

**Business and Health Administration Association
Division of MBAA International**

**2010 Meeting
Chicago, Illinois**

ABSTRACT AND PAPER PROCEEDINGS

**William Stroube – BHAA President
Jack Newhouse – Program Chair
Steve Szydlowski – Proceedings Editor**

March 18, 2010

Dear Colleagues,

On behalf of the Officers and Board of Trustees I would like to welcome you and thank you for your participation in this year's BHAA meeting.

Jack Newhouse has organized an exciting program. His hard work along with the group of Track Chairs has resulted in strong sessions on a variety of topics.

I want to thank everyone who has contributed to BHAA and made it the strong organization that it is today. It is already time to start planning the 2011 conference. Please encourage your colleagues to join us next year.

Sincerely,

Bill Stroube
University of Evansville

Business and Health Administration Association
Annual Meeting – 2010
Chicago, Ill.

J. Newhouse
Program Chair

Dear Colleagues;

The following abstracts and papers represent over fifty peer reviewed submissions for this year's BHAA meeting. The entire compilation is close to equally divided between single authored and multiple authored works. Twenty-five of the authors are graduate students representing eleven papers. There is a wide range of subject matter covering such areas of interest as health policy, public health, nursing, health economics, health informatics, health administration, diseases and epidemiology, pharmaceutical marketing, and international health care to mention some of the represented disciplines.

A large portion of the work for this meeting was done by the various track chairs who received the abstract and paper submissions and arranged for their review. It should also be noted that many BHAA members worked hard to support this year's meeting by conducting research and scholarship to write these papers and abstracts, or by working with their graduate student populations to develop appropriate scholarship for submission. The result was a 122% increase for papers and abstracts over the 2009 level.

I think you will enjoy reviewing this material and find articles that address health care areas of interest to you. I would encourage you to contact the authors of any of the papers you wish to pursue whether to advance the overall research agenda the paper addresses or to incorporate the information within the context of an undergraduate or graduate course. BHAA represents both a community of scholars, as well as a community of teachers with the common goals of promoting the generation of new knowledge, the sharing of information, and the enhancement of educational strategies for the health services disciplines.

Sincerely,

Jack Newhouse, Ed.D.
Saint Joseph's University

Business and Health Administration Association ABSTRACT AND PAPER PROCEEDINGS INDEX

- Page 9 : Sustainable Cost Reductions For Community Hospitals –
Abdul Ahad Imran Akram & Daniel J. West
- Page 10 : Financial Incentives System For Nursing In The Kingdom of Saudi Arabia –
Majed Alamri
- Page 15 : Developing and Testing a Prototype for a Community-Based Health
Informatics System (CBHIS) –
Kuriakose Athappilly, Waleed Al- Balooshi, & Louis G. Simonetti III,
- Page 16 : Towards a 21st Century Healthcare Management – A Grass Root Approach -
Kuriakose Athappilly
- Page 17 : The Message On Your Colleague’s “Marquee”: The Everyday Experience of
Grief In The Workplace -
Suzanne L. Bailey & Garry R. Bailey
- Page 19 : The Employee Free Choice Act: Implications for The U.S. Health Care System-
Charles Braun
- Page 20 : Antitrust Enforcement and its Implications for Business Planning -
Michael M. Costello
- Page 21 : Management of Kawasaki Disease in Texas: Policy Implications –
Alberto Coustasse, Doohee Lee, Cody Arvidson, Julius J. Larry III, & Witold
Migala
- Page 32 : Lacrosse Encephalitis: Results from the National Inpatient Sample
(NIS)/HCUP 2004-2006 -
Alberto Coustasse & Dennis Emmett
- Page 41 : Kawasaki Disease in the USA: Findings from The National Inpatient Sample
(NIS)-HCUP 2004-2006 -
Alberto Coustasse, Dennis Emmett, Jeff Gillis, & John Biros

- Page 51 : A Nursing Management Challenge: Health Care Needs During a Disaster -
Josephine M. DeVito
- Page 52 : Increasing Public Health Efficacy: Using Culture and a Social Psychological Framework to Foster Behavior Change -
Anna M. DiColli & Daniel J. West
- Page 54 : New Approaches for Working with Preceptors to Enhance Student Success -
Dean Eide, Douglas Olson, & Jennifer Johs-Artisensi
- Page 60 : Medications: The Process of Prescribing and the Muse in Taking –
Dennis Emmett & Ashish Chandra
- Page 68 : Expanding Practice Venues for Dental Hygiene: Improving Outcomes and Reducing Costs -
Peter G. Fitzpatrick & Susan I. Duley
- Page 81 : Developing Health Promotion Strategies in Community Settings Through Academic and Clinical Partnerships -
Margaret J. Greene
- Page 82 : Making a Difference to the Very End: Development of a Volunteer Program to Serve Actively Dying Clients as a Strategy for Adding Value and Client Satisfaction to the Hospice Experience -
Gail Henson
- Page 83 : Health Care Disparities and HIV/AIDS Among Latinos in the United States -
Hengameh Hosseini
- Page 89 : Meth Madness –
Samir IsHak & Jitendra M. Mishra
- Page 94 : Correlates of Hospital Provision of Leadership Development Programs –
Tae Hyun Kim
- Page 95 : Is Uncompensated Care Affecting Quality Assurance of Rural Hospitals? –
Doohee Lee, Chris Dixon, Paul Kruszynski, & Alberto Coustasse

- Page 111 : Deal or No Deal: Do Pharmaceutical Sales Representatives' Nonverbal Communication and Empathy Influence Physician Responses? –
Yam Limbu & Avinandan Mukherjee
- Page 114 : Physicians Heal Thyselves: A Continuous Improvement Report on Physicians Peer Review –
Donald Maier, CarolAnn Riggio, & Michael Stowe
- Page 125 : Making a Difference to the Very End: Development of a Volunteer Program to Serve Actively Dying Clients as a Strategy for Adding Value and Client Satisfaction to the Hospice Experience
- Page 126 : Health Beliefs Related to Willingness to Accept Treatment of Pain with Potentially Addictive Drugs –
Kimball P. Marshall, Lisa Micich, & Arthru G. Cosby
- Page 130 : Electronic Medical Record – The How, The Why, and The ROI –
Teresa M. McKay
- Page 131 : Financially Troubled Hospitals –
Allen C. Minor
- Page 132 : Smokers Need Not Apply –
Bharat Mishra & Jitendra Mishra
- Page 143 : A Social Marketing Perspective To Managing Neonatal Health In India –
Avinandan Mukherjee
- Page 145 : Death Panels and the Impact of Media Coverage on Public Opinion –
Michael F. Peters
- Page 154 : Electronic Medical Records in Long Term Care –
Krista Phillips, Chris Wheeler, Josh Campbell, & Alberto Coustasse
- Page 167 : The Burden of Out-Of-Pocket Prescription Drug Expenses on Low-Income U.S. Families
Manuel Pontes & Nancy Pontes
- Page 168 : Health Professional Perceptions of Barriers to Access to Prenatal Care for Adolescents –

E. Racquel Racadio, Kelly Kusik, Lisa Bradford, Mary K. Madsen, &
Alexandra Menefee

- Page 170 : Electronic Pedigrees and Counterfeit Pharmaceuticals: The U.S. Experience with RFID –
Bill Roach & Gene Wunder
- Page 186 : Delegation: What Nurse Managers Need to Know? –
Scott J. Saccomano
- Page 187 : Globalizations and Health/Medical Tourism: Implications for Pharmacy Practice –
J. Warren Salmon
- Page 206 : The Rise of Indifference Illegal Pharmaceutical Marketing Practices –
Michaeline Skiba
- Page 213 : Disease Management Initiatives and the Ability to Reduce Costs of Chronic Care –
Robert J. Spinelli
- Page 214 : National Health Insurance – Time Has Come -
Robert J. Spinelli
- Page 215 : Knowledge, Skills, and Abilities Required of Continuing Care Retirement Communities' Executive Directors –
Michael Stowe & James Haefner
- Page 228 : Conducting a Community Health Needs Assessment in Northeastern Pennsylvania –
Steven Szydlowski & Daniel West, Jr.
- Page 229 : HPV Mandatory Vaccine Issues: Medical, Political, and Ethical Concepts –
William Kent Willis
- Page 235 : Traditional Healing Practices in the Palestinian Occupied Territories –
Meira M. Yasin
- Page 237 : Subjective Views of Chronic Low Back Pain Patients on Effectiveness of Certain Pain Relief Methods –
Sevilay Yuceer & Ahmet Ozturk

- Page 238 : Subjective Views of Chronic Low Back Pain Patients on Benefits of Physical Therapy and Chiropractic Treatment -
Sevilay Yuceer & Ahmet Ozturk
- Page 239 : A Successful Partnership Between Organizations –
George A. Zangaro
- Page 241 : Bullying and Nursing: A Work Place Reality –
Nashat Zuraikat & Catherine Dugan
- Page 242 : The Ways to Contain the Rising Health Care Costs and Their Etical Implications - Hengameh Hosseini

SUSTAINABLE COST REDUCTIONS FOR COMMUNITY HOSPITALS

Abdul Ahad Imran Akram, The University of Scranton

Daniel J. West, Jr., The University of Scranton

ABSTRACT

Reducing operating costs and improving quality of care is important for community hospitals. Under the current Obama administration, efforts to reduce costs have intensified and executives are searching for ideas to implement new cost saving initiatives. This presentation will identify cost saving strategies in community hospitals and also explore how to make these efforts sustainable. Moses Taylor Hospital in Scranton, Pennsylvania will be used as a case study as part of my administrative residency in building strategies for cost reduction, uncovering cost saving opportunities, promoting accountability and insuring sustainability of results.

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FINANCIAL INCENTIVES SYSTEM FOR NURSING IN THE KINGDOM OF SAUDI ARABIA

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ABSTRACT

Nursing shortage is one of the major health problems that face the Saudi Arabia government. This paper will focus on the role of financial incentive as a strategy to motivate and enhance nurses' job satisfaction and alleviate nursing shortage among Saudi nurses. Incentives are important as they motivate, attract and retain nurses in the era of shortage. It is important to form a desirable incentive system to attract and motivate Saudi and non-Saudi nurses to work in Saudi Arabian governmental hospitals.

OVERVIEW OF THE PROBLEM AND OUTCOME MEASURES

This paper looks at the role incentives play in the nursing career in Saudi Arabia. In so doing, the paper attempts to shed light on the factors, which govern the incentives framework in Saudi Arabia with the pertinent experience of other countries in mind where necessary.

Incentives are important as they motivate, attract and retain nurses in the era of shortage. Saudi Arabia actually needs about 170,000 nurses, it is not an easy job to recruit and train such a number of nurses in Saudi Arabia. It is important to form a desirable incentive system to attract and motivate Saudi and non-Saudi nurses to work in Saudi Arabian governmental hospitals. The performance of not only fresh nurses but also both junior and senior nurses could be enhanced with an attractive incentive system. (WHO, 2008a)

WHO defines incentives as "all the rewards and punishment that providers face as a consequence of the organizations in which they work, the institution under which they operate and the specific interventions they provide". They are factors and conditions within health professionals work environment that enable and encourage nurses to stay in their jobs and in their profession (WHO, 2000).

Incentives could be positive or negative, financial (involving the transfer of monetary values such as: salaries, pensions, bonuses, allowances and loans), or non-financial (involving work autonomy, flexibility hours & scheduling, recognition of work and support for career development, etc.). Also, incentives could be applied to individuals, groups, organizations, and may vary according to the type of employer (ICN, 2008).

In Saudi Arabia, there was an effort to fill the shortage in the nursing position; the Saudi ministry of health (SMH) adopted a financial incentives system as a means of recruitment and retention of nursing staff. The adopted system included some direct monetary bonuses depending on nurses' education level and years of experience only, without taking into consideration the annual evaluation of nurses' performance and quality of nursing care. There are many factors affecting the nurses work environment in Saudi Arabia which include: inadequate staffing and

distribution of nurses, lack of supervision, ineffective regularity mechanisms, limited resources in the public sector, lack of standards of care and the absence of procedure manuals.

ICN (2008) report concludes that:

Literature on the application of incentive schemes in health care acknowledges that financial incentives alone are not sufficient to retain and motivate staff. Research has confirmed that non-financial incentives play an equally crucial role. This is the case both in well resourced countries where staffs are able to maintain a high standard of living, as well as in relatively poorly resourced nations. Non-financial incentives include provision of work autonomy, flexibility in working time and recognition of work. Non-financial rewards are particularly vital for countries and organizations where limited funding constrains their capacity to provide financial rewards. Nevertheless, non-financial approaches require a significant investment of time and energy, as well as commitment across the whole organization... While the importance and potential of non-financial incentives is widely recognized, it is important to note that there are limitations to what can be achieved with non-financial incentives alone. (p. 7)

Thus, non-monetary incentives should be carefully considered for adequate planning and study of the cultural values in order to achieve the desired objectives of the proposed program.

This paper investigates the role incentives play in the nursing career in Saudi Arabia and observes the experience of other counties with regards to their strategies in developing a health policy related to nursing incentives and introducing a system of incentives which involves both financial and non-financial elements for a variety of settings (Wieck, Dols and Northam, 2009).

Due to the wide varieties of incentives and settings of implementation, it will be hard to verify what particular element influences the outcomes the most (ICN, 2008).

THE SAUDI ARABIAN HEALTH SYSTEM

The Kingdom of Saudi Arabia was established in 1932 by King Abdulaziz Al Saud. It took the kingdom two decades to organize preventive health services. In 1954, the Saudi Ministry of Health (SMH) was created. By the late 1950's, the World Health Organization (WHO), SMH and Saudi ARAMCO Petroleum Company worked together against malaria at the kingdom's Eastern Region. The Saudi health system went through a rather slow development phase for another decade. By 1970's, there was rapid development in the Saudi health system. As a result of extensive work of SMH. In 1980's the concept of Primary Health Care (PHC) became popular (Al-Yousuf, Akerele & Al-Mazrou, 2002).

Now the estimated population of Saudi Arabia is 28.7 million, including 5.6 non-nationals (CIA, 2009). Regarding health resources indicators, there are 21 physicians per 10.000 population, 39 nurses per 10.000 population, 6 pharmacists per 10.000 population, 20 allied health personnel per 10.000 population and the immunization coverage for children is 96% (Saudi Ministry of Health Statistics, 2007). In comparison with the United States of America, there are 26 physicians per 10.000 population, 94 nurses per 10.000 population, 9 pharmaceutical personnel per 10.000 population, 145 allied health personnel per 10.000 population and the immunization coverage for the children is 92% (WHO, 2009).

The Saudi health system consists of the three levels of health care: primary, secondary and tertiary. At the primary level, there are health centers (dispensaries), at the secondary level general hospitals and at the tertiary level specialist hospitals. Moreover, there are 387 hospitals in Saudi Arabia which contain 53519 beds, with a rate of 2.2 / 1000 people. There are 47,919 physicians 21.6% of them are Saudis. The total number of pharmacists in Saudi Arabia is 15043, 12.5 percent of those physicians are Saudi citizens; however, the percentage of non-Saudis in private pharmacies is 99%. The total number of nurses in Saudi Arabia is 93,735; (28.8 percent of them are Saudis).

The total number of the allied health personnel is 51288, 59% of them are Saudis. The total number of primary health care centers is 3077 centers in the Kingdom of Saudi Arabia (SMH statistics, 2007).

The primary level has 3077 health centers, 1925 (63%) are governmental centers under MOH and 1152 are private centers (pay out of pocket). Each primary health care center provides health services to about 12590 people (MOH statistics, 2007). At the Secondary and Tertiary Levels, there are 387 hospitals; 225 hospitals are SMH hospitals (58%), 39 hospitals are under other governmental sector (10%), and 123 hospitals operated by private sectors (32%). Moreover, there are 53519 beds; 31420 beds (59%) are in SMH hospitals, 10828 beds (20%) are in other governmental hospitals and 11271 beds are controlled by private sectors.

RELEVANT SAFETY AND QUALITY ISSUES

Motivated nursing work force is essential to a well functioning health system (WHO, 2008b). Motivation is an important aspect of enhancing employees' performance. Motivated employees are likely to be more productive than non motivated workers (Sullivan and Decker, 2005). There is evidence that implementation of a range of incentives is important if worker's motivation and behaviors are to be influenced (Dieleman and Harnmeijer, 2006). Many studies showed that financial incentives are not the only reason for motivation, and there are other important motivating factors such as: recognition, appreciation and opportunities for career advancement (Dieleman and Harnmeijer, 2006). However, fairness of rewards affects the manner in which individuals view their jobs and the organization, and it can affect the amount of effort they expend in accomplishing tasks (Kingma, 2003). On the other hand, unfairness may foster poor job performance, psychological tension and lower job satisfaction (Sullivan and Decker, 2005).

In terms of quality of work life and nurses job satisfaction, a Jordanian study found that in Jordan the nursing job satisfaction is actually on the border line, which urgently requires more vital intervention to achieve patients' satisfaction and enhancement of the quality of nursing care to reach the level of *very satisfied* (Murayyan, 2006).

Conversely, McKnight, McDaniel and Ehmann (2006) proposed a new approach to satisfy nurses, their program is "shift rewards" basically it is similar to frequent flyer programs which are offered by airline companies to recruit their customers. Such a program could be based on many factors such as patient satisfaction scores, performance appraisal, years of work, absenteeism, etc. As a result of "shift rewards" program nurses will engage in their profession to increase their rewards points, those rewarded points could be redeemed for a wide variety of selections. Thus nurses' satisfaction is expected to increase which will, in turn, increase the quality of care and client satisfaction as well.

Pay for performance (P4P) had been introduced in many sectors. In the United States P4P has emerged as a key strategy for improving quality of care in many states. The basic goal of such a strategy is to give providers a financial incentive to achieve assigned quality goals and it incorporates direct incentives for measured performance. However, nurses are not currently the focus of P4P and there are few examples of payment incentives that reward nurses for higher productivity and quality or cost saving (Young et al, 2007).

NURSING INCENTIVES IN OTHER COUNTRIES

Stilwell et al (2004) look at the motivation of health care workers in four developing countries in Africa. They maintain that

...low job satisfaction and motivation affects the performance of health workers as well as acting to push people to migrate non-financial incentives are important in motivating health care workers both to do a good job and to continue working in public health services; these incentives include training, study leave, the opportunity to work in a team, and support and feedback from supervisors. Some incentives were

found to work well to retain staff in rural areas. These included providing housing and transport, agreeing the number of years that will be spent in a rural location, offering further training, and offering financial incentives (p. 598).

Despite the fact that there are varies work environment in Saudi Arabia, one should look at the philosophy and the general ideas of others experiences and apply those ideas in a form that is suitable and acceptable to Saudi Arabian community.

Moreover, the incentive program should be considered carefully, otherwise dramatic changes could happen, for example, in Uganda and Tanzania the improved the incentives in the public sector healthcare provider and the result was shifting of the providers from faith based organization to governmental services (ICN, 2008 & Mathauer and Imhoff, 2006).

NURSING INCENTIVES POLICY

Developing and reforming of the existing nursing incentives system in SMH are likely to lead to a strong debate; financing department will have the usual concerns regarding the allocation of resources, but development departments and the directorate of quality are expected to support such reform in the policy of nursing incentives.

Lewin's theory could be used to introduce incentives changes; Lewin's theory is based on what is called a "Change Agent" which performs unfreezing, movement, and refreezing (Marquis and Huston, 2009). Pearce (2007) mentioned ten steps to manage change effectively; providing incentives and support throughout and beyond change process, involving the healthcare worker in identifying problems, demonstrating commitment to change process, ensuring adequate facilities, considering the impact of change on healthcare providers, discover and deal with resistance, understand multidisciplinary team concerns, and communicate effectively and clearly.

However, the goal of reforming of the SMH nursing incentives system in SMH is to recruit and motivate the nurses to provide high quality nursing services while limiting financial expenses. The incentives objectives are to introduce an incentives system which is contextually appropriate, fair, equitable, and reflects health professionals' needs

The incentives could include a financial and non-financial incentives package: It may include provision of work autonomy, flexibility in working time, recognition of work, appreciation and opportunities for career advancement, study leaves, training, support and feedback from supervisor (ICN, 2008 & WHO, 2006). This policy requires a significant investment of time and energy, and substantial commitment across the whole organization of health system (ICN, 2008). The incentive package will target those who are enthusiastic and do their job with courtesy, who are dedicated in their job and encourage their colleagues to be enthusiastic, who continuously got high scores in the appraisal performances, and those who achieved the goals of the Saudi ministry of health.

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DEVELOPING AND TESTING A PROTOTYPE FOR A COMMUNITY –BASED HEALTH INFORMATICS SYSTEM (CBHIS)

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Louis G. Simonetti III, Western Michigan University

ABSTRACT

The paper discusses the design, development and testing of a Prototype for a Community-Based Health Informatics System (CBHIS). The long term goal of CBHIS is the creation of an **open source intelligence system**, which allows patients to input information about their health conditions, guide them towards care professionals in their locale, deliver the patient data to a physician's center, and even provide insights about the possible causes of the patient's health conditions and recommendations to physicians' treatment approach. The physicians would be able to take all these inputs from different sources and use their best judgment about how to handle the patient at the point-of-care in a fast, efficient and effective way. However, ***the short-term project goal of the proposal is to select a few illnesses and suggested professionals in order to develop and demonstrate a working prototype that can then be enhanced into the afore-mentioned complete system.***

During the last two decades Information Technology (IT) has played a significantly role in improving patient safety, decreasing health care costs and enhancing quality of treatment. It started with Transaction Processing Systems (TPS) such as Electronic Medical Records (EMR) and Electronic Health Records (EHR) which facilitate structured patient queries. At present, several types of advanced IT systems emerged to support *decision making* at various levels of health care management. However, the afore-mentioned IT systems lack four fundamental elements. First, these systems are mostly designed and developed to act as isolated systems and they do not interact and communicate with other stakeholders in the health care spectrum. Second, the systems lack deployment of emerging technological advances such as Artificial Intelligent (AI) modeling, data mining and business intelligence. Third, these systems are developed primarily for stakeholders' own interests in the forefront. Fourth, they lack a community-centered approach. This is a deplorable situation, which leads to low quality health care at the expense of the patient. Hence a new approach is necessary, a 'patient-first' or 'patient-

centric' approach for health care management. The paper will elaborate how the prototype of the proposed system is designed and developed.

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TOWARDS A 21st CENTURY HEALTHCARE MANAGEMENT – A GRASS ROOT APPROACH

Kuriakose Athappilly, Western Michigan University

ABSTRACT

The paper will share the author's experiences of examining, discussing and sharing ways to improve the existing healthcare management in Southwest Michigan. The venue for the panel discussions was provided by the Southwest Michigan Health Coalition. The author was an invited honorary member of the coalition at the request of CEO of the coalition. Several panel discussions were conducted. The discussion group consisted of representatives from health care providers (physicians and nurses), major insurance agencies, business owners, major pharmaceutical companies, and university professors, government agencies from county and state levels. The paper will shed light on: a) the problems confronting the present-day health care management and b) an approach which the author finds it necessary to make the health care more efficient and effective. Major emphases of this approach are two. The first one is the criticality of a shift of focus of health care from the stake-holders to patients - a patient-centric approach! The second is the unfortunate state of health care system which lacks the deployment of the advanced technologies and methodologies now available. IT should occupy the very central point of healthcare system for integration, innovation and communication at different levels with privileged access for in the system including the patients. Finally, the paper will illustrate some examples of successful implementation of Health care information systems at different levels of health management. The author believes that the paper will elicit active discussion in the panel session and the participants will contribute their valuable criticisms and suggestions towards

a better understanding of the factors impacting health care practices and possibly improve the health care management in their own constituencies.

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THE MESSAGE ON YOUR COLLEAGUE'S "MARQUEE": THE EVERYDAY EXPERIENCE OF GRIEF IN THE WORKPLACE

Suzanne L. Bailey, University of Evansville
Garry R. Bailey, Evansville Vanderburgh School Corporation

ABSTRACT

"Nothing that grieves us can be called little: by the eternal laws of proportion a child's loss of a doll and a king's loss of a crown are events of the same size."

Mark Twain

The experience of loss is universal. Loss is the state of being deprived of or being without something that one has had or desired to have in the future. Losses may be situational or maturational. Colleagues struggling with loss will undoubtedly be present in the work environment. Individuals convey overt and covert expressions of suffering. Sensitivity to the circumstances and struggles of another, and deliberate efforts to offer support and encouragement contribute to the creation of a benevolent workplace.

Grief is the emotional response, mental suffering, or distress over affliction or loss. The experience of grief is unique to each individual. Emotional responses may include anger, sadness, hopelessness, fear, and anxiety. Observable behaviors may include social withdrawal, increased absences from work, restlessness, difficulties executing routine activities of daily living, and aggression. Associated physical symptoms often reported by persons who are grieving are sleep disturbance, fatigue, loss of appetite, muscle aches, lack of energy, and headache. Cognitive symptoms that may impact functioning may include lack of concentration, memory deficits, and decreased problem-solving skills.

Kubler-Ross identified stages of the grief process experienced by people preparing to die. These five stages of grieving have been applied to individuals grieving losses other than death. Kubler-Ross documented the five stages to be denial, anger, bargaining, depression, and acceptance.

This paper asserts that individuals coping with grief and loss may benefit from compassionate interpersonal interactions. Supportive interventions that can be offered to grieving colleagues will be examined.

THE EMPLOYEE FREE CHOICE ACT: IMPLICATIONS FOR THE U.S. HEALTH CARE SYSTEM

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ABSTRACT

The proposed Employee Free Choice Act currently being considered by Congress proposes to change the way employees choose or reject union representation in a dramatic fashion. Presently, employees vote for or against union representation in a secret ballot vote after the union shows that there is sufficient interest on the part of the workers to hold an election. However, during the time lag between vote authorization and the actual voting process, employers can lobby employees about all the negative aspects unionization will or may bring to their workplace. Too often, union supporters counter, this lobbying goes far beyond an educational basis into the realm of intimidation and coercion on the part of employers. To protect employees from employer misbehavior, union leaders argue that the rules of the unionization process must be changed to protect the rights of workers. While variations of the Free Choice Act have been offered for several years, a Democratic majority in both houses as well as a President who received strong support from organized labor during his campaign run suggests that there may well be changes in this area in the near future.

The purpose of this paper is to explore what effects the Employee Free Choice Act may have upon American health care providers, workers and patients. Particular attention is paid to the balancing act between employee rights to bargain collectively and the desires of employers to limit the potential impact of labor unions within their organizations.

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ANTITRUST ENFORCEMENT AND ITS IMPLICATIONS FOR BUSINESS PLANNING

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ABSTRACT

Antitrust law seeks to protect consumers by maintaining competitive markets. In practice, however, antitrust law does not seem to be applied in a consistent, predictable manner. This presentation will examine variability in federal and state antitrust enforcement and the difficulties it can cause in strategic business planning. A brief case overview will be presented to show potentially different antitrust perspectives in a proposed health system integration effort. Relevant observations by antitrust scholars will be reviewed along with the author's recommendation on antitrust merger policy

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MANAGEMENT OF KAWASAKI DISEASE IN TEXAS: POLICY IMPLICATIONS

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ABSTRACT

Kawasaki Disease (KD) is the leading cause of acquired cardiovascular disease among children, but KD has received little attention on its management from a policy perspective. The core objective of this paper is to review the literature, identify problems related to KD, and evaluate and offer some policy alternatives to effectively prevent and treat KD epidemiologically in Texas. Policy options suggested in this paper include, among others, (1) establishing a mandatory national KD registry system (along with active surveillance), (2) introducing sentinel providers, (3) requiring mandatory reporting of KD by hospitals, and (4) sponsoring policy KD research and practice.

INTRODUCTION

Kawasaki Disease (KD) involves the skin, mouth, and lymph nodes, and typically presents in children up to five years of age. In the U.S. alone, over 5,500 KD cases were reported in 2006 (Centers for Disease Control and Prevention [CDC] 2009). KD represents the leading cause of acquired cardiovascular disease in children (Kawasaki Disease Foundation 2009). With the etiology of KD unknown after 40 years of intense research (Burns 2007), no specific laboratory test, such as a blood test, throat culture, or nasal culture, has been developed for accurately diagnosing KD and atypical cases (CDC 2009). Delayed diagnosis and treatment have remained unavoidable and prevalent (Coustasse, Larry, Migala, Arvidson, and Singh 2009). Furthermore, diagnosis is complicated by the same symptoms and signs being present in other illnesses (Freeman and Shulman 2006).

For the purpose of this policy paper, KD is defined according to American Heart Association (2001) and CDC (2009) criteria. These diagnostic criteria include high fever of 4 or 5 days duration along with four or more of the following seven symptoms: (1) rash, (2) red eyes, (3) red, swollen, and cracked lips, (4) "strawberry" tongue, (5) swollen hands and feet, (6) swollen lymph nodes, (7) redness of the palms and soles of the feet (AHA 2001). Treatment consists of Intra Venous Immuno Globulin (IVG) for 8 to 12 hours being administered within 10 days of the first onset of fever. High doses of aspirin must continue to be administered until the fever subsides. The initial

treatment is followed by aspirin dosages maintained, with regulated reductions in administration amounts, for at least 2 months to reduce spontaneous coronary thrombosis (Gersony 1991).

Virtually all deaths in patients who have experienced KD result from cardiac sequelae, or secondary cardiac conditions such as arrhythmia, chest pain, myocardial infarction, and sudden death (Fujiwara and Hamashima 1978; Burns et al. 1996;). The peak mortality occurs 15 to 45 days after the initial onset of fever. However, sudden death from myocardial infarction may occur many years later in individuals who as children had coronary artery aneurysms and stenosis. The potential for later death due to KD complications suggests tracking KD patients throughout childhood is important. Many cases of fatal and nonfatal myocardial infarctions in young adults have been attributed to “missed” KD in childhood (Burns et al. 1996).

Coustasse, Larry, Migala, Arvidson, and Singh (2009) report only 49.4 percent of the patients in their Texas sample being correctly diagnosed with KD upon admission to a hospital. The majority of patients presenting with KD were misdiagnosed. Further, Coustasse et al. reported for the majority of the patients, the sample was represented by 41 different admitting diagnoses other than KD. Even though the misdiagnosis right appears to be high, the overwhelming majority of children with KD (>96 percent) are hospitalized (Chang 2002; Holman et al. 2003). The remaining four percent of cases are treated on an outpatient basis. Since Coronary Artery Aneurysms (CAA) occur significantly more frequently in untreated patients (Newburger 2007), effective interventions are required to enhance the healthcare providers’ ability to accurately identify cases of KD in children less than 5 years old and presenting with high fever and rash illnesses (Anderson, Todd, and Glode 2005). Untreated, KD can lead to serious complications that involve the heart and cardiovascular system (Newburger et al. 2004). Therefore, timely and accurate diagnosis is critical, and treatment within 10 days after onset of fever is essential to decrease the risk of heart problems. With appropriate detection and treatment, the incidence of CAA is reduced to as little as 1 percent and no more than 5 percent of cases (Freeman and Shulman 2006).

Lloyd, Walker, and Wilkinson (2001) investigate the clinical and epidemiological features of KD and emphasize the likelihood of an infectious cause for KD. Consequently, several microbial agents have been studied in KD patients. The microbial agents studied include rickettsiae, propionibacterium acnes, klebsiella pneumoniae, ehrlichia sp., parainfluenza virus types 2 and 3, Epstein-Barr virus, rotavirus, among others (Belay et al. 2005; Dominguez, Anderson, Glode, Robinson, and Holmes 2006). Additional possible causes for the disease are identified as prior respiratory disease, exposure to carpet cleaning chemicals, use of humidifiers, or living in close proximity to lakes, rivers, bays, and oceans (Rauch 1987; Kawasaki Disease Foundation 2009). Although multiple infectious agents and toxins are implicated as potential origins for exposure to the disease, none have been conclusively identified as a causative or contributing agent (Chua 2001; Holman et al. 2005).

While KD has been investigated empirically as suggested above, no single, published policy paper provides policymakers with insights on how to manage KD. Therefore, a need to research policy options exists, and this paper’s main objective is to identify problems related to KD and review the potential health crisis created by misdiagnoses of KD in children. We use the available literature and offer epidemiologic policy implications for the efficient and effective prevention of KD and diagnosis and treatment of KD in U.S. children.

METHODOLOGY

The research was conducted to complete a comprehensive literature review on the policy and public health implications of KD. The research strategy was limited to selecting articles from reputable journals in which online access was available from electronic databases. The research strategy yielded journal articles of high impact and an analysis of findings from the literature was performed. The studies were investigated to determine their pertinent findings and ethical conclusions, whether stated or implied by the article’s general perspective.

Search Strategy

When completing the online research, the following terms were combined using the Boolean “OR” with “Kawasaki disease” and “Kawasaki Syndrome” in conjunction with the Boolean “AND” with “policy,” “passive surveillance,” “public health,” and “active surveillance.” All pertinent articles came from (1) four electronic databases including EbscoHost, Ovid Medline, Springer, and PubMed and (2) the Internet, such as GoogleScholar and Dogpile search engines, in an effort to find all possible scholarly and newsworthy information available regarding problems associated with KD and the nature of the crisis related to the misdiagnosis of KD in U.S. hospitals. Also, recognized health organizations websites, such as the CDC, AHA, and World Health Organization, were included in the search for data. Reference lists from retrieved articles were utilized to identify other relevant research articles.

Inclusion, Exclusion, and Assessment

Abundant information is available regarding the disease; however, the review was restricted to literature including information about the policy and public health implications in KD. Reviews and primary research articles were included in this study. All selected articles were in English. No articles were excluded due to the age of the article, but unpublished works were excluded from this study.

RESULTS

A Rationale for Developing a National Kawasaki Disease Policy

Since KD is the leading cause of acquired heart disease for children in the U.S. and with sudden deaths resulting from coronary aneurysm and/or thrombosis, the societal benefit in reducing KD is apparent (Kawasaki Disease Foundation 2009). The financial costs and benefits of more accurate KD diagnosis and treatment will be further quantifiable when accurate incidence and disparities are identified and addressed. Maintaining on-going surveillance is one of the basic duties of a public health system (Wagner et al. 2001; Lewis et al. 2002).

Estimation of national and state incidence of KD has been difficult because the reporting of cases to the CDC remains sporadic (Burns 2007), and all KD tracking and reporting is left to state agencies to enforce (Kao 2005). As is the case with any large passive surveillance system, only a fraction of the total cases are reported (Rauch 1987). Researchers have been forced to rely on hospital discharge data for records of KD surveillance and reporting (Holman, Curns, Belay, Steiner, and Schonberger 2003).

The CDC has maintained a “passive surveillance, or voluntary, system for tracking KD in the U.S. since 1976 (Belay, Maddox, Curns, Ballah, and Schonberger 2006). While a standardized case report form was devised by CDC to collect patient information regarding age, gender, race, residence, clinical signs and symptoms, and KD complications and outcomes, and efforts to insure full completion of the forms were instigated, many forms have not filed properly (Belay et al. 2006). Beginning in 1984, a computerized database was created by the CDC, and a passive reporting system for KD was implemented in 22 states, but poor compliance with reporting procedures has prevented an accurate estimate of the number of cases diagnosed each year (Burns et al. 2000). The number of states reporting KD has declined from a high of 29 in 1994 to a low of 11 in 2002 (Belay et al. 2006). “Active surveillance” would require formal protocol for recording observations of the disease and reporting all suspected cases of KD and the circumstances under which hospital admission occurred admission. Moreover, through active surveillance better estimates of KD incidence and rates of long-term complications can be made available to the medical community and the public (Morens, Anderson, and Hurwitz 1980).

In 1994, San Diego County, California implemented passive surveillance of KD. KD was reported through the recognition, identification, and reporting of each KD case by health care providers to the San Diego Health and

Human Services Agency's Division of Community Epidemiology. Bronstein, Besser, and Burns (1997) conducted a retrospective review of hospital discharge data for San Diego County using 1994-1995 data and demonstrated a reporting of only two-thirds of the eligible patients for county and state levels and a complete failure to report any cases to the CDC. From this study, Bronstein et al. recommend the implementation of a sentinel hospital reporting system, or an active surveillance system, as an alternative to the national passive surveillance system for tracking patients diagnosed with KD. Kao (2005) has reiterated the importance of their recommendation for the 21st century.

Policy Recommendations for Kawasaki Disease Surveillance

The central public health policy problem involving KD are the needs for educating healthcare providers and for a government policy to insure the acquisition of accurate and timely data on all suspected KD cases for purposes of early diagnosis, patient tracking, and determining the cause of the disease (Coustasse, Larry, Migala, Arvidson, and Singh 2009). Timely and accurate data are critical to the early diagnosis of KD. Through awareness of the disease, children can receive early diagnosis and treatment before complications arise. Proper early treatment has been shown to reduce the potential of cardiac sequelae, including CAA and ectasia, which develops in approximately 15 percent to 25 percent of untreated children and may lead to ischemic heart disease or sudden death (Newburger et al. 2004).

The issue of acquiring accurate KD data remains problematic. Active surveillance would require reporting, collecting, storing, tracking, and disseminating confidential data regarding KD patients from registries or centralized databases and intervention at the regulatory and legislative levels. There are several policy issues of concern to legislative bodies, public health professionals, and the public, such as privacy issues; perceptions of governmental intrusions; and ethical issues such as the potential for stigmatization. Perhaps the most serious policy issue of concern is privacy. Presently, the standardized case report form devised by CDC to collect information on KD includes age, gender, race, residence, clinical signs and symptoms, and complications and outcomes (Belay et al. 2006). Although these forms contain personal identifiable health information, privacy concerns are adequately safeguarded because the information is subject to the strict handling and disclosure provisions of the Health Insurance Portability and Accountability Act of 1996 (HIPAA).

While privacy a serious concern in considering policies promoting the active surveillance of KD, the professional education of healthcare providers, the development of a KD specific national registry, and the sponsorship of research are necessary for increasing awareness by professionals and the public and decreasing complications related to misdiagnosis.

On the other hand, *Active surveillance* is costly and involves outreach by the public authority, such as regular telephone calls or visits to laboratories, hospitals, and providers to stimulate reporting of specific diseases (CDC, 2007). Because it places intensive demands on resources, implementation of active surveillance, according to the CDC, it should be limited only to brief or sequential periods of time and for specific purposes.

Professional Education About KD

KD is now the leading cause of acquired heart disease among children in developed countries (Falcini 2006; Burns 2009). Departments of pediatrics at most medical schools in the U.S. are committed to excellence in research and education and in the clinical care of infants, children and young adults. Therefore, it is imperative that more emphasis be placed on the signs, symptoms, diagnosis, and treatment of KD in medical school training so that medical graduates will be cognizant of the disease in their medical practices. In order to obtain correct, early diagnoses of KD, healthcare providers must be educated to recognize the signs and symptoms of KD and make differential diagnoses. This training should begin in medical schools and continue through continuing medical education courses.

In order for pediatricians, emergency room physicians and primary care physicians to stay abreast of the latest developments in pediatric medicine and infectious diseases, continuing medical education courses are necessary. The first line of treatment for KD is accepted to be a combination of aspirin and intravenous immunoglobulin. However, a substantial number of patients have an incomplete response to intravenous immunoglobulin and require additional treatment. Unresponsive patients are at high risk of developing coronary abnormalities and experiencing adverse events from treatment with multiple therapies (Latino, Manlhiot, Sabharwal, Chahal, Yeung, and McCrindle 2008). In 13-30 percent of KD patients, fever persists or recurs. Fever may recur several days following discharge. Doctors must bear the responsibility of warning parents to return to the hospital if fever or other signs of KD recur following discharge, because patients may develop coronary artery abnormalities due to inadequate discharge instruction (Mason and Takahashi 2008).

Physicians must attend continuing education courses and availing themselves of the latest knowledge might prevent them from providing optimal treatment to their KD patients. Continuing medical education becomes increasingly more important with KD because of the serious and sometimes fatal consequences of delayed treatment due to erroneous diagnoses. If professional associations and state licensure boards were to require such education, perhaps the level of misdiagnosis in states such as Texas could be reduced to single digits.

Active Surveillance Through a KD Registry System

The Texas Birth Defects Registry is an excellent example of how legislation can be used to create a centralized state-wide registry, control its use, safeguard privacy, provide for appropriate oversight, and limit access to the information contained in the registry. A statewide KD registry could be created and maintained in like manner in as state of Texas' size. A registry is an organized system for the collection, storage, retrieval, analysis and dissemination of information on individual persons who have either a particular disease, a condition (e.g., a risk factor) that predisposes to the occurrence of a health-related event, or prior exposure to substances or circumstances known or suspected to cause adverse health effects (U.S. Department of Health and Human Services 2008). Texas and the U.S. may need to take a cue from the Japanese Ministry which established a registry of children with a history of KD to determine the long-term outcome for those children and at least 6,600 were being evaluated longitudinally (Nakamura et al. 2000). To investigate the association between service in Vietnam and risk of subsequent cancer, registries have been used to identify people with selected cancers and their prior experiences (exposures) of these "cases" were compared with those of appropriately selected persons serving as "controls." Another purpose for a KD registry could be establishing the etiology of KD. As the literature has shown, however, a legislative mandate creating a statewide KD registry alone is not enough to guarantee these purposes for a registry will be achieved.

An excellent example of a sentinel provider surveillance program is the U.S. Sentinel Provider Surveillance Network for influenza surveillance. An influenza sentinel provider is a trained health care professional who volunteers to report clinically diagnosed Influenza-Like Illness (ILI) to the CDC. The CDC and states' health departments use the data to determine flu activity levels for each state (Texas Department of State Health Services 2009). Sentinel physicians report the total number of patient visits to their facilities each week, as well as the number of patient visits for influenza-like illness within four age categories (0-4 years, 5-24 years, 25-64 years, and 65+ years). They collect respiratory specimens from a sample of patients with influenza-like illness for virus culture (Michigan Department of Community Health 2009).

It is important to note that the data provided by the influenza sentinels can only be used to determine where and when influenza-like illness activity is occurring. It cannot be used to determine the total number or magnitude of influenza cases for an entire state. A major drawback to the sentinel provider program is the shortage of volunteers available to adequately canvass a state, thereby limiting the number of surveillance sites. Effectively, trade-off of between the non-compliance of the passive surveillance system and the greater degree of specificity created using sentinel providers occurs.

Disease surveillance is an epidemiological practice by which the spread of disease is monitored in order to establish patterns of progression. The main role of disease surveillance is to predict, observe, and minimize the harm caused by outbreak, epidemic, and pandemic situations and to increase knowledge as to what factors might contribute to such circumstances. A key part of modern disease surveillance is the practice of disease-case reporting (World Health Organization 2008).

Most infectious disease surveillance systems rely primarily on receiving the case reports from physicians and other health care providers. These data are usually incomplete and may not represent all populations. Completeness of reporting had been estimated to vary from 6 percent to 90 percent for many of the common notifiable diseases (Thacker and Berkelman 1988). Voluntary reporting of KD, whose etiology is believed to involve an infectious agent, suffers from poor compliance with reporting procedures preventing an accurate estimate of the number of cases diagnosed annually (Burns et al. 2000).

Several reasons explain the failure of health care providers and laboratories to report notifiable diseases. The reasons include lack of awareness of the legal requirement to report, lack of knowledge of which diseases are reportable, lack of accurate diagnoses, lack of understanding of how or to whom to report, an assumption that someone else will report the case, intentional failure to report to protect patient privacy, and insufficient reward for reporting or penalty for not reporting. Interventions aimed at reducing these barriers have had limited success at improving provider and laboratory reporting behavior (Doyle, Glynn and Groseclose, 2002).

The best recommendation for reporting of KD in Texas is through mandatory reporting by all hospitals in Texas to a centralized state registry mandated by legislation. Presently, the Texas Health Care Information Collection (THCIC) is responsible for collecting hospital discharge data from all state licensed hospitals (Texas Department of Health Services 2009). For purposes of KD reporting by hospitals, it is recommended that legislation require all hospitals in Texas to report KD symptoms and cases without exception. It is estimated that about 96 percent of KD children were hospitalized in Texas in 2004. The other 4 percent were probably treated on an outpatient basis or were admitted to exempt hospitals. If all hospitals in Texas were required to report, all KD case admissions to formerly-exempt hospitals would be captured and reporting error rate would be minimal.

The UNEX project which investigates Unexplained Deaths and Critical Illnesses by the CDC has developed methods for evaluating severe syndromes indicating infection, including non-culture-based methods to identify etiologic agents (CDC 2002). Many clinicians have treated patients with puzzling situations, in which the acute onset of a critical illness suggestive of an infectious origin occurred in otherwise healthy young people for whom diagnostic tests failed to identify an etiologic agent. Occasionally, such episodes are retrospectively diagnosed many years later with the recognition of a new infectious disease and testing of stored clinical specimens (Pinner, Rebmann, Schuchat, and Hughes 2003). Considering the seriousness of cardiac sequelae, lack of an etiologic agent, and the long-term follow-up required, we advocate that KD should rightfully be placed in the UNEX project. Active surveillance is needed and recommended in the literature. A national registry, such as the one maintained in Japan, would greatly enhance the management and tracking of KD children into adulthood while providing accurate estimates for the calculation of incidence rates and recurrence rates.

“Active surveillance,” as opposed to a “passive surveillance,” system is recommended. The voluntary passive surveillance for KD has failed to accomplish the purposes of surveillance as evidenced by the continuing decline in the number of states that voluntarily reported to CDC from a high of 29 in 1994 to a low of 11 in 2002 (Belay et al. 2006). Therefore, it is recommended that all hospitals report KD cases immediately following discharge of the patient. “Active surveillance” can provide better estimates of disease incidence, rates of complications (Morens, Anderson, and Hurwitz 1980), and more timely identification of outbreaks.

Sponsorship and Diversification of KD Research and Practice

Given that financial resources play a vital role in preventing and treating certain diseases, we suggest that federal and state governments should initiate systematic efforts to sponsor KD research and practice. A reasonable need to increase research funding exists as only limited (competitive) funding opportunities exist for KD researchers and practitioners. In addition, scant attention for funding KD projects investigating access to care, quality of care, cost analyses of care, and program evaluations of prevention and treatment. For instance, 103 KD research projects have been funded by the National Institute of Health from 2000 through 2009, according to the Computer Retrieval of Information on Scientific Projects (CRISP 2009), but no single proposal was funded in the context of health services research. This finding simply suggests that governments must diversify funding mechanisms to meet the different needs for KD research and practice (CRISP 2009).

CONCLUSION

The national surveillance system is an important tool to monitor the likely occurrences of regional and nationwide KD outbreaks and to monitor the trend of cardiac complications among all KD patients representing specific racial and ethnic groups. These patients could be at risk for long-term coronary artery disease and require special attention and follow-up. It is imperative to start an “active surveillance system” first at the state level, such as within a large and populated state like Texas, as a pilot experience. Once the system has been refined within Texas, for example, a national registry should be implemented to ensure compliance with “mandatory” KD reporting and to be able to provide accurate data to accomplish the mission of monitoring KD. A clinical registry containing important information on treatment and coronary outcomes is needed along with a serum bank and DNA bank (Newburger 2007). Such integrated state and system-wide improvements will greatly enhance continuing education for physicians and increase their proficiency in making accurate and early diagnoses of KD. Education of physicians and other healthcare providers in the recognition of the symptoms of KD is imperative because delayed or erroneous diagnoses might cause not only delayed treatment but in some cases also death. Active surveillance, therefore, can provide the best avenue to ensure providers, patients, and society as whole gain beneficial long-term benefits.

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LACROSSE ENCEPHALITIS: RESULTS FROM THE NATIONAL INPATIENT SAMPLE (NIS)/ HCUP 2004-2006

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ABSTRACT

*La Crosse encephalitis virus (LACV) has been identified in the hardwood forest areas of the upper
Midwestern United States and in the Appalachian region. The purpose of this research study was to evaluate the
epidemiologic pattern of LACV in the US between 2004-2006 using the NIS / HCUP datasets. The vast majority of
cases LACV (77.5%) were in children less than 16 years old and most of them were school aged children with about
70% of these cases occurring in males. The majority of cases occurred in summer months. Prevention is the only
effective method to decrease the number of LACV cases and public education is crucial in endemic areas like Ohio
and West Virginia.*

BACKGROUND

Without question the most dangerous creature on earth is the mosquito (Illinois Department of Public Health, 2007). Mosquitoes and the diseases they spread have been responsible for killing more people than all the wars in history (Illinois Department of Public Health, 2007). Even today, between 350 and 500 million clinical episodes of mosquito-borne diseases occur every year around the world (CDC 2004). More patients are killed and debilitated by a host of other mosquito-borne diseases, including filariasis, yellow fever, dengue and encephalitis (Illinois Department of Public Health, 2007).

Today, the threat of developing encephalitis from mosquitoes is far greater than the threat of malaria in the United States. Encephalitis, meningitis and other diseases can be developed from the bites of mosquitoes infected with certain viruses. These include: viruses of La Crosse encephalitis, St. Louis encephalitis, Eastern Equine and Western Equine encephalitis, and West Nile encephalitis (Illinois Department of Public Health, 2007).

The primary vector of La Crosse encephalitis is the tree hole mosquito *Aedes triseriatus*, (Carter, 2008), who transmit the virus and causes the most prevalent arboviral infection in children in North America It is a dark

mosquito with silvery white spots on the sides of its thorax and abdomen. Water-holding cavities in trees are its natural habitat, but man-made containers also are important breeding sites. Old tires, buckets, cans, bottles, planters, tire swings, toys, pet water bowls and any other kind of container that holds water make especially good breeding sites for the tree hole mosquito (Division of Surveillance & Control, 2009).

Arboviral encephalitis are maintained in nature in complex life cycles involving a nonhuman primary vertebrate host and a primary arthropod vector and which usually do not include humans (University of Florida, 2008). Vertebrate primary hosts include chipmunks, tree squirrels, and other small vertebrates that live in forest habitats (University of Florida 2008). Humans and domestic animals can contract the disease when the virus escapes the cycle and infects a secondary host (University of Florida 2008). This can happen because of ecological or demographic changes, or due to population changes in the primary vector, host, or both.

It was first isolated in the United States in 1963 (Directors of Health Promotion and Education (DHPE) 2009). The risk of exposure has been increasing as people move into previously underdeveloped areas where the virus lives. Anyone can get La Crosse encephalitis, but some people are at increased risk: children, people who live in or visit woodland habitats, and people who work outside or participate in outdoor activities in areas where the disease is common are also at increased risk (Directors of Health Promotion and Education (DHPE) 2008).

La Crosse encephalitis virus (LACV) has been identified in the hardwood forest areas of the upper Midwestern United States and in the Appalachian region (West Virginia, Ohio, North Carolina, Tennessee, Virginia), Directors of Health Promotion and Education (DHPE) 2008). About 75 cases of this form of encephalitis are reported to the Center for Disease Control each year (Emedicine 2008). During 2006-2007 West Virginia had the greatest number of cases (95) due to LACV than any state and the highest incidence in the USA with 5.1 cases per 100,000 population (CDC 2009a).

La Crosse encephalitis often goes unrecognized until five to fifteen days after exposure (CHPPM, 2005). The majority of cases infected with LAVC either does not have symptoms or develop a mild febrile illness. Only 1-4 % of those infected with LAVC develop any symptoms (CDC, 2009). La Crosse encephalitis can affect the central nervous system and cause severe complications and even death. In a large study with LACV infections, the clinical presentation was as meningoencephalitis (56.3%), encephalitis (20.7%), meningitis (17.2 %), or uncomplicated fever (5%), (Haddow and Odoi 2009). The case fatality rate is less than one percent (CDC, 2005).

Children under the age of 16 are more likely to contract the disease due to increased exposure to these mosquitoes (VDH, 2008). The virus typically cannot be recovered from cerebrospinal fluid, and the disease can masquerade as enteroviral meningitis when mild, and herpes simplex encephalitis when severe. Currently, there is no antiviral therapy approved by the Food and Drug Administration (FDA) for La Crosse encephalitis (McJunkin, 2001). A publication by the Directors of Health Promotion and Education stated that there is no specific treatment for LAC encephalitis.

The National Inpatient Sample (NIS) is an annual stratified probability sample of hospitals from participating statewide data organizations designed to approximate 20% sample of US community hospitals. It is produced as part of the Healthcare Cost and Utilization Project (HCUP), sponsored by the Agency for Healthcare Research and Quality in partnership with the states (HCUP, 2009).

The purpose of this research study was to evaluate the epidemiologic pattern of La Crosse encephalitis disease in the US between 2004-2006 using the NIS / HCUP datasets to determine if its incidence has remained stable or has increased following national trends.

METHODOLOGY

The Healthcare Cost and Utilization Project is a multistate database project maintained by the Agency for Healthcare Research and Quality (AHRQ). The number of states participating in the NIS data and the number of hospitals have increased over time. In 1988, the NIS data included 5.3 million hospital discharges from 759 hospitals in 8 states.

For this study 2004-2005 and 2006 NIS files were included with about 24 million discharges with an average of 8 million per year. They represented a sample of 20 % of the universe of US hospitals for 2004-2006. All files contained 1004, 1054, and 1045 hospitals, respectively and containing 37, 37 and 38 states each year, respectively. The NIS data provides the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9TH CM), (US Department of Health and Human Services, 1988) discharge diagnosis and procedure codes assigned by hospitals in participating states to each individual discharge. The data include >100 clinical and nonclinical variables for each hospital stay, and included in the analysis of this study were all discharge diagnoses procedures, admission and discharge status, patient demographics (gender, age, race/ethnicity), expected payment source, total charges and length of stay. Age was stratified in the following age groups: less than 1 year old; 1-4; 5-9; 10-17 years old and > 18 years old. We structured race and ethnicity to create four major groups: Non Hispanic Whites (NHWs), Non Hispanic Blacks (NHBs), Hispanics, and Asian and Pacific Islanders (APIs).

Case Selection

For this retrospective cross-sectional study design study, pediatric patients with an ICD 9 diagnosis code 062.5, for La Crosse Encephalitis was selected as the study population. To evaluate the geographic variation of KD epidemiology, the 38 states were grouped into four major geographic areas according to each state's census region designation. States in the West census region were: Arizona, California, Colorado, Hawaii, Nevada, Oregon, Utah, and Washington. States in the Midwest census region were Indiana, Iowa, Illinois, Michigan, Minnesota, Nebraska, Ohio, Kansas, Missouri, South Dakota and Wisconsin. States in the Northeast census region were Connecticut, Massachusetts, New Hampshire, New Jersey, and New York, Rhode Island and Vermont. States in the South census region were Arkansas, Florida, Georgia, Kentucky, Maryland, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.

