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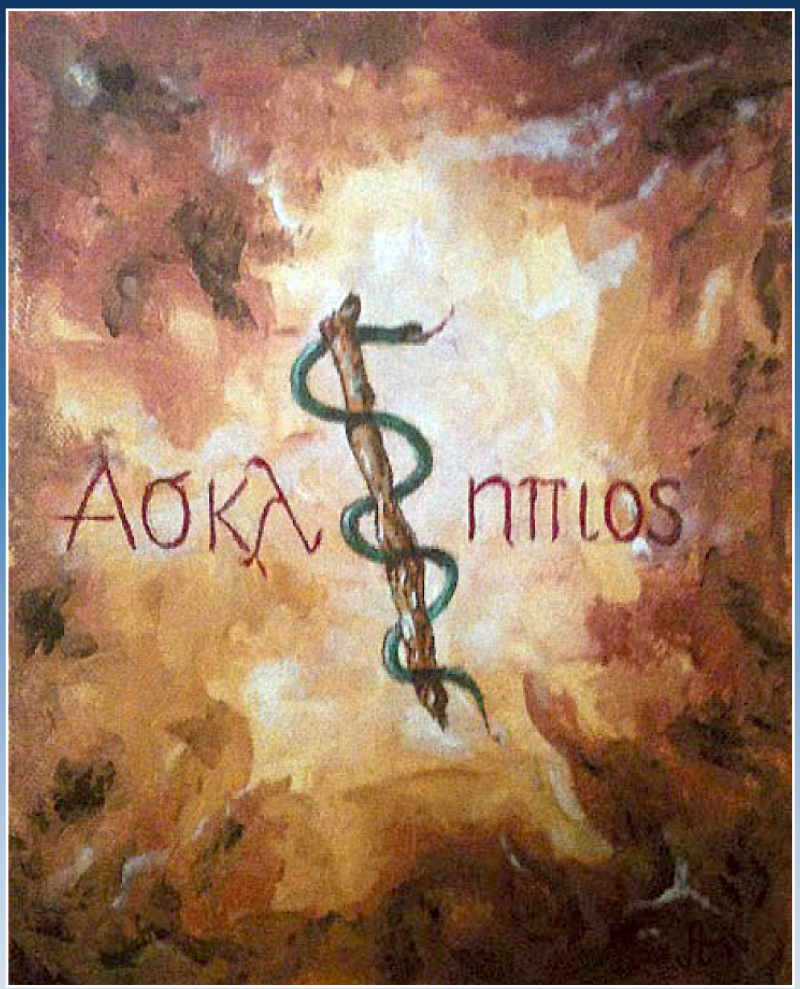

SPECIAL SECTION

SPIRITUALITY & MEDICINE

GOWRI ANANDARAJAH, MD, GUEST EDITOR

MARCH 2014 VOLUME 97• NUMBER 3 ISSN 2327-2228

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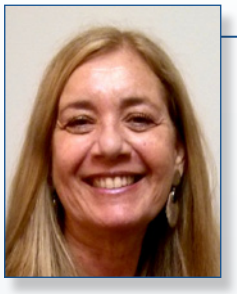

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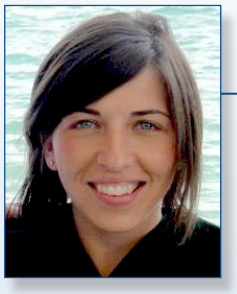

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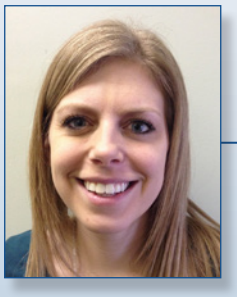

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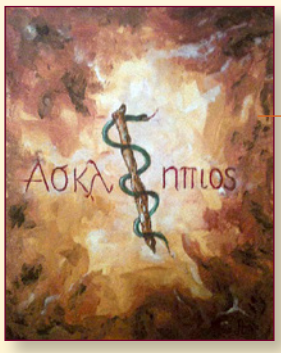

COVER: *Asklepios*, acrylic on canvas, by Stanley M. Aronson, MD

Ασκληπιος

According to the National Library of Medicine, one of the earliest Greek gods to specialize in healing was Asclepius (known to the Romans as Aesculapius). It is now thought that he was an actual historical figure, renowned for his healing abilities. As his followers grew, he was elevated to divine status, and temples were built to him throughout the Mediterranean world.

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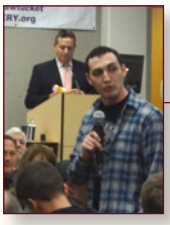
IN THE NEWS



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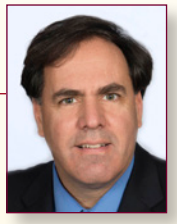

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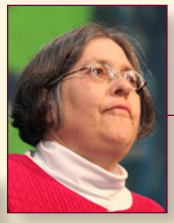

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RIMJ Mission Statement

The Rhode Island Medical Journal (RIMJ), published by the Rhode Island Medical Society, is an independent, monthly, electronic publication which aims to reflect the views and purposes of the entire medical community of Rhode Island.

We see the Journal as a vehicle aimed at the practicing physicians of Rhode Island – whether they are in private practice, on the staff of the state's hospitals or as part of the many colleges and universities of the state. It offers a venue for them to express their clinical or investigative findings, and for the academic faculty to publish their clinical or research results. It also serves as a platform for local medical students, resident physicians and fellows to contribute to the medical literature while honing the rudiments of medical writing.

In addition, it offers the opportunity for medical professionals to make the community aware of testing or clinical expertise that may not be widely known, even within our small state. And finally, RIMJ is a forum where allied health professions such as local schools of public health, pharmacy and nursing may share their concerns and aspirations as the business of health care takes on new and unanticipated challenges.

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Stanley M. Aronson, MD
Editor Emeritus

Let Sleeping Dogs Lie

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I recently saw a 40-year-old woman with a movement disorder that began in her teens, reportedly diagnosed at a major medical center at age 20. Since that time she's done very well, living a normal life, married, with children, seemingly comfortable. I was surprised by her history. Her problem, presumably an autosomal recessive disorder, was progressive, yet hers had not progressed. Her movements were very intermittent, sometimes not present for hours, yet they did occasionally interfere with her life. They never occurred when exercising, so she can jog without problem. Her movements were quite odd and it became quite apparent to me that they were psychogenic. She was not seeing me for treatment, but only to "check in," and have a doctor available should her problem worsen.

This reminded me of a couple of other cases. A 75-year-old woman who I'd followed for a few years for a very significant tremor told me that she had another neurological problem that she'd never mentioned. If she stood in one place for several seconds she would lose her balance, always falling backwards, and that she could abort this by either shaking her arms or rubbing the top of her scalp. She allowed me to film this, and I have it on file. It was a phenomenon without a physiological explanation. Yet it was not a "problem," in that it caused her no distress. She mentioned it to me casually, wanting to share a peculiar observation, like someone showing that they can bend themselves backwards enough to touch the floor with their hands. It didn't distress her in the least.

The third case along this line is a 50-year-old man who I diagnosed with Parkinson's disease 20 years ago or more, who hasn't changed during that entire time and has not required medication. He reports easy fatigue, which limits his life to a small extent, but it has not interfered significantly with his family life, raising his children, pursuing his professional career or enjoying leisure activities. He is, at least to my eye, completely well compensated. Yet, I came to the conclusion a few years ago that this had to be psychogenic. I thought about proving this with the newly developed DaT scan, a SPECT scan that provides an estimate for the number of dopamine-secreting neurons in the brain. It is a fairly reliable method of confirming the presence or absence of a dopamine cell deficiency. Since we don't see physical signs of PD until people have lost between 50% and 80% of the dopaminergic cells in the midbrain, there is generally a marked difference between normal and abnormal. But in this case I refrained. Just as in the previous two cases I did not mention suspicions of a non-physiological explanation.