Statistical Analysis

Descriptive continuous data, such as hospital charges and length of stay, are presented as mean $\pm$ standard deviation and median when appropriate. Statistical analyses were performed using SPSS 17 for Windows (SPSS 2009).

RESULTS

The discharge diagnosis consistent with La Crosse was identified for a total of 40 cases for the period 2004-2006. About 70% were male, 20.0% NHW and 20.0% NHB, and 60% of the cases had the race as missing (data not shown). The majority of cases were in age category three to five years old with 30% of overall cases and about 55% of cases were equal of less than 8 years old (Table 1). The average age was 6.7 and the Standard Deviation (SD) was 3.6 (data not shown). The mean hospitalization LOS was about 6 days but with a large SD) with about 7.2 LOS. Similarly, mean charges were \$20,890.50 but with \$20,890.50 as SD (Table 1).

Table 1: La Crosse Encephalitis-Associated Hospitalization: NIS /HCUP 2004-2006

Group	Cases (N= 40)	%
Age (years)		

0 - 2	2	5.0%
3 - 5	12	30.0%
6 - 8	8	20.0%
9 - 11	7	17.5%
12 - 14	0	0.0%
15 -16	2	5.0%
17 and Over	9	22.5%
	40	100.0%
Age Subgroup		
<5	14	35.0%
>=5	26	65.0%
Gender		
Male	28	70.0%
Female	12	30.0%
	Mean	Standard Deviation
Length of Stay (LOS)	6.1	7.2
Total Charges	\$20,890.50	\$20,890.50

In examining the admissions by month, Figure 1, the vast majority of the admissions were in the summer and the fall. After the weather turns warmer, mosquitoes breed and are active until cold weather arrives and most admissions started in June and run through October (Figure 1).

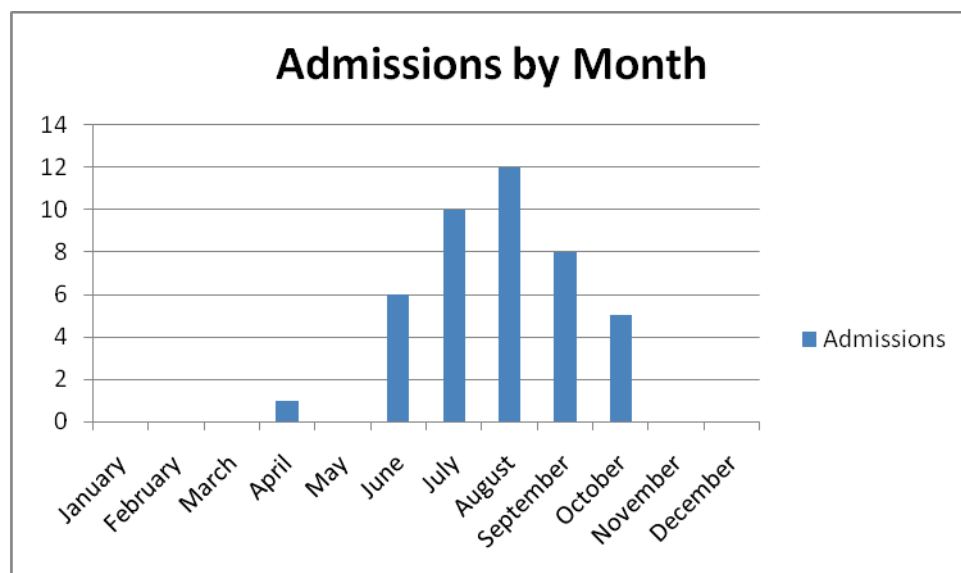


Figure 1: Admission by Months, La Crosse encephalitis: NIS 2004-2006

Table 2 presents the unadjusted hospitalization rate by states. Only 8 states were found to have hospitalization during the study period. There was found an overall downward trend of cases in the US from 17 cases in 2004 to 7 in 2006. The majority of cases were found in Ohio with 18 hospitalizations or 45% of total cases, however this state did not presented any hospitalization in 2006. West Virginia presented 11 hospitalizations or 27.5 % of overall cases and all the rest of states presented three or less hospitalization (Table 2). Kentucky and Texas showed one case in 2004 and none in the rest of years following the described declining trend as well as Wisconsin. West Virginia presented the only death case in the study in a 6 year old child with 8 days of LOS (data not shown).

Table 2: La Crosse Hospitalization by State: NIS/HCUP 2004-2006

State	2004		2005		2006		Total	Total %
	Counts	Percent	Counts	Percent	Counts	Percent		
OH	11	64.71%	7	43.75%	0	0.00%	18	45.00%
WV	2	11.76%	6	37.50%	3	42.86%	11	27.50%
NY	0	0.00%	0	0.00%	3	42.86%	3	7.50%
WI	2	11.76%	1	6.25%	0	0.00%	3	7.50%
GA	0	0.00%	2	12.50%	0	0.00%	2	5.00%
KY	1	5.88%	0	0.00%	0	0.00%	1	2.50%
NC	0	0.00%	0	0.00%	1	14.29%	1	2.50%
TX	1	5.88%	0	0.00%	0	0.00%	1	2.50%
	17		16		7		40	100.00%

The hospitalization LOS was 6.1 days in average although it presented a wide SD with 7.2 LOS (see Table 1). Figure 2 shows the number of cases with length of stay. The largest numbers of cases were LOS of 2 or 3 days with 7 cases each or 17.5% of the total cases. The average is skewed by the number of cases of 9 days or more, with an outlier with 35 days in Ohio.

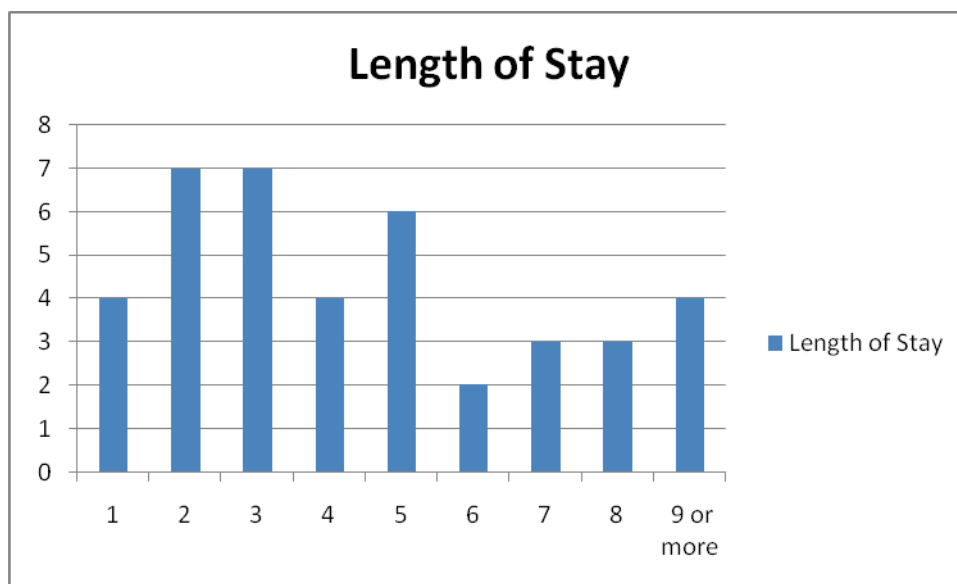


Figure 2: Length of Stay, La Crosse Encephalitis: NIS/ HCUP 2004-2006

Hospitals charges ranged from \$1,732 to \$162,218. The largest number of cases was found in the \$5,001 to \$10,000 ranges with 10 cases or 25% of all cases. The next highest categories were \$10 to \$15 thousand and \$15 to \$20 thousand with 7 cases in each or 17.5% each of total cases (Figure 3).

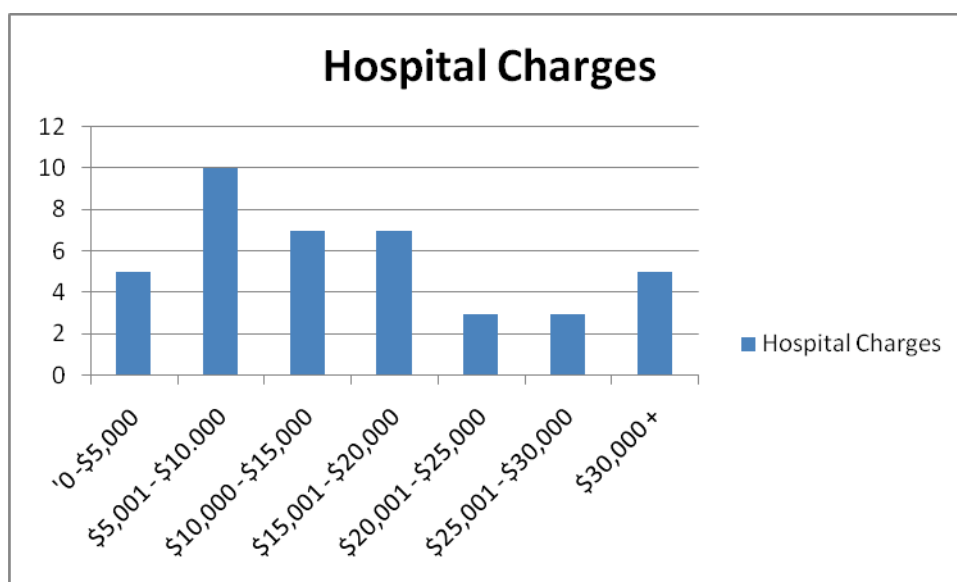


Figure 3: Length of Stay, La Crosse Encephalitis: NIS/ HCUP 2004-2006

DISCUSSION

The vast majority of cases LAVC (77.5%) were in children less than 16 years old and most of them were school aged children which concurs with McJunkin et al (2001) and with about 70% of these cases occurring in males. The propensity for children to develop LAVC which results with a hospitalization may be due to a variety of reasons, including differences in the pediatric and adult immune system, and/or longer time children may spend outdoors although these factors are not quite will understood.

La Crosse encephalitis hospitalizations were less than reported cases for West Virginia in a previous large study (Haddow and Odoi 2009), and Ohio was the state with more cases in this study, which is in line with a 2009 report of the CDC (CDC 2009b).on the other hand, the present study found similar pattern of seasonality than reported by the CDC (2009a). The majority of cases occurred in summer months and this is likely due to the transmission cycle of LAVC which involves vertical and horizontal transmission. This happens with summer months when humans are more expose to mosquitoes in outdoor activities and therefore putting themselves at an increased risk for coming into contact with infectious mosquitoes. This concurs with 2008 report from the West Virginia Department of Health (WDDHHR 2008).

Most cases had a short LOS with the largest numbers of cases with 2 or 3 days which can indicate mild cases, however the wide SD and many cases over 9 days may be indicating more severe cases, which require more intensive care and thus more expensive charges. No specific therapy is available at the current time and clinical management is limited to alleviating the symptoms and balancing fluids and electrolyte levels.

Limitations: Cases were reports are by hospital discharge percentage, instead of hospitalization rates, using hospitalization per 100,000 discharged and US Census Bureau population to estimate the denominators, due to time constrains. Also we couldn't determine what type of neurological prototype i.e. meningitis or encephalitis as this was a retrospective study and it wasn't performed chart review. The number LAVC-associated hospitalizations might have been overestimated as multiple LAVC- hospitalizations for single cases were not screened. Inversely, many LAVC-cases could be missing from database because the disease could have been treated on an outpatient basis, since not all children diagnosed with LAVC required hospitalization. Many LAVC- patients could have seen by health care providers in urgent care, outpatient, and family care settings and as classical cases or incomplete or atypical LAVC- cases as described by literature.

Prevention is the only effective method to decrease the number of cases of La Crosse encephalitis; therefore public education is crucial in endemic areas like Ohio and West Virginia, especially as severe disease and neurologic sequelae may happen in young children.

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KAWASAKI DISEASE IN THE USA: FINDINGS FROM THE NATIONAL INPATIENT SAMPLE (NIS)-HCUP 2004-2006

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ABSTRACT

Kawasaki Disease (KD) is the leading acquired cardiovascular disease in children. The purpose of this research study was to evaluate the epidemiologic pattern of Kawasaki disease in the U.S between 2004-2006 using the NIS / HCUP datasets to determine if has remained stable or has increased following international trends. The results presented in this report are the most recent nationwide. The epidemiological trend of KD in this study were consistent with previous national incidence rates. This suggest that the incidence of KD has not changed markedly in the US in the last decade.

INTRODUCTION

Kawasaki Disease (KD) is an acute febrile illness that often affects kids under age five years old that can potentially affect the heart and its larger arteries (CDC 2009). KD, named after the Japanese physician that first identified it in 1967, is a condition complicated by a systemic vasculitis with a predilection to produce an inflammation in the walls of small- and medium-sized arteries throughout the body, including the coronary arteries, which supply blood to the heart muscle (Kawasaki et al.1974; AHA 2007). Kawasaki disease is also called mucocutaneous lymph node syndrome because it also affects lymph nodes, skin, and the mucous membranes inside the mouth, nose and throat (Newburger et al. 2004; CDC, 2009). The cause is unknown, but if the symptoms are recognized early, kids with KD can fully recover within a few days. Untreated, it can lead to serious complications that can affect the heart with an aneurism of the coronaries arteries, myocarditis (Chang 2002) and sometimes presenting itself by a toxic shock (Prieto 2009), and sudden death (Quezada-Chavarria et al 2009). However, sudden death from Myocardial Infarction (MI) may occur many years later in individuals who developed coronary artery aneurysms and stenoses in childhood (Shulman and Fimbres, 2008).

It is currently the leading causes of acquired cardiovascular disease in children in the U.S. (AHA 2001; CDC 2009; Kawasaki Disease Foundation 2009). It is also characterized by a striking propensity for coronary artery damage, which occurs in approximately 25% of untreated and 3–5% of treated children (Burgner et al 2009)

In Japan a nationwide survey conducted by Nakamura et al in 2008 showed 19,138 patients were diagnosed as suffering from Kawasaki disease during the 2 year period 2003-2004, highlighting the upward trend that has continued in Japan since the mid-1990s. A recent interview survey study suggests that the incidence is rising in India too (Burns, 2009). This may be explained perhaps of improved recognition or the appearance of KD at a time of rapid industrialization (Harnden, Takahashi and Burgner 2009).

The first cases in the United States were reported in Hawaii in 1976 (Melish, Hicks, and Larson 1976). Kawasaki disease incidence is between 9 to 19 out of every 100,000 kids in the United States (Holman et al 2003). It is most common among children of Asian and Pacific Islanders descend (API) with 32.5 per 100,000 hospitalizations, but can affect all ethnic/racial groups with Non Hispanics Black (NHB) with 16.9 per 100,000 hospitalizations and Non Hispanics Whites (NHW) with 9.1 per 100,000 hospitalizations (Holtman et al. 2003). A recent study in Texas described the Hispanic rate in children less than 5 years old to be 12.6 per 100,000

hospitalizations vs. 9.7 only per 100,000 hospitalizations compared to levels of NHW, respectively (Coustasse et al 2009).

There has been limited, up-to-date epidemiologic information on KD in the United States (Chang 2002). The latest report available in the literature in the US is from Holtman et al (2003). A recent report suggest the annual incidence is about 20 to 25 per 100 000 children less than five years of age in North America by a Canadian Study (McCrindle 2009), however the API descend population rate in Canada is greater than in the US so the incidence of this disease might be higher to the one of the US (Statistics Canada 2009).

Kawasaki Disease patients were defined according to Centers for Disease Control (CDC 2009) and American Heart Association (AHA 2001) criteria. These diagnostic criteria include presence of a high fever for four or five days duration along with four or more additional symptoms. For epidemiologic surveillance, the CDC (2009) defines KD as a patient demonstrating fever for five or more days or until the date of administration of intravenous immunoglobulin, if given before day five of fever, and the presence of at least four of the clinical signs of rash, cervical lymphadenopathy at least 1.5 cm in diameter, bilateral conjunctival injection, oral mucosal changes, and peripheral extremity changes (CDC 2009).

The etiology of Kawasaki disease remains unknown. Toxic, allergic and immunologic causes have been suspected, but most investigators favor an infectious cause or an immune response to an infectious agent (Burns 2007). Among classes of microorganism suspected of causing Kawasaki disease were bacteria, leptospirae, fungi, rickettsiae and a number of viruses. recently, there has been considerable interest in the possibility, that kawasaki disease is caused by retroviruses (Lloyd et al. 2001). Although multiple infectious agents and toxins have been implicated in the etiology of the disease, none have been confirmed to cause KD (Burns 2007). Carpets cleaners have been described as well as causal agents (Rauch et al. 1991; Rauch et al. 1988) and epidemiologic data suggest that KD is triggered by unidentified infection(s) in genetically susceptible children (Bugner et al. 2009)

With the cause of KD unknown after 40 years of world wide research (Kao 2005), no specific laboratory test, such as blood test or throat culture, has been developed to diagnose KD (CDC 2009). Delayed diagnosis and treatment have been unavoidable. Furthermore, diagnosis is complicated by KD' symptoms and signs are similar to many other diseases, like just fever and rash (Gersony 1991). So the real number of undertreated and/or misdiagnose is unknown

The NIS is an annual stratified probability sample of hospitals from participating statewide data organizations designed to approximate 20% sample of US community hospitals. It is produced as part of the Healthcare Cost and Utilization Project (HCUP), sponsored by the Agency for Healthcare Research and Quality in partnership with the states (HCUP 2009).

The purpose of this research study was to evaluate the epidemiologic pattern of Kawasaki disease in the U.S between 2004-2006 using the NIS / HCUP datasets to determine if has remained stable or has increased following international trends.

METHODOLOGY

The Healthcare Cost and Utilization Project is a multistate database project maintained by the Agency for Healthcare Research and Quality (AHRQ). The number of states participating in the NIS data and the number of hospitals have increased over time and in 1988, the NIS data included only 5.3 million hospital discharges from 759 hospitals in 8 states (HCUP 2009).

For this study 2004-2005 and 2006 NIS files were included with 24 million hospital discharges and with an average of 8 million per year. They represented a sample of 20 % of the universe of US hospitals. All files contained 1,004, 1,054 and 1,045 hospitals per year respectively containing 37, 37 and 38 states each year (HCUP 2009). The NIS data provides the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9TH CM), (US Department of Health and Human Services 1988), discharge diagnosis and procedure codes assigned by hospitals in participating states to each individual discharge. The data include >100 clinical and nonclinical variables for each hospital stay, and included in the analysis of this study were all discharge diagnoses procedures, admission and discharge status, patient demographics (gender, age, race/ethnicity), expected payment source, total charges and length of stay. Age were stratified in the following age groups: less than 1 year old; 1-4; 5-

9; 10-17 years old. We structured race and ethnicity to create four major groups: Non Hispanics Whites (NHWs), Non Hispanics Blacks (NHBs), Hispanics, and APIs.

Case Selection

For this retrospective cross-sectional study design study, pediatric patients with an ICD 9 diagnosis code 446.1 were selected as the study population. To evaluate the geographic variation of KD epidemiology, the 38 states were grouped into four major geographic areas according to each state's census region designation. States in the West census region were : Arizona, California, Colorado, Hawaii, Nevada, Oregon, Utah, and Washington. States in the Midwest census region were Indiana, Iowa, Illinois, Michigan, Minnesota, Nebraska, Ohio, Kansas, Missouri, Minnesota, South Dakota and Wisconsin. States in the Northeast census region were Connecticut, Massachusetts, New Hampshire, New Jersey, and New York, Rhode Island and Vermont. States in the South census region were Arkansas, Florida, Georgia, Kentucky, Maryland, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.

Statistical Analysis

Descriptive continuous data, such as hospital charges and length of stay, are presented as mean $\pm$ standard deviation and median when appropriate. Statistical analyses were performed using SPSS 17 for Windows (SPSS 2009).

RESULTS

The discharge diagnosis consistent with KD was identified for a total of 3,642 cases for the period 2004-2006. About 62% were male, 7.1 % API, 13.2% Hispanic, 48.3% NHW, 16.1% NHB, and 6.7% other. The stratified age distribution for the 3,642 KD cases is shown in Table 1. The majority of the cases (56.8%) fell in the 1 to 4 years of age category followed by the 5-9 years of age category with 18.3% and almost 74% of the all the KD population was less than five years old (Table1). For the category with age less than one year old, the highest population hospitalized was for NHW followed by Hispanics with 37.5 % and 24.5% respectively. At 1-4 years old it was also shown higher proportion in NHW with 44.2 % as compared to Hispanics which presented the disease in 20.7% of the cases. Finally there was no mayor gender difference between age categories and about 60% of the patients their expected payment source was private insurance (Table 1)

Table 1: Demographic Characteristics Kawasaki Disease patients: HCUP 2004-2006

Group	(N=3642)	%
Age (years)		
<1	602	17.0%
1-4	2014	56.8%
5-9	651	18.3%
10-14	123	3.5%
15-17	32	0.9%
>or=18	126	3.6%
Age Subgroup		
<5	2616	73.7%
>=5	932	26.3%
Gender		

Male	2189	61.7%
Female	1359	38.3%
Children <1 year of age		
Hispanic	107	24.5%
NHW	164	37.5%
NHB	74	16.9%
API	216	11.5%
Other	132	7.0%
Age Group by Gender (years)		
Male		
<1	373	23.3%
1-4	789	76.7%
Female		
<1	229	22.5%
1-4	789	77.5%
Primary Payer		
Medicare	28	0.8%
Medicaid	1173	32.3%
Private Insurance/HMO	2175	59.8%
Self-Pay	118	3.2%
No Charge	7	0.2%
Other	135	3.7%

As seen in Figure 1, the cumulative hospitalization at age 5 was 80.6% with the highest increase between ages one and two years old with 17.3% and 22.2% respectively. After reaching 10 years old the cumulative increase per year old is less than 1% (Figure 1).

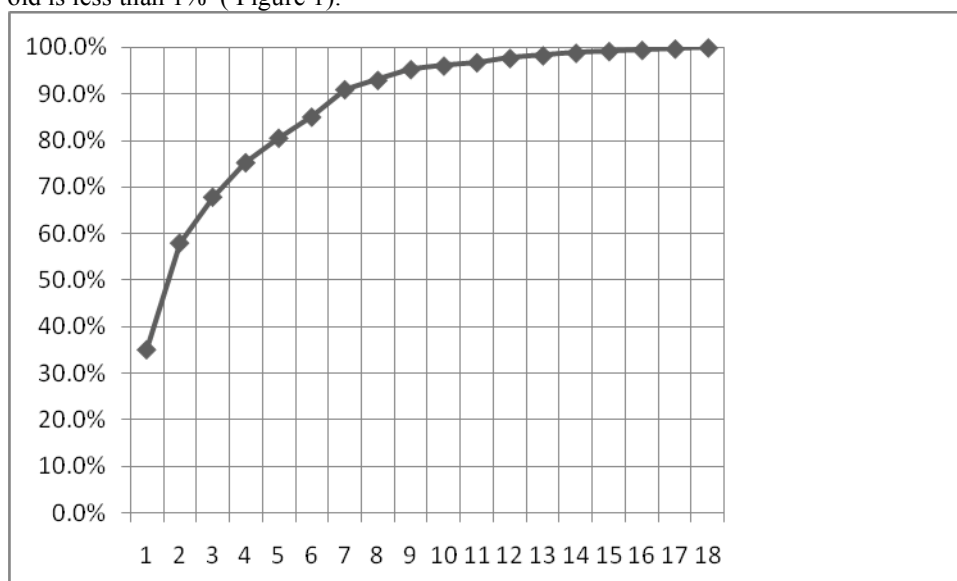


Figure 1: Cumulative Percent by Age in Kawasaki Disease patients: HCUP 2004-2006

Figure 2 displays the hospitalization by months by KD patients. Winter months had overall the highest incidence being March and January the months with the peak of hospitalizations with 10.9% and 10.4 % respectively. It is also

observed an upward trend from October to December with 6.9% and 9.2% respectively and descending trend from March to September when it reaches lowest point in year with only 6.2% of hospitalizations. When analyzed by group age and seasonality 1-4 age category followed the same trend but not infants less than one year old which admissions did followed a trend (Figure 2).

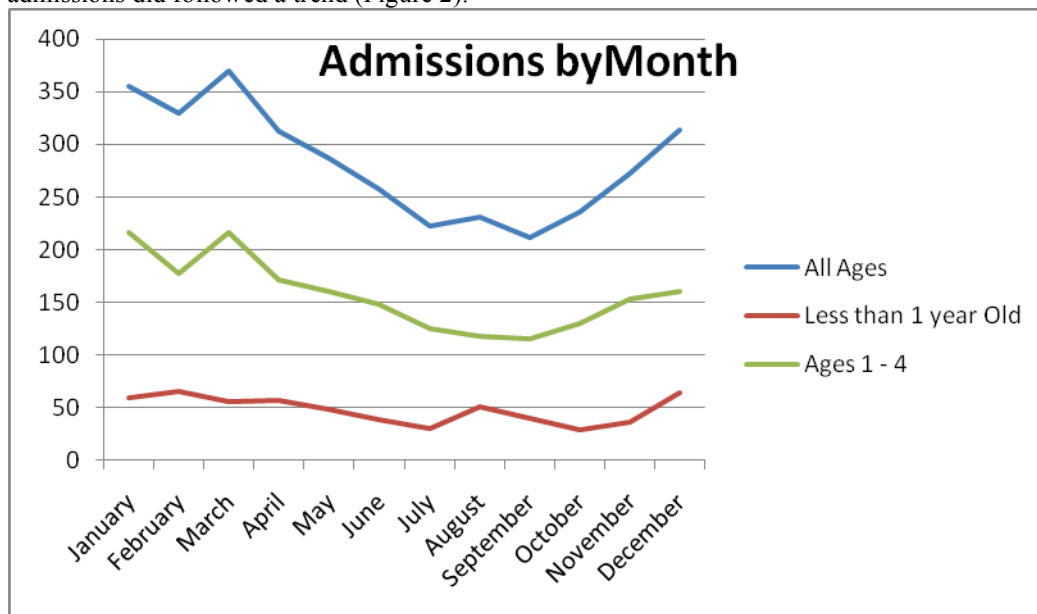


Figure 2: Hospitalization by Month, KD Patients HCUP 2004-2006

Figure 3 shows that the highest number of patients required only two days of Length of stay [LOS] 29.2% and most patients 78.4% were discharged equal to or less than 4 LOS (Figure 3).

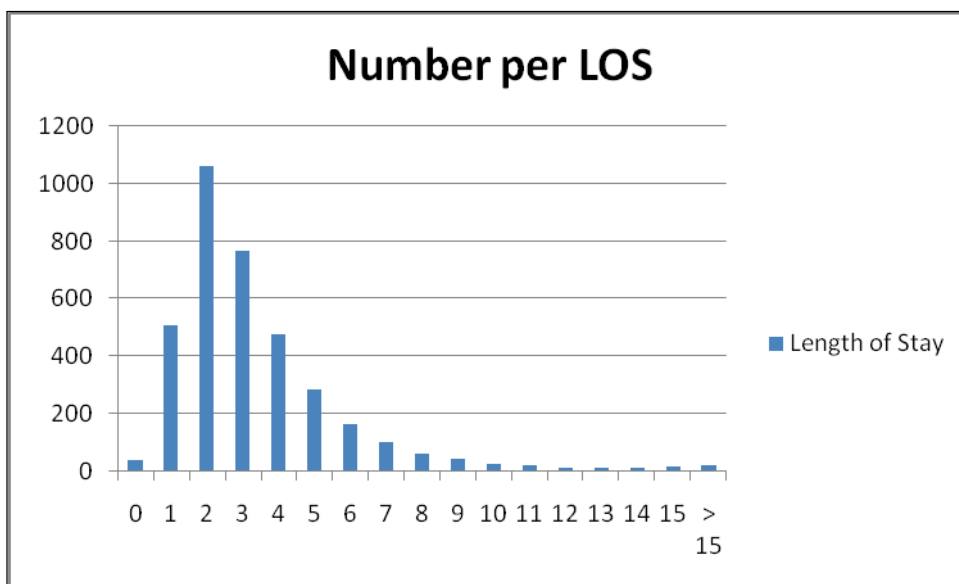


Figure 3: Hospitalization by month, KD Patients: HCUP 2004-2006

Table 3 shows distribution of Kawasaki disease cases in states with a rate above two percent. The most crowded states presented a higher incidence with California, Texas and New York with about 15%, 10% and 9 % respectively. West Virginia presented only one case in 3 years used for this study.

Table 3: Kawasaki disease
2006

STATE		
	Total	Total %
CA	543	14.91%
TX	358	9.83%
NY	329	9.03%
FL	235	6.45%
IL	184	5.05%
OH	172	4.72%
GA	167	4.59%
MA	158	4.34%
NC	119	3.27%
CT	107	2.94%
VA	103	2.83%
NJ	100	2.75%
HI	96	2.64%
MO	91	2.50%
TN	88	2.42%
MI	81	2.22%
KY	80	2.20%
WI	73	2.00%
		84.68%

Distribution by States: HCUP 2004-

DISCUSSION

All ethnic/racial groups were affected by KD in the study sample, with the highest hospitalization rates in children less than five, males and in NHW. However this last element requires further study to adjust for total population to get accurate incidence rates. Our results were close to the reported by Newburger et al (2004). and to other academic evidence indicating a higher hospitalization rate of KD among males and less than five years old.

Overall cases were more frequent during winter months and this trend was followed by KD patients in the 1-4 years old category however within infants < 1 year old this trend was almost flat. This might be an argument to believe that this disease might not be related to mosquitos and more to genetic predisposition as the incidence is higher in Japan, Hawaii and California. In addition, KD could be following an inverse epidemiological profile as presented in the Honolulu Heart study by Kagar (1996), however the incidence of children from Japanese descent is higher in Hawaii when compared with children living in Japan with an incidence of 197.7 per 100,000 hospitalizations (Holtman et al. 2005) which adds more mystery to the puzzle.

Most KD cases were discharged in less than four LOS which represents a short hospitalization and a possible explanation that the risk level is low as reported previously in Texas (Coustasse et al; 2009). In fact there was only one death which represented less than 0.04%.

Finally, the higher discharge rates in California, Texas, and New York are unadjusted by population so it might be representing only more cases in states with more population. At this moment further research is needed to adjust the results of the present study.

Limitations: The number of KD-associated hospitalizations might have been overestimated as multiple KD hospitalizations for single cases were not screened. Inversely, many KD cases could be missing from database because the disease could have been treated on an outpatient basis, since not all children diagnosed with KD required hospitalization. Many KD patients could have been seen by health care providers in urgent care, outpatient, and family care settings and as classical cases or incomplete or atypical KD cases.

Cases were reported by hospital discharge percentage, instead of hospitalization rates, using hospitalization per 100,000 discharged and US Census Bureau population to estimate the denominators, due to time constraints.

CONCLUSION

Kawasaki disease is the leading acquired cardiovascular disease in children. The results presented in this report are the most recent nationwide. The epidemiological trend of KD in this study were consistent with previous national incidence rates. This suggests that the incidence of KD has not changed markedly in the US in the last

decade. The etiology of Kawasaki disease remains unknown. There is the need to continue to monitor these trends as new data becomes available and more states report data.

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A NURSING MANAGEMENT CHALLENGE: HEALTH CARE NEEDS DURING A DISASTER

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ABSTRACT

During the aftermath of September 11th, our country was faced with the reality of uncertainty for planning for a catastrophic disaster in the future. Emergency medical agencies and institutions must have intact policies that can be put into operation immediately. After the tragic events on September 11th, all health care facilities had to review the policies and protocols to reflect the new threat of nuclear disaster and chemical warfare. Communication had to be stepped up as well as the coordination of services with the goal of making the most of the availability of services for the population as a whole.

The challenge that disaster management provided to health care was monumental yet necessary for society to recognize and plan for. Many resources had to be called upon. Funding had to be available and provided in the most expedient way. Training programs had to be instituted with the most accurate information available. Guidelines and policies had to be prepared and communicated to health care professionals.

Nursing has a role in this demand placed on health care. It is evident throughout the history of nursing practice, that nurses do make an impact on the needs presented by society in times of crisis. The role of the nurse has come a long way since Florence Nightingale during the Crimean War. But even Florence Nightingale left nursing with a legacy of taking action for the greater good by remembering that threats to the environment result in devastating results on the lives of our populations. Therefore who better to be involved with disaster management for health care needs in our country than professional nurses? Because nursing is both an art and science, nurses can draw on critical thinking skills to intervene during this time of uncertainty. Nursing education can meet the needs of disaster management in the community, in the education of future nurses, as we move into the 21st Century.

The objectives of this presentation will be to:

1. Briefly review the various types of disaster and their impact on society
2. Identify how leadership and management is handled in a disaster
3. Understand the roles of the professional nursing during a disaster
4. Assess the needs of special populations during a disaster
5. Evaluate the mental health needs of the disaster responders and victims
6. Understand the ethical aspects of a disaster

The outcomes of this presentation will be that the health care professional and health care management will be more aware of the needs that might be present during disaster which will involve immediate action, coordination of services, and accountability for provided the most positive responses that is possible at this time.

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INCREASING PUBLIC HEALTH EFFICACY: USING CULTURE AND A SOCIAL PSYCHOLOGICAL FRAMEWORK TO FOSTER BEHAVIOR CHANGE

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ABSTRACT

Culture gives members of a particular group a sense of identity and is societal-specific (Haviland, 1990). For these reasons, public health solutions may not be universally effective because their applicability does not transcend cultural boundaries. Cultural customs, traditions, and other characteristics also contribute to the complexity of public health issues when they are responsible for the circumstances that jeopardize health. In these situations, public health professionals should incorporate traditions, communication techniques, and other cultural characteristics of populations into public health campaigns to increase the efficacy of these initiatives, for programs involving solutions that oppose cultural and social norms are destined to fail. Current public health issues to benefit from this approach include nutrition, adolescent pregnancy, HIV/AIDS transmission, and violence, including that which is gender-based (Barry, 1995; Braine, 2009; Das Gupta, Mukherjee, Singh, Pande, & Basu, 2008; Fadiman, 1998; Fan, Conner, & Villarreal, 2007; Farmer, 1996; Morris, 2005; Obbo, 1996; Schoepf, 1996; USAID, 2003; WHO, 2009a, 2009b). An additional value of cultural adaptation is its applicability within the American healthcare system. Healthcare providers such as American hospitals have experienced obstacles to treatment on home soil that stemmed “from a lack of attention to cultural differences” while administering care to cultural sub-groups (Fadiman, 1998; Galanti, 2001).

This conflict between cultural competency and change is what makes familiarity with the specific qualities of a target population’s culture a relevant issue, for public health personnel will not be able to effect change unless program infrastructure is organic and their communication methods consistent with that of the community being served (Conquergood, 1988). Otherwise, key messages will not be transferred seamlessly into the surrounding environment. Both the World Health Organization (WHO) and Paul Farmer, world-renowned public health advocate and founder of the non-profit organization Partners in Health, support culturally integrative approaches to health. In its literature, the WHO has championed for “health care systems to be . . . accessible [and] culturally appropriate,” while Farmer (1996) has acknowledged the “lack of culturally appropriate prevention tools” as “significant factors” in the prevalence of HIV in rural Haiti (WHO Regional Office for the Western Pacific, 2006).

This paper asserts that the incorporation of traditions, communication techniques, and other cultural characteristics of populations into public health campaigns is the most effective way to increase the efficacy of these initiatives. The authors propose that in addition to tailoring intervention methods, social psychological concepts such as informational social influence, social norms, self-efficacy, and message framing can serve as tools to foster positive, sustainable results through behavior change (Aronson, Wilson, & Akert, 2007; Pruitt, 1998). Social psychology provides an especially valuable framework for approaching behavior change when the health-enhancing behaviors oppose cultural norms, for the adoption of such behaviors will be slow to occur due to the influence and authority that social and cultural norms exert over individuals.

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NEW APPROACHES FOR WORKING WITH PRECEPTORS TO ENHANCE STUDENT SUCCESS

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ABSTRACT

This paper explores some of the issues facing the changes in how faculty, preceptors and students interact and work together taking into account advances in technology, new learning approaches and the value equation for all parties involved in this essential relationship. The authors will provide their conceptual understanding of the relationship, share practical strategies, consider the essential questions and offer a beginning set of recommendations for future preceptor training in coaching and mentorship. The importance of proactively discussing this topic cannot be underestimated due to the critical link to leadership development.

INTRODUCTION

The best way to develop and enhance critical leadership and management skills is to do so under the supervision of an engaged mentor in an applied setting where the impact of content-focused education on the actual practices of the manager are reinforced by coaching and accountability. Preceptor training varies widely across the country with the norm being little to no emphasis focused on developing their mentoring skills and styles. In terms of AIT programs in health and aging services, there is much variation in required time, supervision, and structure of these programs across states. One of the challenges is that in many cases today, AIT programs are not funded by the state or by facilities and for those that are funded the pay is generally low. We also know that the perceived value and presence of mentors with formal programs has waned over the years, which suggests the value of this role warrants further attention and study (Olson, Prybill and Hilber, 2004).

The National Association of Long Term Care Administrator Boards (NAB) has established academic program accreditation criteria, which can be interpreted as minimal levels for quality preparation, and their guidelines incorporate a minimum 400 hour internship program. They require the use of experienced nursing home

administrators and, regular interim evaluations, and facilities must offer a comprehensive array of services, be licensed as long term care providers, and be free of chronic licensure problems (NAB Accreditation Workbook, 2003-2004). Many state licensing boards look to NAB accreditation guidelines as they set their own standards. There has been some discussion about advancing more rigorous standards and sharing best practices, but the net result has been only modest progress. Although the term “experienced” is a step in the right direction, it is vague and open to interpretation, and with no requirements for training or structure in *how* to best supervise and develop a trainee, the quality and experience of trainees can be expected to vary widely.

The University of Wisconsin – Eau Claire has offered a program in health and aging services administration for nearly 35 years. This program has seen many changes over recent years, and we have continued to try and stay ahead of the curve in our educational practices. Some trends we have been watching include innovative and applied learning approaches, for example, the neuroscience of leadership (Rock and Schwartz, 2006) and the evolving role of the preceptor as a mentor. We also have integrated and explored new approaches that leverage the ability to connect students and preceptors across geographical distances by using new web-based technologies and distance learning techniques. Working closely with preceptors to offer them structure and guidance in their approaches with students has continued to be a priority and has evolved over time as we have seen our program grow. These preceptors, whom we view as adjunct faculty, are critical to the professional development of our students.

As we look at innovative ways to train preceptors, it is important to first outline what defines a good preceptor. The preceptor student relationship is primary to the success of a practicum experience. Effective communication establishes mutual respect, trust, openness, honesty and acceptance of risk, which were qualities found in a recent work with the Fellows of the American College of Health Care Administrators (2008). These skills form much of the foundation of mentoring. Furthermore, outlining the qualities to be a successful mentor and providing opportunities to learn more about the differences and similarities in coaching, mentoring and preceptoring is imperative for the preceptor. These learning opportunities provide a good framework for guidance for the student and add value for preceptor as they can transfer many of these skills to professional development of their own staff. Developing talent within one’s own organization is an important leadership responsibility, and has recently been advanced as a core requirement of CEOs (or Administrators) as good business strategy (Buckingham, 1999). Mentoring within an organization is certainly one of the ways that leaders are effectively influencing the performance of their management teams and ultimately the success of their companies (Bell, 2002, George, 2003). These factors need to be paid attention as we consider the broader value equation for practitioners interacting with academic faculty, and the critical nature of the relationship.

CURRENT INNOVATIVE APPROACHES IN A GROWING HEALTH AND AGING SERVICES ADMINISTRATION PROGRAM

At UW – Eau Claire, we have spent considerable time in recent years making improvements to our approach in working with preceptors. Some of the enhancements we have made over the past two years include the following:

- 1) Conducting a face to face interactive session with faculty and preceptors exploring collective needs, ways to enhance training and communication, and sharing suggestions of innovative approaches.
- 2) Implementation of an effective, online video conference preceptor training session web-based and telephone technologies (which is described in further detail below).
- 3) Expansion of electronic, routine communications with them using electronic newsletters, group e-mails and individual e-mails to enhance traditional mail communications.
- 4) Conducting an integrated Preceptor assessment of student performance, which also introduced some preceptor performance opportunities (Appendix A).

- 5) Continuation of face-to-face on-site orientation site visits with students and preceptors at new practicum sites and follow-up visits as needed at any sites where potential issues have arisen.
- 6) Advancement of a larger national initiative, in partnership with the American College of Health Care Administrators and our Center for Health Administration and Aging Services Excellence, focused on mentoring as a necessary leadership skill set for Nursing Home Administrators.

A SPECIFIC CASE STUDY EXAMPLE OF AN ONLINE PRECEPTOR TRAINING APPROACH

As practicum experiences expand into larger regions, and financial resources continue to be challenged, it is imperative that internship advisors utilize current technologies to help the student and the preceptor develop in the respective practicum experience. Therefore, the University of Wisconsin - Eau Claire held three one hour web based training sessions for the preceptors. The purpose of each of these one hour sessions was to focus on recent changes made to the practicum, which better utilize on-line capacities for teaching, networking, and supervision. Each web-based training closed with an on line discussion regarding future opportunities for development of the practicum experience and the mentor-mentee relationship.

The on-line format allowed the instructor to use power points, conference calls and real time written communication to facilitate the training. Utilizing the on-line program, we provided 26 preceptors with a one hour educational session. The preceptors received their training within the first three weeks of their new practicum student beginning their experience.

The preceptor training focused on the following main topics:

1. Raise awareness of the new practicum approach and curriculum;
2. Provide a history of the program and increasing student enrollment;
3. Discuss practicum site criteria, and the need for diversity of program opportunities (SNF, Assisted Living, Clinic/Acute Care, and Community Based);
4. Introduce neuroscience of leadership (self discovery, rapport and trust, practice);
5. Outline the continuum of professional maturity (fundamental skills and knowledge, applied broad coursework, and leadership development modules);
6. Review student expectations of the practicum experience;
7. Provide strategies to being a good preceptor;
8. Identify the preceptor roles;
9. Identify the different phases for building the preceptor/student relationship;
10. Discuss the qualities of being a good mentor;
11. Reviewed the results of the pre and post NAB exam from the prior year;
12. Provide the 2008-09 preceptor assessment outcomes;
13. Provide discussion questions regarding the on-line platform and utilization of resources via current technologies.

Recommendations to improve the preceptor training are as follows:

1. Provide a pre-meeting tutorial to identify all the functions of the web-based tool;

2. Allow more time for preceptors to network and share experience of student involvement in their organizations;
3. Provide a list of other preceptors by region to enhance preceptor peer networking;
4. Provide periodic training throughout the 50 week practicum experience keeping pace with the students' profession growth.

In conclusion:

The on-line preceptor training was well received by the preceptors. The feedback that was received outlined the value of maintaining an online preceptor-faculty network. The preceptors' comments and feedback focused on establishing an online network that all preceptors could access via the web. This networking would allow preceptor peers to discuss strategies of mentoring and guiding students as they participate in their respective organizations. Also, an online networking format would allow sharing of ideas to occur in "real time." At the conclusion of the three training session, it was clear that the preceptors understood the value of utilizing the online format to better the outcomes of the practicum program.

DISCUSSION

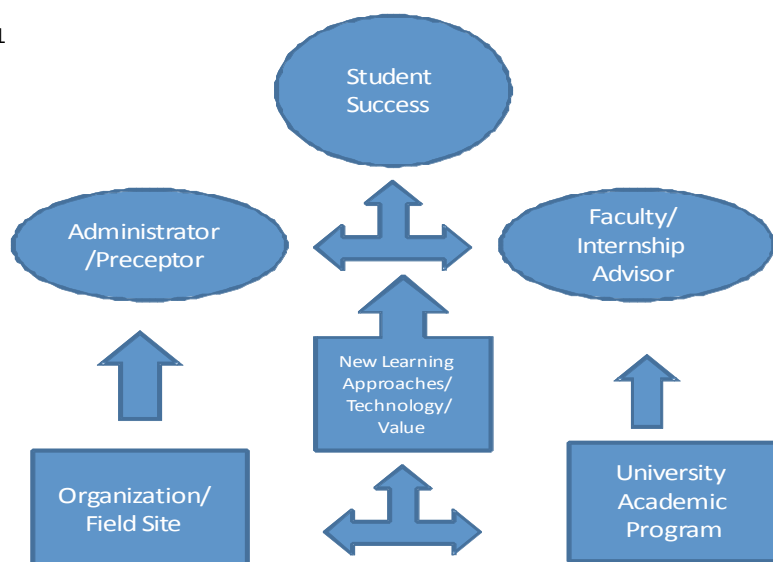
We have a number of interesting yet tough questions we continue to grapple with as we move forward with our ideas and approach to best support the field experience preceptor-student relationships. One of the first pragmatic issues is the balance of effort involved in having face-to-face time or using that time differently by supporting faculty and staff program assessment and development. The effort for any faculty member involved in the field experience has to be fluid between the roles of instructor, facilitator, and program designer, yet there certainly is a place for intention of effort.

That requires an evaluation of the value of the site visit, which is a traditional approach to monitoring a student's development and ensuring the quality of the preceptor/student relationship. We propose that we should be open to exploring alternative mechanisms to accomplish these goals. We also recognize other ancillary values of onsite visits, which may include interactive learning, enhancing everybody's knowledge, building relationships with other members of the leadership team partnerships, and enhancing the broader partnership between the academic program and the organization.

Therefore, the question really becomes, "When can elements of a site visit can be replaced by something else and what is that something else?" This analysis is what we view as one of the current tasks of academic programs done in partnership with the field. In some ways, as illustrated above, we are already intentionally shifting our efforts and time. Although it seems to be the right thing to do, do we really know at what cost this shift is occurring? We also need to decide if there are situations when a site visit cannot be replaced. These are very real questions for the field, but based on the technology is evolving new venues for communication and distance learning, coupled with the current economic climate these technology assisted approaches are likely to stay. Our challenge as educators is to minimize the "cost" while leveraging the advantages these approaches have to offer, and

We need to explore how a model can be developed that begins to capture the current possibilities and tensions in the ever evolving relationships of stakeholders involved in the field experience of a student (see Fig.1).

Figure 1



The model above is an initial step at conceptualizing how the critical factors of new learning approaches and technology have influence in the future development of program approaches. New pedagogical paradigms are already influencing learning models, for example, the principles put forward by the neuroscience of leadership, and technology has opened new doors of assessment, communication and sharing that are only beginning to be tapped. Faculty and preceptors are both looking for effective and efficient processes to be built and used to facilitate even greater student development and growth. We need to think about what the next stage of interaction looks like for all of the stakeholders.

Furthermore, we also need to more fully consider what value we are bringing to students, preceptors and organizations. The table below begins to outline some of the values drawn from literature in the mentoring field, experience with our own preceptors, and based on the recent field research with the ACHCA Fellows (Olson, 2008).

Table 1: Value of a Mentor – Protégé Relationship		
Preceptor	Site or Organization	Student or Protégé
Teaching	Energy	Personal Growth
Learning	Fresh Perspective	Professional Guidance
Self-fulfillment	Talent Development	Opportunities for Future

As noted above, the current economic climate has driven some of these value questions. We believe that this type of inquiry should be welcomed and looked at as essential to building a solid foundation for everyone involved in the field experience. Finally, we also would suggest that the alignment of energies focus on the ultimate success of the student as the universal goal and can never be forgotten.

RECOMMENDATIONS

The evolution we support is one that embodies a proactive, thoughtful approach, which requires a different set of activities to be in place to help guide preceptors in the field. To that end, the following initial list of recommendations is put forward for consideration.

- Continue to advance and support work to collect and document best practices on preceptor, faculty and student relationships.
- Allow program experimentation to evolve with new learning approaches and technology enhancements, especially if the right assessment tools are in place.
- Encourage the embedded utilization of NAB pre and post practice exams by educational programs with a focus in health and aging services to benchmark progress while in the practicum. Identify strengths and weaknesses in the 5 NAB domains to determine competency.
- Support specific research inquiry or survey work focusing on the effectiveness and efficiency of the “onsite visit”.
- Have a guided discussion with academics around these topics to validate a conceptual model of the relationship between stakeholders.
- Advance the intersection proposition between being a preceptor and mentor, and emphasize the value of mentoring as an important business skill for professionals.

This list is by no means intended to be all inclusive but rather a starting point to prime a discussion around this critical topic. The successful development of the next generation of leaders is essential to the health and aging service field and ultimately to the quality of care and service for the future residents of these organizations. It is imperative that we use thoughtful discernment and practice good stewardship with the advances we put forward and implement with this crucial link in the development process for our future leaders.

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MEDICATIONS: THE PROCESS OF PRESCRIBING AND THE MUSE IN TAKING

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ABSTRACT

This paper compares India and the United States in two areas. First, we examine how medications are prescribed, including the explanation given by doctors and the advice given by pharmacists, along with the extent that others share their medications with others. American doctors are better at explaining the medications. Americans are more likely to take others' medications. Second, we examine the reasons for individuals skipping their medications. Respondents from the United States are more likely to list not having the money, not having the medication with them, and having consumed alcohol, as reasons for skipping medications

INTRODUCTION

Prescription drugs are a major topic in today's society, from the new prescription benefit under Medicare to rising costs. The rate of inflation of prescription drugs roughly triples that of overall health care. This has caused many drugstore chains – including Kmart, RiteAid, and Wal-Mart to match lower prices in an area for prescription drugs (Consumer Reports, 2001).

This study is a comparison of two countries, United States and India, in terms of their use and misuse of prescription drugs. The United States and India differ in culture, economic development, and medical establishment. India is multi-cultural as is the United States. India has a rich heritage deriving from Hindu and Buddhism traditions. Recently, there is an influx of Muslim culture. The United States is traditional a Judeo-Christian tradition, with an influx of Muslim and other cultures. The United States is a well-developed country

economically with a tremendous industrial and commercial base. India is a rapidly developing country which is on the brink of being a world economic power. Medically, the United States is a traditional western medical system. There is evidence to support the use of non-western medical practices, including acupuncture and herbal medicines. India has a rich culture of a variety of medical practices including traditional western medicine. In fact, India is well-developed in certain procedures; such as, heart bypass surgery, and have hospitals run by prestigious American organizations; such as, Harvard University. Herbal products are used by a large number of people. In addition, Ayurvedic medicine is an important component of the medical system. Ayurvedic medicine involves the use of oils, diet, massage, yoga, and other routines.

There are two main issues that will be compared. First, we ask the consumer about the information provided by the doctor and the pharmacist. Physicians and pharmacists are to provide information and advice to the ultimate user, the patients. How well these groups performed are measured by the perceptions of the consumer.

Second, prescriptions are only the first step in the process. "Studies have discovered that medications are consumed by prescribed only about half the time." (Russell and Conn, 2005). There are many reasons for this behavior. Physicians can not just give a patient a prescription with directions on taking and assume that the protocol will be followed (Russell and Conn, 2005). One of the strategies adopted by beneficiaries exceeding annual drug benefit caps to lower their costs is to skipping their medication (Tseng et al., 2004). Many chronically ill patients underuse prescription medications because of cost (Piette and Heisler, 2004). Of those individuals, 2/3rd never told their doctor. Of those that told their doctors, 66% reported that nobody asked them whether they could pay, and 58% did not think that providers could help them (Piette and Heisler, 2004). Also, when people talked, 72% found the conversations useful (Piette and Heisler, 2004). Only a few patients were given other forms of assistance such as information about programs that help pay for prescriptions or offered advice about how to pay patients current regimens (Piette and Heisler, 2004). This study investigates why individuals skip doses of their medicines. The list includes cost as one of many factors.

Zachry et al. (2003) found that doctors are willing to talk to patients about drug information, but are less willing to talk about issues arising from direct-to-consumer advertising. People in this survey were asked whether the physician explained why the prescription was given and whether an alternative product, generic or other brand name, were discussed.

ANALYSIS OF DATA

Prescription medicines are commonplace in today's society, in both India and the United States. A survey was administered to 692 individuals in the United States and 710 individuals in India. A convenience sampling technique was adopted for the purpose of this study. The samples utilized for this study were unrestricted non-probability samples. The rationale for adopting this type of sample was that despite its minor drawbacks, all the respondents were legitimate consumers.

Questions were asked regarding 1) the doctor explains why the medicine is being prescribed, 2) pharmacy suggest an alternative product, 3) take a medicine prescribed for someone else, and 4) purchased medicine on the advice of the pharmacist. Also, respondents were asked if they ever skipped a dose of their medication. If they had, they were asked why they skipped the dosage.

Demographic Variables

Several demographic variables are included: 1) age (18 – 25, 26 – 45, 46 and over), 2) gender (male and female), 3) marital status (married or single), and 4) educations (less than Bachelor's degree and Bachelor degree or higher). Table 1 provides the results. Individuals surveyed in the United States are slightly older than those surveyed in India. There are more females in the United States group than there are in the Indian group. Also,

slightly more married individuals in the U.S. group. The group in India had a significantly higher percentage of people with a college degree.

Table 1
Demographics of U.S and India

Demographic Factor	United States		India	
	N	%	N	%
Age				
18-25	260	38.5%	348	49.6%
26-45	249	36.8%	230	32.8%
46 and Over	167	24.7%	123	17.5%
Total	676	100.0%	701	100.0%
Gender				
Male	322	46.8%	392	55.7%
Female	366	53.2%	312	44.3%
Total	688	100.0%	704	100.0%
Marital Status				
Single	397	58.0%	436	62.6%
Married	287	42.0%	260	37.4%
Total	684	100.0%	696	100.0%
Education				
<College Degree	274	40.5%	85	12.5%
College Degree and Above	402	59.5%	594	87.5%
Total	676	100.0%	679	100.0%

Analysis of Prescriptions

Respondents were asked several questions regarding their prescription and its use and substitution. Each question was answered by Always, Most Times, Some Times, Rarely, and Never. Table 2 provides the number of responses to each question along with the percentages for India and the United States. Table 3 provides the mean response for each group for each question, along with the t-test of the difference between the means.

TABLE 2
Understanding Prescriptions and Alternative Products

Question		Always	Most Times	Some Times	Rarely	Never	Total
Doctor Explains	U.S.	306 48.8%	217 34.6%	76 12.1%	20 3.2%	8 1.3%	627 100.0%
	India	104 19.3%	213 39.5%	152 28.2%	58 10.8%	12 2.2%	539 100.0%

Alternative Product Suggested	U.S.	63 10.1%	152 24.4%	215 34.5%	117 18.8%	77 12.3%	624 100.0%
	India	37 6.9%	113 20.9%	251 45.6%	101 18.7%	38 7.0%	540 100.0%
Take Others' Medicines	U.S.	5 0.8%	30 4.8%	166 26.5%	234 37.3%	192 30.6%	627 100.0%
	India	23 4.3%	64 11.9%	124 23.0%	165 30.7%	162 30.1%	538 100.0%
Purchase on Advise of Pharmacist	U.S.	12 1.9%	62 10.0%	305 49.0%	138 22.2%	106 17.0%	623 100.0%
	India	26 4.8%	81 15.0%	155 28.7%	163 30.2%	115 21.3%	540 100.0%

Table 3
t-tests for U.S. versus India

Question		Mean	Standard Deviation	Sign.
Doctor Explains	U.S.	1.74	0.885	.000*
	India	2.37	0.985	
Alternative Product Suggested	U.S.	2.99	1.153	.907
	India	2.98	0.976	
Take Others' Medicines	U.S.	3.92	0.911	.000*
	India	3.70	1.143	
Purchase on Advise of Pharmacist	U.S.	3.42	0.949	.343
	India	3.48	1.126	

The first question is whether the doctor explained to them the reason the medication was prescribed. The vast majority (83.4%) of respondents in the U.S. answered either always or most times that the doctor explained the reason that why he/she is prescribing the medication, with 12.1% of the respondents stating some times, with 4.5% stated rarely or never. For India, only 59.8% stated always or most times, with 28.2% stating some times, and 13.0% state rarely or never. The mean response for the United States was 1.74 and the mean for India was 2.37. The difference was statistically significant with a p-value = .000. This implies that doctors in the United States explain more often why a medication is being prescribed. There may be several reasons for this. One may be that due to media, the United States consumers are more apt to have additional information and thus ask questions. There may also be a cultural difference, where Indian citizens may be more likely to see a greater status difference between themselves and the physician.

The second question asks how often the pharmacy suggested an alternative product (e.g., generic or other brand name) rather than what the doctor prescribed. Of the respondents in the United States, 34.5% suggest that pharmacy always or most times suggests alternative (including generics), with 34.5% stating some times, 31.3% stating rarely or never. The respondents from India answered always or most times 27.8% of the time, 45.6% with some times, and 25.7% rarely or never. The mean responses were 2.99 for the United States and 2.98 for India. The difference was not statistically significant.

Respondents were asked if they taken a prescription medicine prescribed for someone else. In the United States, the response were 67.9% stating rarely or never with 26.5% stating some times, and only 5.2% stating always or most times. The Indian responses were different with 60.8% stating never or rarely, 23.05 stating some times, but 16.2% stating most times or always. The means were 3.92 for the U.S. and 3.70 for India. The difference between the means was statistically significant with a $p = .000$. Again, this may be a cultural issue. U.S. residents have been warned not to take other's medicines. In India, sharing of herbal products and other medical products is a commonplace event.

Respondents were asked how often they had purchased medicine on the advice of pharmacy personnel. In the U.S., 11.9% stated that they purchased on advice of pharmacist always or most times, with 49.0% stating some times, and 39.2% stating rarely or never. In India, 19.8% of the respondents stated that they purchased drugs on the advice of the pharmacist always or most times, with 28.7% stating some times, and 51.5% stating rarely or never. The difference between the means (U.S 3.42 and India 3.48) was not statistically significant.

Skipping of Medicine

Respondents were asked if they intentionally skipped their medicine. In the United States, 317 respondents stated that they purposely skipped their medications. In India, 310 respondents stated that they purposely skipped their medications. These individuals in both countries were then asked why they skipped their medication. There was no statistically significant difference in the number of individuals that skipped medication between the two countries. Numerous reasons were given with some individuals giving more than one reason for skipping medicines. These reasons are presented here along with chi-square test of significance. Then, a likelihood ratio is provided to determine, if the respondents from either country is more likely to present this as a reason. The likelihood ratio was tested for statistical significance. Table 4 presents these results.

TABLE 4
Reasons for Skipping Medication

Reason	Country	Yes	No	p-Value	Likelihood Ratio 95% C.I. (US vs. India)
Purposely Skipped Taking	U.S.	317 50.6%	273 49.5%	.706	-
	India	310 49.4%	279 50.5%		
Reasons Why Skipped (N= No. of Yeses)					
Did Not Have the Money	U.S.	71 22.1%	250 77.9%	.003*	1.314 (1.119 – 1.543)
	India	36 12.8%	245 87.2%		

Didn't Think that I needed the medicine	U.S.	201 62.4%	121 37.6%	.200	--
	India	161 57.3%	120 42.7%		
Didn't Have the medicine with me at the time I was scheduled to take.	U.S.	212 66.2%	108 33.8%	.000*	1.507 (1.276 – 1.780)
	India	128 45.6%	153 54.4%		
Had not eaten or drank anything and thought I should not take.	U.S.	106 32.9%	216 67.1%	.253	--
	India	105 37.4%	176 62.6%		
Had taken other medicines and thought there might be an interaction.	U.S.	69 21.4%	253 78.6%	.574	--
	India	55 19.6%	226 80.4%		
Had consumed alcohol and then realized that I cannot take the medicine if I consumed alcohol	U.S.	75 23.4%	246 76.6%	.000*	1.379 (1.182 – 1.609)
	India	34 12.1%	247 87.9%		

The first reason is that the individual did not have the money. In the United States, 22.1% of the respondents gave this as a reason for skipping their medication, with only 12.8% of Indians listing this as a reason. The difference was statistically significant with $p = .003$. The likelihood ratio was 1.314 which implies that the respondents from the U.S. was 1.314 times as likely as respondents from India to give this as an excuse for not taking their medication. This may be due to differences in cost of medications in the two countries.

The second reason is that people did not think that they had to take the medicine. This is especially true with antibiotics. When people begin to feel better, they stop taking the medication, even though the directions say to take all. In the U.S., 62.4% of the respondents gave this as a reason compared to 57.3% in India. This difference was not statistically significant ($p = .200$).

Third, people stated that they did not have the medication with them when it was to be taken. In the U.S., this was given by 66.2% of the respondents compared with only 45.6% of the respondent in India. The difference was statistically significant with $p = .000$ and the likelihood ratio of United States to India being 1.507.

Fourth, the fact that people had not eaten or drank anything, when that may be a caution of the prescription, was given by 32.9% of the U.S. respondents and 37.4% of the Indian respondents. This difference is not statistically significant.

Fifth, people gave the reason that had taken other medicines and were concerned with interactions. In the U.S., 21.4% listed this reason as compared with 19.6% of Indian respondents. Again, this difference is not statistically significant.

Sixth and finally, consumption of alcohol was given as a reason. In the United States, 23.4% gave this as a reason versus only 12.1% of the Indian respondents. This difference is statistically significant with $p = .000$. The likelihood ratio is 1.379 with United States respondents more likely to give this as a reason for skipping

medications. The reason for this may be due to cultural differences. Some of the religious sects in India forbid the use of alcoholic beverages. This may account for at least part of the difference.

CONCLUSION

The purpose of this paper was to compare two countries, India and the United States, in terms of several aspects of prescription medications. The two countries are different in culture, economic development, and medical establishment, although there are many similarities.

The conclusions reached are as follows:

- 1) Doctors in the United States are more likely to explain why a medication is prescribed.
- 2) Individuals in India are more likely to take other people's medication.
- 3) Individuals in the United States are more likely to skip medication on purpose for the following reasons:
 - a) Did not have money.
 - b) Did not have the medication with me.
 - c) Had consumed alcohol and realized there may be interactions.

This paper presents some significant differences in the behavior patterns of these two countries. It would be interesting to delve further to determine the reasons for these differences. For example, is the reason that Americans give money as a reason for skipping medications, due to differences in cost? Another interesting area of research would be to compare the United States to a country with a culture more similar; such as, Canada, Great Britain. Also, it would be interesting to compare to a country that is less developed economically and medically; such as, either Southeast Asian country or Latin American.

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EXPANDING PRACTICE VENUES FOR DENTAL HYGIENE: IMPROVING OUTCOMES AND REDUCING COSTS

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ABSTRACT

Concerns about healthcare costs and outcomes continue to dominate the political landscape. Lost in much of this debate are ideas about how we can achieve better outcomes in a more economical way. This paper outlines one straight forward approach which involves expanding the practice setting of dental hygienists. By allowing dental hygienists to see more patients in a greater variety of venues we can strengthen the linkages between oral and systemic health and improve both.

INTRODUCTION

Once again the health care delivery system of the United States is under intense scrutiny. The heightened investigation is a by-product of a push towards health care reform. Reform has been occasioned by the confluence of increasingly high costs of health care, the large number of uninsured, and an overall dissatisfaction with many health care outcomes

In 2008, the United States spent approximately \$2.4 trillion on health care. Left unchecked this amount is projected to reach \$3.1 trillion in 2012 and \$4.3 trillion by 2016.¹ This level of spending is 4.3 times the amount that is spent on national defense.² The dollars spent on health care approaches seventeen percent of the country's GDP.¹ The interesting paradox of this spending is that as large as it is, we still have some 47 million people uninsured. We spend more than other industrialized countries who manage to provide health care coverage to all of their citizens while we have the 47 million uncovered.² We can argue the relative merits of this coverage, but none-the-less the lack of comprehensive coverage in the United States bespeaks of a major problem.

An additional area of concern for the U.S. health care delivery system is outcomes. On many measures these outcomes are far from satisfactory particularly when we factor in the amount of money being spent. Take for example deaths and re-hospitalizations for elderly patients who have had heart failure. Deaths from heart failure at 30 days, 180 days, and one year past the event were 11 percent, 26

percent, and 37 percent respectively. Additionally, almost one in four patients had to be re-hospitalized within 30 days after their initial stay. On a longer view one in three patients died of heart failure, and approximately two-thirds were re-hospitalized within a one year follow-up.³

Another good measure of health care outcomes is the percentage of births in a country that are classified as low birth weight. On this measure three are twenty-one industrialized countries that are doing a better job than the United States. The U.S. has an approximate rate of 7.8 percent of its births classified as low birth weight. This compares to Iceland's 4.1 percent, Finland's 4.3 percent, Italy's 6.0 percent among others.⁴

Clearly, while many argue that the U.S. health care system is the best in the world, there are many deficiencies in this system. What we are proposing is to look at current delivery and make it more cost effective and produce better outcomes. We are not looking to overhaul the system, but rather introduce new paradigms that will expand roles and bring about greater cohesion. Specifically we want to propose expanding the role of the dental hygienist beyond that of the dental office. With the many well established linkages between oral and systemic health, it flies in the face of reason not to use the dental hygienist in other venues of health care delivery.

ORAL AND SYSTEMIC HEALTH CONNECTIONS

The relationship between oral disease and systemic disease begins with the creation of inflammatory processes that typically result from periodontal disease. Periodontitis is caused by bacterial infection which affects supporting tooth structures including the gingival, periodontal ligament, cementum, and bone.⁵ These causative gram negative bacteria contain metabolic products and lipopolysaccharides within their cell walls which initiates the inflammatory process in the mouth. The process is further exacerbated as the bacteria attacks the junctional epithelium cells which triggers the release of inflammatory mediators; cytokines, prostaglandin E2, matrix metalloproteinases, and tumor necrosis factor.⁵ The systemic connection begins as these inflammatory mediators travel to the liver where they stimulate the production C-reactive proteins. Elevation of the C-reactive protein levels can damage the lining of the coronary arteries which will produce atherosclerosis and subsequent emboli. Increased levels of C-reactive protein have also been correlated to increased morbidity from diabetes.⁶

Studies have shown that the risk for cardiovascular disease may increase as much as 20% in the presence of periodontal disease and the risk for stroke appears to be even greater.⁷ The inflammatory process mention above may be assisted by the causative bacteria infection atherosclerotic lesions after they have been developed. This further promotes inflammation and underscores the systemic sequelae of periodontitis.⁸ Other studies have shown that atheromatous lesions in the carotid arteries have been found to contain antigen from periodontal pathogens giving more evidence to the linkage between periodontitis and cardiovascular disease.⁹ Significance of this relationship is compelling in light of the fact that cardiovascular disease is the leading cause of death in the United States.¹⁰

The diabetes issue is almost equally crucial considering that this condition is becoming more and more prevalent in our population.¹¹ The relationship between periodontitis and diabetes works both ways; namely, periodontitis is a major complication of diabetes and periodontitis increases the risk of poor glycemic control in diabetes.¹² The probable explanation for greater existence of periodontitis in diabetics is that diabetes itself tends to increase the susceptibility to infection and the disease also impedes the utility of immune cell mechanisms that control infection.¹³

The more practical aspects of the oral/systemic disease connections can be seen with pathologies relatively common in the geriatric patient: the Gastroesophageal reflux disease (GERD), chronic liver disease, and anemia.

GERD has been linked to aging.¹³ The increase of acid in the oral cavity causes erosion of enamel which can expose the underlying dentin.¹⁴ An examination of the mouth will reveal this exposed dentin and help corroborate the presence of GERD.

Chronic liver disease impacts the coagulation pathway by impeding the proper absorption of vitamin K from the intestines. Additional clotting factors in the clotting cascade are also synthesized in the liver; therefore impaired liver function will interfere with hemostasis.¹⁵ Orally anemia will be manifested as petechiae or excessive gingival bleeding. These signs are especially indicative when no obvious oral inflammation is observed.¹⁶ The dental hygienist examining the mouth and noticing the absence of inflammation but the presence of petechiae excessive oral bleeding will be alerted to the strong possibility of underlying liver disease.

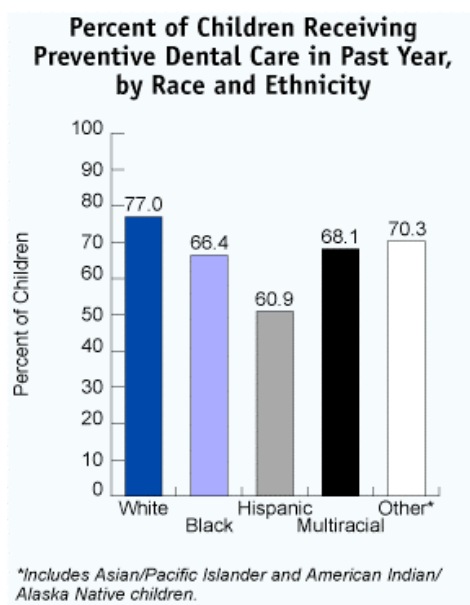
Linkages have been established demonstrating that eating patterns common in the geriatric patients exclude essential minerals necessary in the prevention of anemia. Most important of these are folate and cyanocobalamin. Anemia is expressed orally in two principal ways: the oral mucosa exhibits pallor, and glossitis develops. Glossitis causes the tongue to appear markedly redder than normal and the papillae of the tongue are atrophic which gives the tongue a somewhat smooth appearance.¹⁷ Again, oral examination will easily reveal these symptoms and alert the dental hygienist to the presence of anemia in a cost effective manner.

DENTAL HYGIENISTS AND PEDIATRICS

One of the most fundamental adages in health economics is that preventative care is far less expensive than curative care. Or to put it another way it is easier and less costly to prevent a medical condition rather than trying to eradicate it after a patient has developed it. As such when we look for ways to reduce costs and improve outcomes in health care delivery it is imperative that we use all possible screening opportunities at the earliest possible time. Normal oral health screening can obviously be done during visits to the dental office. When, however, dental visits are not part of a child's routine then this opportunity is lost. While the use of ambulatory dental care has markedly improved, there still exists a sizable population of untreated children. In a study conducted for the Institute for Health Policy Studies researchers found that over the past two decades the untreated rate fell from 38.5 percent to 26.3 percent.¹⁸ While this improvement is significant we are still dealing with over one-quarter of children between the ages of two and seventeen who are not getting oral health services. The significance of this omission becomes apparent when we look at the sequelae of this omission.

The chart below illustrates the discrepancies of children receiving dental care relative to race and ethnicity. The existence of these disparities begs the implementation of a system or solution to address the problem.

Figure 1



Source: The Oral Health of Children: A Portrait of States and the Nation 2005.

Clearly departments of public health have to understand the need to offer more expansive services, particularly as they relate to oral health. Dental hygienists are uniquely positioned to screen for dental and oral health problems. Likewise they can provide necessary oral health education and proper referrals to individuals who need additional or more extensive treatment. Similar services can also be offered by dental hygienists as they work adjunctively in pediatrics. Interventions by dental hygienists can be greatly facilitated by the use of a screening instrument (see figure 2).

Periodontal diseases have been identified as being among the most common diseases affecting children and adolescents. The periodontal diseases most indicated are chronic gingivitis or dental plaque – induced gingival diseases and early onset periodontitis or aggressive periodontitis.¹⁹ Chronic gingivitis is not easily detected by a cursory oral examination. It is however part of the scope of practice for dental hygienists. Most physicians do not receive sufficient training on preventative dental care. One study found that most physician respondents received two hours or less during their medical and specialty training.²⁰ It becomes apparent as we investigate the oral systemic health linkages that early detection is crucial. Having a dental hygienist as part of the team in a pediatrician's office would go a long way in identifying oral health problems. Not only would this early intervention help stem further oral health problems, it would also possibly stem the many systematic diseases that have been linked to poor oral health.

A further crucial issue to consider in the oral health of children is the use of topical fluorides. In a position paper published by the Dental Hygienists Association of the State of New York, the Association made reference to the Surgeon General's Report on Oral Health and how this report linked poor oral health and the lack of access to proper oral care. This linkage was especially acute in underserved populations. Their recommendation is the use of topical fluorides as an effective means of reducing the risk of carries particularly in the underserved high-risk populations.²¹

A study conducted on American Indian children found that fluoride varnish applied to the teeth at well child care visits reduced the incidence of carries by 35% in this population.²² The key in both of these reports is that fluoride treatments are an important part of oral health particularly in at risk populations.

With approximately 26% of children in the United States not receiving ambulatory dental care it becomes clear that some form of this care must accompany regular medical care. The best and most obvious solution is to have dental hygienists available to give fluoride treatments as part of well child medical care.

Figure 2

Pediatric Oral Health Survey

Patient's Name: _____

Date: _____

Examiner's Name: _____

(To be completed by the child and parent)

I. Directions: Please check all of the following related to your teeth and gums.

Are you experiencing any of the following?

1. Red, swollen or tender gums?

Yes ☐ No ☐

2. Pain in your mouth?

Yes ☐ No ☐

3. Bleeding while brushing, flossing or eating hard food?

Yes ☐ No ☐

4. Gums that are receding or pulling away from the teeth causing your teeth to look larger than before?

Yes ☐ No ☐

5. Loose or separating teeth?

Yes ☐ No ☐

6. Pus in your gums?

Yes ☐ No ☐

7. Sores in our mouth?

Yes ☐ No ☐

8. Persistent bad breath?

Yes ☐ No ☐

9. A change in the way your teeth fit together when you bite?

Yes ☐ No ☐Score: Yes _____
NumberNo _____
NumberReferred for dental examination : Yes ☐ No ☐

Comments:

II. Oral Assessment done by the Dental Hygienist

Using appropriate PPE (personal protective equipment), tongue blade and good light source examine the teeth and gingiva for the following:

**Bleeding**

Bleeding gums during tooth brushing, flossing or any other time.

www.perio.orgClinical Signs ☐ Yes ☐ No**Puffiness**

Swollen and bright gums.

www.perio.orgClinical Signs ☐ Yes ☐ No**Recession**

Gums that have receded away sometimes exposing roots.

www.perio.orgClinical Signs ☐ Yes ☐ No

**Mild Decay**
www.ada.org/topics/decay
Clinical Signs ☐ Yes ☐**Moderate Decay**
www.ada.org/topics/decay
Clinical Signs ☐ Yes ☐**Severe Decay**
www.ada.org/topics/decay
Clinical Signs ☐ Yes ☐

III. Dental Hygiene Treatment Plan:

Unfortunately the patients currently in the healthcare system presenting as a geriatric patient have not had early oral preventive care opportunities.²³ As a result many older adults have untreated oral disease. Recognizing this problem the American Dental Association (ADA) Foundation established grants for pilot programs addressing access to care issues for the older adult, using a \$250,000 grant from GlaxoSmithKline (GSK) Consumer Healthcare. The Oral Longevity program goal is to create a dialogue between patients, caregivers and health professionals.²⁴

One way to meet this goal and determine the oral health status and assure referral of the senior patients to dental offices and treatment clinics for needed care, is to include an oral health screening by a dental hygienist as part of an examination in the primary physicians' and specialists' offices. This screening can be done to detect special needs of this geriatric population related to dental caries and tooth loss, periodontal disease oral pharyngeal cancer, oral mucosal lesions, candidiasis, and temporomandibular disorders as well as screen for oral indicators of systemic diseases.

The three measures of oral health status are caries, periodontal disease and oral cancer. Additionally, tooth loss is a global measure of the oral health status of a population. Tooth loss and edentulism are consequence of caries and periodontal disease, but teeth are removed for a variety of other reason including lack of restorative dental services, prosthetic reasons, personal choice and lack of resources to pay for dental care. The adults bear a greater oral disease burden than other age groups.²⁵

Dental caries in the elderly manifest primarily as root caries (as a result of the exposure of the more vulnerable root surfaces which can occur when periodontitis is present) and recurrent caries found in dental restorations. Oral cancer is a disease of older adults, with a mean age of diagnosis in the United States of 64 years.²⁶

Managing oral disease is complicated by all of the considerations that accompany the care of older adults. The physical status of these individuals will vary. The care of older adults is complicated by illness and the use of medications that can affect the patient's ability to tolerate routine dental care. The consequences of untreated oral disease are serious and include severe morbidity and mortality associated with oral cancer; the potential of long-standing, untreated oral disease (primarily periodontitis) contributing to the risk for a number of systemic disorders affecting the elderly including cardiovascular/cerebrovascular diseases; and the effects of tooth loss on mastication and nutritional intake, self-image and comfort with social interactions.²⁵

Oral Health Professionals: Access to Oral Disease Screening

The shortage of skilled geriatric dental care professionals is part of a larger national shortage of geriatricians. Unlike medical schools and other health professional training programs, dental hygiene and predoctoral dental education programs provide limited didactic training and rarely allow students opportunities to work with medically compromised and cognitively impaired dependent older adults. As such, few dentists are trained to provide care to this population. Providing venues for care of opportunities for oral health care providers in physician's offices can work to better educate these providers.

Interdisciplinary Opportunities: Making a Difference

Oral health care professionals often fail to achieve improvements in the oral health of the community because they do not share their knowledge and expertise with those beyond the dental office.²⁶ Limited efforts have been instituted to facilitate the inclusion of oral health in general health. This isolation sends the message to other health professionals, policymakers and the public that oral health is not as important as general health.²⁷ This isolation is perpetuated by the limited oral health curricula in most health care professional schools. Without adequate knowledge physicians and other primary health care providers do not recognize oral disease.²⁸

Until and if an oral health training program for primary health providers – physicians, physician assistants, nurse practitioners and all levels of nursing personnel is implemented, the dental hygienist manpower should be utilized. Hygienists are educated to provide oral health assessments, that is, to assess and differentiate common signs and symptoms of oral diseases, to identify disease risk and to know referral source.²⁵

An oral assessment should be viewed as a natural extension of a general physical examination. Identifying the oral health status of older adults requires substantial familiarity with oral health knowledge and assessment techniques. Embedding oral health into a general health assessment will help both the practitioner and their patients recognize oral health is an integral component of general health, and it will help to remove oral health care from its silo.²⁵

As a group, the elderly suffer disproportionately from oral disease and access to oral health care. Older adults are faced with numerous barriers to oral health care, ranging from their knowledge and attitudes about oral health to those of general oral health professionals to financial concerns and health status.²⁵ It is recommended that all adults, especially those who are frail and dependent, obtain an annual or biannual comprehensive oral examination. Frequent dental hygiene appointments may be planned as needed to eliminate factors that predispose older adults to oral disease and to assist them in maintaining their optimal level of oral health.

In recognition of the Surgeon General's statement that health care professionals should be educated in the importance of oral health to overall health and well-being (U.S. DHHS, 2000), new models of collaboration should be developed. There are few successful programs throughout the country focused on improving the oral care for older adults, and most health care professionals and policymakers have not been successful in ensuring that older adults receive an annual oral health examination. Positioning a dental hygienist in primary and specialty physician's office can address the Surgeon General's concern.

The dental hygienist can become part of the patient's health status screening team. This oral health care provider can guide the patient through the self screening check list and perform the visual examination (See figure 3). The dental hygienist can then develop the dental hygiene treatment plan and make appropriate referrals.

Figure 3

Geriatric Oral Health Survey

Patient's Name: _____

Date: _____

Examiner's Name: _____

(To be completed by the patient)

II. Directions: Please check all of the following related to your teeth and gums.

Are you experiencing any of the following?

1. Red, swollen or tender gums?
Yes ☐ No ☐
2. Pain in your mouth?
Yes ☐ No ☐
3. Bleeding while brushing, flossing or eating hard food?
Yes ☐ No ☐
4. Gums that are receding or pulling away from the teeth causing your teeth to look larger than before?
Yes ☐ No ☐
5. Loose or separating teeth?
Yes ☐ No ☐
6. Pus between your gums and teeth?
Yes ☐ No ☐
7. Sores in our mouth?
Yes ☐ No ☐
8. Persistent bad breath?
Yes ☐ No ☐
9. A change in the way your teeth fit together when you bite?
Yes ☐ No ☐
10. A change in the fit of partial dentures?
Yes ☐ No ☐

Score: Yes _____ No _____
Number NumberRe Referred for dental examination : Yes ☐ No ☐

Co Comments:

II. Oral Assessment done by the Dental Hygienist

Using appropriate PPE (personal protective equipment), tongue blade and good light source examine the teeth and gingiva for the following:



“Chronic Periodontitis”
Color Atlas of Periodontology
Wolf and Hassell
Clinical Signs ☐ Yes ☐ No



“Chronic Periodontitis”
Color Atlas of Periodontology
Wolf and Hassell
Clinical Signs ☐ Yes ☐ No



Color Atlas of Periodontology
Wolf and Hassell
Clinical Signs ☐ Yes ☐ No



“Aggressive Periodontitis”
Color Atlas of Periodontology
Wolf and Hassell
Clinical Signs ☐ Yes ☐ No



Necrotizing Ulcerative Gingivitis
Wolf and Hassell
Clinical Signs ☐ Yes ☐ No



Necrotizing Ulcerative Periodontitis
Carranza's Clinical Periodontology
Newman, Takei and Carranza
Clinical Signs ☐ Yes ☐ No

III. Dental Hygiene Treatment Plan:

less costly, and provides overall better outcomes. Unfortunately, cost seems to dominate the conversations and we can not get past the question of who is going to pay. There does not seem to exist the will to look at the system much more holistically and work at solving systemic problems that affect health care delivery.

An often overlooked approach to increase access and simultaneously reduce costs is to expand concepts that we have been using for years. The utilization of health care practitioners' extenders has been in place for a number of years. Within health care delivery we have physicians assistants, nurse practitioners, pharmacy technicians, assistants for physical and occupational therapists, just to name a few. When these ancillary personnel are used to the full extent of their training and scopes of practice, appreciable savings accrue to the system. But it seems lately that we have stopped looking for ways to expand the use of the extender concept. A logical application of this concept would be to broaden the practice venues for the dental hygienist.

The connections between oral and systemic health have been well established and articulated. What has not been well established are the ways that we can use these connections both diagnostically and prophylactically to improve outcomes without increasing costs. The dental hygienist is uniquely positioned to bridge this gap by serving in areas outside the dental office. The basic training and scope of practice of the dental hygienist allows this person to recognize the early onset of oral problems that may subsequently develop into systemic difficulties or are manifestations of their current existence. This gate keeping screening activity will greatly improve outcomes without adding appreciable cost. If we are to improve health care delivery sound strategies such as these must be developed and implemented.

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DEVELOPING HEALTH PROMOTION STRATEGIES IN COMMUNITY SETTINGS THROUGH ACADEMIC AND CLINICAL PARTNERSHIPS

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ABSTRACT

Increasing health care issues within the community setting have posed significant challenges to health care administrators across the country. In an era of health care reform and economic instability it is imperative for administrators, educators and health care providers to collaborate and be responsible for offering health promotion education programs, preventive health services and monitoring health behaviors in the community. Health care professionals need to take the time to discuss behaviors that may improve the quality of life and extend years of life.

Providers and administrators need to look for partnerships in the community through which they can better serve the needs of individuals. *Healthy People 2010* emphasize the efforts of partnerships and partnership building as essential to health promotion. Current and emergent demographic and economic trends for the geographic area served need to be examined to determine the health needs of the community.

One approach to partnerships is an innovative model created by the nursing faculty at Ramapo College of New Jersey. This model blends the clinical expertise of advanced practice nurses with nurse educators in an academic setting. The model offers unique challenges and an exciting broad range of experiences in community-based health care settings. Students are on site for their clinical rotations and specialty areas in the community while nurse educators provide the didactic component of the curriculum at Ramapo College. Faculty also works with the clinical agencies on many collaborative research projects and community-based prevention efforts such as encouraging positive health behaviors, providing education about prevention services and general health information, screening and referral services. These interventions are implemented at health fairs, clinics, existing community organizations and community - based change projects.

This innovative model provides the foundation for a successful partnership as well as strengthening the delivery of comprehensive health care to the community, monitoring the quality of preventive and health promotion programs and improving the relationships among the community, educational institutions, health care agencies and the nursing profession. The partnership also has the unique opportunity to promote change and acceptance through education and advocacy.

The partnership model will be described during this presentation as well as health promotion and disease prevention strategies which provide the foundation for this interactive model that could be adapted for other health care systems.

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MAKING A DIFFERENCE TO THE VERY END: DEVELOPMENT OF A VOLUNTEER PROGRAM TO SERVE ACTIVELY DYING CLIENTS AS A STRATEGY FOR ADDING VALUE AND CLIENT SATISFACTION TO THE HOSPICE EXPERIENCE

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ABSTRACT

Healthcare organizations that serve actively dying patients—whether nursing homes, hospitals, stand alone hospice facilities, or hospice organizations—operate in a very competitive environment. The development of a volunteer program of individuals who will be present with actively dying patients so that they do not die alone can add significant value to the organization, both in client satisfaction and public perception. This presentation will examine the efficacy of such volunteer programs in terms of client satisfaction and perception of the organization. It will further provide strategies for recruitment, training, and retention of volunteers for this especially vulnerable time in the experience of a patient and that patient's family.

HEALTH CARE DISPARITIES AND HIV/AIDS AMONG LATINOS IN THE UNITED STATES

Hengameh Hosseini , Seton Hall University

ABSTRACT

The paper begins by emphasizing that Hispanics, who now constitute some 13% of the United States Population, are a very diverse minority in terms of income and national origins. After defining health care disparity in terms of access to health care services and the quality of those services received, it is demonstrated that minorities have had less access and have received less quality in these services than non-minorities in the United States. Then causes of these disparities are explored; they are found to be rooted in the socio-economic disadvantages in society, as well as conscious or unconscious biases that may exist among health providers. However, while the least advantaged among the Hispanics, like other minorities, have less access to health care and health quality, it is argued that some Hispanic groups, in particular Mexican-American women- in spite of their poverty- do better in certain health areas such as hypertension. These are caused by cultural and behavioral differences.

As demonstrated, Hispanics suffer from HIV/AIDS epidemics more proportionately. For example, in 2005, 19% of new cases of AIDS were of Hispanic heritage, although they constitute only 13% of the U.S. population. It is argued that for various reasons, including lack of access to health care and testing, the HIV/AIDS epidemic is a serious threat to the Hispanic community. After discussing HIV/AIDS among the Hispanics in the United States, barriers to prevention among them are explained. It is demonstrated that these barriers /risk factors differ among Hispanics in terms of their country of birth, whether they are men or women, and the risk factors of their sexual partners. It is argued that drug injection too is a risk factor, in particular for certain Hispanic groups. It is also argued that Hispanic cultural concepts of masculinity, femininity and machismo, and thus social norms of sexuality, are also important in the way HIV/AIDS spreads among the Hispanics. At the end, the socio-economic causes of HIV/AIDS are also explored. Specifically, factors such as lack of education, unemployment, lack of insurance, poverty, migration patterns, and language barriers, are seen as factors that effect the spread of HIV/AIDS epidemic.

INTRODUCTION

By Hispanic in the United States we mean persons of Mexican, Puerto Rican, Dominican, Cuban, and Central and South American ancestry and heritage. Although their origins are predominately Native American (Indian), they also have significant infusions of whites, African, and even Asian, which explains why Hispanics can be of any race. An alternative Spanish-language world and collective designation, Latino, recognizes the Latin American origins of these groups, and is more acceptable to Spanish –Speaking Americans.

As of 2003, there were 39 million Hispanics in the United States, constituting 13% of the U.S. population. Hispanics surpassed African-Americans in the United States as the largest minority group. Given that Hispanics as a group grow five times faster than the rest of the U.S. population, they will even become a much larger group in the future.

The major subgroups among Hispanics are Mexican American (64%), Central and South Americans 14%, Puerto Ricans 10%, Cuban-Americans 4%, and “other Hispanics” 7%. Hispanics are also diverse in terms of their incomes. The economic status of three of the main subgroups among Hispanics parallels their educational background. In 2000, Cuban Americans were more affluent in standing than Puerto Ricans and Mexican Americans; their per capita income was \$39,530, compared to \$28,953 for Puerto Ricans and \$ 27,883 for Mexican Americans.. For those three groups, the percentages of persons below the poverty line were: Puerto Rican, 31%; Mexican American, 27%; Cuban Americans only 5%.

In the next section, health disparities in the United States will be explored. We will see that certain Hispanics groups enjoy a better health situation than other minorities. However, as we will see, HIV/AIDS epidemic is a serious concern for the Hispanic communities in the United States.

HEALTH DISPARITIES FOR MINORITIES IN THE UNITED STATES

First, what is meant by disparity? As defined by the United States National Institutes of Health, health disparities are “differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exists among specific population groups in the United States” (NIH, 2000). This is to say that health disparities refer to gaps in the quality of health and health care access for racial and ethnic groups.

In spite of the fact that the health of all American racial and ethnic groups has improved drastically, the benefits have not been shared equally. In fact, racial and ethnic minorities tend to receive a lower quality of health care than non-minorities, even when access-related factors, such as patient’s insurance, status and income and patient’s insurance are controlled. Two observations, some forty one years apart, demonstrate these inequalities. In his classic 1944 study of the role of race in American life, Gunnar Myrdal stated that: “Area for area, class for class, Blacks cannot get the same advantages in the way of prevention and care of disease that whites can”. (Matydal, 1944). In 1985, the Report of the Secretary’s Task Force on Black and Minority Health concluded that: “Despite the unprecedented explosion of scientific knowledge and the phenomenal capacity of medicine to diagnose, treat and cure diseases, Blacks, Hispanics, Native Americans and those of Asian/Pacific Islander heritage have not benefited totally or equitably from the fruits of science or from systems responsible for translating and rising health science technology”. (USDHHS, 1985)

WHAT CAUSES SUCH DISPARITIES

According to King (1996, pp. 30-46) and Menefee (1996, pp. 418-419), the major determinates of population health status and the primary explanations of disparities among population groups lie in the social,

physical, and economic environments, which in turn are determined by the larger society's norms, values, social stratification systems and political economy. Some writers have attributed health disparities to such variables as socio-economic status (especially income, lack of education and unemployment); lifestyle choices and behavioral risks; occupational and environmental hazards, inferior housing, poor nutrition, and different cultural beliefs about health and illness. They find evidence for all of these variables. Writers like Blendon et al, (1994, pp.445) and Weinich, Auvekas, and Cohen (2000 pp 453) also mention lack of minority access to health care, particularly the lack of either public or private health insurance, which has persisted despite the introduction and expansion of such programs as Medicare and Medicaid.

Another cause mentioned in the literature is the argument that ethnic and ethnic discrimination itself may be an important contributor to health disparities, not only through the historic and persisted disadvantages it creates for minorities in the American social structure, but also specifically through health providers' biases-conscious or unconscious, individual or institutional.

WHAT IS THE HEALTH SITUATION OF HISPANICS IN THE UNITED STATES?

According to Michael Byrd and Linda Clayton, "The diversity of Hispanic population is remarkable. Comprising virtually all races, that group diversity includes 75% of all United States farm workers, which is important because Hispanic farm workers have a life expectancy of 49 years. The Hispanic population also has infant mortality rates 25% higher than the United States average and higher cancer rates" (2003).

These writers also argue: "though subpopulations vary, Hispanics generally experience higher unemployment rates and are employed in lower employed jobs, which helps explain their higher rates of infant mortality rates and the lack of employed based health insurance" (Ibid).

Interestingly enough, Hispanic subpopulation, especially Mexican Americans, appear to enjoy better health than would be predicted given their low socio economic status and their low utilization rates for health services. For example, some groups, such as Mexican American women, despite their greater poverty, have lower rates of hypertension than even white women. While Puerto Ricans and Cuban Americans use health facilities at rates comparable with white Americans, Hispanics as a whole utilize these facilities less. According to Byrd and Clayton; "Moreover, prevention rates for certain diseases like cancer and low birth weight infants favor new immigrant, less acculturated Hispanics. For poorly understood reasons, the risks for these health problems increases as these immigrants become more "Americans". Other writers have explained this as well. For example according to Becerra et al. "Although Mexican Americans and African Americans have similar low socio-economic profiles, infant mortality rate among Mexicans is less than half that of African Americans. Mexican American women who were born in Mexico are less likely to give birth to a baby of low birth weight than are U.S. born Mexican American women". (1991). Scribner and Dwyer explain that difference as follows: "This difference is particularly explained by the fact that Mexican born women are less likely to use cigarettes and alcohol than Mexican women who were born in the United States" (1989).

That, of course, does not imply that all Hispanics have better health situations in all cases. According to statistics from Department of Health and Human Services, 2000, in some cases certain Hispanic groups suffer more from certain health disorder than white Americans. For example, according to these statistics, Hispanics are twice as likely to die from diabetes. Or, for example, while in 1996 they comprised 11% of the total U.S. population, Latinos had 20% of the new cases of tuberculosis in the United States.

In 2005, for the 50 states and the District of Columbia in the United States, there were 40,608 new cases of AIDS. Of these 19% were of Hispanic heritage. In 2005, in all those 50 states and the District of Columbia, 78,054 Hispanics lived with AIDS. This also accounted for 19% of the entire U.S. population of those living with AIDS. Although Hispanics made up only about 13% of the population of the United States, they accounted for 16% of the

952629 AIDS cases diagnosed since the beginning of the epidemic. By the end of 2005, an estimated 77,125 number of Hispanics had died from AIDS (U.S. Department of Health and Human Services, CDC: 2007).

Of persons whose diagnosis of AIDS had been made during 1997-2004, a smaller proportion of Hispanics (74%) compared with whites (75%) and Asian /Pacific Islanders (81%) were alive after 9 years. However, the proportion surviving Hispanics was larger than the proportions of surviving American Indians and Alaska Natives (67%) and Blacks (66%). (Ibid).

Health indicators for Puerto- Rican Americans are worse than such indicators for other Hispanics. According to the results of a nationally representative Puerto Rican Americans reported more days in which they had to restrict their activities due to health disability, more days spent in bed , and more hospitalizations than did Mexican Americans and Cuban Americans. (2000).

HIV/AIDS AMONG HISPANICS IN THE UNITED STATES

As some have suggested, the HIV/AIDS epidemic is a serious threat to the Hispanic community, partly explainable by lack of access to health care. In other words, in addition to being seriously affected by HIV, Hispanics face difficulty in accessing health care, prevention services, and HIV treatment. For example, in 2005, Hispanics accounted for 18% of the 37,331 new HIV/AIDS diagnoses in 33 states in the United States. For Hispanic men with HIV/AIDS, the most common exposures were sexual contact with other men, injections drug use, and high risk heterosexual contact. For Hispanic woman living with HIV/AIDS, the most common exposures were high-risk heterosexual contact and injection drug use (CDC WISQARS Report, July 30, 2007).

WHAT ARE THE BARRIERS TO PREVENTION OF HIV/AIDS AMONG HISPANICS?

A number of cultural, socio-economic, and health-related factors continue to affect the HIV epidemic in the U.S Hispanic community. Experts argue that risk factors differ by country of birth. For example, Hispanics born in Puerto Rico are more likely than other U.S. Hispanics to contract HIV as a result of injection drug use and high-risk heterosexual contact. By contrast, sexual contact with other men is the primary cause of HIV infections among Hispanic men born in the Central or South America, Cuba, Mexico, or the United States.(Ibid).

Hispanic women are most likely to be infected with HIV as a result of sex with the opposite sex (Ibid). In a study of heterosexual Hispanics in the United States by Catania Sabogal (j. of Behavioral Sciences, 1996), 16% had sexual risk factors for HIV infection, including multiple sex partners or partners with risk factors with HIV infection. Some women , including those who suspect that partners are at risk for HIV infection, may be reluctant to discuss condom use with their partners because they fear emotional or physical abuse or the withdrawal of financial support. (Suarez-Al-Adam & Rafaela, M,& O'Leary, 2000). According to SD Rhodes, L.J. Yee and K.C. Hergenrather, an assessment of HIV risk behaviors among men who have sex with men in the southeastern United States found that Hispanic and African American men were more likely than white men to report inconsistent condom use during their homosexual experiences and with multiple partners, and that Hispanic men more likely to have never been tested for HIV.

SUBSTANCE USE

Injection drug use continues to be a significant risk factor for Hispanics, in particular for those in Puerto Rico. (CDC, 2007) Drug users in Puerto- Rico are more likely to share syringes, cotton, and rinse water and to inject more frequently than U.S. Hispanics drug users in the U.S. Proper. (Finlinson, HA. et al, 2006). Additionally, those Puerto- Ricans also engage in more risky sex behaviors such as unprotected sex, when under the influence of drugs or alcohol. (B.C. Leigh, & Stall, 1993)

THE IMPACT OF CULTURE: RISK AND PROTECTIVE FACTORS

According to research by Y. Szasz (2007), Hispanic cultural concepts of masculinity and femininity, and thus the social norms of sexuality, have created double standards and power inequalities that have had implications for HIV infection. For some Hispanic men, the traditional role of machismo has positive implications for HIV prevention, such as strength and protection of the family (B. Marin, 2003). However, machismo can also lead both homosexual and heterosexual men to engage in risky sex behavior, such as sex with multiple partners, unprotected sex, or sexual coercion. Famililismo may also lead to conflict with family members if they are men and homosexual, and if their families have a negative view of homosexuality.

SOCIOECONOMIC ISSUES AND HIV EPIDEMIC

About 22% of U.S. Hispanics live in poverty. Various problems associated with poverty, such as lack of formal education, unemployment, inadequate health insurance, and limited access to high quality health care, can directly or indirectly increase the risk of HIV infection. As a result, Hispanics are more likely to be given a diagnosis during the late stages of HIV infection, or when they have AIDS. This occurs if they have not sought tests or health services before it is too late (CDC, 2003).

Other contributing factors might be migration patterns, language barriers, and lack of health care among transient undocumented Hispanics, leading them not to seek help. Recent undocumented immigrants also face social isolation and lack of or insufficient information, which can also lead to the risk of exposure to HIV.

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METH MADNESS

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ABSTRACT

According to the office of National Drug Policy, White House, about 1.3 million people used meth in year 2002. Moreover, in year 2001(previous year) 607,000 people used meth. Why meth use is on the increase? The University of Arkansas reports their study found businesses in Benton County were losing an estimated \$21 million annually because of meth mainly due to absenteeism and lost productivity. Methamphetamine is a profoundly addictive drug that seriously affects health, families, businesses, social services and the environment.

Commonly known as crystal, crystal meth and Tina, meth (Methamphetamine) is a highly potent addictive drug that experts say can cause long-term neurological and cardiovascular damage. Meth (Methamphetamine) can make workplace unsafe. According to the NIDA(National Institute on Drug Abuse) 75 percent of illegal drug users are employed and one out of five employees in the age group of 18-25 uses drugs on the worksite. The Quest Diagnosis reports that in 2004 methamphetamine use increased about 84percent. Since 2004, the US police raids for methamphetamine have increased 500percent (Johnston, 2004).

WEST MICHIGAN

John Tunison of the Grand Rapids Press in a recent article suggested that some people call Allegan County as the meth capital of Michigan because of the soaring number of clandestine labs in rural areas harvesting/cultivating makeshift cooking operations. Police found the makeshift labs in homes, car trunks, hotel rooms, basements and backyards. The top five counties with most meth labs from 1997 to present are Kalamazoo-284labs, Allegan 235 labs, St. Joseph 132. Allegan County became ground zero for the state resources to fight meth. In 2002, 53 labs were busted in Allegan County. In 2007, the number of labs busted dropped to just nine labs. People give credit to a 2-year-old law that put pseudo ephedrine-the cold medications behind the counter and

limited the sales volume to individuals. Attack by police, social workers, legislators and public information campaigns helped curbed the problem (Tunison, GR Press 2007).

Methamphetamine is abused more worldwide than cocaine and heroin combined. We have not done any survey research to back our statements but we cite following case studies.

Chad Upham's Case reported by Washington Post:

Chad Upham an Eagle Scout, a good child did not touch beer until he was 21. However, in later years he met some strangers on line and became a victim of wrong group. One early Monday morning, Chad had been up all night and sent the following e-mail to his friends and family "Over the past four months," he wrote, "I have become a regular user of crystal methamphetamine. I acknowledge, without shame, a concern for my mental, physical and emotional health." (Andriote, Washington Post, 2005).

David Parnell's Case reported by USA Today

David Parnell, 38 worked for several years at a tire factory in Kentucky. He had six kids with his wife, Amy. David was going downhill fast. David would scoop piles of white powder on a toilet paper and swallow the concoction. His \$35,000/- a year job paid for his addiction. At work, Parnell became explosive, confrontational and exhausted. His weight dropped. Coworkers began to avoid him. Eventually, he became paranoid and started carrying an assault rifle. When his wife threatened to leave him, he asked her to lie-down beside him. When she did, he grabbed the rifle and shot himself below the chin, blowing his nose off and shattering bones in his face. David woke up after three days. Amy told David that she is pregnant with their seventh child. David took more than a year to recover (USA TODAY, 2005).

Scott Chubb's case reported by USA Today

Scott Chub would always open a small bag and inhale white, odorless crystalline powder before work. Scott worked as a waiter at Bennigan's Grill & Tavern. Meth gave Scott a quick high. Scott dashed between his five tables but felt jittery and frenetic. For seven years, Scott used meth. Scott slept only a few hours between shifts and some times not at all. Then one day in 2004, he asked a co-worker to cover him because he realized he needed help. He went to several recovery programs ((USA TODAY, 2005)...

According to the NIDA (National Institute on Drug Abuse), more than 12 millions Americans use meth. Meth (Methamphetamine) also known as chalk, is a fast growing illegal stimulant. Meth (Methamphetamine) induces euphoria after the odorless, bitter tasting powder is smoked. It takes a few minutes to feel high. Meth affects the central nervous systems include increased wakefulness, physical activity, respiration, hypothermia, euphoria and decreased appetite. The negative effects include extreme irritability, insomnia, confused thoughts, body tremors, dehydration, convulsion, paranoia and aggressiveness.

What is Methamphetamine?

This drug is a powerful stimulant with "short-term effects that may include: increased attention and decreased fatigue, increased activity, decreased appetite, euphoria, increased respiration, and hypothermia (NIDA, 2002). The effects of increased attention and decreased fatigue is what most people who take this drug seek and they do not feel obligated to continue researching other effects of this drug that they are about to orally ingest, inject, snort, or smoke. Methamphetamine has long-term effects that may include dependence and addiction psychosis (paranoia, hallucinations, mood disturbances, and repetitive motor activity), stroke, and weight loss: (NIDA, 2002, p. 4). Methamphetamine can take many forms depending upon the usage, but typically it is a white powder that easily dissolves in water (DEA, 2002). Methamphetamine can also come in the form of clear chunky, called crystal meth, or in the form of small brightly colored tablets. Street names include Meth, crystal meth, ice, glass, speed, zip, crank, and poor man's cocaine (DEA, 2002; KCI, 2006).

WHO USES METH?

Methamphetamine was once thought of as a drug for blue-collar workers; however, it is becoming a problem among white-collar workers as well. According to studies, the majority of Methamphetamine users are between the ages of 18 and 23. This group makes up 34% of all users. The second largest group of Methamphetamine users is under the age of eighteen. This group makes up 24% of all users. Methamphetamine is used in both rural and urban areas. While Methamphetamine use among Hispanics and Native Americans is on the rise, the majority of Methamphetamine users are white. Women tend to use the drug as a weight loss tool. Blue-collar workers may use the drug in order to work extra shifts. Others use the drug to stay energized at all night parties. Because Methamphetamine is less expensive than cocaine some people use it because it is financially more affordable (KCI, 2006).

"During 2000, 4% of the U.S. population reported trying Methamphetamine at least once in their lifetime" (DEA, 2002). This number may seem small, but according to the U.S. Census Bureau, there were 281,421,906 citizens in the year 2000. This means that 11,256,876 people tried Methamphetamine in that year alone. That number does not seem so small anymore. The fact that more than 11 million people have tried this drug is difficult to contemplate, but what is more staggering is that this number has increased almost twofold since the year 2000.

Methamphetamine was first synthesized in Germany in 1887. Meth costs as little as \$20 a hit and usage is more common now because of accessibility. It can be synthesized from common household products such as over the counter cold medications, lithium camera batteries, hydrogen peroxide, gasoline, sulfuric acid, and sodium hydroxide from drain cleaners. For some reasons the cold medicine, Sudafed has been now moved behind the counter of pharmacies.

Meth is not just a party drug anymore but has made its way into the workplace. Overworked and stressed employees are using the drug as a way to increase their concentration and stamina. Use of the drug is growing at construction sites and manufacturing facilities where workers must stay alert during long hours of repetitive work (Costello, 2004). Use is increasing in the entertainment, sales, retail, and legal professions as lawyers and other employees use it to get through heavy workloads ("Meth moves," 2004). At a cost of about \$100 a month, it is affordable for many workers ("Meth moves," 2004). This situation is no longer a minor problem. We must think of how this epidemic is influencing our communities, family, and employment. We must also consider how this epidemic is influencing our economy as a whole. Methamphetamine abuse is identified into three different patterns: low intensity, binging, and high intensity. The low intensity user usually swallows or snorts the meth. These users are seeking extra stimulation in order to finish a job or for appetite suppression to lose weight. The second stage binging is a continuation of the high. A rush can last anywhere from five to thirty minutes. Typically, users either smoke or inject the meth. Within the binging pattern, there are seven stages: rush, high, binge, tweaking, crash, normal and withdrawal. The binge can last three to fifteen days. High Intensity users are considered addicts (US Dept of Labor 2007).

According to the United Nations Office on Drugs and Crime, 26 million people worldwide use Methamphetamine and its chemical cousins, more than heroin and cocaine combined. The U.S government describes methamphetamine as an addictive drug that can cause mood changes, violent behavior and with long-term use, permanent psychological damage. Methamphetamine has also been linked to sexual behaviors, such as multiple partners and intercourse without condoms. This is especially dangerous in South Africa, where an estimated one in five adults is infected with the AIDS virus.

WHAT IS BEING DONE TO COMBAT THE USE AND EFFECTS OF METH IN THE WORKPLACE?

Methamphetamine costs Americans millions of dollars each year in health insurance. In Hawaii, where Methamphetamine is a highly abused drug, the Hawaiian Legislature was considering a bill that would have mandated annual drug-related education for employees. While the bill did not pass, some companies decided to educate their employees anyway on Methamphetamine. Hawaii's experience with Methamphetamine led to a new focus for social services in that state. Zero tolerance policies are enforced in companies. By using a zero tolerance policy, a company sends the message to employees that drugs will not be tolerated. Along with the zero tolerance policy is the adoption of a drug free workplace. Companies are also training their managers on the symptoms of meth use.

Drug testing is also another policy enforced by some companies to wipe out the meth problem. Tim Dimoff, president of SACS Consulting Investigative Services Inc. in Akron, Ohio and a former narcotics detective believes that education is not enough. He believes that the best way to combat drug use in the workplace is to set up drug-testing policies and programs. Meth user costs an employer an average of \$47,500 annually. These costs include employee theft, lost productivity, increased turnover, compensation claims, health-care premium costs etc (Pfadenhauer, 2006). Companies that are interested in combating meth use are employing different techniques. While some companies try to anticipate future drug use, others simply recognize and react to the problem when it arises, while still others just turn a blind eye. Workplace safety is a broad issue raised by Methamphetamine. Some parents have bought home drug testing kits. The manufacturers of these drug-testing kits claim that they are 99.9 percent accurate. These kits can test for marijuana, cocaine, ecstasy, PCP, amphetamine, opiates, methamphetamine and benzodiazepines. To combat meth madness Methamphetamine Act was signed on March 9, 2006. The Act limits the amount of ephedrine based, pseudo ephedrine based or phenylpropanolamine-based products to 3.6 grams per buyer, regardless of the number of transactions (USDept of Justice, 2006). The Act further limits the location of the products. The Act requires the seller to document the quantity, time, date, buyer name, address and the product name in the logbook. The information contained in the logbooks can be released to federal, state, local law enforcement agencies if needed. Prevention of methamphetamine usage requires action by police, social workers, legislators and public information campaigns.

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CORRELATES OF HOSPITAL PROVISION OF LEADERSHIP DEVELOPMENT PROGRAMS

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ABSTRACT

Background

Leadership development at all levels of healthcare organizations is widely recognized as a key to success. Today's hospital industry faces many challenges and certainly needs well-prepared leaders who are able to deal with the volatile environments. Leadership development has the important benefit of providing for the systematic development of new and emerging leadership competencies called for by technological and cultural changes.

Leadership development also is the heart of succession planning. Effective succession planning is an essential business strategy because it enhances the ability to achieve orderly transitions and maintain productivity levels. However, the literature suggests that many healthcare systems and hospitals are highly deficient in succession planning and talent management for top administrators compared to benchmarking organizations from outside of healthcare. This underscores an important disparity in leadership development in healthcare.

Objectives

A better understanding of these factors will be essential in helping health administration students, particularly racial/ethnic minorities, find jobs that may provide better opportunities for their future career. It is worth noting that despite representing almost 28 percent of this nation's population, African Americans, Latinos, and Native Americans make up only less than 2 percent of senior leadership roles in health care management.