I also have followed a man for the last 25 years for severe parkinsonism while on prochlorperazine. He refused to taper or stop the drug, which commonly causes parkinsonism. Over the next few years it became increasingly clear that his parkinsonism, while possibly partly due to the drug, was mostly a psychogenic problem. I was unable to check him for stiffness, a cardinal feature of Parkinson's disease (PD), or for slowness, another cardinal feature, because he had too much pain to move any part of his body even a millimeter. I then learned that he had severe, intractable asthma, but never had visited an emergency room, and never had pulmonary function tests because his tremors were too severe. He had never been hospitalized for this and never had wheezing detected. On top of this were seizures, occurring many times each day. I sent a videotape of him many years ago to my mentor, who thought the tremors psychogenic, but I never discussed this with the patient. I have always felt, and continue to believe, that there is no reasonable chance that he might embrace the idea that all of his disabling medical conditions were the result of emotional distress. I never thought that with appropriate therapy he might become a functional person. He was wedded to his diagnoses, which were as important to him as life itself. I would have intervened if I had seen him near the onset.

I see a lot of people with psychogenic problems. All doctors do. But most of these are for highly subjective symptoms: chest pain, abdominal bloating, dizziness, fatigue, weakness. In neurology we see non-epileptic seizures (pseudo-seizures), blindness, deafness, mutism, paralysis, tremors and a wide variety of movement disorders. Many of the neurological disorders can be demonstrated to be

of "non-physiological origin," either with objective testing such as video monitoring with concurrent EEG, for non-epileptic seizures, or with a variety of examination procedures. One can never "prove" that pain or discomfort or dizziness isn't organic while we often can demonstrate that a patient isn't truly paralyzed. This makes us more confident about the non-physiological origins of neurological symptoms.

Acute "functional" (non-physiological) neurological disorders usually resolve without treatment. The ones that persist six months often don't resolve, ever, even with treatment. The above cases demonstrate that some people with psychogenic movement disorders do quite well over decades. If a disorder is psychogenic, it presumably has a psychic explanation. In most cases the explanation is apparently so disturbing that the person cannot deal with it consciously, transforming the emotional distress into a physical sign. Perhaps in these cases, where people can live full lives around an isolated disorder, they have successfully cordoned off the distressing problem without having to deal with it? Perhaps some psychic traumas are best NOT dealt with other than for having a few twitches now and then? I certainly believe that for these three cases, it is highly likely that, even if the patient would embrace my diagnosis, an unlikely event, the treatment might well be worse than the disease.

I published an essay a few years ago in a neurology journal calling on my colleagues to "call a spade a spade," and tell their patients the truth when they think the problem is psychogenic and not hide behind, "I'm not sure," "I can't explain this," "maybe you should see someone else," when, in fact, they are sure. My co-author asked me how I could have written that column and then this one. The answer lies in why the patients saw me. In none of these cases was a diagnosis or a treatment sought. I was being seen for "follow-up," for reassurance, for comfort. ❖

Author

Joseph H. Friedman, MD, is Editor-in-chief of the *Rhode Island Medical Journal,* Professor and the Chief of the Division of Movement Disorders, Department of Neurology at the Alpert Medical School of Brown University, and chief of Butler Hospital's Movement Disorders Program.

Disclosures

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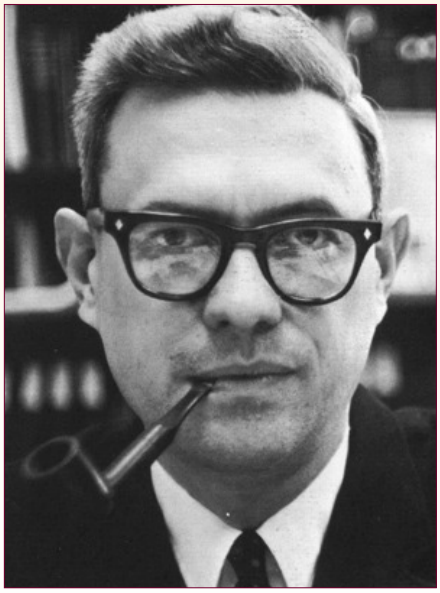
Dr. Aronson in 2007 receiving Doctor of Medical Science (DMS) at Brown in 2007.



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Stan Aronson, MD, in the early years in the 1950s at Downstate Medical Center in NYC.

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Medicine: Then, Now and Perhaps in the Future

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The Rhode Island National Public Radio Station (RINPR), last summer, conducted an educational series of seminars that they called "Future Docs." Kristin Gourlay, its moderator, chose two matriculating students at Brown's medical school and followed them in classes, clinics and at the bedside as they learned their new and increasingly complex profession. And so these RINPR programs discussed such relevant issues as innovative curriculums, the increasing preeminence of public health in the private practice of medicine, the many ways medical education has transformed itself to meet the health-care needs of the 21st Century; and, certainly, the very character of those young candidates about to enter the profession.

The art and science of human healing has been immensely advanced since I entered the medical profession some seven decades ago. And these readily documented advances are at least as robust as the more obvious advent of antibiotics, the many evidence-based therapies, the development of newer radiographic, ultrasound and biochemical diagnostic procedures and the wider availability of health insurance.

Consider, for contrast, the typical candidate chosen to study medicine in the 100-odd American medical schools during the 1930s and early 1940s.

The great majority of matriculants were tall, healthy white males chosen more for their lineage and innate sense of authority than for any visible signs of intellectual superiority or compassionate behavior. If a medical school admissions committee, say in the year 1937, had to identify a single sought-for attribute in those seeking admission, it probably would be evidence of mature leadership (as evidenced, perhaps, in extracurricular scouting, church activity or in collegiate team work).

The medical schools of that past era trained their students for a life of solo-practice; and therefore, inevitably, an immersion in a profession that required unilateral decision-making, impassivity in the face of calamity, aloofness, and a fatherly rather than brotherly demeanor. The lone medical practitioner of the 1940s fostered little collegiality with nurses, technicians or members of the clergy; and his guiding principle in life

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A crowd of medical students gathers around Sir William Osler, MD, during a bedside consultation at the Johns Hopkins Hospital in Baltimore, circa 1903.

was equanimity in the face of stress. In the words of Sir William Osler, "…be like an immoveable rock in the face of adversity." And if he experienced occasional regrets or grief, he kept it to himself.

The patients of that remote era were either privileged clients of private practitioners; or, more likely, persons bereft of any formal medical care: at best, recipients of welfare medicine provided principally through municipal hospital clinics (called OPDs) which offered competent but an intensely impersonal and discontinuous mode of health care. It was often described as "four hours in the waiting room and four minutes in the treatment room." And if the clinic was part of a medical school's venue, the "attending physician" was often a fourth-year medical student.

Many Americans, therefore, went for decades without professional contact with registered physicians. Who then provided care for their surface bruises, ill-defined abdominal aches or sudden fevers? A wide variety of volunteer healers including the neighborhood pharmacist, the school nurse, the elderly grandmother and sometimes practitioners, both secular and religious, of alternate therapies.