Methods & Results

This study uses a nationwide sample from the American Hospital Association (AHA) Annual Datasets in 2006, which is the first year the AHA included questions in the survey that specifically asked hospitals to report if they had leadership development programs. Demographic data on each hospital in the sample will then be analyzed to determine how specific market and organizational factors that are associated with a hospital's provision of a leadership development program, a diversity strategy or plan, a leadership succession plan, and career development resources.

The study intends to supplement other research on leadership, contributing new insights in the field. Although hospitals are being called on to respond to stakeholder expectations regarding environmental change by providing leadership development programs, little is known about the factors associated with such a response. This study addresses this issue and aims to

identify external factors and internal organizational characteristics associated with hospital provision of leadership development program. Knowledge of these factors is important for policy makers and managers who try to influence hospital provision of leadership development programs, as well as for researchers who study variation in organizational responses to environmental forces.

IS UNCOMPENSATED CARE AFFECTING QUALITY ASSURANCE OF RURAL HOSPITALS?

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ABSTRACT

Healthcare disparities in rural areas remain significant in the U.S. healthcare industry. Uncompensated care makes healthcare disparities in rural areas worse and rural hospitals are unfavorably positioned to compete with urban hospitals in the economic downturn marketplace. How uncompensated care affects quality care among rural hospitals has been lightly investigated. As many rural residents experience difficulty accessing high quality care and the importance of establishing quality care practice standards in a rural setting, we conducted a systematic literature review to identify some quality care barriers and opportunities, suggested strategies to strengthen the position of rural hospitals in response to uncompensated care.

INTRODUCTION

With the rising trend of the uninsured in the United States and national health care expenditures at an all-time high, hospitals and healthcare providers all over the nation are facing the financial pressures brought on by the colossal burden of uncompensated care costs. Healthcare in the U.S. is a fragmented system that leaves roughly 47 million Americans uninsured (U.S. Census Bureau 2006). This problem has only grown worse in light of the current economic crisis because of rising unemployment, which has increased the amount of uncompensated care provided

by healthcare institutions (Holahan & Garrett 2009). Although no gold-standard definition exists for uncompensated care (Coustasse et al. 2009), it can generally be defined as healthcare provided in which full payment was not received (Hadley & Holahan 200). Hadley, Holahan, Coughlin, & Miller (2008) have refined their definition to be uncompensated care as the amount of provided care that is not compensated from out-of-pocket costs, third-party reimbursements, or government subsidies. Additionally, according to the American Hospital Association (AHA), uncompensated care is further defined as the combined costs of hospital charity care and bad debt resulting from providing care to the indigent and uninsured (AHA 2006). Charity care is referred to as healthcare provided to a patient with the foreknowledge that the patient is unable to pay for these services (Baker & Baker 2006). Charity care amounted for roughly \$80 billion or five percent healthcare services (Getzen 2007). Bad debt in simple terms is an account that cannot be collected. Bad debt is accrued when healthcare is provided by the hospital and full payment is not received for these services, either by the patients' unwillingness or inability to pay (Baker & Baker 2006).

Lastly, the Centers for Medicare and Medicaid Services (CMS) (2005) defined uncompensated care as the uncollected and unrecoverable cost of services rendered to the uninsured and indigent population. Included is the cost of care, expressed in undiscounted hospital charges, provided to eligible recipients of state healthcare benefits less any reimbursement for those services by the state, Medicaid, or another payer. However, CMS also stated that UC does not include bad debt or payer discounts (CMS 2005). The AHA and Hadley et al. definitions differ from CMS because they include bad debt charges and discounts.

According to the Kaiser Foundation (2004), total uncompensated care provided for the year 2004 totaled roughly \$124.5 billion with the following breakdown: about 63% spent by hospitals, 19% by community healthcare providers and clinics, and 18% by private physicians. Although government and private subsidies absorb a portion of these costs via Disproportionate Share Hospital (DSH) payments, it is estimated that U.S. hospitals are still responsible for roughly 26 billion dollars in uncompensated care costs (Hadley and Holahan 2004).

One common practice for hospitals to compensate for this deficit is by cost shifting (Clement 1997; Zwanziger and Bamezai 2006). Increased healthcare delivery cost and health insurance costs are a result of increased uncompensated care costs. As a means for making up revenue lost by provision of uncompensated care, hospitals charge higher prices for services rendered to private payers covered by insurance companies (Shi 2008). In response, insurance companies raise their premiums in order to compensate for increased cost of services. Consequently, the rise in insurance premiums makes it difficult for employers to offer health insurance benefits to their employees, particularly small businesses, where only 42.6 percent of individuals working for small businesses are insured (National Center for Policy Analysis [NCPA] 2008). If an employer ceases to offer health benefits or is forced to offer them at a higher cost to the employee, many employees may be unable to afford coverage, thus perpetuating the vicious cycle of the uninsured (NCPA 2008).

Falling hospital reimbursement rates coupled with uncompensated care and other factors such as population density, expensive medical technology, Certificate of Need (CON) laws, and reduced travel time to urban facilities has made it difficult for rural hospitals to provide adequate quality of care compared with urban-based hospitals, urban-outpatient care centers, and urban-urgent care centers (Moscovice & Rosenblatt, 2000; Berry, 2006). This problem has persisted because private patients whom have the ability to procure healthcare services either through out-of-pocket or health insurance bypass rural care for non-emergent needs because it's cheaper, faster, and more reliable to use urban care services, while rural hospitals attract patients with Medicare/Medicaid (Lee, 2008). Uncompensated care has been directly associated with the uninsured that receive healthcare services. In 2008, it was estimated the U.S. government covered 75% of the uncompensated care provided by hospitals, community-based providers, and private physicians (Hadley et al, 2008).

Rural Hospitals

Rural hospitals provide healthcare for approximately 54 million individuals across the U.S. (AHA, 2006). In 2006, 13% of discharges were from rural hospitals, which serve roughly 21% of the U.S. population (Levit, Stranges, Ryan, & Elixhauser 2006). The Census Bureau (2000) classified urban as all territory, population, and housing units located within an Urbanized Area (UA) or an Urban Cluster (UC). It delineates UA and UC boundaries to encompass densely settled territory, which consists of: core census block groups or blocks that have a population density of at least 1,000 people per square mile and surrounding census blocks that have an overall density of at least 500 people per square mile (US Census Bureau 2008). All other areas not meeting such criteria is defined as rural (Joubert, Prentice, Moulin, Liaw, Joubert, et al. 2008). In 2000, rural hospitals made up 46% of the total hospitals across the United States (Loux 2000). Rural hospitals can provide a wide range of services from inpatient to outpatient care as well as ER capabilities. However, rural hospitals have a much higher percentage of UCC (9.7% of net inpatient revenue) than urban hospitals (6.3%), but rural hospitals have controlled cost of patient care much better than urban resulting in breaking almost even (0.5 % profit margin) while urban hospital had a negative margin (-1.9%) in a Medicare study of short term acute care hospitals (Schuhmann 2008).

Quality of Care

In recent years, the importance of quality assurance is widely recognized among the general public and healthcare providers as up to 98,000 Americans die each year because of medical errors (Institute of Medicine 1999). The IOM defines quality of care as the extent to which healthcare services provided to patients' increases the probability of the desired or expected outcome of the patient and the provider (IOM 2009). Quality care is assessed by the measures of skill, availability, and flexibility of the doctor to provide adequate care (Moscovice & Rosenblatt 2000). There are currently five types of quality care measures: access, outcome, patient experience, process, and structure (NQM, 2009). Quality assurance indicators are important measures that gauge the hospital's ability to provide adequate care to all patients. A high level of uncompensated care can affect quality measures through reducing the financial stability of hospitals (Bazzoli, Chen, Zhao, & Lindrooth 2007). Reduced financial stability might cause the process and structure functions to be insufficient keeping healthcare providers from identifying inefficiencies and providing adequate quality of care (IOM 2001).

A Conceptual Model of Quality Care for Rural Hospitals

Identifying competitive strategies remains critical for rural hospitals as uncompensated care negatively affects both financial status and quality care of rural hospitals. We employ Avedis Donabedian's structure-process-outcome model (1966 & 2005) to understand how rural hospitals successfully compete with urban hospitals and further develop own competitive advantages in the marketplace in response to uncompensated care. Donabedian's model is well known for understanding quality care assessment and monitoring and has been extensively touted to study diverse health outcomes among health care scholars and practitioners in the past decades. Recognizing the importance of the external health care environment, Donabedian states that quality outcome is a function of structure (resources) and process (activities), and establishing measurement standards in each stage is important to manage quality improvement (Donabedian 1980; 1982). Utilizing Donabedian's quality care model, we present six quality care strategies that are identified from the literature (Figure 1). Basically, we contend in this Model that rural hospitals could outperform (or at least compete with) their urban counterparts by engaging in the four quality care strategies.

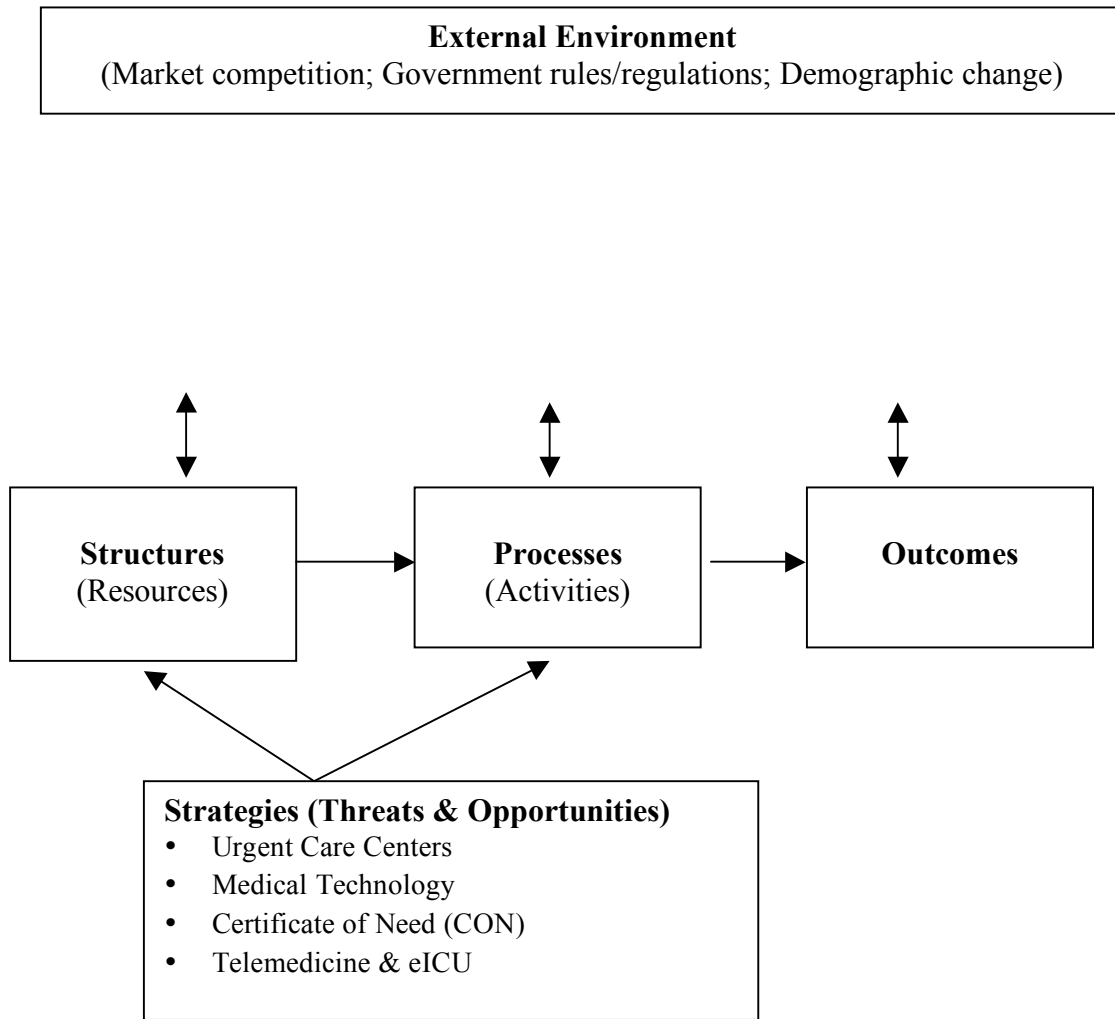


Figure 1: A Conceptual Model of Quality Assurance For Rural Hospitals

The main objective of this research is twofold: (1) to review the literature in terms of how UCC affects quality care of rural hospitals, (2) to provide strategic alternatives to sustain competitive advantages in response to uncompensated care.

METHODOLOGY

We conducted a systematic review of the literature to explore whether UCC affects the quality of healthcare in rural hospitals. A systematic review methodology has been popular among policymakers and health service researchers (Fox 2005) and one core advantages of a systematic review is the ability to limit bias by disclosing the purpose of the paper, the assembly of the literature and the appraisal of study quality (Callcut & Branson 2009). The systematic literature review helps link directly and indirectly uncompensated care to the inability of rural hospitals to provide adequate levels of care through proper staffing, using up-to-date technology, and increasing market competition. These variables can affect quality of care through lack of funding caused by providing uncompensated care. To fully capture quality and uncompensated care, the research study separated the two components and broke down what makes up each part. This research gathered data from well-known healthcare organizations, journals, and government websites who collect healthcare data.

Search Method

The systematic review tools for this research include the Internet search, healthcare related books, newspaper articles, and journal articles. All articles were obtained through electronic databases such as EBSCO host, PubMed, Medline AHA, CMS, U.S. Census Bureau, Institute of Medicine, and Agency for Healthcare Research and Quality (AHRQ)/Healthcare Cost and Utilization Project (HCUP). Most articles used for research were gathered through search terms such as “uncompensated care”, “quality of care”, “rural hospitals”, “financial effect of uncompensated care”, were combined using the Boolean method. All articles referenced in the study were in English and were limited to ten years (1999-2009) in order to make sure the information was current and up-to-date.

RESULTS

The study results are portrayed in Table 1. A systematic review generated the following alternatives that will enhance the ability of rural hospitals in competing with their urban counterparts. These strategies could be threats, rather than opportunities, when and if rural hospitals do not recognize the importance of each strategy and utilize them unsuitably.

Table 1. Results of Uncompensated Care Affecting Quality Care Among Rural Hospitals

• Author (year)	• Type of Study	• Key Findings (Keywords)
• Loux • (2000)	• Quantitative • Literature Review	• 46% of hospitals are classified as rural (rural hospitals)
Thorp (2000)	• Qualitative • Literature Review	• Differences in billing software calculates uncompensated care differently (Billing software)

• Kellermann (2003)	• Qualitative • Interview/Statement	Competition has shrunk rural hospitals profit margin and has affected quality of care (competition & profit margins)
• CMS (2005)	• Qualitative • Case Study	Nonpayment for provided care it does not include bad debt or underpayment costs (Uncompensated care definition)
• Lubitz (2005)	• Quantitative	With the GDP costs increasing to 14 percent in 2002 Medical Technology can account for almost half (healthcare spending, medical costs, GDP)
• Enthoven (2005)	• Qualitative • Case Study	Hospital systems make it easier to operate in rural areas (hospital systems: the outgrowth or merging of hospitals or satellite healthcare services)
• IOM (2005)	• Qualitative • Case Study	Uncompensated care is linked to quality of care through the financial status of healthcare institutions (uncompensated care & quality of care)
• AHA (2006)	• Qualitative • Case Study	• Bad debt plus charity care (uncompensated care definition)
• Flateland (2006)	• Quantitative • Case Study	• Utilizing an urgent care center can be up to 50% cheaper than an ER visit (urgent care)
• Dobson (2006)	• Qualitative • Literature Review	• Healthcare services offered outside of the hospital ER will eliminate cost shifting that takes place which makes urgent care visits cheaper than the ER for non-emergent needs (cost shifting)
• ARC (2006)	• Qualitative Literature Review	• Easier travel in rural areas gives better access to health facilities (US infrastructure)
• Casto (2006)	• Qualitative Literature Review	• Price contracts providing third-party payers discounts places a greater burden of risk on healthcare facilities (Prospective payment system, price contract negotiations)
• U.S. Census Bureau (2007)	• Quantitative • Survey	• 79% of citizens are located in urban areas leaving roughly 21% to rural areas (US population density)
• Hadley (2008)	• Quantitative • Literature Review	• Covering the uninsured in 2008. 86 billion in healthcare services, 56 billion was uncompensated and 30 billion will be out of pocket (Uncompensated care, uninsured)

Urgent Care Centers

Urgent care centers have given potential non-emergent ER patients the option of receiving non-emergency care outside of the hospital ER. Most urgent care centers open seven days a week and operate extended office hours (Urgent Care Association of America [UCAOA] 2008). These centers offer medical care to walk-in patients at a fraction of the cost and reduced wait times compared to ERs. The cost savings of utilizing an urgent care center can be up to 50% compared to an ER visit (Flateland & White 2006). For those that pay for health services out-of-pocket or have high co-pays/deductibles, urgent care centers have provided the cheapest route resulting in patients bypassing the hospital ER reducing the inflow of revenue. The types of non-emergent care include x-rays, lab services, provider's office visits, wound care, and minor surgical procedures (UCAOA 2008). These services are offered outside of the hospital setting normally in rural or suburban areas because of cost shifting that takes place within hospitals which makes ER charges substantially higher than urgent care centers for non-emergent needs (Dobson et al 2006). This easy and greater accessibility allows insured patients and self-payers to bypass rural hospitals, diminishing rural hospital's inflow of revenue and severely reducing their financial ability to provide adequate quality of care (Kellermann 2003).

Medical Technology and Certificate of Need (CON)

As a percentage of Gross Domestic Product (GDP), healthcare spending in the United States rose from 5.7% in 1965 to 14.9% in 2002, with technological changes accounting for at least half of the growth (Lubitz 2005). Improving and procuring medical technology is an elaborate process that involves substantial amounts of capital and hospitals are finding it difficult to raise capital due to the current state of the economy (Abelson 2008). This is a crucial part of the healthcare system that relies on Certificate of Need (CON) approvals and having the financial resources to acquire the equipment. Urban care facilities have more resources to purchase equipment and higher patient volume to qualify for CON than rural healthcare facilities placing them at a competitive disadvantage at a time when rural healthcare providers need to adapt to meet patients needs (Pollard 1999). On the other hand, there is evidence that states that have dropped CON experienced lower CABG mortality rates relative to states that kept CON, although the differential is not permanent. However, the question still remains on whether this is due to greater number of hospitals performing revascularization after CON removal, by building of more facilities, or lowering expenditures due to enhanced price competition (Ho et al. 2009).

Improved medical technology relies heavily on the process. The CON is a state-based regulatory measure responsible for the planning and diffusion of expensive medical technology. CON is the process which hospitals or other healthcare providers seeking a substantial expansion of their scope of services or physical facilities pursue approval from a government-endorsed entity (Shi 2008). The CON process is a way for governing bodies to control healthcare costs through the diffusion of medical technology. The governing body that approves a CON evaluates the geographic area in which the applicant has filed and makes their decision based on whether the existing facilities can adequately satisfy the need of that surrounding population. The CON can prevent facilities from purchasing

expensive and unneeded medical equipment just to offer a broader range of services to compete for more patients. In some areas, the CON process restricts rural hospitals from purchasing low utilization high cost equipment not allowing them to compete with their urban counterparts (Sorrel 2008).

Rural Telemedicine and Geographical Isolation

Traveling within the U.S. has become easier over the years as infrastructure projects have been completed. These projects such as highways, bridges, tunnels, and other roadways systems have made it easier for automotive travel giving better access to health facilities despite long driving. This has not only made it easier and quicker for patients to reach healthcare facilities within a timely manner; it has given them the ability to bypass rural hospitals and clinics, reaching urban healthcare settings within a relatively short time frame for non-medical emergencies (Appalachian Regional Commission [ARC] 2006). A common alternative to offset geographical isolation is telemedicine where rural patients could be screened and treated by urban medical providers. The literature provides evidence of benefiting from the rural telemedicine services (Puskins 1995; Smith et al. 2005; Frickton & Chen 2009;). E-ICU (Electronic Intensive Care Unit) is another strategic cost-saving alternative for rural hospitals in the context of telemedicine as studies document advantages of utilizing eICU in a rural hospital setting. eICU refers to a technology-enabled care model (Celi et al. 2001) and has been widely studied within the medical community. Although initial technology investment cost could be high, rural hospitals with eICU could certainly enhance the ability of drawing more patients. Evaluating the impact of ICU telemedicine programs among 15 rural hospitals, Zawada et al (2009) found the following constructive outcomes: reduced length of stay; raw mortality was the same or lower; decreased actual-to-predicted ICU and hospital mortality).

Since the 1983 transfer from the retrospective payment system by CMS to the prospective payment system (PPS), reimbursement rates have been continuously falling (Office of Inspector General [OIG] 2001). This shift in payment methods enabled CMS to set the reimbursement rates for healthcare procedures through using Diagnoses Related Groups (DRGs) and Resource Utilization Groups (RUGs). The switch in payment methods by CMS was soon followed by third-party payers, which enabled them to negotiate price contracts providing them discounts (contractual allowances) placing a greater burden of risk on healthcare facilities (Casto & Layman, 2006).

As highlighted in Table 1, UCC is linked to quality of care through the financial viability of healthcare institutions (IOM 2005). Healthcare regulations that were enacted in order to help control costs through competition have shrunk profit margins of rural healthcare institutions reducing the amount of uncompensated care that can be provided affecting quality of care in rural areas (Kellermann 2003). As unemployment rates continue to rise so will the number of uninsured and many hospitals especially rural healthcare institutions with thin profit margins cannot bear the burden of providing uncompensated care and will become financially unstable (Guggenheim 2008).

Considering population density, the majority of the U.S. population (79%) is located in urban areas leaving roughly 21% to rural areas (U.S. Census 2000). This places most patients closer to urban care settings reducing the patient pool of rural hospitals placing them at a disadvantage (National Association for Rural Mental Health (NARMH) (2007). The disadvantage comes in the form of nonpayment for

providing care to indigent uninsured patients. However, calculating nonpayment of services or uncompensated care levels becomes complicated because of differences between billing software used by healthcare facilities all of which calculate uncompensated care differently (Thorp, Seiber & Curtis 2000).

DISCUSSION

Urban hospitals have the ability to threaten the financial viability of rural hospitals because of their capacity to create outpatient facilities or systems in rural areas reducing the patient population of rural hospitals. Affiliated hospital systems make it easier to operate in rural areas than unaffiliated rural hospitals because of bigger purchasing power, larger market share, and more negotiation power for reimbursement (Enthoven & Tollen 2005). Urban hospitals offer more services than their rural counterparts due to the larger population base and more financial resources. This places urban-based hospitals in direct competition with rural hospitals, placing rural hospitals at a disadvantage position because urban facilities can channel patients through their hospital system (Enthoven & Tollen 2005). On the other hand, rural patients prefer to receive healthcare from a hospital that is in a network, that provides more number of services, and that has a greater market share (i.e., a lower level of market competition) in their locality (Roh et al. 2008).

Rural hospitals are frequently located in areas that have indigent populations and out-of-pocket healthcare expenses often exceed five percent of annual income (Reschovsky & Staiti 2005). These rural indigent populations often procure health services through hospital ERs that are required to treat patients under the Emergency Medical Treatment and Active Labor Act (EMTALA) regardless of payment type (Zibulewsky 2001). Often treatment of these patients leads to uncompensated care either through charity care or bad debt expense of the hospital. The continuing decline of the economy will cause the unemployment rate to increase. A 2009 study by the Urban Institute predicts that a one percent increase in the unemployment rate will cause a 1.1 million increase in the uninsured population. These increased levels of uninsured individuals will place a greater strain on the healthcare system to provide sufficient quality of care within rural areas.

Quality of care received at rural hospitals is affected by uncompensated care due to the lack of financial funding (IOM 2005). Rural hospitals located in areas with higher rates of uninsured individuals have smaller financial margins (Kellermann 2003). These smaller financial margins often cause hospitals to have budget cuts which require hiring freezes, lay-offs of key non-medical personnel, and understaffing of medical professionals (Massa 2009). Cost cutting strategies such as understaffing medical personnel can affect quality of care levels through decreased health outcomes and negative patient experience (Stanton & Rutherford 2004).

The amount of uncompensated care provided by each healthcare facility urban and rural is hard to distinguish due to differences in uncompensated care definitions. The varying definition of uncompensated care between CMS and other healthcare organizations make it difficult to identify key components of uncompensated care; therefore, the true value of uncompensated care varies depending on the definition. The Government Accountability Office (GAO), for instance, recognized and created the interest in collecting data from healthcare providers and facilities on their definitions of uncompensated care and the process of data collection and review of uncompensated components (GAO 2005). These differences in uncompensated care definitions and its components makes it difficult for researchers to properly compare healthcare facilities. Hence, one standardized definition of uncompensated care would significantly improve the ability of health service researchers to compare uncompensated care rates among different healthcare facilities rural and urban.

CONCLUSION

As the U.S. economy continues to weaken, providers will encounter a rise in uncompensated care, as the number of uninsured increases due to unemployment. This will cause healthcare organizations to cost shift increasing financial risk sharing and getting more uninsured individuals. Providers will have to focus on cost saving measures to reduce uncompensated care such as bad debt expense and charity care losses. These cost saving measures will affect quality of care standards among healthcare facilities through the reduction in staffing, maintenance, and utilization of older equipment due to lack of financial funding caused by uncompensated care losses.

The higher the amount of uncompensated care provided by rural hospitals, the higher the probability of financial instability that can affect quality of care. Rural hospitals are geographically located in areas that contain higher levels of uninsured individuals, which effects quality of care through reducing the financial resources of rural hospitals. The insured and those able to purchase healthcare out-of-pocket will bypass rural non-emergent care to access care at urban health facilities such as urgent care centers that provide care at a fraction of the cost. This creates competition between rural and urban health providers causing financial strains on rural providers.

Furthermore, competition between rural hospitals and urban-based care will continue to increase as satellite services from urban-based hospitals continue to grow. As Roh and Lee (2006) suggested, collaborating with other rural hospitals and strategic alliance in the marketplace will help and strengthen the marketplace position of rural hospitals as they compete with urban hospitals. Larger hospital systems and for-profit outpatient clinics will continue to squeeze profit margins of rural healthcare institutions. As a result, this will leave rural hospitals to merge or close leaving a significant population without a source of care.

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DEAL OR NO DEAL: DO PHARMACEUTICAL SALES REPRESENTATIVES' NONVERBAL COMMUNICATION AND EMPATHY INFLUENCE PHYSICIAN RESPONSES?

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ABSTRACT

Studies that examine the effectiveness of nonverbal communication and empathy in sales management are scarce. No studies have attempted to investigate their potential role in the personal selling context of pharmaceutical products. This article discusses the possible impact of nonverbal communication and empathy for Pharmaceutical Sales Representatives (PSRs). Nonverbal communication and empathy may improve the pharmaceutical sales representative's effectiveness in informing and persuading physicians, pharmacists, and other concerned individuals and parties. This study reviews the literature on the effectiveness of nonverbal communication and empathy. A conceptual model, along with six propositions, is proposed that explains the importance of nonverbal communication and empathy to the job performance of pharmaceutical sales representatives (see Figure 1).

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Note: The solid lines indicate the components of the model discussed in the study.

The duties and responsibilities of PSRs are to some extent different than those for salespersons for non-pharmaceutical products. PSRs make contact and interact with physicians, pharmacists, nurses, etc., rather than with the ultimate consumers. They provide information on newly produced drugs to physicians rather than selling those drugs. Their jobs depend on their interpersonal interactions with physicians and

other healthcare professionals. The current study attempts to elucidate the value of nonverbal communication and empathy on the effectiveness of pharmaceutical salespersons. In this study, it is proposed that the PSRs who use nonverbal communication and empathy will be more successful in informing physicians about the benefits and side effects of the drugs and persuading the physicians to prescribe the drugs than those who do not. Also, it is proposed that the joint effect of both nonverbal communication and empathy will have a stronger positive impact on the job performance of pharmaceutical sales representatives than would empathy or nonverbal communication alone. We also propose that nonverbal communication and empathy must be used synergistically with verbal communication for the maximum desired impact. Further, different types of nonverbal communications and different types of empathy will produce different results in the pharmaceutical selling context.

The main contribution of this study is the conceptual framework that explains the potential impact of both nonverbal communication and empathy to pharmaceutical marketing. It has considered the utilization of nonverbal communication as a guide for the behavior of those who are attempting to convince others to undertake certain actions. Nonverbal communication may have significant influence in sales negotiation (Graham 1981), sales presentation (Brody 2001), and influencing buyers' perceptions of the salesperson. Empathy of PSRs may have a positive impact on salesperson listening, trust in the salesperson, satisfaction with the salesperson, and physicians' willingness to prescribe drugs represented by the salesperson. Such findings could have important implications for the pharmaceutical sales force. The importance of empathy and nonverbal communication for PSRs cannot be underestimated, since these communication techniques may play a crucial role in service evaluation where services are essentially interpersonal interactions (Gabbott and Hogg 2000). Further, training in nonverbal communication and empathy may be useful to PSRs in making presentations (Wood 2005). The study offers important managerial implications and avenues for future research on the role of nonverbal communication and empathy in sales effectiveness.

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PHYSICIANS HEAL THYSELF: A CONTINUOUS IMPROVEMENT REPORT ON PHYSICIANS PEER REVIEW

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ABSTRACT

“The use of a physician peer review process remains a reliable and critical tool for advancing healthcare in modern hospitals, but despite drastic changes in medicine and hospital based healthcare, peer review models remain substantially unchanged.” (Credentialing and Peer Review Legal Insider, 2009, p. 1) At one small community hospital in particular, the process has indeed remained unchanged for several decades in fact. The physician peer review models were developed in the 1970s by the medical staff committees at this hospital. Due to the changes in health care policy, regulations, and technology, the peer review process as originally designed is outdated and vague. This lack of clarity has required many patient charts to be subjected for review. Unfortunately, the opportunity to track and analyze data for trends is lost to an outdated model and process. Physicians time and expertise that should be applied to essential cases, is wasted on an inefficient process.

This paper will describe one hospital’s perspective of how a systematic organizational change and shared vision transformed the physician peer process, precipitating the facility’s successful completion of a Joint Commission Survey. Furthermore, the study will highlight the importance of continuous improvement in the healthcare industry. Facilitated by the institutions Quality Action Team (QAT), the team designed a model for ongoing professional practice evaluation achieving a shared vision across the organization as well as within its’ customer base.

BACKGROUND

The facility within this study is one hospital of a larger, nationally established, for-profit, healthcare organization. Located on the Central Coast of California, it is the only hospital within a fifty-mile radius. It has been called “the only show in town” by the locals of the three communities that it serves. Located in the heart of wine country and located near three major California freeways, which lead to numerous recreational areas, there is a growing tourist industry for this area. This results in the hospital being the prime receiver of many admissions of various types of traumas. The two lakes, sandy beaches of the Pacific Ocean and a warm, temperate climate year round contribute to this being a retirement area which 10% of the 92,000 population being over the age of 65 (U.S. Census Bureau, 2000). The hospital has also contracted with five state correctional facilities to provide tertiary and orthopedic care for the inmates. A new locked forensic unit was designed specifically for that inmate population, keeping them apart from the public. The 133-bed facility is frequently at a high or full census.

“Effective peer review and quality monitoring have never been more important.” (Credentialing and Peer Review Legal Insider, 2009, p.1) Hospital leaders, from the CEO to the charge nurse of a patient care unit, use quality data to make decisions regarding patient care services. The CEO analyzes patient care in regards to serving the community at large. Services such as surgery, obstetrics, cardiology, outpatient testing and procedures are assessed for need versus use. Leaders make decisions based on questions such as:

“Do we need an MRI in our radiology department in order not to have to transport patients via ambulance to an outside facility?” Or “Does the emergency room need a CAT scanner in that area for faster, more reliable diagnostics in a trauma?” “Is a Cardiology department with a heart catheterization lab necessary?” Or “Can patients be safely transported to another hospital that already has these services in place?”

A CEO analyzes the total number of employees required to be effective for patient care yet efficient in managing costs. They concern themselves with how the facility will receive reimbursement for services from state and federal programs, such as Medicare and Medicaid, and various private insurance payers. CEO's are charged with the macro-perspective of the organization as a member within a larger community.

Department Directors, focus on patient care from a departmental performance perspective. “How do I meet my budget, motivate my staff, and provide safe, reliable patient care?” The direct care, charge nurse level looks directly at the patients and wonders “how will I help this patient return home safely and in a timely manner, assist other patients begin transferred to surgery on-time, and still be able to relieve my staff for lunch breaks”?

Embedded within the culture is the focus on quality, yet each group has focused on different quality indicators. Each has to take into consideration the impact of patient safety, “Never 27” laws and “Core Measures” are the “Best Practice” standards established as guidelines by Medicare and The Joint Commission. The standards are evidence-based practice guidelines of medicine, clinically proven and outcome driven; this data is calculated for specific diagnosis related core groups of disease processes. Each hospital within the larger organization report on its “Core Measures” and are compared and rated publicly on the aggregate data collected. [See Appendix A for a list of Core Measures]

The “Leapfrog Group” is an initiative driven by organizations that purchase health care, to develop improvements in the safety, quality and affordability of healthcare for Americans. Regardless of what measurement of reporting system a hospital uses, returned data on patient care received is now publically reported. Monitoring patient care indicators and satisfaction has become a requirement. It is no longer a choice or a “nice” thing to do. “Maintaining high quality care reduces the facilities exposure to legal and regulatory issues.” (Credentialing and Peer Review Legal Insider, 2009, p.1)

Physician peer review not only identifies potential issues and oversees the provision of care, but should also educate medical staff on patient safety indicators such as “Never 27”, and “Core measures”. The emphasis on quality is evident since Medicare will not reimburse for hospitalization if a “Never 27” occurs in a facility. It is a 100% unreimbursed admission to the facility. If a patient acquires a Nosocomial infection while in the hospital, the entire cost of the hospitalization is written off, even if the reason for admission is for another diagnosis on admission (i.e., a urinary tract infection is acquired while admitted for gall bladder). If a patient falls while hospitalized and sustains an injury, the entire cost of stay written off by that hospital. As such, it is important for all physicians and staff to understand the cost of poor medicine, not just in terms of dollars to the facility but also the harm to the patient.

Just as important as the care provided is the system by which data is monitored and tracked. The Ongoing Professional Practice Evaluation (OPPE) specifically addresses the tracking of clinical practice indicators. Data is collected every six months and then presented to the Medical Executive Committee and the Governing Board of the hospital biannually for reappointment. The Joint Commission (TJC) also requires hospitals to have a peer review process. Although TJC does not have a defined model on how to conduct peer review or credentialing and reappointing physicians in the hospital setting, it has set standards a facility must follow. “Standards MS 4.00-4.25, MS.4.60 and HR.1.20 deal with credentialing, recredentialing and privileging of physicians. These standards are intended to assure that only qualified and competent practitioners are delivering patient care in the facility. Standards MS.4.30, MS.4.40 , MS 4.45, MS 4.50, MS .4.70 and MS.4.80 address focused and Ongoing Professional Practice Evaluation, OPPE, peer recommendations, fair hearing protocol and physician health. These standards require review of the practitioner knowledge, skills and abilities and behaviors. Two of these standards introduce new concepts: Focused professional practice evaluation [MS.4.30] and ongoing professional practice evaluation [MS.4.40].”(Health Care management, 2009, p 10)

TJC encourages “hospital and medical staff to jointly define what is meant by quality of care, appropriate resource use, patient safety, professionalism, and accountability for active participation as a team member in the care system,” (Health Care management, 2009, p11).

| The Medical Executive Committee, at this facility, has been charged with the responsibility for performance improvement and assuring that a process is integrated with all caregivers for ongoing systematic review of all care and services.

The responsibility of the Quality and Risk Review Coordinator, QRRRC, is to review and assign physician peer review charts. The QRRRC is responsible for the review, identification and risk analysis of hospital occurrences for assignment of peer review and department performance improvement. They aggregate data by physician for reappointments. Additionally, the QRRRC identifies areas of improvement in the peer review process, including medical staff department indicators, peer review policy, peer review forms, physician performance profile and occurrence training and education at this hospital. Managing the peer review process became the responsibility of the QRRRC as well in early 2009.

THE PROCESS ISSUES

When reviewing the process at this hospital it became immediately apparent that the process was labor intensive, wasteful and the tracking system outdated. The process was chaotic, repetitive and disorganized. Furthermore, the process caused animosity amongst the physicians, medical staff, and executive leadership.

Waste of Resources

When criteria are met for peer review, department performance improvement charts are extracted from records. A physician reviewer is chosen by rotation from a list of eligible physicians. Either the chart is assigned through the computer in the Electronic Patient Folder, EPF, or if the physician prefers, the charts are manually printed, distributed through inter-hospital mail with a letter and a form to be completed by the peer reviewer. Three copies of this form are made. Each individual copy is then placed in a different folder and placed in a different area of Quality department. The event is recorded on two different excel spreadsheets, by two different people, on two separate computer programs, never to merge. The QRRRC makes a notation on a separate table as to which physician was reviewing the chart. Once the chart and the forms left the Quality department, the QRRRC never had knowledge regarding the outcome of the event. This process required 2 staff members, 200 pieces of paper and 30 minutes to assign one chart for a physician peer review. In a month, an average of 40 files are sent from the Quality department for physician peer review. Annually, resources consumed approximated 3.85 million sheets of paper and general labor costs within the Quality department alone of nearly \$31 K. These resources do not include the time or other resources consumed by the physician reviewer.

Tracking and Reporting System

Again, the process was repetitive, resources were wasted, and there was no clear manner to monitor the peer review once the file was given to a physician reviewer. The system caused incomplete entries, lack of consolidated information, and what's worse is that the Medical Staff Director had to complete a reappointment of a physician based on incomplete and inconsistent data. The reports submitted to the Medical Executive Committee and the Governing Board for the past four years was inadequate. The three people on the Quality Action Team (QAT) and Medical Staff Office Director were all new to their roles or to the facility.

The QAT only became aware of the inadequacy of the reports because their "sister hospital" in the southern area of the county was audited by the parent company. The independent auditors noted the sister facility's meeting minutes and reports to their Board and Medical Executive Committee to be lacking content and tracking mechanisms. Specific clinical indicator information pertaining to the physician in the peer review was inadequate and insufficient. The CEO of the hospital in this study became concerned and requested the QAT and medical staff office to review the existing process and records. The physician peer

review reports being submitted to the Governing Board were found to be too broad and contained no significant information regarding a review. The submitted reports were graphs with no detailed analysis on performance or ability to monitor trends. [Appendix B]

Physician education and OPPE

This issue could not be ignored since the hospital was due for its tri-annual TJC survey. The measuring of OPPE was not effective and the criteria for peer review was vague. The list set forth by the seven medical groups for peer review was not adequate for it had not been updated for this upcoming TJC survey. The criteria consisted of too many generalizations with little to no hard data to report. If the criteria were more defined less physician time would be required on minor reviews such as readmissions and transfers to higher levels of care. Also missing from the charts were data when a physician was due for reappointment, data that could assist the Medical Staff Director. Furthermore, no one could articulate how to retrieve any information on performance measures from any one specific computer program or system related to the physicians. The previous reports provided only comparative data based on volume and percentages against peers. Data was not collected on skills, ability, or overall annual performance thereby making the board decision nearly all subjective (see Appendix B for sample report).

TRANSFORMATION

Step 1: Reduction in wasted resources, time and labor

What was needed was the ability to institute leadership regarding a change process. “Innovative leaders set the direction with a mission, vision and strategy. They establish a foundation, build will, generate ideas and execute the change.” (JL Reinertsen, 2008, p. 4) Leadership focusing on motivating others to excel beyond normal performance was needed to transform the organization through simple compliance (Pierce, 2008).

The CEO was approached by the QRRC with the possibility of using the Electronic Patient Folder, EPF, the computerized documentation system, for assignment of the peer review chart to the reviewing physician. All physicians at the facility use this computer system to review charts, look up history and physicals or sign documents electronically, such as progress notes, discharge summaries or other forms of dictation. At the CEO’s request a detailed review and complete report of which physicians were currently trained and currently using the system, and of those who needed training was submitted. There were over 125 physicians, with 47% not using the EPF system to review medical records for peer review. This 47% required their charts to be sent on paper which amounted to over 8000 sheets of copy paper per month (40 charts average per month) adding a financial burden on the facility through waste.

The CEO initially began with addressing the Medical Executive Committee and then he spoke to the seven medical specialty groups, about the change in peer review chart viewing process. The information communication process began in March 2009 in the format of the *Physician Newsletter*. The CEO explained the theory of going “green” and wasted resources. He went on to explain the hospitals concern for the “ever growing landfills in California” and how “by doing our part we could make a huge impact by reducing our paper consumption, also saving trees.” A recent reduction in force throughout the facility had prompted many to think of cost saving measures to keep others in their positions. The Quality department was informed that it had to eliminate one-half of an FTE (full-time equivalent). Establishing cost reduction in paper, as well as time reduction in labor, accomplished two significant cost saving initiatives at a very crucial economic period. Streamlining this process provided several benefits.

The QRRC was able to absorb the reduced workload and in becoming salaried the QRRC eliminated overtime costs. The cost savings in labor and office supplies amounted to an annual savings of \$78 k.

In adapting point 13 of Deming's fourteen principles: "Institute a vigorous program of education and self-improvement," (Deming, 2000, p. 24) the new focus was on assuring that all the physicians knew how to contact the Medical Staffing office, the QRRC, and the Director of Patient Information in order to be updated or educated on the use of EPF if needed. This was available for three weeks beginning May 2009. At the end of May, a final reminder letter from the CEO went out to all of the physicians via the Physician Newsletter reminding them of the coming process change. He thanked them for their assistance in making this project a success and reminded them how essential each physician is to a positive outcome. By June 2009, all peer review charts were assigned via EPF. All peer reviews are now assigned to the physician reviewing the chart by the QRRC through the EPF. Only a letter and a form are sent via inter-departmental mail to be completed and returned. (Note: The form will also be placed online in the near future. The decision was made to institute a few changes at a time rather than change the entire system at once).

Previous Risk Managers have attempted to change the process to computer review without any success. Yet the question remained why the change was accomplished this time in a six-month period this time. Insightful leadership, by the CEO, clearly and simply, led continuous improvement through quality initiatives. The outstanding difference was the change in the team. The new QAT instituted significant change in the structure (a technical change) and culture (a socio-change, according to Shani) within the facility that were evident and palpable. With the advent of the new team came a new approach and the recognition of focused outcomes, quality, satisfaction and a facility that has received a "5 Star Award" in patient satisfaction and improved physician satisfaction from 78% the previous year to 87%.

Timing was also a key element to success. Every step has been closely monitored and managed. The poor economy and the "green" factors have both assisted in the process. Reluctance from the physicians was not as evident as initially feared. The rationale for such needs to be further investigated but is presumed at this juncture that the physicians were unaware or not properly trained in the EPF system. Since the beginning of the physician training on the EPF system, only four phone calls have been taken in the Quality department regarding questions on the system.

Step 2: A tracking and reporting system

Through "a constancy of purpose toward improvement", barriers were removed between members in the QAT. Developing and being committed to a common goal provided the necessary impetus to improve and work together. Deming states to "remove barriers that rob people of pride in workmanship and put everybody to work to accomplish the transformation." (Deming, 2000, p.24). This was clear and very prominent in the change process.

The team met to decide what was not working, how our roles interacted or overlapped in this process, and how we could improve on what did work. The main purpose of the meeting was to define roles, disseminate jobs responsibilities and fix an inherited broken process. A common goal, vision and purpose were created as a team and therefore it was not a difficult task to have members of the team be connected to and feel ownership for the change.

All of the members from the Quality department regardless of level defined their current responsibility in the process and their “actions” in the current process. The group worked on an improved process that integrated the use of the system utilizing EPF and developed a plan going forward. The Director of Quality Improvement created an intradepartmental computer system that tracks the peer review as each member completes their respective portion. This enables the entire Quality department to view the status of the peer review. The Administrative Assistant mails the form with the standard letter (mentioned earlier), via inter-departmental mail. When the reviewing physician completes the form, it is returned to the Administrative Assistant who then enters the response and transfers the document to the appropriate folders. Data is available to track and trend and be formatted into a report for the Review Board. It is important to note that this process is highly confidential and anonymous. When a physician is credentialed by the hospital, they are given a physician ID number that follows all of their activity in the computer throughout the hospital system. No names are used in reporting any physician activities. For increased security, when creating the program for physician peer review and tracking, the DCQI set the program to assign a new random number for identification. Only the three people who have access to the Quality computer program can identify the physician on the reports and subsequent forms for peer review. The new system allows a peer review to be entered, recorded, and sent in less than five minutes by the same individual. Information is readily accessible from one source, reports contain pertinent and detailed clinical information, the program is secure and there are no papers to be filed or misplaced.

Step 3: Physician education and OPPE

Physician Excellence is the initiative that focuses on designing and implementing a set of standard policies and procedures for governing the hospital medical staff. This initiative is designed to provide a consistent model of governance and medical staff structure that supports quality of care, patient safety and documentation of physician excellence. The physician peer review process is an intricate part of this initiative as well as OPPE, Ongoing Professional Practice Evaluation, which is now required of hospitals by The Joint Commission. In these two quality processes, in conjunction with the Medical Staff department, open documentation of competency and error rate on each physician is monitored and tracked throughout the facility. Non-clinical areas, such as legibility of documentation, delay in operating room times, and attitude issues are also tracked and trended to ensure all aspects of expected hospital mission, vision, and values are met and improved upon.

CONCLUSION

On July 31, 2009, the hospital passed the TJC survey with no significant recommendations. Core measure indicators have reached the high 90th percentile. The improved outcomes and indicators have helped the facility exceed expectations for 2009, thereby highlighting the base of continuous improvement. The hospital also received the American Heart Associations, Gold Standard for Congestive Heart Failure Care and received designation as a Blue Cross and Blue Shield “Center of Distinction” for hip and knee surgery. The organizational objectives of quality patient care and safety objectives have been achieved through improved physician accountability, increased education, monitoring clinical practice activity, and insuring quality standards are met. Physician peer review contributes to the preservation and improvement of the quality performance indicators, while the effectiveness and efficiency of patient care is measured through investigation of significant, potential or actual adverse patient occurrences in an organized and systematic manner [See Appendix C and D]. The overall objective is always to ensure the patient returns home better than when they were first admitted.

Credit for success has been attributed to the leadership role of the CEO as mentioned earlier in this study. Additional research is also needed to measure if any physician turnover occurred during the time of the study. A correlation of demographic data may also show other variables attributing to the success of this continuous improvement project. Furthermore, the physicians themselves need credit for the success of this project. Learning how to use the system and physically using the system provided the associated financial success for the project. Research should be conducted to determine the nature why the system had not been utilized earlier than the outset of this project. Finally, a longitudinal study should be conducted to determine the implications of minor quality initiatives on the cost of today's health care system.

Appendix A

Selected criteria showing goals prior to and after change process

AMI	Goal	2007	2008	Occurrences YTD	
				18	18
Aspirin at Arrival	95%	96%	96%	18	18
Aspirin at Discharge	95%	88%	100%	10	10
ACEI or ARD for LVSD	95%	86%	89%	2	2
Smoking Cessation Counseling	95%	100%	100%	0	0
Beta Blocker at Discharge	95%	100%	93%	9	9
Beta Blocker at Arrival	95%	95%	92%	1	13
Inpatient Mortality	13%	7%	13%	12	12
Aspirin or equivalent at Discharge	95%	88%	93%	10	10
ACEI or ARB prescribed at discharge	95%	86%	79%	8	8
Cardiac Rehab Referral	95%	new	42%	4	6
Statins or Lipid	95%	100%	50%		

Appendix B

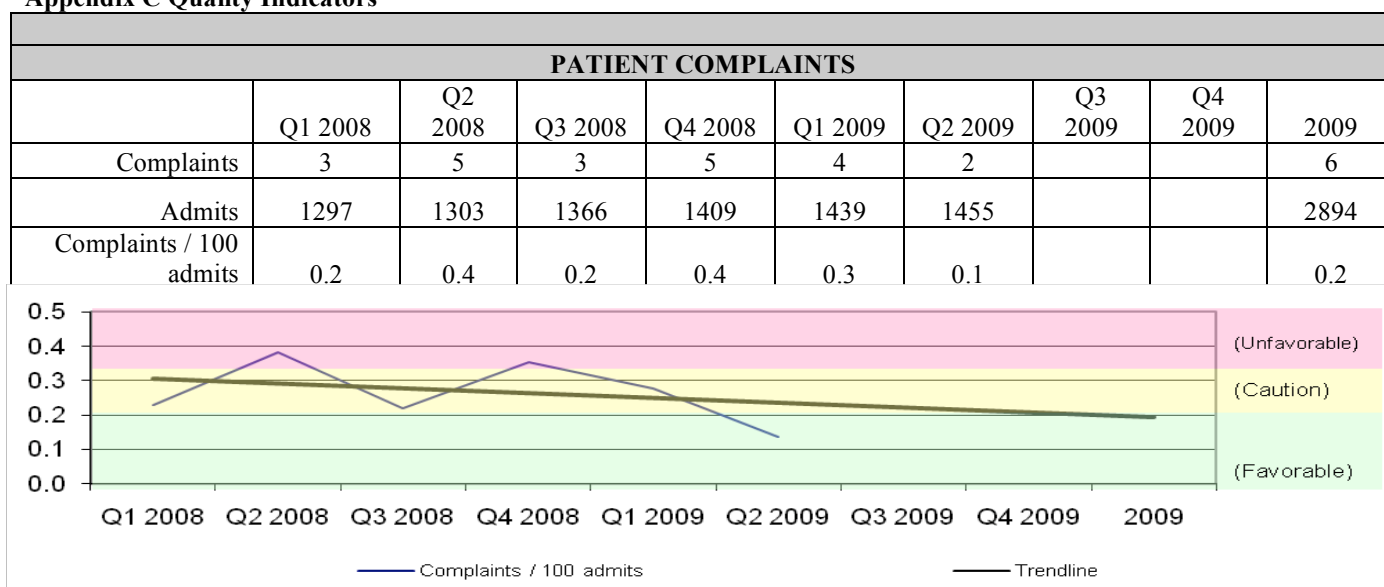
Example of previous Governing Board Report on Obstetrical Peer Review Cases:

C/S CASE STATISTICS

YEAR: 2007

DOCTOR	166	822	377	050	164	752	TOTAL	Percent of deliveries
<i>2007 total</i>	<i>21</i>	<i>38</i>	<i>46</i>	<i>22</i>	<i>22</i>	<i>18</i>	<i>167</i>	<i>27%</i>
January	2	4	5	2	0	3	16	23%
February	0	0	3	1	2	0	6	15%
March	2	3	8	4	2	0	19	35%
April	1	3	4	4	3	3	18	31%
May	1	3	3	0	2	2	11	22%
June	2	3	3	5	1	2	16	28%
July	2	1	11	1	0	1	16	26%
August	1	0	7	3	4	1	16	25%
September	5	0	2	3	5	3	18	35%
October	3	0	3	1	8	6	21	30%
November	3	4	2	1	2	3	15	22%
December	4	7	10	0	5	1	27	44%
Total C/S	26	28	61	25	34	25	199	
Total deliveries	122	95	165	86	120	116	704	
Percentage	21%	29%	37%	29%	28%	22%	28%	

Appendix C Quality Indicators



Measure Definition:	Written complaints about hospital care, physician care, interaction, billing
Required By:	Joint Commission, CDPH
Benchmark:	Less than a 1% complaint rate
Reason for Tracking:	To identify trends and assure systems are in place to reduce patient concerns.
Analysis:	Complaints reviewed No trends apparent. Concerns sent to peer review.
Recommendations:	Continue to track complaint categories and resolve individual complaints when possible.

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MAKING A DIFFERENCE TO THE VERY END: DEVELOPMENT OF A VOLUNTEER PROGRAM TO SERVE ACTIVELY DYING CLIENTS AS A STRATEGY FOR ADDING VALUE AND CLIENT SATISFACTION TO THE HOSPICE EXPERIENCE

ABSTRACT

Healthcare organizations that serve actively dying patients –whether nursing homes, hospitals, stand alone hospice facilities, or hospice organizations—operate in a very competitive environment. The development of a volunteer program of individuals who will be present with actively dying patients so that they do not die alone can add significant value to the organization, both in client satisfaction and public perception. This presentation will examine the efficacy of such volunteer programs in terms of client satisfaction and perception of the organization. It will further provide strategies for recruitment, training, and retention of volunteers for this especially vulnerable time in the experience of a patient and that patient's family.

HEALTH BELIEFS RELATED TO WILLINGNESS TO ACCEPT TREATMENT OF PAIN WITH POTENTIALLY ADDICTIVE DRUGS¹

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ABSTRACT

Over 40 years ago Zborowski (1969) demonstrated that cultural beliefs underlie reactions to pain in hospital settings. Despite documentation of the current prevalence of acute and chronic pain in the general population (American Pain Foundation 2007a,b, 2002, Cosby et al. 2005a,b), little is known about the relationship of health beliefs regarding pain treatment. The objective of this exploratory study is to assess relationships of health beliefs about pain to willingness to approve pain treatment for oneself with potentially addictive drugs. Taking a social marketing perspective (Hill 2001; Andreassen 1995), the current study draws on past studies of pain prevalence in the general population and on patient and clinical studies of attitudes and beliefs that present barriers to pain management, and extends consideration to the general population. Using data from the 2007 Southern Pain Prevalence Study (SPPS) carried out by the Social Science Research Center of Mississippi State University (Cosby et al. 2005a), the present study investigates the relationship of eleven attitudinal items to willingness to approve treatment of pain with potentially addictive drugs. Specifically, eleven health-pain beliefs are studied that may influence willingness to approve treatment, and six items are studied that address willingness to accept treatment for oneself with potentially addictive drugs under varying conditions ranging from a terminal illness to a condition that impedes leisure activities. Special consideration is given to consideration of the association of health-pain beliefs to willingness to approve treatment of oneself for pain with potentially addictive drugs for a terminal condition. If resistance to approved pain management treatments diminishes a patient's quality of life or leads to lower social functioning, or to less efficient or more expensive treatment, both the patient and the larger society suffer. Social marketing programs to change general population beliefs that are barriers to effective treatment may benefit the patient and society by encouraging a social environment that is conducive to medically approved pain treatments. A step toward preparing for such programs is to identify health-pain beliefs items that are associated with willingness to accept treatment.