Prior to the era of functioning anti biotics and evidence-based pharmacological agents, medicine relied principally on nature, palliatives, dietary regimes and sound advice. The anonymous third-grade teacher and her classroom instructions on personal hygiene saved as many lives as a bevy of physicians.

And what did the practitioner of 1937 consider his enemy? Sometimes the truth since the unembroidered truth was too painful to share; and so, euphemisms were often employed: tuberculosis was called a spot on the lungs; and cancers were domesticated to "lumps" or "growths."

The most implacable enemy of this isolated physician was the imminent death of his patient. Organized hospice programs did not exist then and the public insisted that every measure be undertaken to preserve and prolong life. And if the private physician eased up on his exertions, he kept his resolve to himself. Palliation for the terminally ill patient was a private matter between the family and the physician, with never a hint of it in the written record.

Medicine, more than a half-century ago, was a lonely art consuming a minimum of 60 hours per week for its practitioners. They learned to stand alone, keeping silence to hide their doubts. And the average practitioner in that era rarely lived beyond age 58.

Describing medicine's recent past is easy. Speculating about its future, prophesying medicine's therapeutic capabilities fifty years hence, might also be simple but only when compared with guesses concerning affordable health care for all Americans in 2064. ❖

Author

Stanley M. Aronson, MD, is Editor emeritus of the *Rhode Island Medical Journal* and dean emeritus of the Warren Alpert Medical School of Brown University.

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Rainbow Healthcare, it takes a village

Two weeks ago my aunt fell while shopping in a mall in Johannesburg. She is 86 and frail, but still independent, driving and able to do her own shopping.

She was immediately assisted by a middle-aged South African Indian woman who stopped her own shopping to provide assistance. My aunt was bleeding from a hand laceration. After some initial aid, this woman insisted on taking my aunt directly to this woman's primary care physician office for further assistance. She was seen immediately by the physician who seemed unperturbed about checking if she had health insurance as the information was not readily available. My aunt required 3 sutures. The young Afrikaans office manager insisted on driving my aunt home and arranged for her husband to collect my aunt's car from the shopping mall.

This whole episode was over within 3 hours, was managed without any fuss and at a minimal cost to the health care system. It also provided an opportunity for tremendous neighborliness and goodwill that spanned age, ethnicity and social background.

I know that there will be comments made about what could have gone wrong and what liability was incurred by those who participated.

However, I thought this vignette was worth sharing, so that we may dream and strive to capture the spirit of such a health care system. The physician was only a small cog in this wellness model.

Alan Gordon, MD
Associate Medical Director, Butler Hospital
Chief, Clinical Addiction Services, Butler Hospital

Guidelines for Letters to the Editor

Letters to the Editor are considered for publication (subject to editing and peer review) provided they do not contain material that has been submitted or published elsewhere.

The *Rhode Island Medical Journal* prefers to publish letters that objectively comment on or critically assess previously published articles, offer scholarly opinion or commentary on journal content, or include important announcements or other information relevant to the Journal's readers.

Letters in reference to a Journal article must not exceed 175 words (excluding references), and must be received within four weeks after publication of the article. Letters not related to a Journal article must not exceed 400 words (excluding references).

A letter can have no more than five references and one figure or table. A letter can be signed by no more than three authors. The principal author will be asked to include a full address, telephone number, fax number, and e-mail address. Financial associations or other possible conflicts of interest must be disclosed.

Cheers to CVS for tobacco stand

The Rhode Island Medical Society commends and congratulates CVS Caremark for its voluntary plan to remove tobacco products from the shelves of its 7,600 retail stores nationwide. With this decision, CVS sets an example of good corporate citizenship that all other pharmacy chains should emulate.

The juxtaposition of pharmaceuticals and other health- and wellness-related products with the sale of tobacco, which is harmful and addictive in all its forms, has always been a blatant incongruity in American chain drugstores and a disservice to consumers. That is why the Rhode Island Medical Society again this year is promoting legislation that would ban the sale of tobacco products anyplace where health-care services are provided.

Thanks to CVS's courageous, logical and pioneering move, we can now hope that other pharmacies will consider the welfare of their customers and obviate the need for our legislation.

Elaine C. Jones, MD
RIMS President

Governor's Budget Threatens the Hospital Mission

Hospitals in Rhode Island will face $19 million in direct payment reductions through the governor's FY15 budget proposal. The proposed cuts will further destabilize fragile hospitals and threaten their important mission.

This budget fails to recognize the difficulties hospitals are facing. Hospitals posted a negative operating margin in 2013, a unique occurrence that has only happened once before (FY11) and highlights financial struggles our organizations are already facing.

As lawmakers work to strengthen our state, we urge them to recognize the important role hospitals play in keeping our state healthy. We employ more than 21,000 health care professionals with a payroll of nearly $2 billion. In total, the economic impact of hospitals in our state exceeds $6 billion. It is clear that hospitals are critical to keeping our state strong.

We have significant concerns regarding the impact of these cuts. Hospitals provided nearly $200 million in uncompensated care last year to Rhode Island's neediest. These payment reductions place the mission of hospitals in jeopardy.

Hospitals are unique, with no ability to raise prices or discontinue services. They stand ready 24 hours a day, seven days a week and 365 days a year to care for patients during their greatest time of need. Rhode Islanders turn to hospitals on more than 2 million occasions each year.

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Introduction to Spirituality and Medical Practice

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Spirituality has gained increasing attention in the medical literature over the last twenty years. A PubMed search from 1881 to December 1993 reveals 7,032 articles with the words spirituality, spiritual, religion, religious, religiosity or faith in the title or abstract. A search to December 2013, however, shows 32,505 articles using the same search parameters (25,473 in 20 years), with 11,012 articles including these words in the title. Although spirituality was originally mostly explored within the context of end-of-life care, contemporary articles are found regarding every medical specialty as well as multiple other healthcare fields. Early studies included religious or spiritual factors as one among several secondary variables. Recent studies focus on these as primary study variables, resulting in an increasing understanding of the complexity of the construct of spirituality and a refining of definitions.

Although there remains no clear consensus on definitions, there is growing acceptance of a broad definition of spirituality as a multidimensional aspect of the human experience encompassing: (1) cognitive/existential aspects (beliefs, values, meaning and purpose); (2) emotional aspects (need for connection, love, hope, inner strength and peace); and (3) behavioral aspects (specific spiritual practices and life choices). Human spirituality may be expressed through religious or non-religious frameworks, depending on an individual's unique life experience. A 2011 Gallup poll reveals that 92% of Americans believe in God, suggesting that most people are likely to express their spirituality using the language of religion. As a result, many medical researchers have attempted to further refine their study of religion by examining variables such as external and internal religiosity, while others focus on general aspects of spirituality, such as forgiveness, hope, and altruism.

Why this explosion of interest in spirituality and what impact, if any, does this have on the daily lives of practicing physicians? It is now clear from studies that spiritual factors play a much larger role in patients' experience of illness than previously recognized. When faced with suffering, illness and death, people are likely to search for meaning in their experience – the question "why is this happening to me (or my child)" in this context, is fundamentally a spiritual question, with no easy answer. Patients also need to draw upon sources of strength and hope, often spiritual, to overcome the challenges they face. Finally, specific spiritual beliefs may underpin the medical decisions patients make. Spirituality often plays a positive role in patients' illness experience. However, sometimes spiritual factors, such as fears regarding death or worries that current illness is a result of past transgressions, can result in spiritual distress affecting coping, recovery or medical decisions. In these situations, the ability of healthcare providers to diagnose spiritual distress and provide appropriate spiritual care and referrals to trained clinical chaplains can significantly affect patient care.

The role of spirituality in medicine also encompasses the needs of healthcare providers. Like patients, physicians bring their own spiritual world-view to patient encounters. When these differ from those of their patient, physicians are challenged to develop skills in cross-cultural spiritual communication and negotiation of treatment plans. However, recent studies show that doctors still encounter barriers to assessing and addressing patients' spiritual needs, including lack of training and time. Additionally, the current healthcare environment, with its increasing emphasis on efficiency and documentation, places significant stressors on health professionals, resulting in a pressing need for physicians to find ongoing meaning and purpose in their work. The study of spirituality in medicine, then, ultimately provides opportunities to reintegrate the human experience of both patient and doctor into the practice of medicine. This may in part explain the explosion of articles on this subject in the last 20 years.

In this special issue of the *Rhode Island Medical Journal* we present a collection of articles exploring spirituality in medicine. Since most physicians are somewhat familiar with spirituality in end-of-life care, these articles focus on other aspects of spirituality in healthcare. **HAYLEY R. TRELOAR, MA**; **MARY ELLA DUBREUIL, RN, LCDP**; and **ROBERT MIRANDA, JR., PhD**, review spirituality in addiction treatment; **ALEXIS DRUTCHAS, MD**, reviews spirituality in pediatric chronic disease coping and **RICHELLE C. RUSSELL, M.DIV.**, provides an overview of the training and role of chaplains (spiritual care specialists) on healthcare teams. **PRIYA SARIN GUPTA, MD, MPH**, presents a qualitative study in which we hear the voices of patients regarding spirituality in diabetes self-management. The final two articles examine spirituality from the physician perspective. **JANET LYNN ROSEMAN, PhD**, and I present a qualitative study of practicing physicians' thoughts on compassion and spirituality and **GUY R. NICASTRI, MD, FACS**, provides a surgeon's perspectives on spirituality in surgical care. We hope that this collection, although far from comprehensive, provides insights into the growing field of spirituality and health. ❖

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A Qualitative Study of Physicians' Views on Compassionate Patient Care and Spirituality: Medicine as a Spiritual Practice?

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ABSTRACT

BACKGROUND: Compassion and compassion fatigue are discussed in the medical literature. However, few studies address physicians and none examine physicians' spiritual beliefs related to their provision of compassionate care.

METHODS: This in-depth, qualitative interview study explores practicing physicians' views regarding the relationship between compassion and spirituality in medical practice. Interviews were audiotaped, transcribed verbatim and analyzed using the immersion/crystallization method.

RESULTS: Despite diversity of personal spiritual beliefs, all study physicians felt compassion was "essential for a physician." Most linked compassion to underlying spiritual values (religious and secular). Many physicians saw medicine as providing opportunities for them to grow in compassion, essentially employing medicine as a spiritual discipline. Significant barriers to compassionate care included time pressures and values of the current culture of medicine. Facilitators included time for self-care.

CONCLUSION: Physicians value compassion, linking it to spiritual values and self-care, but identify challenges in daily practice. Further study is needed to explore how to support physicians' provision of compassionate care and prevent burnout.

KEYWORDS: compassion, spirituality, compassionate care, physician self-care, resilience

INTRODUCTION

The ideal of combining clinical competence with compassion has been a central feature of the practice of medicine throughout history. Hippocrates is credited with the terms *philanthropia* (love of humanity) and *philotechnica* (love of technical skill or art) to describe this pairing. Much later Osler, while famed for his emphasis on equanimity, which he defined as "coolness and presence of mind under all circumstances, calmness amid storm, clearness of judgment in moments of grave peril," also reminded his students that "Medicine arose out of the primal sympathy of man with man; out of the desire to help those in sorrow, need, and sickness," adding that " 'the human heart by which we live' must control our professional relations."[1]

Echoing this idea, Lolak recently endorsed the definition of compassion as "the feeling that arises when witnessing another's suffering and motivates a subsequent desire to help."[2] The concept of compassion, married with equanimity, motivating physicians to action, without resulting in emotional paralysis, is critical to understanding the appropriate boundaries and balance physicians need to maintain in their work.

Despite the apparent central role of compassion in medicine, review of the medical literature reveals remarkably few articles specifically addressing compassion. Most relate to nursing or behavioral health, with many addressing the concerning issue of compassion fatigue and burnout.[3-7] The few relating to physicians are mostly opinion articles, letters, and anecdotal stories.[8,9] The medical education literature does address the erosion of values and ideas during medical training[10-12] and calls for curricula that specifically addresses fostering compassion and preventing burnout in physicians.[2,12-14] However, there are very few research articles studying compassion in practicing physicians.

Addressing the current state of healthcare, Sulmasy writes: "Clinicians know in their heart that there is a better way to do healthcare. The gnawing feeling in doctors' and nurses' bellies when they return from work each night, in frustration with the system and with themselves is not caused by *Helicobacter pylori.* The only source of satisfaction for their hunger is spiritual."[15] This 'spiritual need' in healthcare providers, that Sulmasy and others discuss, is a universal human need for meaning, purpose, inner peace and connection, when faced with numerous challenges to the ideals of compassion and service in their everyday lives.[15,16] Individuals may draw upon religious or non-religious mechanisms to meet these universal human spiritual needs.[16]

Of the few articles that address compassion fatigue in physicians, most mention spiritual self-care and interventions drawn from the world's wisdom traditions as potential prevention techniques,[2,7,17,18] in addition to other personal, professional and institutional strategies. There are, however, few, if any, studies directly examining the relationship between spirituality and compassionate patient care. This qualitative study explores practicing physicians' views regarding compassion, spirituality and their practice of medicine.

METHODS

Design

Given the complexity of the terms "compassion" and "spirituality," we chose an in-depth qualitative, individual interview methodology. This study was part of a larger study examining physicians' views regarding spirituality over time. IRB approval was obtained.

Participants

In 2011, we invited all 13 family physicians, who had graduated from the same family medicine residency program in Rhode Island in 2003, to participate.

Setting

Since participants were scattered throughout the USA, we utilized phone interviews for data gathering. The interviewer, a trained research assistant, did not know the participants.

Instrument

We developed a semi-structured qualitative interview guide. Questions focused on physicians' thoughts regarding spirituality, compassion, and patient care, and on facilitators and obstacles to providing compassionate care. In order to facilitate participant comfort in providing a broad range of opinions, we asked them to explain their understanding of the terms 'compassion,' 'spirituality,' and 'religion,' rather than providing a narrow definition for them.

Analysis

Interviews were audiotaped and transcribed verbatim, with identifiers removed. Two researchers analyzed transcripts using the immersion/crystallization method of qualitative analysis,[19] first individually and then by conference calls, until they reached consensus regarding themes in the data.

RESULTS

Qualitative data was obtained from 12 of 13 family physicians – 11 interviews and 1 written reflection to interview guide questions. Physician characteristics are summarized in **Table 1**. Major themes (**Table 2**) include: diversity of personal spiritual beliefs, importance of compassion, relationship between spirituality and compassion, work as a spiritual practice increasing compassion, obstacles, and importance of self-care.