¹ "The Southern Pain Prevalence Study 2004 (SPPS) was jointly sponsored by the American Cancer Society and the Social Science Research Center at Mississippi State University. We are grateful for the support, advice, and encouragement from Ms. Letitia Thompson with the American Cancer Society, Dr. June Dahl with University of Wisconsin Medical School, Dr. Karen Koch with North Mississippi Medical Center, Dr. Eric J. Pearson with Rush Medical Group, PA, Dr. B. Todd Sitzman with Wesley Medical Center, and Dr. Steve Parvin with Center for Breast Health and Imaging. While this study has benefited from the excellent advice of these fine individuals, all errors and oversights in this report are the sole responsibility of the authors."

The SPSS involved telephone interviews with 3,637 civilian, non-institutionalized persons over age 18. Survey Sampling International provided an enhanced stratified random digit dialing sampling design for selecting households in Alabama, Arkansas, Kentucky, Louisiana, Mississippi and Tennessee including those with unlisted numbers. The 3,637 respondents who completed the interviews represent a cooperation rate of 97.3% and a CASRO survey research standard overall response rate of 60.8%. The analyses presented in this report are based on 633 of these respondents who were asked all eleven of the health-pain beliefs questions and all six of the willingness to approve treatment questions used in these analyses, and for whom there was no missing data on these variables nor on basic demographic items related to age, gender, race, and marital status, although these demographic items are not included in the present analyses.

Analysis proceeded through three stages. First, the scalability of the health beliefs items and the willingness to approve treatment items were assessed using Cronbach's Alpha. These items were coded with positive values reflecting strong adherence to the statement. The eleven health beliefs items included beliefs that: 1) pain can worsen if untreated (V1); 2) pain can be treated as a medical condition separate from other conditions that may be causing pain (V2); 3) addiction is a side effect of pain medication (V3); 4) drowsiness is a side effect of pain medication (V4); 5) having pain means that your condition has worsened (V5); 6) pain is a normal part of life (V6); 7) good patients don't complain to their doctor about pain (V7); 8) pain medicine should be saved for when the pain becomes worse (V8); 9) strong pain medication is most effective by injection (V9); 10) your body heals better when pain is treated properly (V10); and 11) treating severe pain is more important than keeping people from abusing pain medicines (V11). Items 1 to 5 were coded for these analyses as: 1=never; 2=rarely; 3=some of the time; 4=most of the time, and 5=always. Items 6 to 11 were each coded as: 1=strongly disagree; 2=somewhat disagree; 3=somewhat agree; and 4=strongly agree. The treatment items included respondent reported likelihood of approving treatment for him- or herself under the following circumstances: 1) terminal illness with moderate to severe pain; 2) cancer with moderate to severe pain; 3) a severe burn with moderate to severe pain; 4) frequent moderate to severe back pain; 5) severe pain that limits ability to function at work or prevents performing everyday tasks; and 6) frequent moderate pain that inhibits my ability to engage in leisure activities. Codes for these items include: 1=very unlikely; 2=somewhat unlikely; 3=somewhat likely; and 4=very likely. In addition, the most extreme of the treatment items which referred to accepting treatment of pain with potentially addictive drugs for a terminal condition was copied and recoded as a new binary variable here named TERMINAL with "1" indicating "unlikely to accept treatment" (codes 1 and 2 from the original questionnaire, N=125), and "2" indicating "likely to accept treatment" (codes 3 and 4 from the original item, N=508). In the second stage of the analyses, differences in mean values for each of the eleven health-pain beliefs items were assessed across two levels of the variable TERMINAL. In the third stage, multiple regression analysis was used to assess associations of the health beliefs items to a summated scale made up of the six treatment items.

In Stage 1, the eleven health-pain beliefs items failed to produce a Cronbach's Alpha reliability coefficient sufficiently high as to justify using these items as a summated scale. Still, strong face validity justified treating the items as separate variables in the analyses. However, the six treatment items did produce an acceptable Cronbach's Alpha (above .78) and, thus, were summed to produce the TREATSELF scale on which high scores indicate greater willingness to approve treatment.

In Stage 2, differences of means comparisons revealed that four of the eleven health-pain beliefs had statistically significant differences in means across the two TERMINAL categories and that the differences were associated with greater openness to treatment. V1, the belief that pain can worsen if untreated, produced a mean of 4.002 for the Likely to Approve Treatment compared to 3.776 for Unlikely

to Approve Treatment. The belief that addiction is a side effect of pain medication, Item V3, produced statistically significant differences in both means and variances with the Likely to Approve category producing mean of 3.250 and the Unlikely category producing a mean of 3.512. Item V8, the belief that pain medication should be saved for when pain becomes worse produced a mean of 2.736 for Unlikely to Approve Treatment compared to 2.354 for the Likely to Approve category. V11, the belief that treating severe pain is more important than keeping people from abusing pain medications, produced a mean of 3.079 for the Likely to Approve Treatment compared to 2.7365 for the Unlikely to Approve Treatment.

In Stage 3, multiple regression of the eleven health-pain beliefs as independent variables with TREATSELF as the dependent variable revealed that four of the eleven health-pain beliefs had statistically significant associations with willingness to approve treatment. The full model produced a statistically significant adjusted R^2 of 13.1% ($F=9.633$, $P<.001$) for TREATSELF. Statistically significant betas for prediction of TREATSELF included: V1 ($\beta=.181$), regarding the belief that pain can worsen if untreated; V2 ($\beta=.105$), regarding the belief that pain can be treated as a medical condition separate from the conditions causing pain; V10 ($\beta=.087$), the belief that the body heals better when pain is treated properly; and V11 ($\beta=.198$), the belief that treating pain is more important than keeping people from abusing pain medications; Higher values for these attitudinal items were associated with greater willingness to approve treatment.

As a general population exploratory study, this study has achieved its objective of assessing potential relationships of health beliefs about pain to willingness to approve treatment of pain for oneself with potentially addictive medications. The results are relevant for pharmaceutical marketing (Stallings 1992), social marketing, and the efforts of physicians and other caregivers involved in pain treatment. The items identified as positively associated with acceptance of treatment for pain with potentially addictive drugs can be used in social marketing campaigns to promote greater general population openness to medically approved, and clinically demonstrated, pain treatment regimens. The study has limitations. Perhaps the most significant is that we have not considered here whether the respondents themselves had suffered great pain or had been exposed to friends and loved ones who suffered great pain. Such experiences may affect willingness to approve treatment for pain with potentially addictive drugs. While much remains for the development of a health beliefs pain model, the orientations identified here can inform future research and benefit social marketing programs and pharmaceutical marketing, and may facilitate communication in clinical settings among medical professionals, caregivers, and patients.

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ELECTRONIC MEDICAL RECORD – THE HOW, THE WHY, AND THE ROI

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ABSTRACT

The West Michigan Cancer Center did not have an electronic medical record in place until 2004. TO implement such a system we had to struggle with many obstacles and deterrents along the way. However, through determination and team work, we successfully implemented a process to assure eventual implementation of an electronic medical record system. This presentation will fully share our experience in converting our traditional file system to an electronic medical record system, application by application. We graded each software application, taking into account the ease of implementation and the time line for conversion. This presentation will also discuss our strategies for handling obstacles, the training necessary, and the hardware selected. Thanks to the establishment of this system we could introduce more effective and efficient processes and procedures for managing patient records and more importantly, we could provide greater value to the patients. Of particular interest to administrators in justifying such a major investment will be the immediate and projected return on this investment.

Objectives:

1. To inspire the participants to move forward with implementation of an electronic medical record system.
2. To demonstrate, by our example, how to effectively implement an electronic medical record system.
3. To share the benefits of an electronic medical record.

The Purpose of this presentation is to share our experiences of a successful implementation of an electronic medical records system at our West Michigan Cancer and thereby encourage oncology administrators elsewhere to implement EMR system if they do not have one for better patient care and more effective records management.

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FINANCIALLY TROUBLED HOSPITALS

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ABSTRACT

Because of the changes in the Medicare payment methodology effective in 1984 from a cost based payment system to a perspective based payment system, hospitals have been experiencing financial difficulty. This payment methodology has shifted the risk of increased health care cost from the Medicare program to the hospitals. As a result, many hospitals are experiencing financial difficulty and in fact many hospitals have closed. On the other hand many hospitals have been successful under the perspective payment system. This paper reviews the factors or indicators of financially troubled hospitals and reviews the factors for success of turnaround of those hospitals. An analysis was prepared of a financially troubled hospital and utilizing this data, recommendations are developed to reverse the negative financial trend of the hospital.

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SMOKERS NEED NOT APPLY

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ABSTRACT

With ever increasing global competition, companies and businesses are now looking for new ways to cut cost. Companies and businesses have now targeted the health sector as being one of the largest costs in the company's operations. The average cost per smoker is approximately \$1623 in excess medical expenses and \$1760 in lost productivity according to the U.S Centers for Disease Control and Prevention or at least \$96 billion in direct medical expenditures and \$97 billion in lost productivity every year (Ridder, 2006). Spectrum Health in Grand Rapids decided to become smoke free and announced that they will dismiss workers if they don't go smoke free at the end 2006(Spectrum 2006). Spectrum reasons were a) Tobacco addiction kills five million people worldwide each year, including more than 400,000Americans b) Health care costs are 2.65 billion annually. c) Smoking employees have six and a half more days absent per year than non-smokers. d) Second hand smoke is responsible for 3000 lung cancer deaths each year. An increasing number of companies ban smoking in the workplace. Companies like Union Pacific; Omaha Nebraska banned smoking in the workplace and won't hire smokers. Lowe's home improvement retail chain doesn't allow smoking on its campuses or on its store properties including parking lots. Alaska Airlines requires a nicotine test before hiring people. Kalamazoo Community College stopped hiring smokers for full time position in Michigan. Weyco, Okemos, Michigan decided to become a non-smoking employer. Weyco fired four (4) employees because they refused to stop smoking even off company premises at their homes (Weyco, 2005). Weyco instituted a policy in 2003 of no longer hiring smokers and offering smoking cessation program to the current employees who smoked. The four employees refused to take a "nicotine test" and were fired. Further, a study of 2500 postal employees found that the absentee rate for

smokers was 33 percent higher than for non-smokers (Working Smoke Free.com) Smokers are absent from work 50percent more than non-smokers. They are 50percent more likely to be hospitalized and have 15percent higher disability rates. Smokers miss more work than non-smokers due to sickness. Smoking causes a weak immune system because of the carcinogen found in the cigarettes. Therefore, smokers use more sick days due to their weak immune system(Danke,2005).A large U.S Airline found that smokers are absent from work as many as 6.16 days per year on average compared with 3.86 days for non-smokers. Employees who smoke are prone to being less productive. Employees who take four ten-minute (4x10) smoking breaks a day actually work one month less per year than workers who don't smoke (Working Smoke Free.com). The American Lung Association concluded that smoking attributed health-care expenditure amounted to \$75.5billion in 1998 (The American Lung Association2006). The WSJ (Wall Street Journal) reports that even WHO (World Health Organization) banned the hiring of smokers to promote its public health campaign against tobacco use. The authors point out in the paper that smokers are more absent, more prone to sickness, disability and are less productive compared to non-smokers.

INTRODUCTION

Discrimination in the workplace has existed for as long as the workplace itself. One of the first encounters an employee will have with discrimination is in the hiring process. Discrimination can occur as soon as the application phase to as late as the final interview. The Equal Employment Opportunity Commission was established in 1964 to address issues of hiring discrimination. Specifically, Title VII was signed into legislature as part of the Civil Rights Act to prohibit discrimination based on race, color, national origin, sex, religion, and retaliation. Title VII was weakly enforceable, however, and relied on voluntary compliance and conciliation from employers. The majority of charges filed during EEOC's early years of operation involved claims of race discrimination against black workers and applicants in hiring (www.eeoc.gov). The EEOC also dealt with gender fueled issues; an amendment to Title VII made clear that it was illegal sex discrimination to refuse to hire or promote women because they were married or had children unless men were treated the same (www.eeoc.gov).

Other areas addressed by the EEOC include the Equal Employment Opportunity Act, the

Reorganization Plan No. 1 of 1978 (making the EEOC the principal Federal agency in fair employment enforcement), the Immigration Reform and Control Act of 1986 (increasing efforts to combat national origin discrimination), the Americans with Disabilities Act of 1990, the Older Workers Benefit Protection Act of 1990, and the Civil Rights Act of 1991 (to provide for damages in cases of intentional employment discrimination) (www.eeoc.gov).

While the EEOC covers many areas concerning employment and hiring practices, a heated debate has recently begun regarding the rights of smoking employees. There is no clear legislature from the EEOC that dictates the employee's or employer's rights regarding hiring discrimination and smoking. While both sides state valid arguments we believe employers should have the right not to hire smokers on the grounds that they are an added liability to the organization.

HR managers are the people responsible for the recruitment, selection, hiring, compensation and termination of all employees all companies in our global economy. As such, their responsibilities are tremendous—and the possible repercussions of such can be staggering. One of the primary forces acting on these HR managers is governmental regulations when it comes to not discriminating in the hiring process. Acts HR managers must be aware of and follow include the Family and Medical Leave Act (FMLA), Title VII of Civil Rights Act of 1964, and the Americans with Disabilities Act of 1990. Not complying with these regulations can result in serious legal suits being brought against the company and the possibility for large fines exists—not to mention the detriment to the company's reputation that comes from these cases. With all of these things, the importance of following these acts is exacerbated.

Smokers Need Not Apply

One issue currently at the forefront of debate in relation to hiring practices is whether or not to hire smokers—and if choosing *not* to hire people who smoke is discriminatory or not. The battle lines have been drawn and each side has their own fierce argument as to why their way is correct. In this discussion, we have chosen to side with those who oppose hiring people who choose to smoke. “The right of an employer to limit smoking ‘on the job’ has been established over the last twenty years by the efforts of the nonsmokers' rights movement and is now recognized by the Federal Government in numerous agency policies including that of the General Services Administration (GSA), by the laws of 33 states which limit workplace smoking in government offices, and of 19 states which limit smoking in private workplaces, and by the smoking limitation policies of over 50% of private employers in the United States” (Employment). The following is information gathered from many experts in this arena who have explored the issue.

Smokers Affect the Bottom Line

The fact of the matter is “‘There are a lot of companies who are realizing that [smokers] affect their bottom line,’ said Michelle Garcia, director of program services for the American Lung Association in Fresno. ‘And when they begin focusing on health, safety and wellness, tobacco is one of the first things that come to mind. Studies have found that smokers take more sick days and cost employers an average of \$1,429 per smoker annually in additional health costs’ (Robert, 2007). ‘And these days, most employers are looking for ways to control escalating health-care costs’ (Cheryl, 2006). There is some conflicting information regarding the actual costs associated with smokers. A report by the U.S. Centers for Disease Control and Prevention states that “the average cost per smoker not only includes \$1,760 in lost productivity but also \$1,623 in excess medical expenses” (Cheryl, 2006). No matter what the exact figure

is, the real point is that there is no escaping the reality of the extra costs. And employers incur these costs for people who make a personal choice to smoke. Employees who do not smoke don't contribute to these costs. And "as long as employers pay the bulk of medical costs, some say they'll continue hiring bans against smokers" (Cheryl, 2006). It is because of these increased costs that employers have evidence with which to defend their position on not hiring smokers. Table 1 shows many of the effects of smoking.

Table 1 – Annual Rates of Sick Days and Disease for Smokers Compared to Non-Smokers

<u>Issue</u>	<u>Smokers vs. Non-Smokers</u>
Sick Days	5.5 more
Cancer	3 times as much
Circulatory Problems	2 times as many
Pneumonia	3 times more
Bronchitis and Emphysema	41% more
Respiratory Disease	76% more

(Howard, 1994)

What further complicates the situation in regards to excess costs associated with smokers is also included in the above quotation—the fact that smokers also have more time in which they are not productive. Taking smoke breaks greatly influences this trend. Some companies "do have heavy smokers, and they periodically leave the building to smoke. The rest of the staff thinks this is unfair. Both have rights but it is difficult to accommodate both sides over this issue. The smoking issue could now cause havoc to our morale" (Theresa, 2000). This can definitely be a problem if smoking breaks become too frequent and "the employee's smoking [is in any way] affecting his or her ability to complete their tasks in a timely manner" (Theresa, 2000). The cost of the lost productivity can be eliminated if smokers are not hired in the first place.

The debate over whether to hire smokers transpired out of complaints from non-smokers as well. "Polls show that a large majority of the American people favors some regulation of smoking in the workplace" (Mark, 1994). Smoking can cause a lot of problems in work environments where smokers and nonsmokers are employed. The first issue is the issue of taking breaks to smoke while your coworkers continue with their day and tasks. Basically, the nonsmokers are getting paid to work while the smokers are getting paid to smoke. So an issue of fairness ensues. To rectify the situation some experts "recommend going to 15 minute breaks in the a.m. and p.m. to make it the same for everyone. Whether they go out to smoke or stay in doesn't matter if everyone is getting the same benefit" (Theresa, 2000). Businesses are also dealing with other complaints regarding coworkers who smoke. "Regarding smokers, we even had a separate closet built when we constructed our new building so the non-smokers wouldn't go home smelling like cigarettes, one for smokers, one for non-smokers" (Theresa, 2000). These issues can be resolved if smokers are not hired in the first place.

One of the main questions to consider in deciding whether or not to hire smokers is to know if it is legal to refuse to hire them. "It has frequently been argued that an employer should not be concerned with what an employee does 'off the job' and this may be accepted provided that the employee's conduct does not result in loss to the employer and others. Under general legal principles, however, exercise of a right or privilege is limited if it intrudes upon the rights of others. The national financial costs of smoking-related deaths have been estimated to exceed \$65 billion in 1985 dollars (Office of Technology Assessment, U.S.

Congress). This figure includes \$22 billion in health care costs and \$43 billion in lost productivity costs. Such costs, distributed throughout the economy, affect every employer whose output drops because of smoking related illness, every nonsmoking employee whose health plan and insurance premiums must be adjusted upwards to cover treatment of smokers, and every taxpayer whose social security and other taxes are increased to cover sickness and welfare benefits to disabled smokers. Table 2 shows the California Department of Health Services' estimates on the costs of smoking to California. It amounts to more than \$10 billion annually in medical costs and lost productivity due to health and illness. And this is just for one of our fifty states! Employment of smokers therefore entails a huge economic loss which represents an entirely reasonable ground to refuse to employ off-the-job smokers" (Employment, 2008).

Table 2 – Costs of Smoking to California

<u>Issue</u>	<u>Cost</u>
Direct Medical Costs	\$3.6 billion/year
Costs to employers in lost productivity	\$860 million/year
Costs to California Economy	\$6.4 billion/year

* (\$124,425 in lost productivity per tobacco-related premature death)
(Howard, 1994)

The second question employers are concerned with in making the decision whether or not to enact policies that state they will not hire smokers is whether or not refusal to hire such persons is considered discrimination. "In most jurisdictions, refusal to hire smokers does not constitute unlawful discrimination. Federal and most state laws outlaw discrimination on only five main grounds - race, religion, sex, age and handicap. Apart from these an employer, or anyone else, is free to discriminate on any chosen grounds, including whether a candidate for employment is a smoker or not... It may be observed that four of the five grounds of unlawful discrimination -- race, sex, age and handicap -- all represent conditions outside an employee's control, and might be described as immutable characteristics which he or she could not change even if wished. Discrimination on such grounds would be unjust and illegal. Discrimination on grounds of religion would violate the fundamental constitutional protection for religious freedom. Such serious, permanent, considerations would not apply to tobacco smoking a course of conduct, like drinking alcohol or playing golf, which a potential employee might relinquish voluntarily or under treatment. In short, the smoker is not being discriminated against. He or she has only to give up smoking off the job in order to be eligible for employment" (Employment, 2008).

We have now established it is neither illegal nor discriminatory to refuse to hire smokers. Actually, refusing to hire them will result in lower health care costs to the employer, a workplace that is considered fair to those who do not smoke and greater productivity all around. So how can companies avoid having smokers even apply—or how do they spot them if they do apply? Reality is that even the World Health Organization is taking a stand against hiring smokers. "Its job advertisements now carry the statement 'WHO has a smoke-free environment and does not recruit smokers or other tobacco users'" (Andrew, 2005). This is quite the statement. Additionally, "hiring managers were instructed by their companies not to ask applicants directly about smoking (for fear of violating privacy rights) often discern smokers during interviews and reject them. Just because a question about smoking isn't asked directly it

doesn't mean that hiring managers turn off their sense of smell'" (Kris, 2004). Basically, there are many alternatives to screening out smokers from your application pool. Employers are finding it is cheaper to screen them before they hire them than paying the increasing health costs later. One example of this is when an applicant went into the interview and said "I smoke." [The interviewer said], 'Interview's over.' We're serious about it. So serious, in fact, that once a candidate successfully completes a series of interviews, he or she is sent to the Industrial Medicine Clinic... for a drug and nicotine test. The test costs Central Benefits \$30.75... Those who [test positive] are rejected" (Wall, 2008). Experts "caution that the policy has to be applied across the board, however. 'You can't say this person could be so valuable to this company, we'll forgive this. You can't say we'll do it for exempt and not for nonexempt. Then it becomes discriminatory" (Wall, 2008).

GLOBAL SMOKE OUT

Ireland was the first country in world to ban smoking in 2004 in all workplaces and included bars and restaurants. Both **England and Wales** have also put national smoking bans in year 2007 that included offices, factories, pubs and restaurants. In **France** a national smoking ban was instituted on Jan. 1st 2008. **Canada** enjoys one of the lowest smoking levels in the world. A number of provinces (New Brunswick, Manitoba, Saskatchewan) and territories (Nunavut, Northwest Territories) are smoke free. The European countries of Italy, Malta, Norway and Britain have all followed Ireland's lead. In the **U.S.**, California led the way with legislation banning smoking in the workplace. Hillary Clinton put a ban on smoking in the White House. Obama who has "fallen off the wagon" in the past has vowed not to break the current White House ban on smoking. **Brazil**, South America has some restrictions on smoking in the workplace. **Indonesia** banned smoking in the workplace in 2006. **India** put a ban on smoking in public in 2008. Among places where smoking got prohibited are hotels, restaurants, schools, pubs, hospitals, airports, bus stops. In India about 250 million people use tobacco. About 40% of deaths in India are linked to tobacco use.

People who do smoke are trying to combat or fight for their right to be employed. Many of them see this as discrimination against them. Our legislation here in the United States has an act called The Americans with Disabilities Act of 1990. "To be covered under the ADA's employment discrimination provisions, a smoker would have to show that he is addicted to nicotine and this addiction qualifies as a disability that merits protection from employment discrimination. Nicotine addiction is noticeably missing from the ADA's illustrative list of covered disabilities. To qualify as disabled under the Act, smokers would have to show that their addiction fits within the statutory definition of a disability, which would entail proving either that their addiction to nicotine substantially impairs a 'major life activity' or that it is 'regarded as' impairing a major life activity. Another approach might be to argue that addiction to nicotine is sufficiently similar to alcoholism or drug addiction to merit inclusion by analogy" (Mark, 1994). We should remember as mentioned before that an employee who smokes costs their employer an average of \$1429/- more per year than one who doesn't (Robert, 2007). Additionally, there are also certain social costs associated with employees who smoke. Employees want to feel like they are being treated fairly in comparison to their co-workers. Smoking can contribute to non-smokers feeling like they are not being treated equitably compared to those who smoke. For instance, smokers will often times take more breaks during the workday so they can smoke. This could potentially cause a division amongst the workforce. It is very important for employers to have a workforce that encourages cooperation and teamwork, and smoking could definitely have a negative impact on these efforts. We cite four (4) small case studies and one (1) court case to support our hypothesis.

CASE STUDIES

1st Case Study: The first focus is a ban on smoking in hospitals. Summa Health System joined Akron General Health System and Akron Children's Hospital to bar smoking anywhere on the hospital property. Diebold, a Green-based company, started a smoke-free-campus policy for all its properties on October 18, 2007. This date coincides with the American Cancer Society's 30th annual Great American Smoke out, which is a day each year in which the society urges smokers to kick the habit, even if it is only for 24 hours. Diebold employees have received a \$25 discount per month on their health insurance premiums since 2006 if they vow that they don't use tobacco products. The company's benefits manager, Sharyn Ball, said that they "want to incentivize employees for healthier lifestyles." (Cheryl, 2006). Because non-smokers are much cheaper to employ and insure, Diebold is willing to give each employee a discount for not using tobacco products. This discount costs the company much less than health insurance for a smoker or the cost incurred if the employee has to miss work because of a smoking related illness.

2nd Case Study: The next case involves the city of Cuyahoga Falls in Ohio. Since January of 2005, the city has been refusing to hire smokers. Prospective employees are required to take a urine test, which monitors nicotine in the body, and if they do not pass they will not be hired. Everyone has to be tested before being hired, which costs the city of Cuyahoga Falls \$40 per test. Those who indicate on their job application that they smoke are not even considered for hire. Valerie Carr, the city's service director said that at the beginning some people complained about the policy. She states that now, "we've had very little comment about it. I think people have just accepted the fact that we're no longer hiring smokers, mainly due to the costs that are associated with them. If we save one cancer case or heart attack, you're talking hundreds of thousands of dollars in claims and hospitalizations and loss of work." (Cheryl, 2006). It is clear that companies are realizing the costs associated with hiring employees who smoke. It is more cost efficient to test future employees for tobacco use prior to employment, than to have to pay for medical bills when they are forced to take a leave of absence from work because of cancer or a hospitalization.

3rd Case Study: A third case highlights a new benefit that has been offered to non-smokers since November of 2006. In Miramar, Florida city employees who kick the habit of smoking are offered \$20,000 more in life insurance. A handful of other Broward County cities had already offered this to their employees and the city of Miramar decided it would be a great incentive to help their employees quit smoking. To get the increased insurance coverage, employees must sign an affidavit affirming that they have not smoked in at least a year. The benefit applies only to employees, not their dependents. Standard Life Insurance, the city's insurer, is absorbing the costs associated with the incentive. The city spent about \$94,000 last year to provide basic life insurance and accidental death/dismemberment insurance for its employees (Georgia, 2006). The cities of Broward County are trying an array of tactics to get employees to quit smoking and curb group health insurance costs. Some cities in Florida have even stopped hiring smokers, much like the cases above. In an informal survey conducted in Miramar 25% of the city's 900 workers smoke (Georgia, 2006). Many companies are trying to cut this number down by offering tempting incentives that may encourage smokers to throw away those packs of cigarettes, and pick up healthier habits such as jogging or playing tennis.

4th Case Study: The fourth, and final, case that supports the idea of a smoke-free workplace involves the company of Weyco Inc. in Illinois. On January 1, 2004 Weyco announced that it would no longer employ people who smoke at its Okemos, Michigan headquarters. Only nonsmokers were considered for new openings, and current employees who were smokers and refused to quit were forced to leave. Gary Climes, chief financial officer, said that the company notified its 200 employees in fall of 2003 about the new policy, and set up a smoking-cessation program to help smokers quit. Gary stated, "we've tried to counsel people to [quit and] stay, but there are some that are still trying to make those decisions." (Kris, 2004).

Although antismoking policies such as this one seem to take a step in the right direction, companies may face problems in states with smokers' rights laws. In fact, twenty-nine states, including Illinois, have laws that prohibit employers from discriminating against smokers (Kris, 2004). In continuing to abide by the law, Weyco will have to continue employing at least one smoker at its Illinois location, but as for the one in Michigan, the antismoking policy will be put into full effect. Employers have to remember that smoking is an addiction that either needs to be controlled or conquered by the person who smokes. Union Pacific made prescription coverage for drugs like Zyban (to treat nicotine addiction) available to its employees. For Union Pacific this was a wise investment. The company saw smoking population shrank 40 percent of its work force in 1990 to 27 percent in 2003 and health claims of Union Pacific fell by 35 percent between 1990 and 2001 (Gunn, 2006). Four years ago, Weyco, Okemos, Michigan, banned smoking on its property and began issuing breath tests to see if employees smoked. If employees tested positive, Weyco charged \$50/- a month until employees enrolled in to a "smoking cessation program". If employees refused to take the test they were let go. Weyco is not alone. Kalamazoo Valley Community college also stopped hiring full-time employees who smoked. It is an employer's responsibility to provide their workers with a clean, safe and healthy work environment. Companies like Union Pacific Railroad and Lowe's Home Improvement opted to provide their employees and customers with a smoke-free environment. Additionally, smokers take five to ten minute break, five to six times a day. Simple calculations will indicate that smokers waste five hours a week in unproductive and unhealthy activity. Smokers account for \$75 billion of US health care expenditure and \$80 billion in lost productivity (WSJ, 2006). Many employers, Weyco, Alaska Airlines, are using nicotine tests and do not hire smokers.

5th Case Study: Can an Employer Deny Jobs to People who smoke Arelene Kurtz a smoker applied for a job as a clerk-typist and filed a case claiming that she was rejected for employment because of her smoking. Arelene Kurtz smoked for thirty years and had tried to quit smoking without success. The city argued that it had established policy because employees who smoke cost as much as \$4611/-per year compared to non-smokers. The court noted that the regulation was least intrusive to accomplish city's interest. Many employers have taken approach of controlling smoking behavior. Fed Ex has a nonsmoking policy and prohibits the use of tobacco products on the job but doesn't regulate employee's off-duty smoking behavior. Weyco, decided to become a non-smoking employer. Union Pacific rejects applications from smokers.

Case 6 Stealing a Smoke, Losing a Job

Health Unlimited, Jacksonville, Florida requires each employee to sign a statement that he or she is a non-smoker and will not smoke either at work or away from work. Lisa DeMarco, produce manager was an ex-smoker. She experienced stress over her separation from her husband and started smoking again. Lisa's coworkers spotted her smoking in local bar. Her store manager next day confronted her. Lisa explained her situation and promised she wouldn't smoke again. But her supervisor fired her on the spot.

Magaw Vs Middletown Board of Education Case: Here a teacher provided evidence to prove that his cancer was caused due to second hand-smoke. He spent 26 years sharing an office with a smoking co-worker. The employee won and the court ordered the school board to pay for his medical bills and provide treatment needed in the future (Sweda, 2004).

There are many more cases that side with the idea of having a smoke-free workplace, but these are few that highlight situations close to home, except for the case in Florida of course. These policies make for

a better work environment for everyone in the office and will cut down on any claims brought to the company for medical costs endured because of an employee's constant proximity of smoke, which may ultimately lead to sicknesses and hospitalizations. The WSJ (Wall Street Journal) reports that even WHO (World Health Organization) states that "smoking bans" are effective in preventing heart diseases, and getting smokers to quit etc. Further, Norwegian doctors report that smoking greatly cuts women's Health edge women who smoke have their heart attacks nearly 14 years earlier (age 66) than women who don't smoke (age 81) and men who smoke about six years earlier than men who don't smoke (WSJ 2008).

CONCLUSIONS AND RECOMMENDATIONS

From the information gathered it is very clear that when comparing smokers to non-smokers; smokers cost employers more money, cause losses in productivity, and create animosities in the workplace. Allowing smoking in the workplace is unfair to the employer and unfair to the non-smoking employees.

Non-smokers and employers will agree to policies for not hiring smokers for many reasons. The literature explained how smokers cost employers more money because they take more sick days, they increase health costs (due to health-related illnesses of smoking), and when people take "smoke breaks" they are usually getting paid for not completing work. When smokers are paid for work which is not completed, it is a loss in productivity and profits for the employer. Meanwhile, the non-smoking employee is being paid to work, and is actually completing the work, with not as many breaks. This is unfair to the employer and the non-smoking employee because the employer is losing money, and the non-smoking employee is not getting paid extra for this time. This is one of the causes for animosities in the workplace.

Smoking is often a "social activity" and when everyone goes out to smoke, the non-smoking employee is left to do the work. While the smoking employees socialize, bond, and have conversations, the non-smoking employee is not involved. Naturally the non-smoking employee misses out on the socializing, bonding, and conversations that take place while the smoking employees are...smoking. Essentially this leads to feeling of hostility by the non-smoking employee as animosities form.

Smokers will disagree with non-smoking policies in the hiring process because they will say it is "discrimination". However, from reviewing the literature it is clear that implementing non-smoking policies in the hiring process is neither illegal, nor discriminatory. Smokers will not agree with non-smoking policies in the hiring process because they do not have to pay the costs for the health care, they get paid for social time without completing tasks, and they create relationships while they are smoking. These are all unfair advantages smokers have over non-smokers and employers in the workplace, and reasons for why non-smoking policies should be implemented in the hiring process. An employer is free to hire people on basis of what it considers traits in terms of knowledge, abilities, skills, and other desirable characteristics.

Smokers will continue to cost employers more money, cause losses in productivity, and create animosities in the workplace. This means that future occurrences of these issues are bound to take place, and will continue to be unfair to employers, and non-smoking employees. The only way to prevent these issues from happening is by implementing hiring policies in the workplace that prevent people from being hired who smoke, and prevent people from smoking in the workplace. We recommend the following: As the non-smoking policies throughout the hiring process are implemented, they should be written exactly to the businesses expectations. This should be a formal document that is easy to read and comprehend so

there will be no question or mistakes regarding the policies.

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A SOCIAL MARKETING PERSPECTIVE TO MANAGING NEONATAL HEALTH IN INDIA

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ABSTRACT

Neonatal health is a critical issue in public health management. The first 28 days of life, referred to as the “neonatal period”, is the most crucial time period for determining whether or not a newborn baby will survive and continue through his/her development. Additionally, this period also serves as a good indicator of both maternal and newborn health and accessibility of care. The purpose of this paper is to analyze neonatal health in India. This paper specifically discusses the importance of providing each newborn with the necessary vaccines, treatments, and care he/she may require. Extant literature on Indian neonatal health sheds light on a variety of interventions attempted over the years and their outcomes.

A social marketing framework is presented to address this critical public health challenge. The four key elements of Social Marketing are *the Social Product, Change Agent, Target Adopters, and Social Change Management Technology* (Kotler and Roberto, 1989). The initiatives undertaken by the Indian government and several international participating agencies and NGOs are discussed. Social marketing principles shed light on efficiency from the production of healthcare services to final consumption by healthcare consumers in four different aspects: 1. Public private partnership in healthcare services; 2. Healthcare service delivery mode; 3. Time period (stage) of healthcare delivery; and 4. Healthcare communication. The enduring collaboration between government, non-governmental organizations, individual and group donors, and international agencies is vital to furthering the international health development plans and achieving those goals set forth, such as the Millennium Development Goals, for attaining quality neonatal and maternal health care for every individual in a highly populated and large emerging economy like India.

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DEATH PANELS AND THE IMPACT OF MEDIA COVERAGE ON PUBLIC OPINION

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ABSTRACT

Public opinion is shaped by more than the content of the message itself. American culture and public opinion are also influenced by the manner in which the material is presented. This article examines some of the strategies used by the media to sway public opinion when covering the controversial issue of 'death panels', a term coined by politicians and embraced by the media to describe a distorted version of end-of-life consultations. Unfortunately, the media may sometimes steer us, as concerned citizens, in the wrong direction through its power and influence over public opinion.

INTRODUCTION

Have you ever wondered if media coverage influences the way we think about controversial issues? We've recently been bombarded with terms like "death panels", "euthanasia", "end-of-life consultations", and "The God Committee". Newspapers, magazines, television, and radio have jumped on the bandwagon to give their rendition of what President Obama's attempt at health care reform really means. Actually, the issue at hand is a 10-page section of a 1,000-page House health care reform bill on "advanced care planning consultations" (Snow, 2009).

I have to admit, before all of the press about death panels, I was unfamiliar with the term. I sincerely believe they have been around for a long time, but were referred to with such dramatic undertones. Many of us have been faced with end-of-life decisions regarding a loved one. I personally faced an ethical dilemma several years ago when a decision needed to be made regarding my father who was on a life-support system. Or, when one thinks about the process of deciding who is first on the list to

receive an organ transplant and the process of eliminating prospective recipients, I can't help but think this is just another version of the same kind of thinking.

These decisions have been a part of life for a long time, but it seems that now that the media has drilled into our heads the idea of a "death panel", it has somehow become more gruesome. Frank James (2009) states that "in any event, the next time someone warns that President Barack Obama's and Congress's health reform proposals will usher in death panels that will decide who lives and who dies, it might be useful to point out that such panels are nothing new. In fact, they already exist, though by another name."

Misunderstanding Takes Shape

So, where did all of the misinterpretation begin regarding "end-of-life consultations"? Sarah Palin, the former governor of Alaska, has been credited with coining the phrase "downright evil" and former Lieutenant Governor Betsy McCaughey claimed "this is a vicious assault on elderly people, all to do what's in society's best interest, or your family's best, and cut your life short."

News reporters galore have come out of the woodwork to express an opinion about what these high-ranking officials meant to say, what the President and Congress intended to convey, and how the American public, especially senior citizens, have interpreted it all. Republicans and Democrats continue to argue their respective points-of-view, while the public continues to become more and more confused. According to an article published in the CQ Researcher (2009), "at angry town hall meetings in August, some even charged, incorrectly, that the arrangement would establish "death panels" that would deny treatment to elderly and disabled patients."

During a town hall meeting in New Hampshire on August 11, 2009, President Obama stated the following, as reported by FactCheck.org. (2009):

The rumor that's been circulating a lot lately is this idea that somehow the House of Representatives voted for "death panels" that will basically pull the plug on grandma...this arose out of a provision in one of the House bills that allowed Medicare to reimburse people for consultations about end-of-life care, setting up living wills, the availability of hospice, et cetera. So the intention of the members of Congress was to give people more information so that they could handle issues of end-of-life care when they're ready, on their own terms. It wasn't forcing anybody to do anything. This is I guess where the rumor came from.

The Debate Continues

Former Governor Palin, of course, reveled in the opportunity for rebuttal. The debate continues to heat up regarding what the President and Congress intended to say, and how an opposing politician chose to interpret what was said, all contributing to the confusion among the American public. The media thrives on this sort of bantering, which lends fuel to a fire that's already blazing. This back-and-forth rhetoric reminds me of a few lyrics from an old Beatles song entitled "She Said, She Said" that claims "No, No, No, You're Wrong!" In a more recent Facebook posting, Palin has claimed a victory for her side. "'Despite repeated attempts by many in the media to dismiss this phrase as a 'myth', its accuracy has been vindicated," Palin writes in a letter to a New York state senator, which she posted on the social networking site (Memoli, 2009).

News Media Comes on Board

Newsweek magazine devoted a recent cover story (9/21/09) to the concept of "death panels." It was entitled "The Case for Killing Granny." Gary Davis (2009), when commenting about the article, stated that "Newsweek magazine is a publication that becomes, each week, more about views instead of news. The "case for killing granny" is meant to be a provocative discussion about end-of life treatment. Incidentally, wanting to reduce care for very sick elderly people used to be called euthanasia. The case for

killing granny doesn't leave much room for discussion.” Readers of the article seemed flabbergasted by the title, and many voiced an opinion focusing on the mishandling of a delicate subject.

Some would say that, while they are not fans of the president's proposed health care reform, they were dismayed when they read the media's handling of "death panels". They recognize that this whole issue was brought to the forefront by former Governor Sarah Palin and others. It has been suggested by some members of the media that the original intent of the death panel discussions was to increase public awareness of the concept of palliative care. Palliative care is used in various healthcare facilities to "transition" patients that no longer have a viable alternative to improve the outcome or prognosis. In other words, the patient may not be terminal, but his immediate or long term prognosis is that he will not improve. Rather than continuing aggressive care, the palliative care model would make the patient comfortable and would provide basic life needs (nutrition, comfort, oxygen) as symptoms worsen. Similar to hospice care, there are no extreme lifesaving measures provided under palliative care.

This is a very difficult care concept for most physicians, and most physicians don't like or aren't comfortable in engaging the patient and family in this conversation. In many instances, hospitals or other facilities will employ palliative care specialists to handle this conversation and provide necessary care while the patient is in the facility. Hospice care is quite different, in that the patient is actively dying (terminal prognosis) and requires a more aggressive care process- pain medications, more active monitoring for changes in symptoms, grief counseling, spiritual intervention, personal care/ daily activities, etc.

Therefore, when the media discusses "death panels" they are actually discussing the provision in a proposed healthcare legislation that is going to require a palliative care assessment on people that are elderly or are likely to have terminal/ life threatening conditions. The goal of these palliative care panels is to help people consider their medical care options that could provide a better overall experience for the

patient and his family; rather than the typical hospitalization/ emergency room visit/ doctor office visits format that most people go through with an acute illness.

A typical process that most people go through when they get ill, especially the elderly, accounts for 40% of all health care costs in the United States. Approximately 40% of all health care costs in America occur in the last months of life! Maybe this helps to explain why Newsweek (9/21/09) feels that "curbing excessive end-of-life care is good for America."

Setting the Record Straight

Has media coverage influenced the way other politicians view the concept of "death panels"? I recently visited a Website called barackobama.com and found an article published in "Setting the Record Straight" (9/29/09) which states "the truth", that is, "There is no "death panel" mentioned in any of the health insurance reform bills under consideration, and there never was." In fact, Republican Johnny Isakson said it was "nuts" to claim the bill encourages euthanasia. Republican Senator Lisa Murkowski stated "It does us no good to incite fear in people by saying that there's these end-of-life provisions, these death panels...Quite honestly, I'm so offended at that terminology because it absolutely isn't (in the bill)" (Demer, 2009). I wish I could get that Beatles song out of my head.

The Medium is the Message

Media can greatly influence public opinion. It can impact the way we think about a controversial medical procedure, decisions made by politicians, new products on the market, guilt versus innocence of a criminal suspect, wars with other countries, and even biases us toward the movies we shouldn't miss at the theatre. Unfortunately, the media may sometimes steer us in the wrong direction through its power and influence over public opinion. In some cases, a story did not become a story until the media exercised this

influence. Marshall McLuhan once stated that “the medium is the message”, meaning that how a story is presented by the media shapes the way we think more than the content of the message itself. I believe this to be true of “death panels.”

After all, the concept of end-of-life consultations between physicians and patients, physicians and the patient’s family members, and the patient and their loved ones have been around for a long time. Throw insurance companies and third-party payers into the mix, and some would say “death panels” are already here. It’s only the way in which we refer to them that has really changed. The following scenario is a case-in-point.

Long before anyone started talking about government “death panels” or warning that President Obama would have the government ration care, 17-year old Nataline Sarkisyan, a leukemia patient from Glendale, California, died in December 2007, after her parents battled their insurance company, Cigna, over the surgery. Cigna initially refused to pay for it because the company’s analysis showed Sarkisyan was already too sick from her leukemia; the liver transplant wouldn’t have saved her life. A study by the American Medical Association found the biggest insurance companies in the country denied between 2 and 5 percent of claims put in by doctors last year (Private HealthCare Insurers’ Death Panels, 2009).

According to columnist John Buntin (2009), ...”death panels have become the scariest words in the health care debate and have given end-of-life care a bad name. A consultation with a family doctor about how a patient wants to be treated when he or she faces an end-of-life condition—the actual provision originally included in some drafts of health care proposals—has nothing to do with denying care to someone who’s old or sick. Nonetheless, that has become the translation of the term in many of the town hall debates.”

Television Seizes an Opportunity

Anchor Keith Olbermann, in a reply to statements made by former Governor Sarah Palin regarding “death panels” stated “There is no ‘death panel.’ There is no judgment based on societal productivity. There is no worthiness test. But there is downright evil, and Ms. Palin, you just served its cause...Madam, you are a clear and present danger to the safety and security of this nation...you should be ashamed of yourself for having introduced it” (Olbermann, 2009).

Keith Olbermann makes a very good point. The term “death panel” should never have come to the forefront. Yet, certain members of the media immediately picked up on the term and have produced countless debates, opinionated articles, and interpretations regarding what was said or what was meant, in an attempt to influence American culture and public opinion to a certain way of thinking. As Mr. Olbermann (2009) further stated, “...a percentage of America does not want explanations nor serious conversation. It wants panic and the guilty thrill of chaos and an excuse to bash skulls and hang people in effigy.” Let’s face it, the sensationalism that comes with chaos, panic, and guilt helps sell newspapers and magazines, and goads the American public to tune-in tomorrow night to see what’s going to happen next.

A recent television program helps to illustrate this point. “The American Death Panel Game Show” was hosted by Bill Maher on HBO (Season 7, Episode 24, 2009). Basically, three contestants remain and are brought out on stage in front of the viewing audience. Mr. Maher begins with contestant #1 and briefly reads about his medical condition, diabetes, from a cue card. The card also contains the results of a poll by the American public as to his fate. He is not going to be saved. Contestant #2 has early signs of Alzheimer’s disease. He is asked to go backstage. He may be asked to return next week. Contestant #3 is an elderly woman who is surprised to find out she has pinkeye and cataracts. Mr. Maher recommends that she not buy any green bananas. The American Death Panel Game Show is another example of how the media sensationalizes an otherwise somber set of circumstances to generate interest among its viewers.

Conclusion and Implications for Future Research

Media coverage does influence American culture and greatly impacts public opinion. As illustrated in several scenarios throughout this research, the way in which we interpret or misinterpret controversial issues in the news is often influenced, not only by the story content itself, but also by the way in which the facts are presented to us. Americans thrive on debate, and we embrace the chaos and panic that comes with a “good story”. Although known by many other names throughout history, “death panels” have become a very controversial item in today’s healthcare arena, especially during a time when major national healthcare reform is at the forefront. Perhaps AARP executive vice president of policy John Rother (2009) is correct when he stated “Right now it seems there is an intentional effort to distort what’s in the legislation and that’s confusing the public debate.”

This research has attempted to bring to light an introduction as to how public opinion is shaped by the coverage the media chooses to provide to its unsuspecting listeners. Implications for future research on the impact of media coverage on public opinion should include a well-designed survey, randomly distributed to the American public, in an attempt to capture the true impact of how their opinions were influenced by the extensive media coverage of “death panels”. Some of these questions may include, “Were you aware of “death panels” before the term was actually coined? Where did you first hear of “death panels”? How much have you read or heard about them on television and radio? Did you know “death panels” existed by other names before they became so controversial? Have you ever been a part of an end-of-life decision? Who should have the final word in determining the availability of care; the physician, the patient, the family, the insurance companies, the government? This list is not all-inclusive. Responses to these questions are only the beginning. Only time will reveal the true impact of media coverage of “death panels” on public opinion.

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ELECTRONIC MEDICAL RECORDS IN LONG TERM CARE

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ABSTRACT

Long Term Care (LTC) facilities possess unique characteristics in terms of implementation and utilization of Electronic Medical Records [EMRs]. The focus of LTC is on a population requiring care encompassing all aspects associated with quality of life rather than simply acute treatment. Because this focus is of a larger scale than traditional medical facilities, the priorities in the implementation and utilization of EMRs are higher in accessing patient history information. The purpose of this study was to determine the EMR utilization in the chronic care settings. In conclusion, the literature review performed does not support the idea that EMRs are currently being effectively used in the LTC facilities.

INTRODUCTION

State-of-the-art filing cabinet systems that occupy several square feet of medical record office space in healthcare facilities across the country are one-by-one being emptied in the name of innovation. While still lagging behind the major industries that embraced the newest technological advances in the 1990's, healthcare industry specifically has taken great strides with the implementation of an electronic system for the storage of a patient's medical data (Hillestad et al. 2005). Influential leaders have agreed that this is the next logical progression in the maintenance and handling of an individual's health record from a cumbersome paper-based system (Oatway 2004). With the founding of Health Level Seven (HL7) in 1987, standards for dealing with health information electronically began to be developed without even knowing what the work-in-progress product would look like (Oatway 2004; HL7 2007).

Although an Electronic Medical Record (EMR) has various forms depending on its usage and integration, its most basic description consists of any patient data that has been stored electronically. (Oatway 2004) The EMR is sometimes inappropriately referred to as an Electronic Health Record (EHR) as this last one refers to interoperable EMRs in more than one organization (Wagner 2009) With separate and unique issues to address as compared to the acute and ambulatory settings, EMR implementation and utilization in long term care has been hindered by costs, regulatory requirements and software that is not all-inclusive (Roop 2006). However, in facilities where it has been applied as a part of an integrated electronic system, a non-exhaustive list of uses includes patient registration, assessments, rehabilitation, census, and care plans while meeting the Medicare requirements for documentation with Minimum Data Set (MDS). Standardization of incident reporting, improved accuracy and completeness of reports combined with overall enhancements in quality have also been realized (Briggs 2006).

Historically, long term care facilities recognized the need for descriptive and extensive historical patient data while having little provider communication coupled with minimal treatment information (Oatway 2004; Roop 2006). To address these issues, long term care aided in the pioneering of EMRs after being identified as a possible solution to address identified industry concerns and to ultimately improve quality. With the addition of federal regulations in 1998, electronic records were further validated when the submission of MDS data from certified Medicare and Medicaid facilities became mandatory in order to participate in these programs (Rochon et al. 2005; Roop 2006;). This technological upgrade also facilitated the time tracking of electronically-entered quantitative data which aided in the Continuous Quality Improvement (CQI) initiative (Resnick et al 2009).

Although the majority of long term care facilities are still using a combination of paper and electronic records with the ratio of use being facility-dependent, current strategies and investments are being implemented towards EMRs altogether. In the meantime, this type of facility and others are at a minimum deciding between the following three options to reduce the use of paper while pursuing their goal of eventual full implementation of the EMR: (1) maximize their existing hardware and software, (2) update technology as it becomes available, or (3) invest in an integrated system from the onset. Regardless of which path is chosen, individual facility budgetary constraints will be a deciding factor in the choice outcome as well as a potential government-issued timeline for completion (Walker 2009).

Despite this dilemma and depending on which source is cited, nursing homes country-wide are paving the way in the adoption of EMRs compared to other healthcare entities. In 2004, a study conducted by National Nursing Home Survey found that 43% of these facilities had a system in place for maintaining electronic medical records for at least nursing and physician notes as well as forms for MDS (Resnick et al 2009). With further application, integration and eventual standardization of this type of technology, projections are that caregivers will have extra hands-on time with patients while also providing an additional means for high-quality care leading to positive outcomes. Furthermore, improved decision-making, patient care trend analysis, evaluating evidence-based treatment as well as increased patient safety among others are just a few of the benefits that remain to be reaped as well (Pacicco 2008). The purpose of this research study was to determine the effectiveness of EMR utilization in the chronic care setting.

METHODOLOGY

A literature review was accomplished by systematic search of the Academic Search Premier, Google Scholar, LexisNexis, Academic Business, and Source Premier databases. For the purpose of the research paper's query, all information regarding electronic medical records use in long term care was considered valuable. The search was limited to only sources available in the English language.

The databases were queried using the key terms, "electronic medical record", "electronic health record" AND "long term care settings", OR "nursing homes" and considered applicable under the following definitions: Long term care facility defined as A facility that provides rehabilitative, restorative, and/or ongoing skilled nursing care to patients or residents in need of assistance with activities of daily living. Long-term care facilities include nursing homes, rehabilitation facilities, inpatient behavioral health facilities, and long-term chronic care hospitals (MedicineNet 2009). Electronic medical record was defined as an electronic record of health-related information on an individual that can be created, gathered, managed, and consulted by authorized clinicians and staff within a healthcare organization (Wagner 2009).

The literary research review focused on three topics within EMR use in long term care: benefits, limitations, and effectiveness. Benefits to the implementation of EMR use in long term care facilities were compared between sources for commonalities, while benefits of significance were also included regardless of concurrence with other sources.

RESULTS

Long term care facilities possess unique characteristics in terms of implementation and utilization of EMRs. The focus of long term care is on a population requiring care encompassing all aspects associated with quality of life rather than simply acute treatment (Pacicco 2008). Because this focus is of a larger scale than traditional medical facilities, the priorities in the implementation and utilization of EMRs are high in: (1) access to extensive patient history information (2) descriptive patient information (3) communication among providers (4) facilitation of integrated care and (5) cost benefits (Hillestad et al. 2005; Oatway 2004; Roop 2006; DeVore et al. 2007; Tomzak 2006; Walker 2009; Wagner 2009; Pacicco 2008; Covolo 2007; Rand Corporation 2009; Garg et al. 2005). It is these priorities that identify the benefits, limitations and effectiveness of EMR use in long term care facilities.

The reviewed literature offered a multitude of benefits for the implementation and use of EMRs in long term care settings. Several commonalities developed among the evaluated information to include: reduction in adverse drug events, streamlining of regulatory compliance, ensuring the most accurate data is available to clinicians, improved coordination in patient care, and increased efficiency (Tomzak 2006; Rand Corporation 2009)

The population served by the long term care setting includes a number of factors putting them at increased risk for experiencing adverse drug events (Rochon et al. 2005). This population often has more than one chronic medical condition, multiple daily and otherwise scheduled medications, and use of medications associated with drug interactions and high occurrence of side effects (Pacicco 2008). It is these factors that result in a higher number of adverse drug events in long term care facilities than in acute care settings.

On average, a typical patient of a nursing home is regularly administered six different medications daily, with over 20% taking 10 or more per day (Cassel 2003). A study performed at 18 chronic care facilities in Massachusetts focused on every resident staying at those facilities over a 12-month period. "During 28,839 nursing home resident-months of observation in the 18 participating nursing homes, 546

adverse drug events were identified. Of all adverse drug events, 1 was fatal, 31 were life threatening, 206 were serious, and 308 were significant” (Cassel 2003, pg71). It was determined that half of these events could have been prevented (Cassel 2003). The end result is a benefit to both the facility and patient in improved patient safety. Evidence expressed in the literature also demonstrates a direct correlation between costs and adverse drug events – no event equals no cost (Hillestad et al. 2005; Oatway 2004; Rochon et al. 2005; Pacicco 2008).

High rates of preventable adverse drug events were identified in several studies which concluded that errors in monitoring and prescribing specific to the long term care population were the causes of adverse drug events (Rochon et al. 2005). The reduction in adverse drug events after implementing a Computerized Physician Order Entry (CPOE) system into their institution reported by the Baycrest Centre for Geriatric Care is consistent with the results in similar published literature (Rochon et al. 2005).

Regulatory and reimbursement requirements of long term care facilities are different than those of acute care facilities. According to Pacicco (2008), 50% of residents in long term care facilities stay at least one year and 21% stay for five years or longer. The requirements that must be met in order to qualify to participate as a skilled nursing facility in the Medicare program and as a nursing facility in the Medicaid program, are complex and must be continually evaluated. Regular assessment and maintenance of compliance with Centers for Medicare and Medicaid Services (CMS) can be implemented through the EMR (Pacicco 2008). Linderner, et al, 2007, reported that 99.6% of active nursing homes in the United States, 2004, already used an electronic information system to report to CMS supporting the claim that EMRs augment regulatory and reimbursement requirements (Resnick et al. 2009).

In the long term care setting physicians and other providers are not always immediately available at the bedside. Communication through multiple parties can lead to poor and inaccurate information (Oatway 2004; Schnelle 2005). Having the ability to access electronic medical records from anywhere allows providers to make assessments and care decisions remotely, ultimately providing the best outcomes based on the most current and complete patient history and treatment information (Tomzak 2006; Pacicco 2008). Oatway, 2004, expanded on this topic by addressing the benefit in the ability to share medical information with other providers, for example outside medical consultations, via the EMR (Oatway 2004).

Improved coordination in patient care is a benefit expressed extensively throughout the literature (Rochon et al. 2005; Linderner 2007; Hakes 2008; Rand Corporation 2009). This is a broad topic encompassing a wide range of examples: tools to summarize trends in patient care, evidenced-based disease protocols, improved documentation, improved records management, and the ability for multiple people to utilize the same information at the same time (Linderner 2007; Hakes 2008; Rand Corporation 2009). The San Francisco VA Medical Center, 2004, developed this benefit in their study of an EMR intervention used specifically to increase the rate of completion of advanced directive assessments by providers in their nursing home (Linderner 2007). Reported outcomes showed an increase from four percent completion prior to the implementation of EMRs for advanced directive discussion notes, to an amazing 63% completion in a three month time period (Linderner 2007). The remarkable effectiveness of the intervention is attributed to many actions by the San Francisco VA Medical Center discussed in further detail in the effectiveness section of this paper.

Implementation of EMRs as a means of increasing efficiency has spurned significant debate in regards to long-term care. Although the majority of articles reviewed expressed increased efficiencies with usage, the outcomes in efficiency were not consistent between facilities. In many circumstances, reporting included increased efficiency in billing, storing, and access to medical records with no change or decreased

efficiency in provider activities, while other research supported the contrary (Hillestad et al. 2005, Oatway 2004; Pacicco 2008; Hakes 2008; Garg et al. 2005). Without intricate details of implementation and the systems used for the EMR, it is difficult within the scope of this paper to differentiate true benefit in efficiency. The end result of this analysis is that use of EMRs in long term care settings can provide a benefit to efficiency (Rand Corporation 2009).

Implementation of EMRs in long term care settings is not achieved without challenge. Even with the best of circumstances and product, EMR implementation and use in long term care settings has its limitations (Hillestad et al. 2005, Oatway 2004; DeVore et al. 2007; Tomzak 2006; Rochon et al. 2005; Pacicco 2008). Those limitations identified in the literature review are adoption costs, incongruity in cost savings, interoperability, and change to the facility culture (Hillestad et al. 2005, Oatway 2004; DeVore et al. 2007; Tomzak 2006; Rochon et al. 2005; Pacicco 2008).

Adoption costs are significant and many facilities lack the capital needed to complete adoption of an EMR (Hillestad et al. 2005; Pacicco 2008). These adoption costs include investment into software, hardware, training and maintenance (Pacicco 2008). Every literature article evaluated addressed adoption costs as a limitation in implementing EMRs in long term care facilities. In assessing implementation of EMRs in hospitals the estimate of potential efficiency savings was only one fifth of the costs projected during the initial 15 year implementation period (Hillestad et al. 2005). Similar costs correlated with implementation in long term care facilities, adjusting for size (Hillestad et al. 2005; Cassel 2003; Rand Corporation 2009). Consideration was given to long term care facilities that have some form of electronic clinical data in place prior to implementing the full EMR and their subsequent reduced adoption costs, as the electronic base, for example computers, training in their use, is already in place (Oatway 2004). This limitation may be undermined by findings reported by the Journal of the American Informatics Association study due to the large number of long term care facilities that already have partial electronic clinical data in place (Resnick, Manard, Stone and Alwan 2004).

Table 1: Use of Electronic Information Systems in Nursing Homes in The United States in 2004

Use of Electronic Information System	% Nursing Homes in United States
Greater than 1 form of electronic clinical data	99.6%
MDS Reporting	96.4%
Billing	95.4%
One or multiple parts of medical record: nursing notes, physician notes, MDS forms	43%

SOURCE: Resnick, Manard, Stone and Alwan (2004).

This study reported greatest use of electronic information systems in the largest facilities and the lowest use of electronic information systems in the smaller, stand-alone facilities (Resnick et al. 2009).

Figure 1: Use of Selected Electronic Information Systems in Nursing Homes, By Bed Size, United States, 2004

SOURCE: Resnick, Manard, Stone and Alwan (2004).

Adoption costs correlate well in the limitation of incongruity of cost savings (Hillestad et al. 2005). While the adoption costs are high, the projected savings with EMRs is not of benefit to the facility making the investment (Hillestad et al. 2005; Oatway 2004; DeVore et al. 2007; Covolo 2007). Research supports that insurance companies and patients receive the greater part of the cost benefit (Oatway 2004; Covolo 2007). Though there are many benefits to the implementation of EMRs, the cost alone was reported as the primary or only deterrent for long term care facilities in the United States who currently do not use EMR in their facilities (Covolo 2007).

Interoperability refers to the ability to exchange patient information between various aspects of patient care (DeVore et al. 2007). For example, interchange between the physicians' orders and the pharmacy or interchange between physical therapy and the case manager. Software programs have been identified as the largest limiting factor. Most current programs are 'vendor-unique' and don't interface with other programs (Oatway 2004). Programs designed for acute care settings have encountered limitations when used in long term care settings because of larger records and longer lengths of stay (Oatway 2004). The inevitability of these issues is multiplied when it is considered that, outside of the generic guidelines set forth by the Health Insurance Portability and Accountability Act (HIPAA), there is virtually no certifying agency to standardize the system for universal use (Oatway 2004). Compounding this issue is a portion of the current presidential administration's proposed solution to our nation's

healthcare dilemma. A central component of that proposal is the development and implementation of a standardized EMR. Standards required to make interoperability possible have not been developed yet which could lead to widespread variations in implementation and utilization of EMRs in all settings including long term care, ultimately resulting in inability to have interoperability (Hillestad et al. 2005; Oatway 2004; DeVore et al. 2007).

Change in facility culture was discussed inclusively in all evaluated research (Pacicco 2008). The term 'change in facility culture' encompasses a wide range of changes occurring with the implementation of an EMR (DeVore et al. 2007; Pacicco 2008). Professional acceptance has been problematic to many facilities in implementing EMRs (Oatway 2004). Physicians report difficulties in use and initially increased time in use, both arguments confirmed by research (Rochon et al. 2005; Garg et al. 2005). Many patient care providers are not familiar with computer use and report feelings of frustration and being threatened (DeVore et al. 2007). Research corroborates extensive training prior to implementation, consulting patient care staff in the development process and user-friendly programs as the key components in addressing professional acceptance (Oatway 2004). Public acceptance can provide a limitation as well. Patients describe feeling neglected or unimportant if their providers are spending time in-putting information into the computer when they feel their time should be directed towards them (Oatway 2004). Lack of public acceptance was identified as a stronger limitation in the long term care setting as their patient population is older and requires more personal attention (Oatway 2004; DeVore et al. 2007; Pacicco 2008).

Insights shared from the Baycrest Centre for Geriatric Care, 2005, showed a specific outcome and significant limitation. In their implementation of a CPOE system, results demonstrated a significant increase in the time spent by the physician. "When compared with similar research on the subject of CPOE, this study identifies a common argument against the use of CPOE demonstrating that it does not initially increase efficiency, creating some resistance to implementation (Rochon et al. 2005). This insight was shared in an attempt to help other institutions employ 'time neutral' methods of implementing an EMR system of any kind.

Effectiveness of EMRs in the long term care setting is minimally represented in the literature. Results from the study by The San Francisco VA Medical Center, 2004 of EMR intervention in nursing home advance directive orders and documentation present a positive effectiveness for their intervention (Linderner 2007). As stated prior, completion of advanced directive discussion notes increased from a four percent completion to 63% completion in a short period of three months (Linderner 2007). This study concluded that the effectiveness of the intervention was a result of including the participating clinicians in the design, implementation with a group of clinicians who were supportive of the initiative, keeping the implementation site confined to one singular nursing home ensuring a small implementation force and use of quality and scientific augmentation techniques (Linderner 2007).

Aside from the above stated study by Linderner, et al, 2007, (Linderner 2007) very little information on the effectiveness of EMR use in long term care settings is represented in the published literature.

Comparative Analysis of Literature Assessing the Use of EMRs in Long Term Care Settings

APPENDIX A: Comparative Analysis of Literature Assessing the Use of EMRs in Long Term Care Settings

Published Source	Benefits	Limitations	Effectiveness
Hillestad R, Bigelow J, Bower A, Girosi F, Meili R, Scoville R, Taylor R. (2005)	Safety benefits, health benefits, efficiency savings, reduction of adverse drug events, chronic disease management, disease prevention,	High adoption costs and multiple non-standardized systems leading to interoperability	No results reported
DeVore D, Price C, Natzke J. (2007)	Improving the quality of patient care, reducing medical errors, increasing operational efficiencies, and reducing costs.	Interoperability challenges and extensive change to the facility culture.	No results reported
Tomzak M. (2007)	streamlining of regulatory compliance	Lack of strategically defined objectives	No results reported
Pacicco S. (2008)	Improved quality and safety, streamlining of regulatory compliance, ensuring the most accurate data is available to clinicians, improved coordination in patient care, and increased efficiency	EMR designed specifically for LTC setting, significant change to culture, lack of capital to invest in necessary equipment, training, and maintenance.	No results reported
Linderner S, Davoren J, Vollmer A, Williams B, Landefeld C. (2007)	Not applicable	Not applicable	The targeted electronic medical record intervention greatly increased completion of the advanced directive discussion notes. Outcome was improved communication and met their implementation goal.
Rochon P, Field T, Gurwitz J et al. (2005)	Reduction in adverse drug events, improved patient safety and improved coordination in patient care.	Change in culture and implementation did not save time for the providers, but increased their time spent on ordering medications.	No results reported
Oatway D. (2004)	Electronic records will be more secure and available than paper. Sharing records among providers is easier. Electronic medical records aid in acquiring data for medical research. Health records can be access anywhere by authorized providers. Claims	Unable to implement acute care oriented systems is ineffectual, software programs are limiting technical factor, professional	No results reported

are easier to file. Backup documentation is more readily accessible. Transition to full electronic medical records is easier if the facility is already storing some clinical data in an electronic format. Reductions in medical errors. Increased efficiency, reduced claim rejections, improved documentation, and more informed and synchronized clinical care.

acceptance, public acceptance, the savings claimed will not necessarily go to the facility making the investment, multiple hybrid systems.

DISCUSSION

As is true of any act of change, the implementation of EMRs in long term care facilities incorporates benefits as well as some limitations. The actual and potential positive aspects that were described in the results relating to EMRs in long term care facilities consist of: reduction in adverse drug events, ensuring the most accurate data is available to clinicians, improved coordination in patient care, increased efficiency and streamlining of regulatory compliance.

In large part, the theme of these benefits revolves around quality of care. With the average nursing home resident typically administered six different prescription medications daily, (Cassel 2003) medication errors have an increased chance of occurring with the current system. Through EMR and CPOE, implementation of an electronic system could be a significant step toward prevention of such errors. By allowing physicians and other care providers access to patient records (i.e. charting, images) remotely, EMRs could provide the patient access to more timely and accurate treatment. A standardized EMR that is fully compatible across different healthcare facilities would no doubt provide for improved coordination, increased efficiency of the healthcare system as a whole, and greater access for regulatory bodies to maintain control and provide input when it comes to streamlining compliance and reimbursement issues.

Negative components, or limitations, of integrating electronic records into long term care that were found in the literature review included: adoption costs, incongruity in cost savings, interoperability, and change to the facility culture. Adoption costs of electronic records software for long term care facilities as well as interoperability issues that make up the total cost of implementing an EMR “not only includes the first year’s software, implementation, and infrastructure costs, but [also includes] the costs for ongoing support and licensing, as well as for ongoing basic IT support not integrated with software support” (Covolo 2007, pg 17). Further compounding the limitations has been a discrepancy between who the cost savings offered by EMR actually benefits. Regarding standardization/interoperability between facilities, the reviewed literature showed that there simply isn’t any at this point. The lack of a governing body in this area enormously limits advancement of EMR use since independent software companies have virtually no guidelines and standards by which to write their individual programs. Finally, the introduction of change to the organizational culture of any facility will always be met with some amount of resistance. There are proven steps that can be taken—and should not be ignored—when implementing change in an organization, especially change that can impact a facility as greatly as the implementation of an EMR.

Finally, comes the inquiry of the effectiveness of the current utilization of EMRs in long-term care. All evidence from this literature review is negative in regard to effectiveness. The primary rationale for this determination is the fact that utilization of EMRs in nursing homes is all but nonexistent. Where EMRs have been implemented results of effectiveness are limited and shallow as the few long term care institutions who have employed EMRs are still in their implementation periods and therefore have yet to assess the effectiveness of using EMR in their institutions (Garg et al. 2005). While one study showed a high level of participation in the use of one or more specific aspects of an electronic information system, a study performed in 2005 by Brigham and Women’s Hospital in Boston (Resnick 2009) found that a negligible one percent of the nation’s long-term care facilities had implemented and were using some comprehensive form of EMR (Pacicco 2008). That translates into only about 160 of the nation’s 16,100 nursing homes. (CDC 2009) Furthermore, upon searching the literature for articles pertaining to the subject of this review, only seven such documents were gleaned from the five extensive databases queried. Upon discovery of statistics such as this, it is evident that something is definitely amiss in terms of the appeal that implementing this new technology holds for long-term care facilities. In further review, it seems that that something is not a single straightforward flaw but instead a multi-factorial quandary with problems to which solutions is most

likely yet to be discovered. While each of the aforementioned limitations undoubtedly play some role, the following issues seem to be primary when considering the almost nonexistence of EMR in the long-term care setting.

The current state of failure of EMR utilization in long-term care facilities cannot be attributed to a lack of technological advancement—especially when considering the hardware component. While the ever-evolving phenomenon that is the technological industry will continue to develop products that will increase capacity, speed, and capabilities, most concur that the equipment currently available is at least adequate to manage the current demands that an EMR would entail. The obstacle from a technological standpoint stems not from a lack of—or shortage of—hardware or software; rather the abundance of available electronic record software serves to hinder its acceptance and implementation (Oatway 2004). The reason for this hindrance is largely due to a lack of standardization. One of the major benefits for the country as whole, when considering the use of EMRs is the ability to quickly and easily share patient information among various providers, allowing greater collaboration and a more extensive knowledge base concerning patient status and history. With the assorted development of multiple software systems by various independent companies, problems with compatibility are unavoidable as well as detrimental to collaboration (Oatway 2004). When combined, the current lack of standardization and the expected movement toward a standardized system deter facilities from committing to a specific system for fear that their investment may prove to be in vain. While the potentiality of a government mandated adoption of EMR paradoxically serves as a current obstacle to widespread implementation of the technology, the actuality of a federally incentivized initiative would most likely more than compensate for any negative impact inflicted on the popularity and acceptance of EMR.

Limitations specific to this paper and the assessment of benefits, limitations and effectiveness of EMR use in LTC include a lack of substantial research completed on the subject and lack of documentation of processes involved in the implementation of EMRs in LTC.

CONCLUSION

Implementation of EMRs in the long term care setting is still in its infancy. Current implementation is limited and varies among institutions. Those facilities that have adopted EMR use are still developing methods to assess effectiveness; therefore, statistical data regarding effectiveness regarding EMRs in the long term care setting is minimal. In summary, the literature review does not support the idea that EMRs are currently being effectively used in the long-term care setting.

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THE BURDEN OF OUT-OF-POCKET PRESCRIPTION DRUG EXPENSES ON LOW-INCOME US FAMILIES

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ABSTRACT

The major purpose of this research is to investigate the burden of out-of-pocket (OOP) Rx drug expenses on low-income US families and to examine the extent to which Rx drug insurance reduces this burden. To that end, we use 2005 data from the nationally representative Medical Expenditure Panel Survey (MEPS). Results demonstrate that low-income families are less likely to have Rx drug insurance, and experience greater barriers to the purchase of Rx drugs. Results also show that family Rx drug expenses and out-of-pocket Rx drug expenses increase only slightly with family income. As a result, the burden of out-of-pocket Rx drug expenses is considerably greater for low-income US families. On average, families below the poverty level spend nearly 1 out of 7 dollars of their income on OOP Rx drug expenses. Also, nearly 2 out of 11 families below the poverty level spend at least 20% of their annual income on out-of-pocket Rx drugs. Results also show that for low-income families, the mean share of family Rx expenditure that is paid out-of-pocket is over 40% and is unrelated to whether or not the family has Rx drug insurance. Also, for low-income families, Rx drug insurance is associated with less government contribution to family Rx expenses and with no reduction in the share of income spent on Rx drugs. Efforts at health care reform need to recognize the substantial exposure to OOP Rx expenses experienced by low-income families even when they have Rx drug insurance and to address the substantial burden of OOP Rx drug expenses on low-income US families.

HEALTH PROFESSIONAL PERCEPTIONS OF BARRIERS TO ACCESS TO PRENATAL CARE FOR ADOLESCENTS

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ABSTRACT

While national rates of teen pregnancy are improving, the current level of births to adolescents continues to be much higher in the United States than in most of the world's developed countries. Similarly, while the state of Wisconsin and the city of Milwaukee have also seen declines in teen pregnancy rates, they continue to hold their positions near the top of state and city lists of overall teen birth rates. In fact, Milwaukee ranks the second worst of the nation's 50 largest cities. Because the problem is at a crisis level in Milwaukee, it is a priority health issue for all members of the local community and to other cities across the country with similar demographics. Pregnant adolescents, regardless of race, are typically at higher risk for negative birth outcomes including: low birth weight, premature birth, and infant mortality. Among the several factors associated with adolescent pregnancies that may positively impact these negative outcomes is prenatal care. However, younger mothers are more likely to obtain inadequate prenatal care due to late initiation and large disparities exist among racial/ethnic groups in the U.S., which may result from structural/psychological barriers to access. As part of a longer-term, multi-faceted investigation of African-American teen pregnancy outcomes, prenatal care use and barriers, a series of interviews were conducted with healthcare and social work professionals who have experience working with pregnant African-American teens. Specifically, this paper will summarize the results of this qualitative study, to describe professional perceptions of barriers to access for adolescent prenatal care in the specific context of Milwaukee. These results will be compared to results reported in past studies of barriers to prenatal care.

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ELECTRONIC PEDIGREES AND COUNTERFEIT PHARMACEUTICALS: THE U.S. EXPERIENCE WITH RFID

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Keywords:

RFID (Radio Frequency Identification), counterfeit, PDMA (Pharmaceutical Drug Marketing Act), track and trace, EPC (electronic product code), electronic pedigree

INTRODUCTION

This paper looks at the use of electronic pedigrees based on RFID (radio frequency identification) technology to protect the American public from counterfeit pharmaceutical drugs and the diversion of legitimate pharmaceuticals into illegal markets. The World Health Organization (WHO) defines a counterfeit pharmaceutical as one that is “deliberately and fraudulently mislabeled with respect to identity and/or source.” (WHO, 2003) Counterfeit prescription drugs can include:

- Drugs which are deliberately and fraudulently mislabeled with respect to identity and/or source.
- Either a branded or generic drug.
- Drugs with correct ingredients, wrong ingredients, without active ingredients, with insufficient amounts of the active ingredient or with falsified packaging.

Counterfeit pharmaceuticals pose a significant problem in the world economy because:

- Lost sales and depressed prices caused by counterfeits represent an economic loss to the company whose product is being counterfeited.
- Patients taking counterfeit prescription drugs may face significant health risks:
 - They may not be getting the drug recommended by their physician in the recommended strength.
 - Counterfeit drugs could include contaminants that are harmful to patients.
 - Counterfeit drugs may be expired or have a fraudulent expiration date.
 - Counterfeit drugs may not have been handled, packaged, or labeled properly making them potentially ineffective or toxic.
 - Counterfeit drugs could cause a loss of faith in the healthcare system which results in patients not seeking appropriate care.
- The pharmaceutical industry may divert funds from research to anti-counterfeiting measures.
- The pharmaceutical industry may not fund research to create new drugs to the same extent it has in the past.
- Counterfeit drugs may expose the maker of the legitimate product to product liability litigation. (Morris, 2002) (Margolies, 2003)

Some of the most recent counterfeit drugs found in the U.S. include. (Runy, 2007)

- Combivir® (AIDS)
- Procrit® (kidney disease, effects of chemotherapy)
- Diflucan® (fungal infections, AIDS)
- Serostim® (AIDS wasting)
- Epivir® (AIDS)
- Sustiva® (AIDS)
- Epogen® (kidney failure, side effects of chemo-therapy)
- Trizivir® (AIDS)
- Lamisil® (nail fungus)
- Viagra® (erectile dysfunction)
- Lipitor® (high cholesterol)
- Zerit® (AIDS)
- Norvasc® (calcium channel blocker)
- Neupogen® (side effects of chemo-therapy)
- Zyprexa® (schizophrenia, acute bipolar syndrome)
- Propecia® (hair growth)

Outside of the United States, counterfeit Artusenate®, an anti-malaria drug, is a major problem. A 2005 article in the British medical journal, The Lancet, estimated that 40 percent of the Artusenate® available in developing countries is counterfeit. Experts estimate that 200,000 deaths could be avoided annually if the genuine Artusenate® were available in appropriate quantities. (Stockholm Network, 2004) Latest estimates jointly elaborated by WHO, the Organization for Economic Co-Operation and Development (OECD), and the Pharmaceutical Security Institute show:

- More than 30% of medicines in some areas of Latin America, South East Asia, and Sub-Saharan Africa are counterfeits.

- Emerging economies - the proportion is estimated at 10%; however, in many of the former Soviet Republics it can be as high as 20%.

- Wealthy countries with strong regulatory mechanisms - counterfeits account for less than 1% of the market value, but 50% of Internet sales are counterfeit. (Gren, 2007)

The FDA reports that counterfeit pharmaceuticals may make up more than half of some countries' drug supply. For example, up to 50 percent of anti-malarial medication in Africa is counterfeit. (FDA, 26 January 2006) The WHO reports that approximately 8% of the drugs sold in the United States are counterfeit. (FDA, 26 January 2006)

(Insert Figure 1 - Bar Chart of FDA Counterfeiting Cases)
(Pharmaceutical Commerce, 2006)

Counterfeiting is a problem for commodities other than pharmaceutical drugs. U.S. Customs statistics indicate that about 17% of their seizures are media, 10 % computer hardware, 10 % wearing apparel, etc. (U.S. Customs and Border Patrol, 2008) Statistics on pharmaceutical drugs are aggregated into an "other" category by U.S. Customs.

Prescription Drug Marketing Act (PDMA) of 1987 and Prescription Drug Amendments of 1992

Congress passed PDMA in 1987 "because there were insufficient safeguards in the prescription

drug distribution system to prevent the introduction and retail sale of substandard, ineffective, or counterfeit drugs and that a wholesale drug diversion submarket had developed that prevented effective control over, or even routine knowledge of, the true sources of the drug." (FDA, 2001)

A key element of PDMA is a legal requirement of drug traceability back to the manufacturer. Every pharmaceutical drug dispensed to a patient must have a pedigree; it must be traceable back through the distribution system to the manufacturer and a particular manufacturing batch. "[The] FDA has concluded that an electronic pedigree should accomplish and surpass the goals of PDMA and is potentially a more effective solution for tracing the movement of pharmaceuticals than a paper pedigree." (Federal Register, 23 February 2004)

The FDA has identified RFID (radio frequency identification) as the most likely technology to meet the requirements of PDMA. The FDA believes that RFID technology can be implemented for pharmaceutical drugs by 2007. For pharmaceutical drugs, the track and trace requirement will involve:

- Assigning serial numbers to individual packages purchased by consumers and
- An information infrastructure of tags and readers.

(Insert Figure 2 – RFID Wal-Mart Style Tag)

An EPC RFID tag similar to those used for Wal-Mart

The actual EPC RFID chips used by Wal-Mart are now smaller than a grain of rice. (Christiansen, 2007)

One of the authors was informed that Wal-Mart's cost for RFID chips was US\$0.18 per chip in the summer of 2005. Current tag prices average US\$0.11 per tag when purchased in lots of one million (Odin Technologies, 2009). This cost is expected to fall as RFID manufacturing technology is improved.

Below is a picture of a state-of-the-art chip from Hitachi

(Insert Figure 3. Powder RFID tag)

(Christensen, 2007)

(Powder RFID chips next to a human hair)

The FDA required compliance with PDMA by December 2006. The actual requirement is that pharmaceutical drug manufacturing companies start implementing the electronic pedigree system, beginning with the products most vulnerable to counterfeiting. Florida and Indiana pedigree laws require compliance by the summer of 2006. A similar electronic pedigree laws in California, Nevada, and Texas require compliance by 2007. (VeriSign, 2006)

The bulk of e-pedigree activity has been at the state level. Nevada, Arizona, Colorado, Indiana, Oregon, and Florida had e-pedigree requirements as of 2006. In the first few months of 2007, Idaho, Wyoming, Maryland, and North and South Dakota enacted similar requirements. California, Iowa, Kansas, Mississippi, Nebraska, New Mexico, Texas, and Vermont have all proposed legislation or planned a timeline for enacting e-pedigree. (Harrison, 24 April 2007)

How Track and Trace works with RFID and EPC

The Electronic Product Code (EPC) was created as an eventual successor to the bar code (UPC). The aim was to create a low-cost method of tracking goods using RFID technology. The benefits of RFID / EPC for pharmaceuticals are:

- The EPC has larger information capacity than the UPC, making it possible to identify each unit of a product with its own EPC.

- The product can be scanned without an individual products being scanned, generating a savings in labor costs.

Both the product and the RFID tag can be inside a tamper proof container on a pallet containing many SKUs, each with their own RFID tags.

Passive tags have practical read distances ranging from about 10 mm (0.39 inches) up to about 6 meters (19.7 feet) at speeds up to 160 miles per hour (260 km per hour). Because passive tags are cheaper to manufacture and have no battery, the majority of RFID tags in existence are of the passive variety. As of 2008, these tags cost from US \$0.16 in high volumes. Universal RFID tagging of individual products will become commercially viable at very large volumes of 10 billion units per year, driving production cost to less than US \$0.05 according to one manufacturer (Airvenue, 2006)

3.1 What is an EPC? (VeriSign, 2005) (Gilbert, 2004)

A UPC (**U**niversal **P**roduct **C**ode) is the sequence of numbers in a U.S.-standard barcode today. An EPC (**E**lectronic **P**roduct **C**ode) is a standard for data formats in RFID tags that is meant to replace the UPC barcode. For example, an EPC-96 code has four components:

- (1) A version number, indicating the tag type (e.g., 96-bit EPC Class 1);
- (2) A domain manager, i.e., a number specifying the entity that administers the tag code, e.g., "Acme Products Co.,"
- (3) An object class, i.e., a number specifying the type of product the RFID tag is attached to, e.g., "Model L rocket,"
- (4) A unique identifier, a number that, in combination with the other EPC components, uniquely specifies the tag (and object).

The following diagram summarizes the EPC structure. Numbers here are bit lengths for the various EPC components.

(Insert Figure 4 - EPC Schematic)

In addition, a tag contains two non-readable data elements: A 16-bit checksum (cyclic redundancy code) used to identify transmission errors, and a PIN, used for such operations as "killing," i.e., permanent disablement of the tag for privacy enforcement.

In addition to RFID / EPC tags on the package of medicine, some producers are printing EPC codes on individual pills. This means that the pedigree of individual pills can be obtained. (Basta, 2006). Data on the tag can be encrypted so that it is not readable by unauthorized readers.

Track and Trace

To realize the "track and trace" potential of RFID / EPC technology, retailers, distributors and manufacturers need access to comprehensive, real-time product information. VeriSign Corporation, the company that maintains the Internets ".com" and ".net" registry, has been chosen by EPC Global to host the EPC network for the global exchange of EPC information. The cost of the EPC starter service is \$10,000 to sign up plus \$4,000 per month or a flat \$50,000 for the first year. The EPC Network is composed of three key elements:

- EPC Information Services (EPC-IS)
- EPC Discovery Services
- Object Name Service (ONS)

When an RFID tag is manufactured with an EPC, the EPC is registered within the ONS. The manufacturer attaches the RFID tag to the product and the EPC becomes a part of that product as it moves through the supply chain. Particular product information is added to the manufacturer's EPC-IS, and the knowledge that this data exists within the manufacturer's EPC-IS is passed to the EPC Discovery Service.

As the product leaves the manufacturer's facility, its departure is automatically registered with the EPC-IS. Similarly, when the product arrives at the next point in the supply chain (e.g., a distributor site) the EPC is automatically read and registered with the distributor's EPC-IS and with the EPC Discovery Service.

(Insert Figure 5 – EPC Information System)

When the distributor needs product information, it asks the ONS for the location of the manufacturer's EPC-IS. The root ONS provides the location of the manufacturer's ONS, which in turn provides the location of the manufacturer's EPC-IS. This query process is transparent to the supply chain member and takes only milliseconds to execute. With the manufacturer's EPC-IS location, the distributor's application can request specific product information.

As products progress through the supply chain, the supply chain is in constant communication with the EPC-IS. The ONS is the "glue" that holds the EPC Network together; this service tracks every EPC-IS and EPC Discovery Service. Authorized users have access to complete, up-to-the minute intelligence about any product. The ONS will run on the same infrastructure as the Internet's Domain Name System (DNS), which routes domain names to specific Web servers around the world.

The result is real-time full visibility of the supply chain.

(Insert Figure 6 – Drug Channnel Distribution Network)

Explanation of the “Infiltration of U.S. Drug Supply” Chart

- Pure and unadulterated drugs, represented by blue arrows [emerging from the diamond on the left], are made by pharmaceutical manufacturers and then shipped to either drug wholesalers or directly to drug dispensers, usually to groups who receive discounts. Drugs are also exported overseas, often at a significantly lower price because of negotiated price controls.
- Meanwhile, counterfeited drugs, including fully fake, adulterated and falsely relabeled drugs, are made by drug counterfeiters and represented in this chart by red lines [emerging from the diamond on the left]. Drug diverters help the counterfeiters, both by supplying them with legitimate drugs that can be relabeled and repackaged, and by serving as the means for counterfeits to enter the legitimate drug supply. Note that while this chart distinguishes between them, there is often no difference between a diverter and a counterfeiter (one individual can be both) or a diverter and a gray market distributor.
- Diverters and their gray market distributors, whether they realize it or not, can mix legitimate medicine with drugs that are counterfeit, substandard, expired or have been degraded by conditions in storage and transport. As a result, the safety of their drugs is compromised, and they are therefore represented by purple lines [most of the arrows originating below the “diverters” rectangle].
- These compromised gray market drugs move into the mainstream drug supply chain by first passing through a complex network of small distributors and secondary wholesalers, who sell the drugs to the nation's “Big Three” drug wholesalers. Once acquired by the Big Three, the compromised drugs are then combined with the pure drugs the Big Three acquire directly from the manufacturers, and then sent to regional wholesalers and pharmacies who sell the drugs to unwitting consumers.
- Consumers' purchases from online drug stores – or direct purchase of imported drugs – may also yield drugs that are unapproved by the FDA, counterfeit, or dangerous, since counterfeits are far more prevalent in foreign drug supplies. (Yankus, 2006)

RFID technology loses some of its effectiveness with metal and liquid products. Read rates are virtually 100 % at the pallet level, and 95-97 % at the case level. Item level reads have been reported at a much lower level (51 % to 80%). Read rates would be 100% if it were permitted to infer data from the pallet levels. (Pharmaceutical Commerce, 2006)

This has been difficult to achieve because of different definitions of what constitutes a successful read.

The problem is that to achieve a high read rate requires that antenna arrays and the size and shape of the tags must be tuned for the material (glass, liquid, etc.) that is being shipped. Within the RFID supply chain the key players are Label Converters. Label Converters put the tags onto adhesive strips and onto other mediums. If a Label Converter was using one array, one type of reader, at one distance and one read speed for their inlays, they well could get a 95 percent read rate, while end users might have a far lower read rate! The key is to define more specifically when a 95 percent read rate is achieved (what inlay combined with what antenna array past what kind of reader moving at what speed gives 95 percent read rates), to certify the partners according to specific definitions, and then to communicate this to potential customers. (Banker, 2006)

Currently the progress of adoption of RFID has been very uneven. Paper product manufacturers such as Kimberly Clark have been deploying RFID very rapidly because both its products and its packaging are RF inert so Kimberly Clark can achieve virtually 100 percent read rates. Pharmaceutical drug manufacturers are having a more difficult time. Wal-Mart is claiming 99.5% read rates at the case level in its pilot program. (Mary Catherine O' Connor, 2007) TAGSYS and Owens-Illinois are both guaranteeing Six Sigma read rates. (Contract Pharma, June 2007)

Diversion

Diversion of a pharmaceutical drug is the practice of drug abusers diverting the drug from its medicinal purpose to use it to feed their addiction. Experts estimate that 30 % of the drug problem in the United States is accounted for by the abuse of pharmaceutical drugs. (RXDiversion, 2006) RFID will enable healthcare institutions to implement a chain-of-custody that will go all the way to the patient. All pharmaceutical drugs are tagged with a HIPA-TAG™ that identifies the NDC number, lot/date, dosage, special instructions, the intended patient's name, the physician and the pharmacist, etc. During the admission process, a patient HIPA-TAG™ is placed inside the wristband identifying the patient name, gender, SSN, birth date, blood type, allergies, admission date, contact name and phone, attending physician, the diagnosed ailments, and other relevant information. An RFID scanner reader automatically checks patient's tag against the prescriptions at the bedside

As the volume of RFID tags increase, the cost of the tags, readers, and the rest of the infrastructure is expected to decrease. The development of interoperable readers that can read both RFID tags and barcodes will simplify the transition from UPC bar codes to RFID codes.

For years, drug manufacturers have sold the bulk of their drugs (90 %) through the three major wholesaler/distributors: AmerisourceBergen, Cardinal Health, and McKesson. These wholesalers buy large quantities of drugs in hopes that manufacturers will increase drug prices. Large purchases by the wholesalers help consumers pay less for drugs, but the practice makes it difficult for pharmaceutical companies to accurately forecast demand. Because of this Pfizer and Merck took revenue hits upward of \$300 million to reduce their wholesaler inventories in 2003. (Miller, 2004)

A wave of mergers has meant that the drug distribution market has undergone significant consolidation over the past five year. Many pharmaceutical manufacturing companies now have the option of distributing directly to pharmacies and bypassing the wholesalers. For the wholesalers to avoid

disintermediation, they must make their services more valuable. Some examples of new services and innovation might be in the handling of controlled substances, which require extra security and in the handling of cold chain drugs, such as some vaccines that need to be stored at temperatures between two and eight degrees Celsius.

At the same time as the number of drug manufacturers has dropped dramatically, there has been an even more dramatic increase in the number of licensed drug wholesalers. The large number of licensed wholesalers makes it extremely difficult to monitor what is happening in the drug supply chain. (Eban, 2005)

FDA Action (21 October 2006)

The FDA ordered drug manufacturers to start implementing PDMA in December 2006. While FDA did not offer any further delays in implementation of the PDMA, its order seemed to anticipate that immediate compliance was impossible and that drug companies to implement first for the drugs most likely to be counterfeited.

So far RFID looks like the most feasible way, both economically and technically, to meet the requirements of PDMA. The FDA has indicated a willingness to work with the industry to ease the implementation of RFID by reducing or streamlining its regulations. The expectation is that RFID standards will emerge from the ongoing tests and that the pharmaceutical drug industry is following these studies and will be ready to promptly implement the standards.

Some Technical Problems:

- Obtaining 100 % read rates.
- Assuring that the RF readers have no affect on the chemical compounds or biological substances in pharmaceutical drugs.
- Assuring that RFID does not violate the privacy rights of individuals.
- Making appropriate arrangements for the ownership, security, and access to the RFID database.

One consequence of the implementation of RFID is the participants in the pharmaceutical drug industry are likely to be unwilling to partner with firms that have not implemented RFID technology. Similar phenomena happened earlier with Electronic Data Interchange (EDI) technology. Companies refused to partner with companies that could not provide an EDI interface. In the case of EDI, it was relatively easy for a company to obtain access to the technology. RFID demands a significantly higher level of sophistication and probably a higher level of investment. Oracle, SAP, Baan, i2, and others currently have such relationships. As time goes by, the Enterprise Resource Planning (ERP) vendors will provide RFID data and software in a seamless manner. Temporarily, there are a number of firms providing middleware, a software interface between RFID and the various ERP systems.

RFID Performance

Implementing RFID, EPC tags involves much more than just putting RFID tags on products. Retailers buying the merchandise (Wal-Mart) have performance requirements. Thus it is appropriate to experiment with tag encoding, tag placement, pallet configuration, etc. The manufacturer needs to plan for the RFID scanning configuration at distributors and retailers. Product can be exposed to humidity, heat, cold, abrasion, etc. in transit. The manufacturer needs to plan RFID tag placement in the light of the transit environment.

Implementation of RFID / EPCs for pharmaceuticals is complicated by the regulation of the pharmaceutical industry by the FDA and other government agencies in the area of product packaging, product labeling, and information privacy. A trial of RFID in the pharmaceutical industry, conducted by Accenture in 2004, led to series of recommendations.

The project team identified and brought to the attention of EPCglobal and the FDA the need for standards and business practices relating to the use of RFID / EPC technologies that address the unique requirements of the pharmaceutical industry. (RFID Journal, 6 October 2005) .

Current speculation puts the RFID data base at 150 terabytes as compared to the 136 terabytes of information in the Library of Congress. (UCB, 2003)

RFID Standards

Part of the problem in implementing an RFID based electronic pedigree system for prescription drugs is the absence of standards. Initially, the problem was the standard for coding the tag. There was an ISO standard tag (ISO 18000-6) backed by vendors, but it was rejected by major users such as Wal-Mart, Gillette, and PNG who went on to develop the EPC. GEN 1 of the EPC had many variations; it was essentially a proprietary standard with many variations, that is, there was no standard. Recently EPC GEN2, a true standard, has been implemented, and it has won wide acceptance. The transition to GEN2 is expected to be complete by the end of 2006. (RFID UPDATE, April 2006)

Still there are variations in the frequencies used by the tags and tag readers. UHF (Ultra High Frequency) seems to dominate for pallet and case tags. HF (High Frequency) dominates for SKU tags. Electronic pedigree systems implemented Pfizer for Viagra® used UHF (915 MHz) tags for cases and pallets and HF (13.56MHz) tags for SKUs. (O'Connor, 2005). Before the Viagra® trial, McKesson, the drug wholesaler involved, had been experimenting with UHF (915MHz). Purdue Pharma used UHF tags on bottles of OxyContin® shipped to Wal-Mart. Purdue chose UHF because that's what Wal-Mart wanted to use. (Roberti, 2006) HF vendor claim that HF tags work better around metal and water and hence are better for item level tagging. Recent advances in UHF RFID tags which put a new kind of antenna on the UHF chip, so-called "near field" UHF tags, have yielded much better results.

The International Standards Organization has adopted a number of standards both for the RFID chips themselves the RF interface (ISO, 2006) To some extent, the implementation of RFID technology is dependent on the development of standards. But this has not a rapid process. While EPC (AUTO ID Center) has broad support from the likely supply chain customers of RFID / EPC it is essentially a proprietary standard. The history of proprietary standards, even those backed by major players, e.g., General Motors and the Machine Automation Protocol (MAP) standard, IBM and SAP, is not encouraging. The history of proprietary standards is a history of failure, and many players well stay on the sidelines until a real standard emerges.

On July11, 2006, the International Standards Organization (ISO adopted the EPC Gen 2 standard as ISO 18000-6C. (O'Connor, 2006) The adoption of a standard, an industry standard not a proprietary standard, should ease the way for the rapid development of an electronic pedigree system. Retailers, pharmaceutical drug manufacturers, pharmaceutical drug wholesalers, software houses, hardware manufacturers, etc. no longer need fear that they would be gambling on the wrong technology. There is a clear path forward, and ISO has said where it lies.

Resolution of RFID Controversy

There are a number of 800 pound gorillas involved in the process:

- The World Trade Organization (WTO)
- The U.S. Department of Defense (DOD)
- Wal-Mart and other EPC partners
- The Food and Drug Administration (FDA)
- Several states including Florida and California
- The United States Congress
- American hospitals
- Wholesale drug distributors

All of the gorillas are pushing for rapid deployment of a standard system RFID tags and readers with varying emphasis on the rapid deployment and standard part of the requirement. The small, independent, secondary wholesale drug distributors are not supportive of the change. Secondary wholesalers are wholesalers who are not who are not authorized distributors of record (ADRs) for the drugs they distribute. In May of 2007, the United States Senate passed the Food and Drug Administration Revitalization Act (S1082). The act provided a provision requires anti-counterfeiting technology analogous to those technologies used with U.S. currency and specifically excluding anti-counterfeiting technologies such as RFID or barcodes which require an infrastructure of readers and scanners. Lobbying Congress is likely to play a more important role in determining the course of the future of RFID technology. California's threatened implementation of its own e-pedigree requirement is likely to motivate the pharmaceutical drug manufacturers to get behind a federal (FDA) program that would pre-empt state requirements.

Some independent drug wholesalers are also resisting the movement to RFID adoption. Immediate adoption of RFID technology would likely lead to the exclusion of many independent drug wholesalers from the pharmaceutical drug supply chain and consequently their bankruptcy. (See RxUSA Wholesalers, Inc. v. HHS.)

Follow the Money!

Economic benefits associated with EPC/RFID adoption range between \$500 million and \$1 billion annually for pharmaceutical manufacturers, and between \$200 million and \$400 million annually for healthcare distributors, according to a new report released by the Healthcare Distribution Management Association (HDMA) Healthcare Foundation. The report, entitled Adopting EPC in Healthcare: Costs and Benefits, finds additional annual benefits of between \$200 million and \$400 million in avoided incidents of counterfeiting, which can damage brand value and public confidence. (A. T. Kearney, November 2004)

Potential benefits of this magnitude will be impossible to ignore. The A.T. Kearney study shows that virtually everyone in the system (manufacturers, wholesalers, retailers, and hospitals) will share in the gain. While the pecuniary benefits are large, some of the non-pecuniary benefits are more compelling. Drug manufacturers will reap substantial cost savings from greatly simplified and focused recalls of potentially dangerous drugs. The entire society will benefit from the rapid resolution of drug recall situations. The hospitals can reap significant cost savings from the reduction in medication errors. The larger society will probably value this improvement more highly than pharmaceutical drug manufacturers.

The benefits of RFID are not as compelling for individual community pharmacies and small

pharmacy chains. Accenture recently completed a study funded by National Community Pharmacists' Association (NCPA) and National Association of Chain Drug Stores (NACDS) (Bacheldor, 2008). The study estimated that the costs of implementing an e-pedigree system based on RFID would be much higher than previously estimated. The study was a response to the proposed Safeguarding Pharmaceuticals Act of 2008 (HR 5839), introduced in April of 2008. HR 5839 was an attempt by Congress to put a federal track and trace system on the fast track and avoid the delays created by the *RxUSA Wholesalers, Inc. v. HHS* suit. It seems likely that RFID does have negative implications for community pharmacies and small pharmacy chains. However, the public's right to a secure supply of ethical pharmaceuticals seems likely to prevail.

RFID technology will be implemented for the pharmaceutical drug supply chain, and it is likely to be implemented much more quickly than the EDI or UPC precedents would indicate for two reasons: the large financial incentives for adopting and standard, and the large organizations that are aggressively championing RFID, that is, the FDA, Wal-Mart, the DOD, and the WTO.

Implementation

On June 9, 2006, the FDA announced that it would not delay the implementation of the PDMA of 1987 beyond December of 2006 (FDA, 2006). While the FDA did not delay compliance with the PDMA, it also realized that compliance will take place over time. In its compliance guide, the FDA told pharmaceutical drug manufacturers to prioritize (FDA, 2006) their implementation of the PDMA. The priority criteria for track and trace to be implemented include:

- high dollar value in the United States market,
- history of counterfeiting,
- for a new drug, reasonable likelihood of counterfeiting, and
- other law violations involved.

Less than two weeks later June 20, 2006, pharmaceutical industry associations threw their weight behind the FDA recommendations. (Bacheldor, 2006) The states theoretically could set a stricter timetable than the FDA; however, at first gave way to the FDA by delaying the implementation of its drug pedigree regulation until January 1, 2008. (Basta, 2006) It makes a great deal of sense for the states to give way to the FDA because:

- the states do not have the expertise to enforce an electronic pedigree requirement
- the states would be hard pressed to finance the enforcement of such a pedigree requirement, and
- the FDA must now shoulder the responsibility for the tragic incidents that may occur during the implementation of PDMA.

More recently California decided to implement its own e-pedigree requirement with an effective date of January 2009. (FDA News, 2008) The California law applies to "dangerous drugs" that is prescription medications. However, California recently delayed implementation of its requirement until 2011. (PRNewswire-USNewswire, 26 March 2008)

4.3 *RxUSA Wholesalers, Inc. v. HHS* and Drug Wholesaler Licensing

On December 8, 2006, a federal district court in the Eastern District of New York issued a preliminary injunction in *RxUSA WHOLESALER v. HHS* to prohibit FDA from implementing a regulation that requires that certain information be included in a pedigree, which documents the custody of certain prescription drugs in the drug supply chain. The regulation, (21 CFR § 203.50(a)), which went into effect on December 1, 2006, was issued by FDA to implement the Prescription Drug Marketing Act of 1987 (PDMA), as amended by the Prescription Drug Amendments of 1992

(PDA). (FDA, 2006)

Jayne Juvan, an attorney who runs a blog on issues related to the PDMA and RFID, says that the courts are likely to support the injunction until the case is resolved, probably several years from now. (Juvan, 2006) The injunction does not completely suspend the implementation of the PDMA, but it does have a substantial effect.

The supply chain for pharmaceutical drugs is quite complex. The FDA implementation of PDMA would have simplified the supply chain by eliminating the many of the small wholesalers. The small wholesalers could not sell their current inventories because they did not have pedigrees for them and they could not return them to the manufacturer. The small wholesalers had to supply pedigrees with the drugs they sold, but they could not procure pedigrees with the drugs they purchased. The court enjoined enforcement of portions of the PDMA because of these problems. Nevertheless, channel management issues are at the heart of the counterfeit drug problem.

In effect, the FDA implementation of PDMA made the large pharmaceutical drug manufacturers the ultimate licensing authority for drug wholesalers. If the drug manufacturers will not provide wholesalers the pedigree for the drugs the wholesalers handle or grant the drug wholesalers authorized distributors of record (ADR) status, then the drug wholesalers cannot do business. Secondary wholesalers have historically played an important role in facilitating price competition in the retail market for pharmaceutical drugs. By buying large quantities of drugs and reselling them to independent pharmacies and small pharmacy chains, the secondary wholesalers have helped the small pharmacies to be more competitive in the retail pharmacy market. Elimination of the secondary drug wholesalers would have significant anticompetitive implications.

One alternative being considered by Congress is to supersede state licensing of drug wholesalers by federal licensing of drug wholesalers through the FDA. The Plasma Protein Therapeutics Association (PPTA) advocated such a plan in a letter to Senators Ted Kennedy (D-Mass.) and Michael Enzi (R-Wyo.) (PPTA, 2007). This proposal has appeared in various incarnations and is included in the current healthcare reform proposals being considered by Congress.

Repackaging

RFID, by itself, cannot secure the American pharmaceutical drug supply from counterfeiting. If drugs are repackaged at the pharmacy, the most an electronic pedigree system, implemented through RFID, can do is to safeguard the drug supply as it enters the pharmacy. (FDA Week, 2006) Drug repackaging is currently licensed in the United States. Most international, online pharmacies are not licensed repackagers. These online pharmacies are the primary source of concern right now, but the outright prohibition of repackaging should be considered. Drug repackaging, although common, is not the norm everywhere. In Argentina, patients routinely purchase medicine in containers sealed by the manufacturer. Fees for drug repackaging represent a substantial share of the income earned by pharmacies and some physicians.

According to a DispenseXpress price list, doctors can clear \$65.50 every time they dispense a 90-tablet bottle of 800-milligram ibuprofen. They can buy the common painkiller from DispenseXpress for \$9.19, but under current workers' comp rules, they can bill insurers at a rate of \$74.69 per bottle. (Senate Democratic Caucus- California, 2005)

Elimination of repackaging (and repackaging fees) might happen, but so far there has been very

little discussion of how this will happen and what will substitute for repackaging fees. In some countries, there is much less repackaging than there is in the United States. The new e-pedigree requirement in California makes specific provision for repackaging.

“...a single pedigree shall include every change of ownership of a given dangerous drug from its initial manufacture through to its final transactions to a pharmacy or other person for furnishing, administering or dispensing the drug, regardless of repackaging or assignment of another National Drug Code (NDC) Directory number...” (California Business and Professions Code section 4034(c)).

(Insert Figure 7- Pills with printed RFID tags)

Individual pills imprinted with RFID tags

5.0 Conclusions

The implementation of track and trace through and RFID based e-pedigree system has not been as smooth and orderly as consumers might have hoped. Nevertheless, it is possible to draw certain conclusions about this process:

An RFID based e-pedigree system for pharmaceutical drugs is going to happen at the federal level. The people who are lined up in support of such a system are quite formidable. They will not be denied. The supporters of RFID include the U.S. Congress, the Food and Drug Administration (FDA), California and the 10 other states considering e-pedigree regulations, the Department of Defense (DOD), Wal-Mart and other major retailers, major manufacturers of consumer goods, and American hospitals. The manufacturers of pharmaceutical drugs and the large drug wholesalers can probably be added to this list. If they do not get behind a federal program, they may be stuck with a patchwork of state systems.

Not everyone will gain from the federal e-pedigree system that is likely to be implemented. Community pharmacies and small pharmacy chains will incur costs that are a larger fraction of their sales than the corresponding costs incurred by the large pharmacy chains. It may not be economic for the small pharmacies to implement the other changes the result in large economic benefits for the large pharmacy chains. The survival of the independent, secondary drug wholesaler needs to be a priority. Historically, the secondary drug wholesaler has played an important role in making independent pharmacies and small pharmacy chains competitive.

The e-pedigree regulations have probably not worked out a working arrangement for repackagers. Repackagers include physician groups, freestanding pharmacies, and hospital pharmacies. Repackagers and “unit doses” have been with the pharmaceutical drug supply chain for a long time. It seems improbable that pharmaceutical drug manufacturers can do all of the packaging, including unit doses, that needs to be done.

California’s entry into this process will probably have a significant impact on the emerging e-pedigree standard. The California law spoke specifically to the repackaging issue, and that will be a critical part of the system that will emerge. Years ago California led the way in setting strict emission standards for automobiles. The California standard is now a de facto national standard. The California e-pedigree requirements will probably have a significant impact on the federal e-pedigree system. The FDA is really not free to ignore what happened in California.

The U.S. approach to e-pedigrees should have a significant impact on a global standard. Much of the technology being implemented already corresponds to international (ISO) standards. Developed economies have an interest in implementing similar systems and facilitating international trade in pharmaceutical drugs.

Some countries may not have an interest in eliminating trade in counterfeit drugs. Unless the

drug manufacturers license AIDS and anti-malarial drugs on very advantageous terms, it seems unlikely that the developing countries will support international anti-counterfeiting agenda.

The e-pedigree system will work to eliminate counterfeits from the legitimate pharmaceutical drug distribution channels. The e-pedigree system is not likely to have a comparable effect on the Internet pharmacies

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DELEGATION: WHAT NURSE MANAGERS NEED TO KNOW?

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ABSTRACT

The relationship between leadership and confidence in delegation is not clearly understood. To be successful in their roles as leaders, RNs need to understand how to best delegate. The ability to delegate tasks to others is an essential skill for the Registered Nurse (RN). The process of delegating requires the RN to remain accountable for the task. However, the delegated individual also assumes responsibility for the task and answers to the RN.

Traditionally, the RN assumed complete care of the patient's needs unassisted by ancillary personnel, such as unlicensed assistive personnel (UAP), clinical nursing assistants or nurses' aides. Because of this emphasis, many RNs never developed the skills needed to delegate patient care appropriately to others, nor were they given educational interventions targeting the development of leadership skills. Today, the presence of sicker patients, fewer RNs, and numerous cost and budgetary restrictions are changing the face of health care. To alleviate some of the stress resulting from these issues, healthcare organizations are utilizing the services of UAPs who provide direct patient care that are consistent with national standards of practice and state nurse practice acts. While the presence of UAPs in health care organizations was intended to alleviate the demands placed on RNs, these same individuals are now saddled with the responsibility of supervising the direct patient care provided by UAPS in addition to their clinical nursing responsibilities.

This cross sectional survey study explored and described the relationship between RN leadership styles, and confidence in delegation. Contrary to expectations, the data did not confirm a relationship between confidence in delegating tasks to UAPs and leadership style. Nurses with less educational preparation were initially less confident in delegating tasks to UAPs as compared to RNs holding a bachelor's degree or higher. Further, after five years of clinical nursing experience, nurses with less educational experience reported more confidence in delegating tasks as compared to RNs with more educational experience. Clinical nursing experience, changes in the nurse's confidence in delegation to UAPs was resulted from interplay between amount of educational preparation and years of clinical nursing experience. It is imperative that nurse managers provide nurses with the educational opportunities necessary to develop delegation and supervision strategies to adapt to the RN changing role. RN's are caring for increasing number of acutely ill patients with scarce resources. An adequately trained RN –UAP team can focus on optimal care and preventing adverse effects on patients.