Table 1. Physician Characteristics – N=12

Medical Specialty	All – Family Medicine
Years in Practice	All – Eight Years
Medical School	All USA medical schools, various schools
Residency	All – Brown Family Medicine Residency Program
Current Practice Location	2 California 1 Arizona 2 New York 2 Rhode Island 2 Massachusetts 3 not identified
Current Practice Type (some with more than one type)	4 Community Health Centers 5 Private Practice 2 Academics 2 Hospice Settings 1 Urgent Care
Previous Practice Locations	Arizona, Massachusetts, Rhode Island, California, Massachusetts, Nepal, East Africa
Previous Practice Type	Private practice, Community Health Center, Department of Corrections, Indian Health Service, Hospital Based, Hospice, Global Health Setting
Personal Importance of Spirituality/Religion	2 Not Spiritual or Religious 4 Spiritual, Not Religious 2 Searching 4 Religious
Religious Identification, if any	1 Christian 2 Methodist 1 Unitarian 4 Jewish 4 No specific religion identified

Table 2. Major Themes

Theme	Range of Responses
Diversity of Personal Spiritual Belief	Wide range from very important to unimportant Most embraced a broad definition of spirituality
Importance of Compassion in Medicine	Universally considered important
Relationship between spirituality and compassion	Compassion - a spiritual quality for most Compassion - a human quality for a few
Work as a spiritual practice that increases compassion	Majority used spiritual terms (eg., meaning and purpose) or religious terms to describe medical practice, especially with underserved or difficult patients
Obstacles to compassionate patient care	'Busy-ness' of medicine - inadequate time with patients Culture of medicine (negative qualities) Inadequate time for self and family
Importance of spiritual self-care for compassionate patient care	Universally considered important. Spiritual self-care included both religious and secular methods

Theme 1: Diversity of Personal importance of Spirituality

Personal importance of spirituality differed greatly among participants (**Table 1**). Most articulated a conceptual difference between spirituality and religion; but for many these were intertwined. Participants generally considered spirituality a broader term encompassing meaning, purpose, values and connection. Religion was more aligned with community and practice.

Some physicians did not consider themselves spiritual at all. One physician stated that (s)he was "*Not very*" spiritual and "*I think my personal beliefs have probably shied away much further from organized religion.*" However (s)he went on to describe belief in a "*higher*" purpose, seeing her/his "*role as contributing to community and well being.*" Another described himself/herself as spiritual but not religious: Spiritual? "*Yes…but I also consider myself vaguely questioning…I don't personally have a religion that I feel like I can wholeheartedly endorse, because it seems like religion as an institution has some flaws. But I think all people are spiritual.*" Others describe identifying with a certain religion but not practicing: "*I'm Jewish, and there are certain cultural values, things that go along with religion and being part of that group. I don't find that I gravitate towards religion.*" Some physicians described a close link to their religion. One stated that "*I'm Christian, so that would be my religious identity, and those are the traditions and rituals and things that I use to express my spirituality.*"

Theme 2: Importance of Compassion in Medicine

Overwhelmingly, all participants, regardless of personal spiritual beliefs, discussed the importance of compassion in their medical practice. The quotes below illustrate these physicians' philosophies about compassion and offer insight into their career choices.

One physician stated: "*I try to focus on some principles that are important, thinking about the way we treat each other, seeing the whole human community as people that have human experience and that we are all struggling and suffering and trying to do our best to get through life and to try to approach that with as much understanding and compassion as possible.*" Another said: "*People who are drawn towards medicine or healthcare are helper-type people who derive meaning and value from helping other people. So, that is directly tied with being compassionate.*"

Theme 3: Relationship between Spirituality and Compassion

Most physicians endorsed a relationship between spirituality and compassion. For some, their own spiritual beliefs were the foundation for their drive to be compassionate. For example one physician identified his/her work as a personal mission: "*I have some of the sickest people and I am drawn to that. I feel like that's part of my mission as a physician, really working with people who are suffering and trying to help them find a way out.*" For some it revolved around understanding the patient's spiritual beliefs: "*Healing and compassion are part of the art of medicine and related to understanding who your patient is and what your patient brings.…It's one of the hardest jobs as family doctors to try to understand where our patient is coming from…tapping into their spiritual voice.*"

Several physicians, however, pointed out that being compassionate, while integral to the practice of medicine, does not require a spiritual or religious identity. "*I think that being compassionate is not just a spiritual thing, but a very human thing. So even someone who does not define themselves as religious/spiritual still could be very compassionate and be very humanistic in their approach to medicine. I think that can be essential for a physician.*"

Theme 4: Work as a Spiritual Practice that Increases Compassion

An unexpected finding in this study was the recurrent theme of physicians identifying their work as a method for increasing their capacity for compassion, which for several was a daily exercise in their personal spirituality (religious or secular). Several spoke of their choice of medicine as a career, their choices to work with vulnerable or underserved communities and their ability to care for "difficult patients" as related to a spiritual urge towards compassion and service (See **Table 3** next page).

One physician indicated that the work that they were doing in a low-income health center helped them feel like they are "*more connected with a spiritual life*" and "*being compassionate towards others,…gives your life purpose… I think that part of a spiritual practice is being a good person.*" Another physician recounted; "*Serving the underserved…and seeing how difficult people's lives are, I think helps me feel like a part of my life is at least connected with living a spiritual life…feeling like I am giving back to other people who are less fortunate.*"

The idea of choosing a "difficult" patient population that could deepen one's spirituality was indicated by another physician who began a career in a prison setting. "*My first job was working in a prison with rapists and killers. I chose it intentionally to deepen my practice of compassion. Because, if I could bring compassion to a killer or a rapist or an arsonist or a pedophile, then I considered that the highest form of my job.*" For another physician, working in an underserved community provided the spiritual opportunity to create a life consistent with the philosophy of creating "*more good than harm…Sometimes when they (patients) are difficult…(I feel) that I have a bigger goal, that there is some part of a path of goodness that I'm participating in. And that affects my life. It's a sense of spiritual, ethical, moral groundwork. It doesn't involve prayer, it doesn't involve participating in religious things.*"

Another summarizes the circular effect of finding meaning and purpose (spiritual needs) as enhancing compassion and vice-versa. "*I think for people to be compassionate they*

have to go back to what gives them meaning and value in your life…I think the far majority of physicians get meaning and value in their life from feeling like they are helping others."

Theme 5: Obstacles to Compassionate Patient Care

While all participants indicated the importance of compassion, they cited various obstacles in their professional and personal lives. One explained: *"Physicians often are alone in isolation and don't know that they have enough tools to help people with the (bigger) issues."* Another said; *"It's the 'busy-ness' of medicine, trying to see so many patients so quickly and being around other physicians who are doing that. So you have this perpetual accepting that it is OK…That it is OK to snap at a nurse. I think doctors in training are exposed to that very early, and that culture is very prevalent in medical training, and shapes how doctors practice and how they treat colleagues and patients."* That cited "busy-ness" was also shared by another physician who said; *"You are so caught up in the medical nitty-gritty when you are taking care of patients that sometimes you forget to back off and say; 'Wait a minute, what does this person really want? What are they ready to do or not to do?"*

Theme 6: Importance of Spiritual Self-Care for Compassionate Patient Care

Most participants discussed the importance of spiritual self-care (secular or religious) in maintaining the ability to provide compassionate care. However, they all also indicated a yearning for "time" to do this. *"I wish I had more time to do some kind of spiritual practice like meditation or something. I think it would be ideal for providers to really spend time taking care of themselves so that they can really be present for their patients. I think that people who have spiritual practices tend to be more centered, more calm and compassionate."*

Another physician described a brief spiritual self-care strategy to prepare for 'difficult' patients: *"It's very challenging to give patients an extra few minutes. …I know that before going into a room, I fill myself with a deep breath and a mindset, 'OK, my work is important', and I find a place of compassion or a sense of generosity towards someone who may be difficult."* Another physician, while admitting they were *"terrible at self-care,"* identified simple techniques they thought young physicians should learn including; *"Take a minute and look out the window," "Stop what you are doing and enjoy the sunset," "Say some type of self-affirmation when you are washing your hands," "Take a deep breath before you go into a patient's room."*

When asked if anything during their residency helped reinforce their drive towards compassion, most recalled annual spiritual self-care retreats, designed to accommodate both religious and secular approaches.[20] They remarked that the value placed on them as human beings, during a stressful and formative time in their lives, was a positive influence on their professional lives. *"What I took from some of the spirituality retreats was the importance of taking care of myself, not just my body, but my emotions and who I am."* Many also recalled that role modeling and support by faculty were extremely formative in maintaining their orientation towards service and compassion.