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GLOBALIZATION AND HEALTH/MEDICAL TOURISM: IMPLICATIONS FOR PHARMACY PRACTICE

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ABSTRACT

When consumers seek health enhancement by traveling to another country, the behavior has been labeled as Health/medical tourism, usually for cheaper care than can be obtained in one's own country. It appears enticing to travel to an exotic land, though many go by necessity, though with exceptions (i.e., cosmetic surgery, wellness spas). As a market-driven phenomenon, Health/medical tourists may also seek unapproved drugs and surgical procedures, along with those after "better value" (Salmon, 2008). Advanced nations are finding segments of their populations leaving for health services abroad. Related to globalization trends, developing nations promote medical tourism as a potential strategy for economic development, beyond reaping trade revenue inflows. Two such nations investing heavily in health enterprises to attract patients from abroad are the United Arab Emirates and Singapore. This trend holds substantial implications for the health professions; pharmacy may find opportunities for its professionalization amidst confronting issues over assuring safe and cost-effective pharmaceutical care.

INTRODUCTION

Many Americans who find themselves uninsured (currently over 50 million) and underinsured (2008 estimated between 25 and 61 million, but now since the economic recession many more) may find

some benefit from Health/medical tourism. . Recently, several private insurance companies in the U.S. seek “bargain care” by sending employees of their clients abroad to reduce benefit outlays. (Konrad, 2009).

The Financial Times noted that 150,000 Americans travel each year for medical treatments, with industry growth of 15-20% annually (Taylor, 2007), jumping to 750,000 in 2007). Patients can save 30-80% over U.S. medical prices. Worldwide the medical tourism industry is expected to grow by US\$2.2 billion annually toward US\$60 billion by 2012 (Forbes, S., 2007). Trade is governed through the World Trade Organization (WTO), with specific definitions outlined in the General Agreement on Trade in Services (GATS). Given increasing global trade in health services, understanding the context in which medical tourism occurs is key to grasping its implications. (Salmon & Aruru, 2010).

Americans priced out of their healthcare system travel for care, among others. Middle Easterners make up 35% of the medical tourist market according to McKinsey (Ehrbeck, Guevara, & Mango, 2008). Europeans, Canadians and others with national health insurance also jump the queues for procedures at home, usually being rich folks who might secure additional private insurance and want to combine vacation touring. Wealthy Middle Easterners have been traveling to England and America for the past few decades, and now hop on planes to Asia to obtain cosmetic interventions or services unavailable from their national health systems. Often they express intents to obtain “better care.” Cheaper dental care, cosmetic interventions, surgeries unavailable in their own health care system, along with specialty pharmacy can be bought through travel packages with arrangements in luxury hotels with shopping sprees. Patients easily travel by plane to an adjoining nation with medical providers who cater to those with private funds. Medical tourism has become a quite profitable enterprise, which accounts for its rapid emergence on the world scene.

Health/medical tourism is thus defined to include seeking lower cost conventional medical services; tourism for indigenous and alternative medicines; obtaining unavailable or unapproved therapies; or virtually any form of tourism undertaken with the purpose of addressing a health concern (including wellness spa vacations). Mostly, this is usually motivated by seeking cheaper care and almost *always paying cash out of pocket*.

Among countries becoming hubs for health tourism are Singapore, United Arab Emirates, Thailand, India, Malaysia, South Africa, Turkey, Hungary, Brazil, Costa Rica, and Mexico. The United States, Germany, and Great Britain have historically attracted individuals seeking high technology, specialized care.

HAVENS FOR HEALTH TOURISM

Places for health tourism are popular destinations for travelers. Shopping in Dubai is a significant lure for spouses (Medical Tourism Dubai, 2009). Private sector providers predominate to garner higher profits from non-nationals. Many of these tourism countries have largely unregulated health care sectors. Middlemen brokers have arisen to lure clientele from abroad with marketing campaigns; travel agencies now exclusively specialize in medical tourism.

To illustrate, India has become a major arena for medical tourism, despite the paucity of services available for the majority of its billion population who cannot afford services from these private providers (Medical tourism flourishes in India, 2008). Historically, India never had a sound health care sector; yet significant private health provider advancement began to serve first expatriates and then a range of foreigners bringing huge revenues into the country. Due to medical tourism, India was predicted to earn

US\$1.87 billion in annual foreign exchange by 2012, according to the Wall Street Journal (Solomon, 2004). India's advantages include low cost care, availability of English-speaking personnel (many trained in Europe and the U.S.), and improved private healthcare facilities, accredited by the Joint Commission International (13 hospitals as of 2009). Foreigners can enjoy opportunities for travel to an exotic land while obtaining medical treatment at a mere fraction of the cost at home, in other words, a "medical holiday." (Aruru & Salmon, 2008).

Since India became a significant medical and pharmaceutical outsourcing place this decade (with contract research, pharmaceutical R&D, manufacturing, human clinical trials, radiology, and other medical activities), it is reasonable that persons seeking health services would follow (Aruru & Salmon, 2007).

PHARMACEUTICALS

In sync with a globalizing health care economy, the issue of re-importation of pharmaceuticals (Salmon & Lynx, 2004) is related to the medical tourism phenomenon. Many northern industrial countries face pharmaceutical prices, particularly for brand entities, that remain extremely high and burdensome to both public and private payers. Increasingly recognized, the *same drugs* made by the *same manufacturers* can be obtained from other countries (which have stricter drug price controls) through Internet cross-border pharmacies, or for consumers who travel to purchase drugs. Re-importation of pharmaceuticals was a hot political issue in the U.S. while the Medicare Part D drug benefit for seniors was debated in 2003-2006. (Lynx & Salmon, 2004a, 2004b). Previously, busloads of seniors traveled in publicized trips to Canada and Mexico to purchase drugs at cheaper prices, estimated to be as low as 80% less. The re-importation of pharmaceuticals remains as a policy issue, supported among both Republicans and Democrats to this day. The Obama economic stimulus package resurrected a drug re-importation legislative push in Congress. (Steinke, 2009). Re-importation is obviously opposed by brand name pharmaceutical companies who don't want to lose their lucrative U.S. market share, particularly while RX sales are growing slowly here (\$286.5 billion in 2007). (Silverman, 2008).

This issue raises a regulatory conundrum for the U.S. Food and Drug Administration (Conlon, 1997). Drugs that are imported through Internet pharmacies are virtually impossible to control (Shepherd, 2004). Fraud and deception remains rampant in that counterfeit drugs pose a major public health problem; consumers are misled and many times harmed by the illicit drug trade in the West, and especially in the developing nations. (Taylor, 2008). All countries that ship its purchased brand drugs abroad, or use for medical tourists, can face, like the Canadians, possible drug shortages particularly when brand pharmaceutical manufacturers place restrictions in their supplies, fearing the huge drain, as with from Canada across the southern border. A similar policy conundrum has risen in the European Union under conditions of parallel trade, again with pharmaceutical manufacturers trying to restrict its practice.

Moreover, counterfeit pharmaceutical permeate the drug supplies within provider institutions where nations have loose regulatory apparatus and enforcement. Thus, globalization has taken on another worrisome characterization in the health arena.

CAVEAT EMPTOR

This newly arising medical tourism presents many unknowns. Consequently, consumers should be aware and cautious, until such time as quality of care can be assured among specific providers in several nations. Finding out about various foreign health care systems can be confounding in itself, let alone

tracking down reliable information on specific providers. Discerning professional quality on the part of patients even in their home country is difficult. Checking the Joint Commission International website, along with available databases in respective countries, where they exist, can be useful, but offer no guarantees for safety. Deciphering the legal frameworks and gaining insights into medical malpractice and court systems (where they exist, as well as the culture provides) poses serious conundrums. Clinical cautions for medication and medical follow-up are issues. Subsequent benefit coverage after returning home from treatment abroad is a problem too.

Before embarking on a trip to secure medical treatment, consumers need serious advance planning in travel arrangements, lodging, Visas, local transportation, bill payment, language, culture, accompanying family members, etc. A number of media pieces focus on “when things go badly.” (Medical tourism, 2008a). While media coverage has done much to publicize medical tourism, some articles provide concerns and cautions for consumers, and these should be reviewed (Salmon, 2008a).

The media coverage has been trendy and filled with testimonials and claims that need to be read with skepticism. Moreover “data” on the numbers of tourists, procedures, quality, etc., also need careful scrutiny. Policies to safeguard patients are not yet assured in most destinations. The professional literature has begun to argue potential safety issues and warns that lucrative entrepreneurial enterprises should be suspiciously avoided by most patients whose conditions require prompt, expert, and follow-through for difficult care processes (e.g., cancer care). Concierge services may far exceed what patients normally obtain from their home country’s health providers, yet, consumers should keep this caveat in mind: “Customer service amenities are not quality of care.”

HEALTH TOURSIM AND ECONOMIC DEVELOPMENT

While medical tourism efforts seek to attract foreigners to private health care providers, they may lead to some spillover to the citizens of that nation, depending on how wide the existing disparities may be (Aruru & Salmon, 2008). Such spillover may occur in terms of higher technology (including pharmaceuticals) being imported (or developed within), and then dispersing and becoming available to the general population; improved systems and procedures of care being possibly disseminated throughout the entire system with MOH leadership, and new learning in medical science and technology among professionals. For such progressive development to occur, government direction must make each a goal, and then to facilitate them with planning and funding!

The World Development Report 1993 (World Bank, 1993) stated that:

“Improved health contributes to economic growth in four ways: It reduces productive losses caused by worker illness; it permits the use of natural resources that have been totally or nearly inaccessible because of disease; it increases the enrollment of children in school and makes them better able to learn; and it frees for alternative uses resources that would otherwise have to be spent on treating illness.”

Any nation that undertakes substantial upgrading of its healthcare system for better performance is investing in human capital, which will provide for increases in economic and social development. Several nations have discovered medical tourism as a means to attract new revenue streams, and a few have even embarked on economic development strategies based upon medical tourism, in particular, the United Arab Emirates and Singapore.

Health services within global trade was estimated to generate about U.S. \$3 trillion annually in the Organization for Economic Co-operation and Development countries alone (OECD, 2007). The medical tourism market itself is expected to increase by US \$60 billion by 2012 (Express Healthcare Management, 2006). Globally, trade is regulated through the World Trade Organization (WTO); the General Agreement on Trade in Services (GATS) has specific definitions outlined as to what constitutes health services trade (Salmon & Aruru, 2010).

Naturally, reassessments of national and individual corporate economic strategies have resulted from the economic collapse brought on in the Fall of 2008. Nevertheless, a year later, we can see that globalization still remains a trend (Laudicina, 2009). Emerging markets (BRIC nations in particular) remain attractive for ROIs. Over the last few decades, economic strongholds have also emerged in medical tourism activity, and these are likely to prosper within limits, perhaps until greater stability is accorded in the world. The global dimension of health care continues to expand, but in unprecedented ways. Emerging nations will find growing numbers of patients in the developed world facing higher costs at home; they may choose alternatives abroad.

Thus, competition to secure redefined cohorts of traveling patients will indeed grow more intense (Ferguson, 2009). Several national governments are already supporting their own medical industries for foreign exchange purposes. It is predictable that the international competitors will be refining their organizational strategies to compete in a world marketplace that becomes broader by the year.

The popularity of this phenomenon led to the forming of the Medical Tourism Association, (MTA) based in West Palm Beach Florida, (www.medicaltourismassociation.com) This organization has among its members international providers, medical travel facilitators, insurance companies, etc.. MTA seeks to promote better communication for available sites and may attempt to track quality and growth in investment and services over time.

At the forefront of the international medical tourism race beyond India and Thailand are Singapore and the United Arab Emirates, two areas of the world in which I lived and traveled to observe last year. Dubai and Abu Dhabi in the UAE have begun multimillion dollar construction to capture the overall Arab tourist market across the entire Gulf region.

UAE's MEDICAL TOURSIM

Dubai Health Care City (DHCC) was established by Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai. A multi-institutional investment and integrated center of excellence for clinical and wellness services and medical research and education (www.dhcc.com), it is anticipated to become a leading health services center in the Gulf region, a 20 million square foot business park cluster for pharmaceutical biotech with foreign investment in a tax free environment. (Matly, 2009, Matly & Dillon, 2009). DHCC has affiliations with both the Harvard Medical School and Boston University. It now offers a range of specialty services, conducts scientific research, and provides for wellness services, amidst complementary and alternative medicines. Its set of facilities consists of hospitals, outpatient clinics, and spa resorts within the Mohammed bin Rashid Al Maktoum Academic Medical Center. Investment (\$572 million) has provided for state-of-the-art medical construction and technology. The DHCC has attracted practitioners and vendors, and offers commercial opportunities to foreign medical and pharmaceutical corporations. The first biotech plant with Korean firms was established to produce drugs to treat diabetes, neurological diseases, and tumors (Pharmaceutical

and Biotechnology Middle East, 2009). DuBiotech is now connected to the Asian Biotech Association for scientific collaborations (Pharmaceutical and Biotechnology Middle East, 2009a).

Abu Dhabi, the second largest city in the UAE and the nation's capital, plans for extensive healthcare infrastructure (\$1.9 billion) with an affiliation with the Cleveland Clinic from the U.S. The planned facilities will serve a variety of patients with critical conditions. Under construction by the Mubadala Development Company, the Cleveland Clinic in Abu Dhabi will include a multi-specialty tertiary center and clinic to serve both local and international patients with "world-class medical care." The hospital will offer high tech diagnostic and treatment capabilities and utilize advanced technologies in surgery, imaging, telemedicine, and electronic medical records.

Healthcare projects are reported to remain unaffected by the economic crisis across the Gulf countries due to the objective need to upgrade capacity for population growth (Healthcare projects "unaffected", 2009). Health care in the overall Gulf Countries is expected to grow 9% to reach US \$47 to \$55 billion by 2020. (Pharmaceutical and Biotechnology Middle East, 2009b).

The overall Gulf Region has been undergoing substantial economic and social change due to oil, but with unevenness among members characterized its economies before the economic collapse in 2008. Given the impact of the global recession, oil price destabilization, and the particular credit bind Dubai faces, most Gulf Countries are expected to have limited growth in 2009. (Recession and Employment, 2009). As demand picks up in the recovery, strategies for health services development may regain momentum, dependent upon accompanying economic, social and cultural directions. Policymakers need to engage private sector entities, as well as the public sector, to expand, consolidate, and support overall healthcare across the Region. The economic development that has occurred due to oil and gas production can enable impressive progress with careful planning and implementation. The Ithmar Capital/Dow Jones Private Markets (2009) report, Expand, Consolidate & Support: Meeting the GCC Healthcare Challenge 2050 stated that::

The requirement for healthcare provision to meet the needs of populations the world over is undiminished in the face of unprecedented financial turmoil.

Currently, the GCC healthcare market is estimated to be worth over US\$20 billion with an expectation of growth to US\$25 billion by 2015. The 37 million inhabitants of the Gulf area are experiencing aging cohorts that pose severe chronic disease management challenges in diabetes, hypertension, and cardiovascular conditions. Therefore, the research and development capabilities and linkages in these UAE efforts for economic development will be key. The Arab Health Exhibition and Congress (2009) held annually continues to promote the UAE as a leading international center for the healthcare industry.

ECONOMIC CRISIS IN DUBAI AND MEDICAL TOURISM

The UAE President had maintained that the global slowdown of 2008 did not burden its economy (Khalifa: UAE economy strong), despite observations in Dubai of empty buildings, falling property prices, and suspended construction all over the UAE (Cummins, C., Bianchi, S., & Sleiman M., 2009). Notwithstanding, by December 2009, Dubai's public image of a modern megalopolis of wondrous achievement became tarnished with its near default to bondholders (Kerr, S., 2009). This city-state had splurged through a golden era with easy money, embarking upon an extensive series of grand and glitzy urban projects (Oakley, D. 2009). Its massive high rise buildings, islands of luxury housing, and shopping

mall were accompanied by a frenzy of infrastructure development by quasi-public entities that can no longer pay the debt. (Reed, S. 2009).

Dubai, unlike its wealthier neighbor Abu Dhabi, is not awash with petro-dollars. So its huge arrears eventually led it to confront solvency (though labeled as a liquidity problem) which reverberated across the world economy (Chancellor, E. 2009). Government debt in Dubai has been estimated to be nearly 140% of GDP so the US\$10 billion bailout from Abu Dhabi appears as only a temporary assist to Dubai World, Nakheel, and other agencies. (Kerr, S., England A., & Wigglesworth, R. 2009). International investors have been wondering where the next few casualties of the credit crunch across the globe will be (Thomas, L. 2009)..

The crisis in Dubai, and its impact across the world economy, reveals the interconnectedness that globalization has wrought upon the fate of nations from external forces and powers. (Reed, S. (2009a). Likewise, predicting the future of the medical tourism industry will depend upon foreseeing through coming social and political events (Al Qassemi, S. 2009).. While the Singaporeans appear to be avoiding a current economic catastrophe, their economy has similarly faced uncertainty.

SINGAPORE HEALTH SYSTEM

Singapore was strategizing medical tourism for economic development long before the global downturn. The 4.6 million Singaporeans have received high quality healthcare in an established system that has been lauded by international policymakers (Krebs, 2006). The Singapore healthcare system operates at a fraction of the cost of other nations in equal sophistication and measured quality of care. Having a model care delivery system in place naturally led to its medical tourist outreach.

This nation established long ago an official enthusiasm for entrepreneurialism (Lands of opportunity, 2009); it has heavily invested in science incubators and enticed foreign scientists to join them (Yap, 2009). A government/industry partnership leads a high tech medical hub that is becoming an international healthcare destination. (Salmon, 2009).

This city/state is entirely dependent upon its neighbors for most resources. In one generation, this island transformed itself into a high tech powerhouse (Jacobson, M, 2010). Nearly everything is manufactured for export (Faiola, 2009). So the recession hit Singapore hard. Nevertheless, what has been provided for the average Singaporean in terms of high quality healthcare in a modern delivery system is now being marketed through the Ministry of Trade and Tourism as a range of specialty medical services to foreigners across Asia and the Americas (Tan, 2009), along side the economic potentials with pharmaceuticals, biotechnology, and medical engineering investments.

Biopolis of Asia, a publicly funded research park, houses 11 research institutes with 1500 scientists. Singapore's public venture capital fund--bent on future growth of the economy--put US\$6 billion over five years into this biomedical and pharmaceutical powerhouse. Despite a first quarter decline in GDP in 2009 of 19.7%, (Mixed signals, 2009) another S\$6.5 billion of investment has been committed for the next five-year period.

FUTURE PROSPECTS

These national strategies by the UAE and Singapore (besides the anticipation of India and Thailand, among others) seem predicated on a rebound in the global economy, and the willingness of large numbers of persons, *with cash funding*, to travel to obtain medical care. Beyond economics, the threat of swine flu and Avian flu plus other communicable diseases, all give pause to consumers to move to far off lands for services. McKinsey reports that “geographic events can quickly impact patient flows” (Ehrbeck et al, 2009). One example in the political realm was the Bush administration’s Visa restrictions that limited travel to the U.S. for Middle Easterners in 2003.

Due to the recessionary economy, the entire global supply chain among nations and corporations began to be reassessed (Laudicina, 2009). Energy costs will become more volatile; increased concerns over global warming and the environment; the prospect of market interruptions from protectionist measures; among other factors have been accelerated and compounded. Such reassessments on the larger global scale may affect trends in medical tourism. While in certain countries economic conditions seem to be improving, a greater risk-averse world may evolve as global corporations prepare for the post recession period. Many policymakers and corporate leaders hope to see a burst of productivity enhancements coming out of the downturn to drive future growth.

IMPLICATIONS FOR PHARMACY

As traveling for medical care to other countries grows, the most popular destinations will likely adopt innovations within their delivery systems of care. This holds implications for pharmacy practice.

The worldwide pharmaceutical market grew only 7% in 2006 to US\$643 billion, marking the shift from growth in mature markets to emerging ones. (IMS Health Reports, 2007). As all Western nations tighten reimbursement for pharmaceuticals and push generic substitutes, brand manufacturers are now targeting emerging economies among which are the popular hubs for medical tourism.

Changing the drug supply in a nation toward greater branded drug use will alter the way pharmacy has historically evolved. Drug consumption outside the developed nations is mainly from domestic generic manufacturers. Pfizer Pharmaceuticals, among other multinationals, has now identified the entire Middle East as key emerging market for double digit sales growth. The Persian Gulf region has “these things going strong: respect for patients, openness to clinical trials, and rapid regulatory review of new products” according to an executive, noting that the firm was on the lookout for Middle East deals (Stanton, 2009). Multinationals even in the world recession are stepping up exports of their brand product lines and forging generic lines for similar earnings abroad.

Even if a nation’s legal regulatory framework is “pharma-friendly” an influx of new drug applications from several large Western manufacturers will pressure ministries of health to quickly upgrade their pharmaceutical expertise to provide for quick and positive reviews. Medical tourists, and their practitioners who may have likely been trained abroad, will expect up-to-date or even more advanced technologies, as the UAE and Singapore are intending.

The institutions serving them face an added pressure for suitably trained clinical pharmacists, supported by continuing education programs comparable to U.S. and European standards. Upgraded Pharmacy and Therapeutics Committees should follow modernized formulary adoptions, implying dissemination of modern medicine and its accompanied new pharmaceuticals at a quick pace. Emerging economies also have middle classes who demand modern medicine at top quality--and are willing to pay

for it. As for the poorer rest of the developing world, their lot depends upon whether international aid efforts can subsidize something similar.

The editor of the *Journal of the American Society of Healthcare Pharmacists* address health problems in the developing world, noting, given a longstanding focus of international health agencies, that the role of the pharmacist has been long ignored in that focus. (Zellmer, 1992). While new and needed attention to pharmacy has come in certain nations, the profession remains generally undeveloped and in need of professionalization akin to what is still evolving in North America and certain British Commonwealth nations (Lin & Salmon, 2008). Attention to clinical pharmacy is not only a necessity in the hospital setting--given the advent of multiple powerful medications for a host of chronic diseases-- but also clinical pharmacy is necessary in primary care practice (Hatoum, Catizone, Hutchinson, and Purohit, 1986). Community pharmacies, especially in the developing world, could stand a strong dose of public health outreach to better serve communities with cost effective care (Aruru, Bruecki, Salmon, & Schlaifer, 2009). Many of the principles of managed care pharmacy from the better U.S. models should be examined as to their applicability in various settings.

Zellmer (1992) specified problems facing lesser developed nations starting essential drugs programs:

1. Lack of basic infrastructure, including management systems, for drug product storage and distribution.
2. Inadequate quality control over pharmaceuticals.
3. Inadequate training and monitoring of prescribers and dispensers.
4. Inadequate instruction of patients with respect to medication use.

The multiple aspects of drug misadventuring (Manasse, 1989) in the ambulatory setting, require that clinical pharmacists become incorporated into teams to coordinate patient care and to reduce unnecessary utilization of emergency rooms, hospitals, and morgues. Moreover, pharmacists should become aware of public policy and seek key government posts concerned with quality control of imported and locally manufactured drug products, regulating drug registrations, formulating drug policies, and preparing drug information for prescribers, dispensers, and patients. Thus, colleges of pharmacy around the world should appropriately revamp their curriculums to prepare a new generation of practitioners to carry out advanced task effectively.

Both emerging economies and developing nations will require assistance to document--and then to remedy--medication errors. Strategies to reduce errors in medication use systems should be implemented across the entire healthcare system. Research skills should be prioritized in pharmacy curriculum as well. Disease state management programs should become experimented, adapted socially and culturally, to gain the support of the pharmaceutical industry (Nair, Salmon, & Kaul, 2007). Of key importance is the functioning of Pharmacy and Therapeutics Committees to preside over formulary management systems and construct drug benefit packages for populations needs. (Salmon, 2009a)

As Western pharmaceutical brand products gain market share in emerging economies, these firms will exert greater influence among policymakers, as well as practitioners (Salmon, 2009b). Drug supply imbalances away from generic utilization hold a large economic ramification. While clinical gains may be had with the latest advanced pharmacotherapy, lesser use of generics can be a costly issue for public health budgets, as well as balloon the balance of trade and balance of payments deficits. It should be noted that many developing nations already spend a relatively high percentage of their resources on pharmaceuticals.

As drug costs rise faster than other medical expenses, it will be alarming to the larger economy when multinational pharmaceutical firms obtain enriched sales by first targeting private sector providers serving medical tourists and middle class clientele, then spilling over to all prescribers tending to use brand drugs across all population segments.

Another implication is that when cheaper domestically-produced generics are foregone as physicians prescribe according to Western drug availability and manufacturer detailing, homegrown generic industries will lose market share. The world pharmaceutical market is undergoing substantial change over this century; so policymakers should heed the ramifications of their health system decisions. World pharmaceutical spending has been predicted to reach over US\$1 trillion by 2012 with the greatest increase coming from emerging economies (Salmon, 2010).

The professionalization of the pharmacy man/womanpower over the world faces challenges both external and internal to the profession (Lin and Salmon, 2008). Given the complexity of altering medication use patterns in medical interventions, the necessity of upgrading pharmacy practice to a clinical role becomes readily apparent. Colleges of pharmacy must begin preparing graduates for new horizons of practice, moving toward the Doctor of Pharmacy (Pharm.D.) clinical curriculum. Clinical pharmacists play a vital role in advising clinicians in a modern health delivery system. The development of treatment algorithms and protocols to ensure appropriate use of medications to manage complex diseases should become part of the formulary management systems. Moreover, graduate education in the pharmaceutical sciences and in the administrative and social sciences must become homegrown in respective countries to provide for the required manpower/womanpower given changes spurred on by the medical tourism industry. Patient registries can contribute greatly. The design of evidence-based clinical pathways for improved management and patient registries to track safety and outcomes from drug therapies moves pharmacy practice to the public health level for population management. (Edlavitch & Salmon, 2006).

Pharmacists' input must come to policy and process reviews, including drug formulary management, benefit design, and the needed use of information technology. Doctorally-prepared pharmacists, along with those with social and administrative backgrounds, schooled in the latest techniques of pharmacoconomics and pharmacoepidemiology will be required. Pharmacists can play important roles in collecting and evaluating available clinical data, identifying knowledge gaps, and making recommendations for the proper and safe use of drug entities. (Edlavitch & Salmon, 2010) Their aim would be to demonstrate and quantify various pharmacotherapies to reduce healthcare costs, improve quality of life, and increase economic productivity (Al Ahdab, 2009).

While the directions of medical tourism in respective countries may go through twists and turns, implications for pharmacy significant for healthcare systems in emerging economies. Pharmacy professionals need to become cognizant of broader public health system dynamics, grasp the intrinsic trends, and involve themselves to effectively advocate for the public's health.

CONCLUSION

Medical tourism will likely face gyrations in reactions for traveling for care, like the influence of swine and avian flu, along with economic conditions. Traveling for medical care clearly appears to be an established phenomenon in more than a handful of nations now identified in a global health services marketplace. Many motives propel traveling for lower cost and necessary procedures, in addition for cosmetic interventions and wellness services. Quicker access and more advanced technologies are also considerable lures. Countries such as the UAE, Singapore, India, Thailand, and more are planning to

become much larger medical tourism hubs. Substantial investments made by private health providers accompany marketing campaigns, with respective upgrading in the private health care systems.

Yet, it is noteworthy that developing countries are by definition “developing,” having not yet established, nor been given sufficient time to enforce, strict regulation over their trade in services. The same goes for regulating their respective healthcare systems. Whatever regulatory structures may exist are often poorly formulated, unevenly administered, and bureaucratic. More so, corruption reigns in certain nations. Cross border medicine then has to be approached carefully by patients.

The idea of medical travel will continue to capture the attention of many worldwide and meet responses by private providers seeking economic reward. McKinsey see great potential for growth of the industry. Medical tourism holds implications for pharmacy and the use of pharmaceuticals. Some implications have been enumerated here. Pharmacists in certain nations may find opportunities for professional gains to strengthen their roles and relationships, and hopefully enhance the public health.

Given future changes in healthcare systems supporting medical tourism, the pharmacy profession should be ready to respond in proactive ways as champions of the public health.

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THE RISE OF INDIFFERENCE: ILLEGAL PHARMACEUTICAL MARKETING PRACTICES

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ABSTRACT

In the autumn of 2009, Pfizer Inc., the largest drug company in the world, became the target of the largest health care fraud settlement in U.S. history. This paper briefly examines some of the current issues affecting the design and dissemination of medical and pharmacy education, and offers recommendations for proactive future policies and practices.

INTRODUCTION

In early September of 2009, various media sources (Harris, 2009; Barrett, 2009; Rubin, 2009) reported that the world's largest drug manufacturer, Pfizer Inc. and its subsidiary, Pharmacia & Upjohn Company Inc., were found guilty of criminal and civil liabilities and ordered by the Justice Department to pay \$2.3 billion to various aggrieved parties. The lawsuit is both the largest health care fraud settlement and the largest criminal fine of any kind in U.S. history.

This settlement regarded the illegal marketing of Bextra, which was approved by the FDA for the treatment of arthritis and menstrual pain. While one source (Harris, 2009) revealed that the government charged Pfizer with illegal marketing practices associated with four drugs - Bextra, Geodon (an antipsychotic), Zyvox (an antibiotic) and Lyrica (an anti-epileptic) – another cited Pfizer's marketing of 13 other drugs that included Viagra, Zoloft and Lipitor (Barrett, 2009). Perhaps more disturbingly, in 2004, Pfizer was charged with illegally marketing Neurontin, "...an epilepsy drug for which the company...paid a \$430 million fine and signed a corporate integrity agreement – a companywide promise to behave" (Harris, 2009). According to Michael K. Loucks, acting United States attorney for the Massachusetts district, "among the factors we considered in calibrating this severe punishment was Pfizer's recidivism" (Ibid., 2009).

Once again, Pfizer has agreed to a corporate integrity agreement with the Inspector General of the Department of Health and Human Services, a position currently held by Daniel R. Levinson. In a press release issued by the Department of Justice, Mr. Levinson was quoted as follows: "The corporate integrity agreement requires senior Pfizer executives and board members to complete annual compliance certifications and opens Pfizer to more public scrutiny by requiring it to make detailed disclosures on its

Web site. We expect this agreement to increase integrity in the marketing of pharmaceuticals” (U.S. Department of Justice, 2009).

This paper will briefly examine some of the questionable education practices utilized by the healthcare industry to market pharmaceutical products, and offer some recommendations for “increasing integrity” within the medical and pharmaceutical education professions.

MEDICAL & PHARMACEUTICAL EDUCATION: THE LAST DECADE

Almost ten years ago, Dr. Nancy Davis, the Director of Continuing Medical Education (CME) for the American Academy of Family Physicians, noted that in 1999 alone, the Accreditation Council for Continuing Medical Education (ACCME) reported that “ACCME-accredited sponsors provided 42,251 workshops and conferences,” and these events “amounted to 548,032 hours, or approximately 90% of all CME hours provided in the United States to 3,455,882 physician attendees” (Davis, 2001, p. 188). Dr. Davis examined a study in which educational meetings and workshops were measured for their effectiveness in improving professionals’ practice or health care outcomes. Her assessment included the following: “The limitations in the reviewed studies included a lack of rigorous evaluation of these types of activities, poorly reported methods, and insufficient reporting of follow-up of health professionals and blinding of the outcome measures” (Ibid, 2001, p. 189).

A provocative component of Dr. Davis’s article is a single question she posed near the end of it: “Why do so many physicians participate in activities that appear to be unhelpful?” (Ibid., 2001, p. 189) She suggested that educational research methodologies should be developed to measure the utility of educational interventions designed to affect medical practice measures.

In 2003 – two years after Dr. Davis’s observations of CME were written – one of the editors of the journal *Pharmaceutical Executive* warned readers about the ACCME’s proposed changes in guidelines that “...could define the limits of commercial involvement in CME and require full disclosure of any relationships among CME speakers, providers, and other commercial participants that may present conflicts of interest” (Branch, 2003, p. 70). Ironically and during that same year, two researchers affiliated with a “sister” accreditation organization, the American Council on Pharmaceutical Education (ACPE), enumerated the purpose, mission, processes and goals of their organization, and one of the processes they emphasized was that “ACPE does not accredit specific CE offerings; ACPE accredits organizations to plan and conduct CE offerings” (Travlos and Zarembski, 2003, p. 941). It stands to reason that non-commercial oversight of curricula design and, more importantly, clinically-based learning outcomes should be required from all participants (sponsors and faculty) engaged in the teaching process.

According to its authors, the first study to “...provide the first empirical evidence that a substantial number of CPE programs offered by both commercial and noncommercial accredited providers receive commercial support” and “...provide empirical evidence that accredited CPE providers allow questionable and unacceptable practices in the development and delivery of their programs” (Smith, Cervero and Valentine, 2006, p. 309) examined data from a survey administered online to a national sample of 386 accredited providers of CPE. Only 134 surveys (34%) were received; however, they revealed that approximately 86% of providers and 43% of programs received commercial support. Furthermore, although the ACPE requires that providers review instructional content and materials for commercially

supported programs before delivery, only 43% always did so (Ibid, 2006). While the authors of this study acknowledged its limitations regarding indirect observations and generalizability of results, they emphasized its implications for ACPE and its accredited providers.

REACTIVE VERSUS PROACTIVE MEASURES

“Why do pharmaceutical companies invest heavily in activities that appear to have limited success at changing physicians’ behaviors?” (Davis, 2001, p. 189) This is an intriguing question that demands a proactive versus reactive response.

In the study of commercially supported programs, the authors emphasized that “...this [commercial support] issue needs to be studied behaviorally from the perspective of pharmacy professionals by examining the effects on their practice and pharmaceutical care” (Smith, Cervero and Valentine, 2006, p. 311). Similarly, another author admitted that “it has been suggested that having controlled or limited [drug] distribution through pharmacies...and a universal medication documentation system that provides surveillance data on ADEs/ADRs [adverse drug events/adverse drug reactions] to a regulatory body...would be beneficial in assessing postmarketing surveillance” (MacKinnon, 2007, p. 2). MacKinnon cited the areas of pharmacovigilance (Baciu, Stratton and Burke, 2006) and medication error prevention (Aspden, Wolcott, Bootman and Cronenwett, 2006) as pivotal topics that require attention from the healthcare community.

Although all of these recommendations are valuable, they offer a *retrospective* examination of drug safety and clinically approved prescribing patterns versus a *prospective* approach to potential and often deadly occurrences. Within the last year and closely related to Pfizer settlement, a cursory examination of the literature revealed the following events:

- In mid-2008, Massachusetts State Representative Robert Spellane protested the so-called “gift ban” which would prohibit biopharmaceutical companies from underwriting CME, funding clinical trials, or inviting doctors to a speaking program, and which would subject violators to a \$5,000 fine. Mr. Spellane filed House Bill 2251, An Act Providing for Disclosure of Certain Gifts made by Pharmaceutical Companies, which would require companies to report any gift of value above \$25 to the Board of Registration in Pharmacy (Spellane, 2008). (NOTE: While this source stated that the bill was being reviewed by the Public Health Committee, its outcome is unknown.)

- In May of 2009, the American Psychiatric Association (APA) announced its intention to eliminate industry-sponsored CME and meals served during its annual meetings over the next two or three years, and possibly sooner. According to Nada Stotland, president of the APA, “It’s important to differentiate CME from advertising...and promotional medical education. There is data to indicate that goodies from pharmaceutical companies influence physicians. We consider [sponsored] presentations and fancy dinners to be goodies” (Comer, 2009).

- New Jersey could become one of the first states to ban doctors in the state from accepting certain types of gifts and requiring them to report consulting fees greater than \$200. Attorney General Anne Milgram made these recommendations, which are subject to further review, based on a task force report provided to the Division of Consumer Affairs. The Medical Society of New Jersey is contesting the issue (Conaboy, 2009).

To reiterate, these actions are retrospective and punitive in nature, and they do not address the core concerns of interest: namely, the objective, unbiased and incentive-free design, delivery and evaluation of CME and CPE programs!

CONCLUSIONS & RECOMMENDATIONS

Howard Brody, the Director of the Institute for the Medical Humanities and John P. McGovern Centennial Chair in Family Medicine at the University of Texas Medical Branch, and the author of “Hooked: Ethics, the Medical Profession, and the Pharmaceutical Industry,” recently observed that “the CME issue seems to me to strike at the very core of medicine’s claims to be a profession, and to adhere to a professional ethic. One of the defining characteristics of a profession is its own collective responsibility to assure the adequate education of its members...and this means that ongoing continuing education is a professional necessity. American physicians as a group are wealthy enough to pay for their own CME programs...in any event, if there is a part of medicine that ought to be as free from industry influence as possible, it is our own education” (Brody, 2009).

At the conclusion of Dr. Brody’s journal article, he noted that while his paper was being edited for publication, the Institute of Medicine released its report on conflicts of interest, which strongly endorsed a divestment strategy for CME, proposing that all industry funding be eliminated following a two-year transitional planning period (Lo and Field, 2009). Presumably, the same divestment strategy will be applied to CPE programs, as well.

This paper has briefly examined some of the challenges associated with legitimate CME and CPE programs. The following list provides some of this author’s recommendations for future research and potential adoption:

- Make CME/CPE certifying bodies (universities and associations) more responsible and accountable for instructional content (as suggested in an earlier study). Consider the elimination of pharmaceutical and medical marketing communications/advertising agency involvement in the certification and content review phases of CME/CPE
- Train pharmacists and particularly, Doctors of Pharmacy, to oversee content through a newly created governmental agency or a new segment of the Department of Health & Human Services (HHS)
- Delimit the power of medical and pharmacy directors from health plans (insurance companies) and large employer groups, especially if they are directly involved in or oversee Pharmacy and Therapeutics (P&T) Committee formulary decisions. General practice physicians and specialists should be allowed to offer meaningful feedback regarding their views of a drug’s safety and efficacy.
- Offer courses in prescribing ethics in all medical and pharmacy school curricula. These courses should include in-depth discussions of case studies related to contemporary, problematic issues

Regardless of the methods utilized by stakeholders in CME/CPE program development, delivery and evaluation, the Pfizer settlement and others of its kind serve as beacons for serious reform measures. In response to the Pfizer case, Michael L. Levy, U.S. Attorney for the Eastern District of Pennsylvania, said it best:

“This resolution protects the FDA in its vital mission of ensuring that drugs are safe and effective. When manufacturers undermine the FDA’s rules, they interfere with a doctor’s judgment and can put patient health at risk. The public trusts companies to market their drugs for uses that FDA has approved, and trusts that doctors are using independent judgment. Federal health dollars should only be spent on treatment decisions untainted by misinformation from manufacturers concerned with the bottom line” (Department of Justice press release, 2009).

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DISEASE MANAGEMENT INITIATIVES AND THE ABILITY TO REDUCE COSTS OF CHRONIC CARE

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ABSTRACT

There are approximately sixty-three million people who suffered from a chronic illness in 2005, accounting for 78% of total health spending currently (Bodenheimer, Chen & Bennett, 2009). Both of these statistics, the prevalence of and cost burden associated with chronic illnesses, are on the rise and projected to continue rising, unless something is done to control costs and manage the prevalence of chronic illnesses. Through disease management efforts, a patient's plan of care is structured to encourage prevention of complications, using evidence-based practices.

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NATIONAL HEALTH INSURANCE – TIME HAS COME

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ABSTRACT

Worsening conditions of the U.S. healthcare system have triggered a renewed interest in discussing the need for comprehensive healthcare reform in the United States. One potential approach to reform that is frequently mentioned is the implementation of single-payer national health insurance (NHI). This presentation will discuss why the United States should abandon employer sponsored health insurance and implement a single-payer system.

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KNOWLEDGE, SKILLS, AND ABILITIES REQUIRED OF CONTINUING CARE RETIREMENT COMMUNITIES' EXECUTIVE DIRECTORS

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ABSTRACT

Studies have examined the knowledge, skills, and abilities of top-level executives, primarily in hospital settings. This study expands this previous research to another segment of the healthcare delivery systems that of executive directors of continuing care retirement communities (CCRCs). The study asked CCRC executives to rate the importance of 25 knowledge, skills, and ability concepts perceived as being necessary for successfully managing this type of healthcare organization. Interpersonal skill and business acumen were rated as the core areas. Those areas involving understanding of certain processes (audits, contracts and agreements) and legal issues were rated of lesser importance. Respondents who were with organizations that were considered successful as measured by operating income per resident rated the importance of creative problem solving, providing effective leadership and development of the board of directors, and knowledge of state and federal care regulations as more important than those who were in less successful organizations.

INTRODUCTION

In the United States, the proportion of the population 65 and over is projected to increase from 12.4% in 2000 to 19.6% in 2030 ("U.S. Population 65+ - Swivel," 2008). The actual number of persons 65 and older is expected to increase from approximately 35 million in 2000 to an estimated 71 million in 2030 while the number of persons aged 80 and older is expected to increase from 9.3 million in 2000 to 19.5 million in 2030 (Swivel, 2008).

Providing care to older adults has become a major industry in itself. It was reported that in 2008, the continuing care retirement industry earned annual revenues of \$18.02 billion ("U.S. Population 65+ - Swivel," 2008). Approximately 2.9 million individuals will be employed in the service of older adults in both retirement communities and nursing homes (Systems Support Division & SSD, 2009).

The demographics of the healthcare workforce are rapidly changing owing to an aging population and fewer youthful counterparts available to replace aging workers (S. Collins, Matthews, McKinnies, K. Collins, & Jensen, 2009). Recruiting and hiring qualified individuals to care for the large number of older adults in the next 5-20 years is critical for organizations that market to this customer base. Although the labor shortages have been particularly problematic in the nursing fields and other allied health professions, there has also been some speculation surrounding a potential executive leadership shortage. Furthermore, there have been concerns that those in the youthful workforce cohorts will be poorly prepared for their new roles (Collins et al., 2009). Many fulfilling those managerial roles do not appear to possess proper management qualifications or managerial experience in healthcare. If the retirement care industry is to effectively manage the growth of this customer base, managers need to possess the requisite skills and abilities to meet the changing business needs (Mathews, Tozer, & Walker, 2004).

The literature on the subject of managerial skills in healthcare is extensive mainly focusing on the hospital environment. Hurley and Brewer (1991), one of few studies that focused on CCRC managers, examined the skills and abilities that "enable managers to interact effectively with residents and staff" and to effectively meet the changing business needs of the organization. (p.365). According to Hurley and Brewer, identification of the necessary skills and abilities required in these complex organizations is beneficial to ensure that the executive management is properly equipped to manage complex organizations. The industry will have to seek, hire, and retain highly qualified individuals that have a breadth of knowledge of both business and healthcare in order to remain competitive.

Organizations must recruit, hire, and train individuals that possess a multitude of managerial skills (Hurley & Brewer, 1991). "In the last 100 years, technology has blossomed, healthcare has spread to near universality, and delivery organizations have exploded in size, complexity and sophistication"(Griffith, 2007, p. 11). Researchers have conducted many studies examining the knowledge, skills, and abilities of top-level executives, primarily in hospital settings (cf. Brooke, Finstuen & Riley, Hudak, 1993; Guo 2002). However, the research on executives is lacking in its focus on the knowledge, skills, and abilities of executives in continuing care retirement communities (CCRC).

The increase in this population and the stress it will place on the healthcare delivery system makes this now an opportune time for further research on executive management in the healthcare industry, especially organizations that focus on care to the older adult population. To remain competitive and profitable, continuing care retirement communities must have executive managers prepared with the right knowledge, skills, and abilities and that correlate for success in their position (Hurley & Brewer, 1991).

This study addresses the gap in research by identifying the necessary knowledge, skills, and abilities for executives in this specific segment of the healthcare delivery system. Additionally, we examined the knowledge, skills, and abilities of healthcare management group not extensively studied, previously, thus providing a baseline of data to examine and understand how these skills and abilities prepare these executives to be successful in their roles. It also examine the role of gender, age, education, years in health care and years of experience in CCRC, and net income per resident as factors that could influence the necessary skills needed for effective management.

METHODOLOGY

The targeted population was the 347 accredited continuing care retirement communities within the United States. This study utilized a panel of experts to review the instrument for comprehensiveness and completeness. The expert panel included, CCRC executive directors, Vice Presidents of Operations for CCRCs in a variety of sizes of communities. There were 8 CCRC experts that reviewed the survey for completeness, readability, and verbiage. Additionally, the expert panel provided feedback on the data elements to determine both applicability and relevance to the executive directors' necessary skills and knowledge set.

The study's methodology provided for initial contact of the study participants and subsequent contacts to occur every 30 days for two subsequent cycles, 60 days total. For this study, the initial and follow-up contact letters were developed for mailing and follow-up. Participants were sent an introductory letter addressed to the executive director of each of the 347 CCRCs, with purpose of the study, a questionnaire, and self-addressed stamped return envelope. All participants received instructions on completing and returning the survey questionnaire as well as the ethical assurances of voluntary participation. Participants that had not responded were contacted again after 30 days. The researcher sent subsequent mailings to participants with a follow-up letter, and a second questionnaire. In the second mailing, the participants were instructed to fax the completed survey back instead of returning by mail. The faxing expedited the return and made it easier for the executives to complete and return the survey.

The return rate from initial contact was 34.5% (n=118) or a return of 118 valid surveys. After 30 days, a second mailing was sent to non-participants from the first mailing. Instead of submitting the survey by return envelope, participants returned the completed survey by facsimile. Participants returned an additional 41 surveys from this second mailing for a total response rate of 45.9%

The knowledge, skills, and abilities of executive directors perceived as being associated with successfully leading a continuing care retirement community are listed in Table 1.

Knowledge, Skills, and Abilities Items

Demonstrates Effective Employee Leadership	Regulations and Ensures Compliance
Listening and Empathy for Residents Concerns	Provide Effective Leadership and Development of Board of Directors
Creates a positive Work Culture and Environment	Knowledge of and Compliance with Accreditation Standards
Communicating Organizational Vision/Value to Community, Residents, and Employees	Prepare Budgets for Community
Sensitivity to Staff Problems	Knowledge of Contracts/Agreements

Creative problem Solving	Ability to Develop a Mission Statement
Ability to Effectively Manage Conflict	Develops Effective Networking Through Events and Outreach
Being Visible to the Residents of Your Facility on a Regular Basis	Manages the Performance of Community Employees
Knowledge of Financial Statements and Ratios	Knowledge of Facility/Plant Management
Knowledge and Use of Strategic Planning	Effective Utilization and Implementation of Health Care Clinic Programs
Develops and Maintains Effective Relationships with Board of Directors	Knowledge of Bond Covenants
Knowledge of Components of Community Marketing Plans	Audits for Clinical and Financial Compliance with Medicare/Medicaid Regulations
Knowledge of State and Federal Care	Management of Account Receivables

Demographic data such as gender, age, education level (Associate, Bachelor, Masters or Doctoral degree), years of experience, facility incorporation (for-profit or not for profit), and number of residents (independent, assisted and skilled) were also collected.

In addition, success was defined as operating income per resident. Based on the data from participants, the operating income was divided by the total number of residents in the particular facility for each respondent which produced a per resident dollar amount as the dependent variable. The participants were categorized as low success (\$0.0 to \$23,999.99 per resident) medium success (\$24,000.00 to \$39,999.99) and high success (>\$40,000.00 per resident).

Data for six domains were also collected:

- Organizational Skills (includes time management, leadership, decision making, delegation training and project management)
- Business Administration (includes budgets, financial management, and strategic planning)
- Communication (includes public speaking meetings, and correspondence)
- Board Relations (includes interaction and reporting to the board)
- Fundraising (includes raising funds/capital campaigns)
- Interpersonal (includes interaction with residents, negotiation skills and conflict resolution)

Respondents were asked the rank of the order of importance of these domains in terms of their importance as tools for being a successful CCRC executive director. These domains were included to evaluate what if any differences in perspectives occurred between the current group of executive directors and those from the Hurley and Brewer study (1991). If there were changes, it could have an effect on the types of employees that a CCRC would seek.

Results

The majority of the sample was female, 65.3% , while the sample was almost entirely Caucasian (See Table 2). The mean age of the participants was 51 years and almost the entire sample had at least a bachelors' degree. Average years in the health care industry were 21 with an average of 13 years in a CCRC situation.

Table 2.

Sample Demographics

Characteristic	Frequency	Percentage	Mean
Gender:			

Male	52	34.7	----
Female	98	65.3	
Ethnicity:			
Asian	2	1.3	----
Caucasian	144	97.9	
Latino/Latina	1	.6	
Age:			
26-39	16	11.0	
40-49	36	24.8	51.7
50-59	70	48.2	
60 and over	23	15.8	
Education:			
Associates	1	.7	
Bachelor-Health Related	12	7.9	
Bachelor-Non-Health Related	40	26.3	----
Masters	37	24.3	
MBA	55	36.2	
Ph.D.-Health Related	3	2.0	
Ph.D.-Non-Health Related	4	2.6	
Years of Experience Health Care:			
0-10			
11-19	21	13.3	
20-29	36	22.9	21.6
30 and over	66	42.0	
	34	21.6	
Years Experience in CCRC:			
0-9	51	32.4	
10-19	63	40.1	13.6
20 and over	43	27.3	
Corporate Status:			
For Profit	6	3.9	----
Nonprofit	147	96.1	
Years Experience in Current Position:			
0-1	27	17.2	
Over 1-5	50	31.8	7.5
Over 5-10	31	19.7	
Over 10	49	31.2	
Number of Residents in CCRC:			
Independent:			
0-190	50	31.8	
191-330	52	33.1	310
331-1900	55	35.0	
Assisted:			
0-35			

36-60	53	34.4	
61-200	52	33.8	55
Skilled:	49	31.6	
0-59			
60-96	56	35.7	
97-450	54	34.4	88
	47	29.9	
Net Operating Income	----	----	\$17,036,611
Operating Success: ¹			
\$0-\$23,999	51	32.9	
\$24,000-\$39,999	55	35.5	\$33,105
\$40,000 and over	49	31.6	
Independent Residents in CCRC:			
0-190			
191-330	50	31.8	
331-1900	52	33.1	310
	55	35.0	
Assisted Residents in CCRC:			
0-35	53	34.4	
36-60	52	33.6	55
61-200	49	31.8	
Skilled Residents In CCRC:			
0-59	56	35.7	
60-96	54	34.4	88
97-450	47	29.9	

Note. Percentages may not add to 100% due to rounding errors.

¹Success was defined as net operating income per resident

A question was asked: “Based on your experience as an executive of a CCRC, evaluate the following knowledge, skills, and abilities.” Twenty-five items were included in this question (See Table 3). A single factor ANOVA was conducted on the 25 items. The ANOVA model was significant at $\leq .001$. Tukey Kramer post hoc multiple comparison procedures were conducted to determine which pair wise differences existed.

Table 3.
Knowledge, Skills, and Ability Means (KSAs)

Knowledge, Skills, and Abilities Items	Mean
Demonstrates Effective Employee Leadership	4.86
Listening and Empathy for Residents Concerns	4.84
Creates a positive Work Culture and Environment	4.83
Communicating Organizational Vision/Value to Community, Residents, and Employees	4.82
Sensitivity to Staff Problems	4.77
Creative problem Solving	4.77
Ability to Effectively Manage Conflict	4.77
Being Visible to the Residents of Your Facility on a	4.72

Regular Basis	
Knowledge of Financial Statements and Ratios	4.70
Knowledge and Use of Strategic Planning	4.70
Develops and Maintains Effective Relationships with Board of Directors	4.68
Knowledge of Components of Community Marketing Plans	4.56
Knowledge of State and Federal Care Regulations and Ensures Compliance	4.48
Provide Effective Leadership and Development of Board of Directors	4.44
Knowledge of and Compliance with Accreditation Standards	4.42
Prepare Budgets for Community	4.28
Knowledge of Contracts/Agreements	4.28
Ability to Develop a Mission Statement	4.25
Develops Effective Networking Through Events and Outreach	4.21
Manages the Performance of Community Employees	4.12
Knowledge of Facility/Plant Management	4.10
Effective Utilization and Implementation of Health Care Clinic Programs	4.07
Knowledge of Bond Covenants	3.92
Audits for Clinical and Financial Compliance with Medicare/Medicaid Regulations	3.90
Management of Account Receivables	3.85
Note. All items were rated on a balanced five point scale ranging from “not at all important” to “extremely important.” n=157 for each item. Differences greater than .33 between means were significant at $p \leq .05$.	

There are no statistical differences between the first 12 KSAs:

1. Effective leadership
2. Listening and empathy empathic for residents concerns
3. Creates a positive work culture
4. Communicating organizational vision
5. Sensitivity to staff problems
6. Creative problem solving
7. Ability to manage conflict
8. Visible to residents
9. Knowledge of financial statements
10. Knowledge of strategic planning
11. Maintains effective relationships with board of directors
12. Knowledge of marketing plans

These first 12 items seem to revolve around the concepts of interpersonal skills and business acumen while the remaining items which were rated of lower importance tended to have more of a specialized expertise (accounting issues such as receivables and audits, legal issues such as contracts, and engineering issues such as plant and facility management).

It is reasonable to assume that many of the more specialized functions are handled by in-house professionals, by retainer, or consulting arrangements. However, the lower importance ratings of issues such as preparing budgets, developing mission statements, and managing the performance of community employees can be explained by the fact that those respondents who worked in firms that had lower operating income per resident (lower success) rated these items lower. This last item will be explained in more detail in a further section of this paper.

A Friedman test was conducted on the rankings of six domains. The model was significant at $p \leq .01$. Tukey HSD post hoc multiple comparison procedures were conducted to determine how the mean rankings differed (See Table 4).

Table 4.
Rankings of KSA Domains

KSA Domains	Mean Rank	Hurley and Brewer Rankings
Organizational Skills	2.27	1
Interpersonal	2.57	2
Business Administration	2.97	3
Communication	3.45	4
Board Relations	4.03	5
Fundraising	5.70	6

Note. The items were ranked: 1=most important, 2=being second most important, 3=being third most important, 4=being fourth most important and 5=being fifth most important. $n=139$ for each item. Mean rank differences of .62 or greater were significant at $p \leq .05$. For the Hurley and Brewer findings, the raw data was unavailable. Thus, a Friedman test could not be conducted.

There is no statistical difference in mean ranks between the top two domains, organizational skills and interpersonal. There is no difference between business administration and communication. No differences were found between communication and board relations. Fundraising was ranked as the least important of all the domains. This study's rankings parallel that of Hurley and Brewer rankings of 1991.

There is some correspondence with the findings of the 25 KSAs and the six domains. Both seem to be dominated by the importance of interpersonal and business administration skills.

A series of one way ANOVAs were run with each of the 25 KSAs serving as a dependent variable and various demographic variables utilized as factors. Only those ANOVAs that were significant, $p \leq .05$ will be reported. Post hoc multiple comparisons were used to determine which pairs of means were statistically different. Tukey's-b was used to make those comparisons. Table 5 represents the results of the One-Way ANOVA with the 25 KSAs and participant demographics.

Table 5.