Table 3. Theme 4 - Work as a Spiritual Practice

Sub-themes	Representative Quotation
1. Choice of career – a spiritual urge towards compassion and service	"My first job was working in a prison with rapists and killers. I chose it intentionally to deepen my practice of compassion. Because, if I could bring compassion to a killer or a rapist or an arsonist or a pedophile, then I considered that the highest form of my job. I went to work every day and I tried to approach each of my patients as an iteration of God, as a soul in front of me."
2. Caring for "difficult patients" – opportunity to increase compassion	"I try to live my life in a way that is going to create more good than harm, and that means environmentally as well as among other humans and animals as well. I also feel that there is a spiritual or ethical pull towards my choice of working in an underserved community that helps me get through my day. Sometimes when they're (patients) difficult, it's feeling like at work that I have a bigger goal, that there is some part of a path of goodness that I'm participating in. And that affects my life. It's a sense of spiritual, ethical, moral groundwork. It doesn't involve prayer, it doesn't involve participating in religious things. I almost returned to work to a suburban practice where everyone had a roof over their heads and food on their table. It would have been easier for me, but not as spiritually rewarding."
3. Working in underserved settings – a spiritual practice	"Serving the underserved - it's kind of a cliché - working in a community center that serves lower-income people and seeing how difficult people's lives are, I think helps me feel like a part of my life is at least connected with living a spiritual life - not for everyone but for me - part of how I live a spiritual life is feeling like I am giving back to other people who are less fortunate."
4. Being Compassionate – is a spiritual practice	"Being compassionate towards others, whether it's personal or professional, gives for a more rewarding life, it gives your life purpose, and it feels like the right thing to do. I think that part of a spiritual practice is being a good person."

DISCUSSION

All study participants (12 of 13 in their residency class), still believed strongly in the importance of compassion in their medical practice, eight years after graduating from residency. Although they varied tremendously regarding personal spiritual beliefs, all closely associated finding meaning and purpose (spiritual elements)[16,21] with compassionate patient care and community service. Those with strong spiritual beliefs felt this fueled their desire to provide compassionate care. Interestingly, many also felt that the provision of compassionate care, especially to 'difficult patients,' was, in and of itself, a spiritual practice that increased their compassion and the depth of their spiritual lives.

To our knowledge, this is the first study examining practicing physicians' views on compassion and spirituality. A study of 34 family medicine residents[22] found similar themes regarding the relationship between spirituality and compassion. However, our study of practicing physicians reveals a new theme of medicine as a spiritual practice, which may represent a maturing of meaning and purpose over time.

The identified barriers to compassionate care in our study are consistent with those found by others.[18] The current culture of medicine which emphasizes productivity, efficiency, meeting benchmarks and documentation, distracts physicians from focusing on the patient as a human being. Our study suggests that attention to supporting spiritual self-care in physicians and reinforcing the concept of work as a spiritual practice for some, could contribute to improved compassionate patient care and help 'immunize' physicians against burnout. This data supports Sulmasy's 1999 conceptual argument that "medicine is a spiritual discipline."[21]

Study limitations include a small sample size. Additionally, although participants were scattered throughout the country, they were all family physicians and all attended the same residency program, which may influence their current opinions regarding compassion and spirituality. We therefore cannot extrapolate our findings to other medical specialties. However, studies of medical students suggests that compassion and service orientation are prominent features of most people drawn to medicine[14,23] but that often these values are eroded through training.[10,11]

The role of physicians in healthcare is unique. Although several studies examine compassion and compassion fatigue in nurses and other health care providers,[3-7] the needs of physicians are likely to be different. Physicians are called upon to be expert decision makers, leaders of healthcare teams, productive income generators, and remain the 'calm in the storm.' Given these challenging demands, physicians are at risk for losing sight of the reasons they chose careers in medicine and the higher meaning and purpose of their daily work. Further research into elucidating the value of compassionate patient care for both physicians and patients is essential for the future of medicine.

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References

1. Bryan C. Caring Carefully: Sir William Osler on the issue of competence vs. compassion in medicine. *BUMC Proceedings*. 1999;12(4):277-288.
2. Lolak S. Compassion Cultivation: A Missing Piece in Medical Education. *Acad Psych.* 2013;37(4):285.
3. Najjar N, Davis LW, Beck-Coon K, Doebbeling CC. Compassion fatigue: A review of the research to date and relevance to cancer-care providers. *J Health Psych*. 2009;14(2):267-77.
4. Aycock, N, Boyle, D. Interventions to Manage Compassion Fatigue in Oncology Nursing, *Clinical J Oncol Nursing*. 2009;13(2):183-191.
5. Craig, CD, Sprang, G. Compassion satisfaction, compassion fatigue, and burnout in a national sample of trauma treatment therapists. *Anxiety, Stress and Coping*. 2010;23(3):319-339.
6. Neville K, Cole DA. The relationships among health promotion behaviors, compassion fatigue, burnout and compassion satisfaction in nurses practicing in a community medical center. *J Nurs Adm.* 2013;43(6):348-354.
7. Rourke MT. Compassion fatigue in pediatric palliative care providers. *Ped Clin N Am*. 2007;54:631-44.
8. Longmaid HE, Branch WT, Rider EA. Compassion: Necessary but not sufficient. *Acad Med*. 2013;88(9):1197.
9. Gilewski, T. The Subtle Power of Compassion, *JAMA.* 2001; 286(24):3052-3.
10. Coulehan J, Williams PC. Vanquishing Virtue: The impact on medical education. *Acad Med.* 2001;76(6):598-605.
11. Lee W, Langiulli M, Mumtaz A, Peterson S. A Comparison of Humanistic Qualities Among Medical Students, Residents, and Faculty Physicians in Internal Medicine. *Heart Disease*. 2003;5(6):380-383.
12. Rabow MW, Evans CN, Remen RN. Professional formation and deformation: Repression of personal values and qualities in medical education. *Fam Med*. 2013;45(1):13-8.
13. Fan VY, Lin SC. It is time to include compassion in medical training. *Acad Med*. 2013;88(1):11.
14. Wear D, Zarconi J. Can compassion be taught? Let's ask our students. *J Gen Int Med.* 2007;23(7):948-53.
15. Sulmasy, DP. The healthcare professional as person: The spirituality of providing care at the end of life. In Puchalski CM (ed) *A Time for Listening and Caring: Spirituality and the Care of the Chronically Ill and Dying*. New York: Oxford University Press. 2006.
16. Anandarajah G. The 3 H and BMSEST models for spirituality in multicultural whole-person medicine. *Ann Fam Med*. 2008;6(5):448-458.
17. Allo M. Presidential address:Widening the circle of compassion. *Am J Surg.* 2009;198:733-5.
18. El-Bar N, Levy A, Wald HS, Biderman A. Compassion fatigue, burnout and compassion satisfaction among family physicians in the Negev area: a cross-sectional study. *Israel J of Health Policy Research*. 2013;2(31):1-8.
19. Borkan J. Immersion/Crystallization. In: Crabtree BF and Miller WL. *Doing Qualitative Research*. Thousand Oaks, CA: Sage Publications, Inc, 1999.
20. Anandarajah G, Long R, Smith M. Integrating spirituality and medicine into the residency curriculum. *Acad Med*. 2001;76(5):519-20.
21. Sulmasy DP. Is Medicine a spiritual practice? *Acad Med.* 1999;74:1002-5.

22. Anandarajah G, Smith M. Resident physicians' thoughts regarding compassion and spirituality in the doctor-patient relationship. In Evans MT & Walker ED (ed) *Religion and Psychology*. New York: Nova Science Publ, Inc. 2009.
23. Coulehan J, Granek IA. "I hope I'll continue to grow:" Rubrics and reflective writing in medical education. *Acad Med*. 2012;87:8-10.

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Spirituality in Medicine: A Surgeon's Perspective

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ABSTRACT

Technological advances over the past 50 years have contributed to change the focus of medicine from a caring, nurturing model to a technological, evidence-based, result-oriented model. Lost in this "Brave New World" of technology is the role of human spirituality. Just how ones' own faith and/or spiritual well-being affects ones' own health has only recently regained the attention of the medical community. Whether faith and spirituality, as independent factors, affect measurable outcomes in healthcare is certainly a difficult task to prove (or disprove, for that matter). This is especially true in the surgical specialties, where successes and failures are usually readily quite apparent.

KEYWORDS: spirituality, faith, surgery, health, outcomes

Does spirituality and faith exist in surgery? That certainly seems like a loaded question. Many will argue that our society has clearly become more secular. Indeed, legal actions to remove any sort of religious "words," symbols, or references from the public arena have become commonplace and some have even reached our nation's highest courts. Those who openly speak of their religious beliefs can sometimes be made to feel "uncomfortable" by others around them. Religious institutions here in the United Stated have certainly noted a generalized decrease in parishioners regularly attending services.[1] This sentiment is not necessarily directed at any specific religion and reasons vary from those who merely feel disconnected from their organized religion to those who question the generalized existence of a higher being. There seems to be a concerted effort to separate religious and spiritual "life" from our "everyday" lives. Despite this trend, however, a recent Gallup poll noted that 92% of Americans still believe in God or a Universal Spirit.[2]

Has this trend carried over to medicine? And what about the "cold-hard" world of surgery? Do we, as physicians, recognize our patient's spirituality and faith? Do we dare allow our own faith to creep into our practice? Do patient's faith and /or spirituality affect their medical course? These are not easy questions to answer, especially in our modern, technology-driven, evidence-based world of medicine. It may help to first look at the definitions of these terms. *Faith*, as defined by the *Oxford English Dictionary*: "complete trust or confidence in someone or something; a strong belief in God or in the doctrines of a religion, based on spiritual apprehension rather than proof; a strongly held belief or theory." *Spiritual* is defined as: "relating to, or affecting the spirit or soul as opposed to material or physical things."[2] Spirituality, however, is a much more difficult term to define. It is a popular expression today that seems to be preferred over "religion." Spirituality is considered personal, something individuals define for themselves. It is often free of rules, regulations, and responsibilities associated with religion. One can be spiritual but not religious. With this in mind, it becomes possible to see why there are so many different interpretations of spirituality. Certainly, in times of great stress, (serious illness, death, etc.), most people seem to turn inward towards their spirituality and, perhaps, faith. Some will do this openly and consciously. They may find comfort in placing their faith in the God of their organized religion, while others may do this unknowingly. Questions or statements like, "Why is this happening to me?" or, "What did I do to deserve this?" or, "It's just my time," are, at their core, spiritual in nature.

As I sat at the hospital computer the other day to gather my thoughts and facts in order to dictate a discharge summary on a recent patient, I couldn't help but feel a bit of simultaneous accomplishment and apprehension. My sense of accomplishment stemmed from the successful surgery and subsequent care of a very sick patient in the middle of the night 6 weeks ago. It stemmed from a successful series of interventions, medicines, devices and nursing care that were required to aid my patient in his recovery. And it stemmed from watching a patient slowly regain his strength, both physically and mentally, to the point where he could now be discharged. Ironically, it was these very things that also led to my apprehension. Why was it that this patient survived? After all, he was an extremely sick man when I first met him in the ER. He was in his mid-80s, somewhat frail and malnourished due to his recent surgery for colon cancer and subsequent cardiac issues requiring stent placement. He was obviously septic. His work-up revealed a small bowel obstruction which clearly was going to require urgent surgery. At surgery he was found to have a closed-loop obstruction with necrotic small bowel requiring resection.

His post-operative course was complicated by a virtual "who's who" of complications: a pulmonary embolic event, intra-abdominal abscesses, pneumonia, acute kidney injury,

and the dreaded "C. difficile colitis." There were the obvious cardiopulmonary issues to deal with. There were wound issues, ostomy issues, nutritional issues, and infectious issues. Yet through it all, he improved. I do not doubt the role "modern" medicine played in this patient's survival. Nor would I dare to minimize how important, (and how hard), all the members of his care team performed. But still, other patients have received the same high quality care, have had the same technologies and medicines available to them, yet they ultimately succumbed to their disease. What was the difference? Genetics? Or was there something else?

I thought back to the night of his surgery. How his family anxiously awaited my arrival in the post-operative waiting room. I carefully explained what I had found during surgery and the very real possibility of their family member not surviving this massive insult. I explained to them the many short- and long-term "problems" that were likely to occur and how any one of these potential complications could be a lethal event. I then listened. I heard them talk about who this man really was: a husband, a father, a grandfather, and a veteran. I was told how he was a man who always worked hard to provide for his family and how much he valued God and his faith. I listened to them tell how much they appreciated the work of our OR team, and that now, "It's in God's hands." Although they were in tears, I could sense how "at-ease" they seemed.

Over the next three weeks, I met with them almost daily. They were inquisitive but not intrusive, and always encouraging. Their faith in their God, in each other, and in the health care team, seemed to act as a comfort for the patient and for each other. I have no doubt it also had a positive influence on the members of the care team. How this impacted the ultimate successful outcome, either directly or indirectly, is certainly a more difficult question to objectively measure.

Although spirituality has been defined in numerous ways, a common theme seems to be one in which there is a belief in a power operating in the universe that is greater than oneself, a sense of interconnectedness with all living creatures, and an awareness of the purpose and meaning of life and the development of personal, absolute values. It is a way to find meaning, hope, comfort, and "inner peace" in one's life. Acts of compassion, altruism, selflessness, and giving are all characteristics of spirituality. This may indeed be what drives the amazing outpouring of help, mostly by complete strangers, seen after many natural disasters, (such as hurricanes' Katrina, Irene, and Sandy, for example). This sense of "spirituality" separates human beings from other species of animals, where the "survival of the fittest," Darwinism-like forces dominate.