One Way ANOVAs of 25 KSAs with Demographic Items as Factors

KSA	Factor (demographic)	Significant Mean Differences
Knowledge of Bonds Covenants	Success ¹	High (3.86) and medium (4.22) success organizations rated bond covenants as more important than low (3.73) success respondents
Knowledge of State and	Success ¹	Low (4.64) and medium (4.62)

Federal Care Regulations and Ensures Compliance		success organizations rated regulations as more important than high (4.29) success organizations
Creative Problem Solving	Success ¹	High (4.88) and medium (4.88) success organizations rated creative problem solving as more important than low (4.20) success organizations
Provide Effective Leadership and Development of Board of Directors	Success ¹	High (4.48) and medium (4.70) success organizations rated provide effective leadership and development of board of directors as more important than low (4.20) success organizations
Ability to Develop a Mission Statement	Success ¹	Low (4.82) and medium (4.80) success organizations rated mission statement as more important than high (3.98) success organizations
Provide Effective Leadership	Years in Current Position	Those in their position over one year (4.66), over 5-10 years (4.87) and over ten years (4.79) rated leadership as more important than those 0-1 years (4.0)
Sensitivity to Staff Problems	Years Experience in CCRC	Those 20 and over years of experience (4.93) rated sensitivity as more important than those with 0-9 years experience (4.67)
Knowledge of Components of Community Marketing Plans	Years Experience in CCRC	Those with 20 and over years of experience (4.71) rated marketing as more important than those with 0-9 years of experience (4.45)
Provide Effective Leadership	Years Experience in CCRC	Those with 20 and over years of experience (4.76) rated leadership as more important than those with 0-9 years of experience (4.27)
Knowledge of Bond Covenants	Years in Health Care	Those with 0-10 years of experience (3.81), 20-29 years (4.13), and 30 and over years (4.26) rated bond knowledge as more important than those with 11-19 years experience (3.67)
Knowledge of and Compliance with Accreditation Standards	Years in Health Care	Those with 0-10 years of experience (4.76), 20-29 years (4.46), and 30 and over years (4.53) rated accreditation knowledge as more important than those with 11-19 years experience (4.67)
Sensitivity to Staff Problems	Years in Health Care	Those with 11-20 years of experience (4.76), 20-29 years (4.80), and 30 and

Sensitivity to Staff Problems	Age of Respondent	over years (4.97) rated sensitivity as more important than those with 0-10 years experience (4.22) Those 40-49 (4.81), 50-59 (4.84), and 60 and over (4.91) rated sensitivity as more important than those 26-39 (4.5)
Develops and Maintains Effective Relationship with Board of Directors	Age of Respondent	Those 40-49 (4.69), 50-59 (4.77), and 60 and over (4.87) rated board relations as more important than those 26-39 (4.19)
Provide Effective Leadership	Age of Respondent	Those 40-49 (4.39), 50-59 (4.57), and 60 and over (4.74) rated leadership as more important than those 26-39 (4.0)
Knowledgeable and Use of Strategic Planning	Age of Respondent	Those 40-49 (4.92), 50-59 (4.80), and 60 and over (4.74) rated Strategic planning as more important than those 26-39 (4.19)
Ability to Develop a Mission Statement	Age of Respondent	Those 40-49 (4.44), 50-59 (4.29), and 60 and over (4.35) rated ability to develop mission statements as more important than those 26-39 (3.75)
Management of Accounts Receivable	Gender	Men rated accounts receivable as more important (4.14) than women (3.69)
Knowledge of and Compliance with Accreditation Standards	Gender	Men rated accreditation as more important (4.65) than women (4.33)
Demonstrated Effective Employee Leadership	Gender	Men rated effective employee leadership as more important (4.98) than women (4.85)
Being Visible to the residents of Your Facility on a Regular Basis	Gender	Men rated visibility as more important (4.91) than women (4.69)
Ability to Effectively Manage Conflict	Gender	Men rated the ability to manage conflict as more important (4.91) than women (4.72)
Management of Accounts Receivables	Education	Bachelor-health related (4.83), masters (4.51), and MBA (4.08) all rated receivables as more important than Ph.D.-health related (3.58)

Note. ¹The participants were categorized as low success (\$0.0 to \$23,999.99 per resident) medium success (\$24,000.00 to \$39,999.99) and high success (>\$40,000.00 per resident).
Reviewing the key points of Table 5:

1. High and medium success CCRCs ranked the KSA bond covenants, creative problem solving, and leadership higher than low success CCRCs while low and medium success CCRCs ranked regulations and mission statement higher than high success CCRCs.
2. Those with 20 or more years of experience in CCRC rated knowledge of marketing plans and leadership as more important than those with 0-9 years experience.

3. Those with 0-10, 20-29, and 30 and over years of experience in health care rated bond knowledge and accreditation standards as more important than those with 11-19 years of experience while sensitivity to staff problems was rated higher by 11-19, 20-29, and 30 and over years of experience than those with 0-10 years of health care experience.
4. Those 40-49, 50-59, and 60 and over rated sensitivity, leadership, strategic planning, and developing a mission statement more highly than those 26-39.
5. Men rated the KSAs of accounts receivable, accreditation, visibility with residents, and management of conflict more highly than women.

A series of chi squares were run crossing the domain ranks and various demographics. Only those results that were $p \leq .05$ are reported.

1. Those with 20 or more years of experience in CCRC were more likely to rate on a six-point scale the business domain as a 1 while those in the business 0-9 years were more likely to rank business as 6.
2. Men were more likely to rank the board domain as a 6 while women were more likely to rank it as a 2.
3. Low success CCRCs were more likely to rank fund raising a 5 while high success CCRCs were more likely to rank it 6.
4. Those with 1-10 years of experience in health care were likely to rank the communications domain as 6 while those with 11-19 years were more likely to rank communications as a 1.
5. Those with skilled residents from 0-59 were more likely to rank fundraising as a 6 while those with 97-450 skilled residents were more likely to rank fund raising as 3.

There was some correspondence with the analysis of the KSAs. The more experience either in health care or CCRC the greater the importance of the business and communication domains. Fundraising was not important to either high or low success organizations. Again experience leads to an appreciation of those domains that can lead to success.

CONCLUSIONS AND IMPLICATIONS

Those respondents that were employed by successful organizations as measured by operating income per resident indicated that a knowledge of bond covenants, knowledge of state and federal care regulations and ensures compliance, creative problem solving, providing effective leadership and development of the board of directors, and ability to develop a mission statement were important KSA for success. In addition, those with more tenures in a CCRC environment rated sensitivity to staff problems, knowledge of components of community marketing plans, and effective leadership as key elements of their management strategy. In addition, it was clear that older respondents appreciated the need for effective relationships with the board of directors, sensitivity to staff problems, effective leadership, use of strategic planning, and ability to develop a mission statement.

The gender findings are perplexing. Men rated management of account receivables, compliance with accreditation standards, effective employee leadership, being visible to residents of the facility, and managing conflict as more important than women. Must women shy away from their more traditional roles of conflict management and interpersonal skills in order to demonstrate the more typical male dominate virtues of strength and power in executive roles at CCRCs?

Therefore, a key factor to success with these respondents was longevity in the business and age of the respondents. Successful CCRC managers as measured by operating income per resident are the seasoned veterans.

This conclusion indicates that education may well be a key variable that can help lead younger managers to success more quickly. An appreciation of the fundamentals of basic strategic thinking and leadership development is crucial. This industry cannot wait for the years to pass for a manager to accrue the necessary skills to become successful given the pressures of the aging U.S. population.

Healthcare education programs can use these results of this study to evaluate curriculum and address the key KSAs to prepare future executives to be effective and successful in managing CCRCs. In addition, current board of directors of the CCRCs should use the results of this study in two ways. First, the KSAs identified as contributing to the success of the executive director should be used to evaluate potential executives moving into this management role within the CCRC. Second, the CCRC board of directors should use these results to evaluate the level of competence of the current executive directors to identify potential areas of strengths or gaps in the KSAs identified in this study.

Further opportunities for research, based on the results of this study, include the changes in demographics of the older adult population with the increase in minority and multi-cultural representation. Additional study on the changes in the knowledge, skills, and abilities of future executive directors appears to be warranted to address the needs of these changing resident demographics. Further research is also recommended based on the changing demographic workforce and the increase in minority and multi-cultural representation. In this current study, nearly 98% of the respondents were Caucasian, which suggests further research should evaluate any changes in the responses to the identified KSAs as the ethnic representation shifts over the next 5 to 20 years.

Expanding the list of the key knowledge, skills, and abilities for executive directors of CCRCs needs to be explored. The focus of this study was not to develop an encompassing list of KSAs but to evaluate specific KSAs for a specific population. One of the limitations identified was the finite list of KSAs and the potential for KSAs that are required to be successful yet not addressed in the current survey instrument. The survey instrument used in this study provided a comprehensive list of KSAs but the list was not exhaustive and further research to add to those already identified appears warranted.

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CONDUCTING A COMMUNITY HEALTH NEEDS ASSESSMENT IN NORTHEASTERN PENNSYLVANIA

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ABSTRACT

The presentation provides a framework in Northeastern Pennsylvania for identifying community health priorities. The research project is funded by the US Department of Health and Human Services, Centers for Disease Control and Prevention. The Healthy Northeast Pennsylvania Initiative (HNPI) is a community health project that coordinates regional resources to improve the health and education of citizens. The assessment shows how the HNPI coordinated efforts in Lackawanna and Luzerne Counties to identify health needs and improvements over a 10-year period. The researcher addresses the marketing benefits and return on community investment for health systems that supplement the mission of creating healthier communities. The researcher utilizes its existing collaborative network to identify what community programs exist in Lackawanna and Luzerne counties and recommends ways to increase the number of these programs. The researcher shows the value-added when providing community health programs resulting from a free market economy. The proposal supports programming at each of the participating entities in a collaborative effort to build county-wide infrastructure for community programming.

HPV MANDATORY VACCINE ISSUES: MEDICAL, POLITICAL, AND ETHICAL CONCEPTS

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Providing the quadrivalent HPV vaccine to young adolescent age females is without a doubt beneficial to the public's health simply because it has the potential to decrease the incidence of cervical cancers. The overriding question posed to public health officials, state legislators, physicians, school board officials, parents and others involved in the HPV vaccine controversy is: (1) the decision to make the vaccine a mandate for school attendance once the female has reached 12 years of age and (2) is it appropriate to be vaccinating these young women for a disease that is sexually transmitted. (Vamos, McDermott et al. 2008) Arguments exist both for and against the mandatory inclusion of the HPV vaccine into the arsenal of the currently required vaccines for school attendance. The arguments present from the medical, political, and ethical viewpoints with each argument having more underlying controversy in the religious, economic, and sociocultural aspects.

From the medical viewpoint, there are several arguments for and against the use of the vaccine as a tool for the prevention of future cervical cancer case. Clinical trials have proven the vaccine is safe, well tolerated and immunogenic with the Merck manufactured Gardasil® quadrivalent HPV vaccine nearly 100% effective in preventing incident persistent infections and cervical intraepithelial neoplasia for the high risk HPV strains 16 and 18. In addition, the vaccine was nearly 100% effective in preventing genital warts from the lower risk HPV strains, six and 11. (Viscidi and Shah 2007) However, the vaccine yet apparently provides no protection against existing HPV infections within the female. Thus, many females will not benefit from the vaccine. (Stewart, A.S. 2007)

Upon approval by the Food and Drug Administration (FDA), the vaccine received recommendation for use by the national Advisory Committee on Immunization Practices (ACIP). However, some within the medical community question the fast track of the vaccine in order to gain public acceptance. The reported clinical trials have indeed shown promise; however, the clinical trials are based on a relatively small number of eligible young females. (Bristol 2007) This fact gives rise to the question of mandating a vaccine that may yet have unknown long term adverse events (i.e. fertility issues or pregnancy intentions) and thus potentially increase liability issues for those who administer the vaccine. (Opel, Diekema, and Marcuse 2008) Coupled with this question is yet another possibility of other HPV viral strains that are carcinogenic yet not included in the current vaccine available. (Javitt, Berkowitz, and Gostin 2008)

One of the greatest benefits of a vaccine as it relates to the decrease in incidence of disease is the concept of herd immunity. In order to achieve herd immunity via use of the HPV vaccine several factors must figure into the equation. From the medical standpoint, prevention of a disease to acquire immunity by the use of a vaccine is the ultimate goal of vaccinating. (Field and Caplan 2008; Javitt, et al. 2008) Use of the HPV vaccine does prevent a public health burden (Opel, et al. 2008) and by vaccinating enough females within the recommended age groups herd immunity is highly likely to occur. Yet, as previously discussed the vaccine has not been in use long enough in order to determine if the immunity it provides at present will continue to be effective in the future. (Bristol 2007; Javitt, et al. 2008; Vamos, et al. 2008) Citing the fact that cervical cancer is waning in incidence (Viscidi and Shah 2007) many in the medical field are asking why a vaccine, with several unknown factors, be provided for a disease that is sexually transmitted and behaviorally related. (Stewart 2007; Gostin and DeAngelis 2007) Diagnosis of cervical cancer is relatively simple procedure and if treated with standard medical protocol the need for a vaccine against such a disease may not be in the best interest of public health.

The use of a vaccine as a disease deterrent proves most effective when the disease is widespread and does not differentiate among individuals. This is not the case with the HPV vaccine and making it a mandatory vaccine for school attendance may serve to hinder health care for some and place more of a burden on others. Historically tying a mandate to a vaccine for school attendance will increase the rate of immunization by a larger degree than if the vaccine receives recommendation only and not as a requirement. (Bristol 2007; Opel, et al. 2008; Stewart 2007) Additionally, herd immunity for the immunized population of concern increases when a vaccine is mandated. Those who argue in favor of the mandate assert many underserved and uninsured females will not be able to receive the vaccine without tying it to school attendance. Thus, will a situation develop where a disparity in health care access could once again effect the populations who need the care the most? (Vamos et al. 2008) Parents and guardians who have female adolescents within the school age mandate group have in the past few years voiced concern that too many vaccinations are being given to their children increasing the risk of an adverse event. (Gostin et al. 2007)

For many public health experts the most important issues surrounding the mandating of the HPV vaccine involve the overall cost of implementing such a massive immunization effort. Ultimately, the question becomes who is going to pay for such a mandate program. Mandating a vaccine does make it more likely that the vaccine receives payment and funding flows will increase in order to overcome the cost. (Bristol 2007; Stewart 2007) If the vaccine were to be mandated the Vaccine for Children (VFC) program, the 317 grants administered by the CDC for those underinsured children and adolescents not served by the VFC program and state Children's Health Insurance Programs will each have to have an increase in funding and Medicaid. (Malone and Hinman 2003; CDC Program Brief 2007) Health departments, clinics, and private physicians will each incur additional costs in areas such as the storage and administration of the vaccine. Additional questions of cost arise when other programs of health care may have to cut back or completely eliminated in order to supply the funding for the vaccine. (Javitt, et al. 2008) Cost is a major issue but it should not be the driving force behind a decision when that decision involves public health.

The political viewpoint of the mandatory vaccine issue plays yet another important role in the decision making process. Since there are no Federal mandates that apply to vaccines, each state has as its discretion the choice of which vaccines to mandate for school attendance. (Stewart 2007) States most generally follow the recommendations of the ACIP and currently over 40 states are considering implementing some variation of the HPV vaccine or education concerning HPV. (National Conference of State Legislatures 2008) Interestingly enough many states had begun to propose legislation before the CDC and ACIP had placed a recommendation on the use of Gardasil® as the HPV vaccine of choice. (Bristol 2007) Some view this overzealousness on the part of the state legislatures due in part to the lobbying efforts by Merck (Gostin et al. 2007; Viscidi and Shah 2007) In response to these intense lobbying efforts, Merck began to feel a pushback from various organizations and from many within the public health arena. Health officials eventually persuaded Merck to present their data to state legislatures and to refrain from such intense lobbying efforts. (Wynai 2007) States utilize diverse sources before a decision is made mandating vaccination against a given illness or disease. A manufacturer should be able to make a case for their product but the ultimate decision should come from the research performed by the state public health agencies.

Each state has within its legal responsibility the right to exercise police powers over a health concern when it has the potential to cause harm to many other individuals. The argument in the HPV vaccine issue has become one where some believe the rush of legislation to mandate the vaccine has created a public concern that government is overreaching its police power. To many, if the vaccine were to be mandated, there is a message that all children are at risk of HPV infection even though HPV is a sexually-transmitted disease. Are the states imposing a police power over those children who abstain from sexual behavior that could put them at risk? If so, then has the state overstepped its police power by mandating a vaccine to prevent a disease that is the result of sexual behavior? This reasoning has begun to

create not only a growing distrust of government when it comes to health issues, but also as a rejection of vaccination as a disease preventing mechanism. Thus, a scenario is created that could prove to be detrimental to the suppression of other diseases that were once thought to be eradicated by way of the rejection of vaccines. (Javitt et al. 2008)

Even though a state has the power in mandating a vaccine, various exemptions decided upon by each state legislature allow individuals to resist receiving the vaccine. The only exemption clause that applies in all states and territories is medical exemption status. Currently, 48 states allow for religious beliefs exemption and 20 states allow for exemptions due to philosophical or personal reasons. (Vamos et al. 2008; Stewart 2007; Opel et al. 2008; Viscidi and Shah 2007; Javitt et al. 2008)) These exemptions have caused concern there may not be enough females vaccinated each year to provide for herd immunity within the population. Evidence has shown that states with more liberal exemption clauses have higher rates of disease incidence for those diseases where a vaccine is available. (Bristol 2007)

The issue of legal liability is one that seems to appear when a new medical breakthrough takes place. There will be the threat of an adverse event occurring and allocating responsibility after this event occurs is a question for the political arena. If the state mandates an intervention such as a vaccine then ethically the state would also have to have in place a fair compensation system such as the National Vaccine Injury Compensation Program. In 2007 the National Vaccine Injury Compensation Program added Gardasil to the list of vaccines that would fall under the umbrella of coverage. With varying laws in the states and their respective courts, this could prove to be a complicated issue. If in one state the courts do not hold the manufacturer responsible then will this also apply to all other states? There needs to be careful consideration of such issues of legal liability and compensation. (Gostin et al. 2007) Another question of liability, cost, and exemption status has presented itself as legislation is currently being considered to mandate all females within the defined age groups seeking immigration into and permanent residence within the U.S be vaccinated. (Jordan 2008) What considerations apply to those of a different foreign culture or belief? Is this creating an unnecessary financial burden on those seeking immigration? Will this become the next step in procuring the first federal mandate for a vaccination?

As with many medical procedures or interventions there will be ethical questions to address and the mandate question surrounding the HPV vaccine has raised an additional series of ethical questions.. These issues and debates can become intense in nature and have far reaching effects and implications pertaining to the decision making process. The debate surrounding the HPV vaccine have many ethicists believing that policy debates involving such a decision as a state mandate on a vaccine should only center on the most salient ethical concerns and a balance of cherished values. (Field and Caplan 2008) Therefore, the last section of this paper will briefly touch on some of ethical concepts brought to light in the HPV vaccine debate.

The harm principle of ethics applies to the HPV vaccine situation. As an example of this principle, Washington State's State Board of Health through utilization of the harm principle has sought to build a framework for vaccine review before school entrance. (Opel et al. 2008) The principle as it applies to a state's police power would identify the point at which a state would have justifiable reason to impose a mandate on a vaccine. However, some ethicists feel that a state's police power is not the proper method of intervention in this case since without sexual contact between two individuals then a person with HPV cannot impose potential harm on anyone else other than the person with who they have had sexual contact. Therefore, under the harm principle some ethicists feel a difference exists between vaccine mandate for a communicable disease versus a vaccine mandate linked to school attendance for a noncommunicable disease. Furthermore, some individuals believe there is a need for limited government intrusion and by placing a mandate on a vaccine for adolescents and linking this vaccine to school attendance the state is becoming too paternalistic. (Field and Caplan 2008; Stewart 2007; Bristol 2007) The mandate would do nothing to ensure the safety of the school environment, which is a responsibility of the state. As a result, the vaccine would not have any bearing on the state fulfilling its responsibility of providing a state funded

education for its youth. (Opel et al. 2008) Citing HPV infection as a sexually contracted disease and behaviorally related again, the argument becomes one where most adolescents will not be at risk at school because the disease causing behavior is absent in the school environment.

Ethicist link several other questions to the HPV vaccine debate. One such issue is parental rights and the possible intrusion into a parent's right to the teaching of sexual health to their children. (Vamos et al. 2008; Stewart 2007) The ideas of informed consent and individual liberties come into focus as not only are the parent or guardians involved, but the adolescent has specific rights of consideration. (Stewart 2007) The ethical concept of principlism takes a major focus where the vaccine is concerned. Included within this concept are the basic principles of autonomy, non-maleficence, justice, and beneficence. In addition, the idea of autonomy where a person's individual liberties and informed consent rights provide a legitimate ethical argument. Again, HPV infection is behavior related and if a female adolescent opts to abstain from the behavior the question becomes why mandate vaccination of the female for a behavior she does not intend to perform. Has this measure taken into consideration her autonomous rights? (Zimmerman 2006; Field and Caplan 2008; Opel et al. 2008) The autonomy ideal has a competing ethical consideration. Using the ethical concept of utilitarianism the question has been debated whether a mandate is truly necessary to achieve a reduction in cervical cancer or would simply making the vaccine readily available to the public bring about virtually the same end result of a decrease in the incidence of cervical cancer and a lesser burden to society. (Field and Caplan 2008; Zimmerman 2006)

Non-maleficence pertains to the vaccine itself where the question of the vaccine's safety is a concern. Previously mentioned were the long-term effects of the vaccine and other attributes were a concern because of the fast-paced push for vaccine acceptance into the public health system. By such acceptance, is it possible the wrong signals are sent to adolescents that sexual activity at a young age is fine so long as they have been vaccinated for HPV? Is there potential for harm in this situation? (Zimmerman 2006; Field and Caplan 2008)

Justice as a principlism concept applies to equitable treatment. One debatable issue is the cost and availability of the vaccine. Proponents of the vaccine argue that if the vaccine is not mandated for school attendance then too many medically underserved and uninsured adolescents will be unable to receive the vaccine. (Zimmerman 2006; Javitt et al. 2008; Field and Caplan 2008) Thus, a health disparity becomes an issue and justice fails for those who cannot afford to receive the vaccine. Additionally, the desired herd immunity concept would suffer a blow and the reason for vaccinating in the first place would become void. An argument of justice against the vaccine involves an adolescent or college student who may have already decided upon a life of abstinence based upon a religious reason. (Zimmerman 2006; Javitt et al. 2008; Field and Caplan 2008)

Beneficence is the final concept in principlism. Because the vaccine trials show a reduction in the potential severity of cervical cancer there is a benefit to receiving the vaccine. However, the question becomes is this benefit any more or less than the benefit that may come due to the alternative methods of cervical cancer control, such as education of HPV and the need for Pap smear exams on a regular basis. (Zimmerman 2006; Field and Caplan 2008)

One final concept for consideration is that of vaccinating males as well as females. Differentiating between males and females involves the concept of principlism and by excluding males the potential to open up a new area of controversy increases. Projected studies demonstrate that if the vaccine does indeed reach 70 to 90% coverage of the female population there may not be any need to vaccinate males. With this in mind where is the justification for vaccinating the male when the benefit to society would be limited and the cost would only increase to a higher level for society. Other models present in favor of vaccinating the male especially if the percentage of the vaccinated female population does not achieve herd immunity. (Zimmerman 2006) Zimmerman (2006) suggests consideration of the issue of male adolescent vaccination would entail an ethical and legal argument situated on a sex-based platform. Therefore, two challenges could possibly appear: 1) the Equal Protection Clause simply because the issue is sex-based, where the state

would have to justify its decision to vaccinate only females, and not males, when the male can contribute to the spread of HPV and 2) the Due Process Clause where a violation of a protected interest in refusing medical treatment is involved. The female under the Due Process Clause has at her disposal a constitutionally protected individual liberty in that she can refuse unwanted medical treatment. If a mandate of females only were to be legislated and passed then the female should have the right to refuse treatment while the male would be exempt from treatment. This concept would tie into the exemption status issue previously discussed where if a female simply did not want to be vaccinated and did not fall into a states given exemption status what rights does the female have at her disposal to refuse such treatment?

In the future, the HPV vaccine may very well prove to be an immense benefit for public health. For the present, the vaccine appears to be creating a controversy in many and varying circles throughout our society. The controversy is such that its effect will have far-reaching results especially if the vaccine becomes one based on a mandate for school attendance. While state legislatures and policy makers wrestle with the complex mandatory issue, it appears, at least for the present, administration of the vaccine remains on a voluntary basis. Time and thoughtful debate need to take place before the vaccine will receive general acceptance as a school mandated vaccine. The concepts brought out in this brief paper only serve to demonstrate the complexity of placing a mandate upon a health concern where that concern is based upon a behavior rather than upon a true threat to the overall health of the public as a whole.

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TRADITIONAL HEALING PRACTICES IN THE PALESTINIAN OCCUPIED TERRITORIES

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ABSTRACT

In recent times, there has been an emphasis on holistic healing practices, as evident by the growing number of people turning to acupuncture, reflexology, reiki, Chinese healing practices, and homeopathy, among others (National Institute of Health, 2009). This trend is attributed to the growing segment of health conscious people in the western world. However, such practices are also found in a large part of the world due to unavailability of modern treatments and medications and the current economic crisis.

Many cultures rely heavily on their traditional healing practices to cure them of their ailments when they cannot obtain modern health care. This is very evident in the villages of Palestine, where hospitals and health care practitioners' offices are often several towns over, which would require Palestinians to venture through one or more of the 102 Israeli checkpoints in the West Bank (Freedom House). In a recent profile of the Palestinian Territories, it was found that there is an average of 1.62 doctors per 1000 people (The Guardian, 2009). As such, Palestinians continue to rely on the traditional remedies that have been with them for centuries, with influences from medical practices in India, Greece, Mesopotamia, Persia, and Rome (Abu Rabia, 2005).

A holistic approach is used in traditional Palestinian folk medicine. Various plants, fruits, vegetables, and olive oil are among the items used in treatment of ailments of the skin, stomach, muscles, eyes, ears, throat, nose, kidney, and reproductive system. Some of these fruits, vegetables, and plants include garlic, cucumber, rosemary, parsley, sesame, almond, thyme, onion, radish, mint, walnut, pomegranate, fennel, lime, pumpkin, olives, and sage (Ali-Shtayeh et al, 2000). These traditional remedies are not only used for every day ailments such as stomachache, headache, and muscle pains, but also for treatment of chronic diseases such as hypertension, diabetes, and hyperlipidemia (Jaradat, 2005).

For the purpose of this study, literature databases will be consulted and personal interviews will be conducted to gather data pertaining to the healing properties of various fruits, vegetables, plants, and nuts used in Palestinian traditional folk medicine. The full study is currently underway and will be ready for presentation at the MBAA March 2010 meeting.

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SUBJECTIVE VIEWS OF CHRONIC LOW BACK PAIN PATIENTS ON EFFECTIVENESS OF CERTAIN PAIN RELIEF METHODS

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ABSTRACT

The majority of people, who have chronic low back pain (CLBP) aim for better comfort, increased physical function, improved coping and less distress, and other positive outcomes. To In order to achieving these goals patients use various self selected methods such as exercise, posture, heat & cold application, weight reduction, distraction, relaxation, prayer etc. The goal of this study is to determine the incidence of usage and subjective views of CLBP patients on certain patient selected pain relief methods. Our results suggest that patients use self selected pain relief methods frequently. Among these methods rest, heat and cold application and distraction are found to be most common.

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SUBJECTIVE VIEWS OF CHRONIC LOW BACK PAIN PATIENTS ON BENEFITS OF PHYSICAL THERAPY AND CHIROPRACTIC TREATMENT

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ABSTRACT

Physical therapy and chiropractic treatment are among the most common employed treatments for the control of low back pain. There are many studies that indicate the use of such treatments, but there is a dearth of evidence if these treatments are favorably perceived by the patient. It is important to identify if patients perceive physical therapy and chiropractic treatment as subjectively beneficial, since pain is a purely subjective symptom and patient's compliance relies on perceived benefit of the treatment. In this preliminary study we have demonstrated that patients subjectively do not express receiving significant benefit from physical therapy and chiropractic treatment.

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A SUCCESSFUL PARTNERSHIP BETWEEN ORGANIZATIONS

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ABSTRACT

Aims/Objectives

A shortage of nursing faculty currently exists and qualified students are being turned away from nursing schools due to the faculty shortage. In response to the faculty shortage, the United States Army Nurse Corps (ANC) and the University of Maryland Baltimore, School of Nursing (UMBSON) formed a partnership to address the faculty shortage and help the Army recruit and retain nurses on active duty. Under the direction of Major General Pollock, Chief of the ANC, the Army initiated the Professional Nurse Education Program (PNEP), and assigned six ANC officers to serve as full-time faculty at the UMBSON for a two year period. The PNEP was the first partnership established between the military and a university. The purpose of this study was to explore the experiences of ANC officers who are assigned as faculty at the UMBSON, as well as explore the experiences of students being taught by ANC faculty. Husserl's philosophical approach was utilized as a framework to ground this study.

Research Design, Methods and Analysis

A phenomenological approach was utilized to guide the study. A purposive sampling approach was utilized to recruit participants who met the inclusion criteria. Qualitative interviews were conducted with ANC faculty and nursing students taught by ANC faculty. The interviews explored the experiences of ANC faculty and the students' experiences with the ANC faculty. The qualitative data was analyzed using Colaizzi's methodology.

Findings and Conclusions

The outcomes of a qualitative analysis of information provided by ANC officers and students should provide information that could be incorporated in the ANC's recruiting process and policy. The major themes of the ANC faculty interviews were transitioning, teaching and transforming attitudes. The students' major themes were professional socialization to military life and classroom learning. The findings from this study will enable military nurse recruiters to modify their strategies to effectively recruit nursing graduates into the Army and may have transferability to the other services. More importantly, this study has demonstrated a successful partnership between the military and the UMBSON. During this partnership the ANC officers provided students with clinical experiences in military treatment facilities and the students expressed satisfaction with these experiences. The ANC faculty were able to reposition faculty and student thoughts about the military. The ANC faculty all described this opportunity as a wonderful experience. Future partnerships will benefit schools of nursing by providing new experiences to students, easing the faculty shortage, and expanding faculty and student experiences and understanding of the military.

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BULLYING AND NURSING: A WORK PLACE REALITY

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ABSTRACT

Historically, bullying was associated with school children, however, recently this phenomena was spilled over to the nursing work place. A current study by Johnson and Rea, 2009 showed that 27% of nurses had experienced work place bullying in the last six months by their managers or charge nurses. Furthermore, nursing literature revealed that bullying was associated with burnout, job dissatisfaction and turnover. This paper will address the concept of bullying in the nursing work place, its characteristics, affect on nurses victims, and the strategies to prevent it.

The Ways to Contain the Rising Health Care Costs and Their Ethical Implications

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ABSTRACT

Purpose: *After discussing the high and rising health care costs in the United States, its disparities, and the suggested demand, supply, and managed competition- side strategies to contain health care costs and their ethical implications, the paper explores whether or not these strategies will further aggravate the existing health care disparities.*

Design/Methodology: *This conceptual paper utilizes the various appropriate exiting economic and ethical theories. The economic and ethical theories utilized are relevant to the problem of rising health care costs, to the proposed demand, supply, and managed competition -side cost containment strategies, and to the existing health care disparities.*

Findings: *The paper demonstrates that the suggested cost containment strategies do in fact aggravate existing health care inequities and are not always ethical.*

Originality /Value: *Given the present health care reform debate in the United States and various misconceptions about it , the author believes that the paper and its findings should in fact be viewed a contribution.*

Key words: *health care costs, health care disparities, demand- side cost containments, supply-side cost containment, ethics of healthcare*

INTRODUCTION

Health Care costs in the United States are high and on the rise; these costs are spiraling out of control. While in 2003 the United States spent 15.3% of its total national income on health care-the largest percentage among all industrialized counties - by 2030 this will reach 26%, leaving 74% of its national income for all other goods and services consumed by households, businesses, and various levels of government. This will not be sustainable, suggesting that the very high costs of health care must be contained.

An aspect of the health care system in the United States is , as the paper will demonstrate, that disparities exist in the way health services are provided to various segments of the United States population. By disparities we mean what the NIH defines as “differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups...”. Disparities may exist in the health services received by racial and ethnic minorities; or , in health outcomes from various health services, including screening, diagnosis, and treatment for specific diseases or medical conditions (Powers and Faden, 2003). It will be shown that health care disparities also exist in terms of age, in terms of socio-economic positions of individuals in society, in terms of gender, and in terms of race and ethnicity. For example, older adults , if for nothing else , have less access to health care because they have less access to transportation; poorer individuals , being less educated, have less health literacy which implies they have less capacity to obtain, interpret, and understand basic health information necessary to seek health care services and prevention; or, as research by the Institute of Medicine suggests, racial and ethnic minorities with the same insurance and income as whites often receive fewer medical tests and less sophisticated procedures.

Because of the astronomical rise of health care costs, suggestions have been made for reducing and containing such high costs. As the paper will argue, there exists three different strategies to reduce health care costs. One suggestion has been containment through the demand side which assumes the ability to pay as the measure of health care allocation. On the demand side, containment takes place through the

requirement of coinsurance payment, co-payments and /or deductibles. Another suggestion to be discussed is containment through the supply-side which would make health providers such as hospitals and physicians to reduce costs, i.e. for-government or insurance companies to pay less to physicians or make physicians or hospitals to avoid the utilizations of unnecessary tests and expensive medical technology. A third suggestion-managed competition- is one which emphasizes both demand and supply –side measures that would contain health care costs.

This paper will demonstrate that these proposals for cost containment will further aggravate the existing inequities of health care. For example, the demand-side proposals that advocate health care allocation on the basis of ability to pay would make access to health care more difficult for those with lower incomes (including racial or ethnic minorities, the poor elderly, or whites with less income). While people of higher income can afford higher co-payments and deductibles, people with less income will either use fewer health care services or spend much more of their limited incomes on health care services, thus having less ability to purchase other essential goods and services.

The paper will explore the ethical implications of the proposed strategies for the containment of health care costs. Of course, as it will be argued, there exist various theories of justice that can be utilized to judge whether or not these containment strategies are just and ethically sound. These theories include libertarian theories advocated by Nozick (1974), utilitarianism, Kantian ethics, or other and more egalitarian theories of justice. One type of egalitarianism that is prominent in bioethics and health policy borrows heavily from the work of John Rawls (1971). An example is Norman Daniels (1985) who applies Rawlsian theory of justice to health care. The paper will explore the ethical implications of these theories of justice; in particular those of Rawls and Kant, as they relate to health care cost containment, its impact on health disparity, and the extent that cost containment strategies are consistent with theories of justice.

II-DISPARITIES IN HEALTH CARE IN THE UNITED STATES

Undeniably, there are gaps in the quality of health and health care access for racial and ethnic minorities in the United States. In spite of improvements in the health of all Americans, the benefits have not been shared equally. This is nothing new. For example, in his classic 1944 study, Swedish Nobel Prize winning economist (and social theorist) Gunnar Myradal compared the health care of the American whites and Blacks

(then by far the largest racial minority in the United States) as follows: “Area for area, class for class, Blacks cannot get the same advantages in the way of prevention and care of disease that whites can”. Forty one years later, in 1985, the Report of the Secretary’s Task Force on Black and Minority Health concluded that: “Despite the unprecedented explosion of scientific knowledge and the phenomenal capacity of medicine to diagnose, Black, Hispanics, Native Americans and those of Asian / Pacific Islander heritage have not benefited totally or equitably from the fruits of science or from systems responsible for translating and rising health science technology”. And, as of 2003, Harvard’s Byrd and Clayton wrote: “Despite steady improvements in the overall health of the United States’ population, the health of America’s racial and ethnic minorities varies from the mainstream. For example, the health status of African Americans- a racial – ethnic group already burdened with deep and persistent history-based health disparities- has been recently characterized as stagnant or deteriorating”. (2003, p. 455). As these two authors argue, “a body of nearly 600 scientific publications documenting racial and ethnic disparities in health care provides ample evidence of this problem.” (Ibid).

Obviously, these disparities reflect socio economic differences and inadequate access to quality health care. However, evidence also suggests reasons other than racial, ethnic, class, and gender bias – factors like direct and indirect discrimination.

III-DEMAND-SIDE APPROACHES TO HEALTH CARE COST CONTAINMENT

There exist different strategies for containing health care costs. Ellis and McGuire (1993, *Journal of Economic Perspective*) discuss demand-side and supply-side approaches. Thomas Rice (2003) also

discusses a third strategy, called managed competition which emphasizes both demand and supply sides for containing costs of health care. Let us begin with the demand-side approach.

As economists argue, a market is an institution that brings buyers and sellers/producers together. Demand is usually defined as the various amounts of a product (good, or service) that consumers/ buyers are willing and able to purchase given different prices at a particular time, assuming that consumers are sovereign (i.e. consumers make better choices for themselves than others). Of course, one may argue that health care, being a unique product, cannot be reflected by a market applicable to other commodities. Two methods might be available for containing health care costs on the demand side. One, as argued by Ellis and McGuire (1993) is cost sharing. In other words, if people pay more of the medical care, there will be less demand for services. This is supported by evidence. Traditionally, cost sharing in health care is done in two different ways- by paying for insurance premiums, or through coinsurance, co-payment, and /or deductibles when patients receive a health services. Of course, regarding effectiveness of this method, we are reminded by Thomas Rice that it is the physician who controls resource usage once an episode of care commences. (2003) In other words, in considering the role of patient cost sharing, it is important to know that its major impact is on reducing the number of episodes of care for which medical care is sought rather than the cost of care per episode. (Ibid).

The second tool for containing health care cost through demand is providing people with better information. Information may pertain in terms of particular services, for example information about the kinds of services which are medically appropriate. Information may also be about insurance-namely about the price and quality of different types of insurance choices that may reflect different benefits, provider networks, etc. (Ibid).

This will enhance consumer sovereignty in order that demand reflects informed decision, giving rise to the most optimal choices. Examples of more information to consumers of health care are supplying patients with the quality of alternative health plan choices and expansion of medical information through the internet.

IV- Supply –Side approaches to Cost- Containment.

Markets also have a supply side; where supply is usually defined as the amounts of a product (good or service) that producers/suppliers are willing and able to supply, given different prices at a particular time. In terms of health care, this is usually the main tool used for containing costs. In other words, instead of focusing on the change of patient behavior which is the case when we concentrate on the demand –side, here the emphasis is to make providers like hospitals and physicians to alter their behavior. We can mention several supply-side examples of cost containment.

- Traditionally, public programs like Medicaid have paid physicians very low fees for treating patients. The intent, of course, is to make physicians provide less medical services to Medicaid beneficiaries.
- Guidelines for those public programs are aimed at insuring that physicians only provide services that are seen as medically appropriate.
- Diagnosis- related groups (DRGs) and capitation try to install in physicians and hospitals an incentive not to over- provide medical services. This is done by paying a fixed amount of money for care regardless of how many services are actually performed. (Rice, 2003).
- Another method for controlling overall usage of medical services has been done by limiting the number of hospitals, doctors, or capital equipment in the system.
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V- Managed Competition Approach to Health Care Cost Containment.

Rice (2003), following Enthoven (1978) and Enthoven and Kronick (1989) also discuss a third strategy of health care cost containment called managed competition, which combines both demand and supply-side incentives to control health care costs. According to Rice: "Under managed competition, health plans compete with each other for enrollees. Payers such as employers or government provide a fixed amount of money to the enrollees to purchase insurance. The payers also provide information on

alternative plan costs and measures of quality and enrollee satisfaction. If enrollees choose a more expensive plan, they have to pay additional premiums out of pocket. These are the parts of managed competition aimed at the demand side. Health plans, in turn, need to keep their costs down to remain competitive, and one way they can do so is to pay providers in a manner that induces them to control costs. They may also use techniques such as utilization review. These are the aspects of managed competition aimed at controlling costs through the supply-side". (2003, p. 705).

According to Rice, managed competition was part of the "failed Health Security Act proposed by the Clinton Administration". (Ibid). However, many aspects of this approach have been accepted by some private payers. An important example of it is the practice of offering employees a fixed contribution towards a menu of health plans which, as some research has demonstrated, can save payers a great deal of money. This, of course cannot be without its share of problems. For, according to Buchmuellers (1998), health plans that rely on fee-for-service medicine may attract a sicker group of patients, which eventually may cause these types of plans to be priced out of the market.

VI-DISPARITIES ON THE DEMAND-SIDE COST CONTAINMENT

First: the case of Patient Cost Sharing

As stated above, demand-side cost containment for health care can be done by cost sharing, which can be done in the form of coinsurance, deductible, and copayments applied at the time of service usage. This is a method which is more common in the United States; it is also advocated by most health care economists in the United States. This view is supported by findings of the RAND Health Insurance Study which was conducted between 1974 and 1982. According to this study, consumer demand for health is sensitive to out-of-pocket costs. In other words, people who have to pay more for services at point-of-service would be much less likely to seek medical care.

What is the implication of patient cost-sharing for racial and ethnic minorities? Cost sharing results in de-facto discrimination against those groups in various ways. (Rice, 2003). The first reason is that in the situation that racial and ethnic minorities are not deterred by the requirements; cost sharing constitutes a much higher average burden. This has to do with income differences. For example, while in 1998 the main household income for whites in the United States amounted to some \$ 41,000, for African-Americans it was \$25,000 and for Hispanics in the United States it was \$ 28,000. (Ibid).

The second reason is that racial and ethnic minorities, being in poorer health, have greater need for medical services in the United States. According to the National Center for Health Statistics (2000), in the United States, 8% of the white population rate their health as poor or fair. For African-Americans this is 16% and for Hispanics it is 13%. For example, hypertension rates are about 50% higher among African-Americans than it is for white Americans. Both of those two minority groups have about twice the rate of untreated dental problems as white Americans. And, according to Gornick (2000), while 25% of Medicare beneficiaries rate their health as poor or fair, among African-American Medicare beneficiaries it is 44%. To Gornick (2000), compared to whites, African-Americans and Hispanics are twice as likely to have diabetes. For example, while two-thirds of African-American Medicare beneficiaries have hypertension, for whites in the United States it is only half of them. Obviously, as the above suggests, minorities have a greater need for medical services. If minorities demand these services then, as Rice suggests, "the problems associated with high cost sharing and low incomes are magnified compared with whites, who are healthier and wealthier". (2003), p. 709).

The third reason is that in many cases cost sharing works as a deterrent to the necessary use of medical services, leading to a situation that racial and ethnic minorities, who in part because of being less wealthy cannot afford these, would not receive the medical care they need. In fact, the RAND Health Insurance experiment mentioned above, demonstrated certain cases where lower cost sharing improved health status of patients.

To Gornick, disparities between American whites and racial and ethnic minorities also exist among Medicare beneficiaries. For example, African-Americans use 82% as many office visits and

77% as many specialist services as whites and are only half as likely to get flu shots. Additionally, racial and ethnic minorities are far more likely to get services that tend to result from seeking medical care too late. This explains why, according to Gornick (2000), amputations of lower limbs are more than triple among African Americans compared with the white population in the United States. Related to this is the fact that racial and ethnic minorities, as Medicare beneficiaries, are less likely to have supplemental insurance than white Medicare beneficiaries. According to Pourat, et al (2000), while only 9% of white Americans receiving Medicare have any type of supplement, for African-Americans it is 27% and for Latinos it is 16%.

The fourth reason is that racial and ethnic minorities are hurt by cost sharing because they have more to gain from preventive care due to their worse health status and lower use of such care. Traditionally, it is assumed that cost sharing should be higher for services that are most price sensitive. According to Rand Health Insurance study, prevention and dentistry are among the most price sensitive of services. In the words of Rice, "application of this economic concept to prevention would discourage usages of preventive care, an area in which racial and ethnic minorities have both the greatest need and ability to benefit" (p.710).

The last form of patient cost-sharing is the premiums paid by individuals and families for health insurance. Research has indicated that this too affects the use of medical service. As research indicates, there are two different ways that premiums paid by individuals affect the use of medical services. On the one hand, according to Knoick and Gilmer (1999), as premiums rise individuals are less likely to buy health insurance offered by their employers. On the other hand, as Cutler and Reber (1998) demonstrated, choice of health plan is very responsive to premiums. Because racial and ethnic minorities in the U.S. have lower average incomes than white Americans, we would thus expect that their enrollment in insurance plans would also lower. (Rice, p. 711). This explains why, as argued by Brown, et al (2001), in 1999, 75% of whites in the United States had job-based insurance, while for the African-Americans this figure was 58% and for Latinos it was only 47%.

SECOND –THE CASE OF CONSUMER INFORMATION

Demand-side cost containment can also use consumer (patient) information. The impact of this may be observed in the differences in terms of the benefits, costs, and quality of health plans; it may also be observed through consumer (patient) degree of satisfaction. For, it is generally assumed that consumers are able to use information to make good plan choices. It is based on this assumption that the federal government

(in the U.S.) and research firms have invested a great deal of money and energy in finding ways of presenting and disseminating relevant information through such initiatives as the Consumer Assessment of Health Plans (CAHPS) sponsored by the Agency for Health Care Research and quality. Additionally, as Rice indicates (Ibid), there have also been initiatives by the private sector, such as the Health Plan Employers Data and Information Set (HEDIS) developed by the National Committee for Quality Assurance.

Rice argues that these efforts that rely on consumer information for making plan choices, although admirable, disproportionately harm certain racial and ethnic minorities in comparison to the whites, in the United States. Specially, they harm the most those with less education and individuals whose primary language is not English. Although poor whites might also be among those with less education, it is much worse among minorities. According to the U.S. Census Bureau 2000 (pp 43 and 46), in 1999, while 26% of white Americans with a four-year college degree, for African Americans it was 16% and Hispanics it was 11%. According to Rice, "Although it is difficult to find comparable data for those whose primary language is not English, the rates are undoubtedly lower". (p.711). These factors are extremely important. As argued by Hibbard, et al (2001), there is a strong relationship between the education and understanding comparative information about health plans up until age 80. Although one may argue that by improving education this disparity may be alleviated, to many health experts we should not really rely on consumers making choices among competing health plan. In other words, they wish to see a type of health system in which cost is contained by relying on factors other than demand-side strategies. This can be done through supply-side approaches.

VII- THE CASE -OF SUPPLY-SIDE

There are four supply-side approach for containing health care costs- low physician fees; capitalization and DRGS; utilization review and practice guideline; supply, technology, and expenditures controls.

1-Low Physician Fees

It is generally believed that states in the United States pay physicians very poorly for treating Medicaid patients. Since states pay lower for these Medicaid patients as compared to patients with other types of insurance, economists have been tempted to explain it in terms of what they call price discriminating monopoly model. This model, as suggested by Sloan, et al, (1978), leads to different amounts of revenue for those two groups of patients. What does this mean in terms of health disparity between Medicaid and other patients? This could imply that physicians would treat most lucrative patients first, treating Medicaid patients only when the market for non-Medicaid patients has been exhausted. Another implication could be that for the Medicaid patients whose medical costs exceed what they pay no medical care (treatment) would be provided. Thus, these would suggest that Medicaid patients would have a difficult time finding physicians who would be willing to treat them. This is particularly true if such patients seek treatment from physicians who are better trained; more specialized, and consequently enjoy better reputation. Using the price-discrimination model, we can predict that highly- trained and specialized physicians would avoid the treatments of low revenue patients including those patients who are covered by Medicaid. In fact, it has been demonstrated by Mitchell (1991), Medicaid patients are less likely to have access to physicians in their outpatient practices, as well as more qualified physicians.

Obviously, these practices would aggravate the already existing disparities in health care faced by racial and ethnic minorities. For, while only 6% of whites in the United States receive Medicaid benefits, for Hispanics it is 14% and for African-Americans it is 19%.

(Rice, p. 712). As a result, referring to U.S. national Center for statistics, 2000, Rice (Ibid) argues that African-Americans are more than 30% likely to use an emergency room as compared to whites in the United States, simply because they are less likely to have regular access to physician offices. (p. 713). Of course, this problem could be eliminated if all types of insurances paid the same amount to physicians. In other words, if we use the system known as "all-payer-system", which is in existence in other industrialized countries.

2- Capitation and DRGS

Capitation and DRGS are rather related. In the case of DRGS, hospitals are paid an amount of money for an in-patient stay. As argued by Rice (2003), this amount can be completely unrelated to how many resources are used to treat the patient. In the case of capitation, a fixed amount of money for every patient per year is given to the physician (rather than to the hospital). In the case of capitation too that amount is unrelated to subsequent usage of resources on the patient. Superficially, it might be assumed that DRGS don't affect the decision making process of doctors, since it involves payment to hospitals and not to physicians. However, as Rice argues, this ignores the fact that hospitals use various strategies to make sure physicians are aware of the hospital's financial motives. These, as Rice argues, "range from informing the doctor how long the patient has stayed in relation to the average for the DRGS, all the way to withdrawing privileges to practice in the hospital". (p.713).

On the surface, these two methods do not seem to lead to any racial or ethnic disparities, since hospitals receive the same DRG payment for white and non-white patients in the case of DRGS, and the same capitation fee is paid to doctors for each patient regardless of his/her race or ethnicity (although, according to Rice, insurance companies may pay different amounts, and have different racial/ ethnic mixes of enrollees). However, it is very possible that financial pressures exerted by these two sources of payments would make physicians to cut back their services differently, in a way that would have racial and ethnic implications.

It is very likely that a physician who is capitated would have the interest and incentive to care for more individual patients in his/her practice. In certain situations, the capitated physician may even

benefit from controlling the number of specialist and hospital referrals. Because time is a limited/scarse resource, physicians may benefit from devoting less time, thus doing less, for each patient.

But how would this behavior lead to racial and ethnic disparities? There are three ways that the above behavior would aggravate racial and ethnic disparities in health care. As suggested by Rice, it is possible that the physicians would engage in overt discrimination, willfully favoring his or her racial or ethnic group over others (P. 23). Ryan and Burk (2000) and Rice (2003) discuss a second related explanation, a situation in which physicians stereotype minority patients. Van Ryan and Burk (2000) surveyed the attitude of physicians in ten New York State hospitals after patients received an angiogram. In that research study, physicians were asked questions about their perceptions of those patients in terms of patients' intelligence and education, pleasantness, self-control, rationality, their compliance with medical care, drug and alcohol use and lifestyle, and the likelihood that they would sue physicians and hospitals. Even after the researcher controlled for the appropriate variables, physicians (I assume being overwhelmingly white) rated white patients higher than African-Americans on most of those questions. Van Ryan and Burke found that, in view of those physicians, African-American patients: "were likely to be seen as the risk for noncompliance with cardiac rehabilitation, substance abuse, and having inadequate social support. In addition, physicians rated Black patients less intelligent than white patients, even when patient sex, age, income, and education were controlled. Physicians also report less affirmative feelings toward Black patients". (200, P. 821).

As argued by Rice (2003); "because physicians are pressed for time under capitation, stereotyping leads to less care for racial and ethnic minorities". (p. 715). In fact, the study by Van Ryan and Burke (2000) found that physicians spent more time with whites than black patient. As a result, these patients may not receive sufficient advice on care; they may also feel alienated from the physician. This in turn may lead to their revealing of less information to the physician, or seek care less often.

A third related reason that those minorities may receive less adequate care in a DRG or capitated situation is through a concept called statistical discrimination.. According to Balsa and McGuire (2001) who have applied this concept to health care, physicians' decisions result from their inability to interpret information about the patient. In other words, if physicians feel they know less about a patient's symptoms or (medical) needs, they will be less certain that a particular type of treatment is appropriate. In the words of Rice, "Under strong financial pressures such as those generated by DRGS and capitation, physicians may therefore favor the patients for whom information is less ambiguous". (p.715). In the words of Balsa and McGuire. "A white male doctor might have an easier time interpreting the signal-doc, it really hurt-from a white male patients than from a black woman patient, from a Latino woman patient" (2001, p. 1). According to Rice, this would be even worse for those patients whose native tongue is not English. (2003, p. 715).

In support of the above argument about health care disparities, a test was conducted by Tai-Seale, et al (2000) when they studied a group of Medicaid beneficiaries who were forced into HMOs. The authors found that in comparison to white patients with a similar situation, African-Americans: "experienced declines in relative use of physician services (among both adults and children) and an increase in relative use of ER and children ... While the reduction in service use in itself is not necessarily a sign of poor access or discrimination, it is the difference in decline of relative service use between African-American and white beneficiaries that warrants further investigation". (2001, pp. 56, 57).

The above demonstrates that financial incentives that encourage physicians to reduce resource usage under managed care differentially harm racial and ethnic minorities. (Rice,P. 715).

VIII-ETHICS/JUSTICE THEORIES AND HEALTH DISPARITIES

How do we apply ethics / justice Theories to the above-mentioned cases of disparities? The response to this question depends on what ethics / justice theory we employ in our analysis. For sure, the response by a libertarian such as Nozick differs from one provided by a utilitarian, or a

Kantian, or egalitarians, or by someone who follows the principles of justice developed by John Rawls. (1971)

Libertarians do not believe government should engage directly in eliminating health care disparities demonstrated above. Under a Libertarian conception health care is not a right, and the ideal health care system is privatized. In the words of Beauchamp and Childress, "A libertarian interpretation of justice focuses not on increasing public utility or meeting the health needs of citizens, but on the unfettered operation of fair procedures". (p. 232). According to noted libertarian philosopher Robert Nozick, there are only three principles of justice- justice in acquisition, justice in transfer, and justice in rectification. These suggest that no pattern of justice distribution exists independent of free market acquisitions. Thus, in that line of thinking, there are no welfare rights, and no rights or claims to health care based on justice. Because libertarianism emphasizes procedural justice, it should oppose disparities if they stem from discrimination.

Egalitarian theories of justice usually advocate that individuals should receive certain goods, such as health care. However, no prominent egalitarian theory advocates equal sharing of all possible social benefits. Some egalitarians, sometimes called qualified ones advocate only some basic equalities among individuals, and permit inequalities that prove to be beneficial to the least advantaged. (Beauchamp and Childress). Case in point is John Rawls theory of justice. Rawls did not directly apply his theory of justice to health care and its disparities. However, others have done so using Rawlsian theory of justice. Example is Norman Daniels who argued that social institutions affecting health care distribution should be arranged

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The Ways to Contain the Rising Health Care Costs and Their Ethical Implications

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