"There are no atheists in fox holes." We have all heard this anonymous phrase which is thought to have originated during WW II. Is spirituality merely a coping mechanism for us in times of great stress or are there real health benefits to be gained by living an "everyday" spiritual life? This is a subject that only recently has gained the attention of the scientific community. In a recently published article, Lucchese and Koenig identified 3200 studies that reported data on the relationship between religion/spirituality and health. Nearly two-thirds of this research was published between the year 2000 and mid-2010 (i.e., more research on this topic was published during that 10-year period than in the previous 128 years).[4] One such study examined spirituality and bereavement. Bereavement is recognized as one of life's greatest stressors. In 145 parents whose children had died of cancer, 80% received comfort from their religious beliefs 1 year after their child's death.[5] Those parents had a better physiologic and emotional adjustment. By alleviating stressful feelings and promoting healing ones, can spirituality positively influence immune, cardiovascular, and hormonal factors? Studies to objectively look, measure, or quantify these issues are extremely hard to design.

One such study took place in the Netherlands. This study examined the life expectancy of the religious population of the Seventh Day Adventists, a religion whose church instructs its followers not to consume alcohol, smoke tobacco, or eat pork. In this 10-year study, Adventist men lived 8.9 years longer than the national average, and Adventist women lived 3.6 years longer. For both men and women, the chance of dying from cancer or heart disease was 60% and 66% less, respectively, than the national average.[6] Were these results due to parishioner's spirituality, or due to their healthy lifestyle? I'm not too sure it matters. Some researchers believe that faith increases the body's resistance to stress. In a 1988 clinical study of women undergoing breast biopsies, the women with the lowest stress hormone levels were those who used faith and prayer to cope with stress.[7] Another study of heart transplant patients showed that those who participated in religious activities and said their beliefs were important, complied better with follow-up treatment, had improved physical functioning at the 12-month follow-up visit, had higher levels of self-esteem, and had less anxiety and fewer health worries.[8] In general, people who don't worry as much tend to have better health outcomes. Maybe spirituality is the vehicle which enables people to worry less. This was again looked at in the Lucchese and Koenig's review. They identified 121 studies that looked at the relationship between religion/spirituality and cardiovascular mortality. In 82 (68%) of these studies, a greater involvement in religion/spirituality predicted significantly greater longevity.

In the end, I again think back on my patient as he left the hospital. In my mind, he clearly "beat the odds." But in reality, he, and his family, may have actually "maximized" their odds by the positive physiologic effect(s) of their own faith and spirituality. Whether we lower physiologic stress agents like C-reactive protein, fibrinogen, or interleukin-6 through our own spirituality, faith, and prayer, our beliefs as individuals can be powerful and clearly can affect our health outcomes. We see this often in the now well-recognized

"placebo effect" noted in most clinical trials.[9] We must recognize this as clinicians and continue to make efforts to understand the spiritual dimensions of our patient's lives without "overstepping" our boundaries as medical doctors.

In my mind, I'd like to think my patient's faith, spirituality, and prayers helped him in his recovery. I'd like to think mine did as well.

References

1. Barnes R, Lowry l. 7 Startling Facts: An Up-Close look at Church Attendance in America. www.churchleaders.com/139575-7-startling-facts-an-up-close-look-at-church-attendance-in-america.html. Accessed Nov. 10, 2013.
2. Newport F. More than 9 in10 Americans Continue to Believe in God. www.gallup.com/poll/147877/americans-continue-believe-god.aspx. June 3, 2011. Accessed Nov. 19, 2013
3. Proffitt M, ed. The Oxford English Dictionary. 2nd ed. Oxford University Press; 1989.
4. Lucchese F, Koenig H. Religion, spirituality and cardiovascular disease: research, clinical implications, and opportunities in Brazil. *Rev Bras Cir Cardiovasc*. Jan./Mar. 2013;28(1). Sao Jose do Rio Preto.
5. Cook JA, Wimberly DW. If I should die before I wake: religious commitment and adjustment to death of a child. *J of Scientific Study of Religion*.1983;22:222-238.
6. Berkel J, deWaard F. Mortality Pattern and life expectancies of the 7th Day Adventists in the Netherlands. *International J of Epidemiology*. 1983;12(4)455-459.
7. Univ Maryland Med Ctr. Spirituality, an Overview.www.umm.edu/health/medical/altmed/treatment/spirituality. Accessed Oct. 31, 2013.
8. Harris RC, Dew MA, et al. The role of religion in heart transplant recipients' long-term health and wellbeing. *J Religion and Health*.1995;34(1):17-32.
9. Shapiro AK, Shapiro E. *The Powerful Placebo*. London. Johns Hopkins Univ Press. 1997.

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Spirituality and Coping with Chronic Disease in Pediatrics

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ABSTRACT

Chronic illnesses represent a growing burden of disease among children and adolescents, making it imperative to understand the factors that affect coping and medical adherence in this population. Spirituality has been identified as an important factor in the overall health and well-being of pediatric patients; however, in this regard, most studies have focused on pediatric palliative and end-of-life care. This article reviews childhood spirituality related to chronic disease coping. The existing literature, though sparse, reveals that children have a rich and complex spiritual life; one which often goes beyond religiosity to examine purpose in the context of illness. Studies suggest that spiritual beliefs have the potential to support as well as hinder children's ability to cope with chronic illness. More research is needed to better understand and meet the spiritual needs of children with chronic illnesses.

KEYWORDS: spirituality, pediatrics, chronic disease, children

INTRODUCTION

Chronic illnesses affect millions of children and adolescents. In the last few decades, advances in early diagnosis, treatment and the increased incidence of childhood obesity have resulted in pediatric chronic disease rates increasing from 12.8% in 1994 to 26.6% in 2006.[1,2] The presence of chronic illness in a child's life not only generates intense medical needs, altering daily routines and activities, but also causes significant and persistent stress for children and parents. This stress affects the patient's and family's emotional well-being, increasing the likelihood of behavioral problems and compromised medical adherence.[3,4] Furthermore, exacerbations of chronic illness such as inflammatory bowel disease, can be triggered by stress, prompting Compasto to state that it is "therefore essential to understand the ways that children and adolescents cope with stress to better explicate processes of adaptation to illness and to develop effective interventions to enhance coping and adjustment."[5]

Numerous studies show that spirituality (defined below) is a meaningful factor in children's ability to cope with stressors such as sickness, hospitalization, disability, cancer, terminal illness and death.[6-11] The groundbreaking work of Fowler and Coles provide in-depth insight regarding the rich internal spiritual life of children, and how this impacts the way they approach and respond to the world around them.[12,13] Compared to adult patients, there remains a paucity of studies examining spirituality and pediatric patients. Most studies focus on cancer, palliative care, end-of-life, and psychiatric conditions.[14-17] Few studies examine how spirituality either positively or negatively impacts the ability of children to cope with chronic illness. Given the growing burden of childhood chronic disease worldwide, it is imperative that we better understand all the factors that influence stress, coping and behavior in the children with chronic disease during these formative years of their lives. This article reviews studies regarding spirituality/religion and pediatric chronic disease and explores opportunities for future research.

SPIRITUALITY AND RELIGIOSITY

In studies regarding children and chronic illnesses, the terms 'spirituality' and 'religiosity' both arise, with multiple and interrelated definitions depending on the source. It should be noted that the boundaries between the two cannot always be separated, and as George and colleagues point out, "a search for the sacred" is central to definitions of both.[18] *Religiosity* is more often thought of as tied to a collective "reinforcement and identity", such as formal religious institutions, frequency of religious attendance and prayer.[18,19] In comparison, *spirituality* is often understood at the level of the individual, and can be viewed as a sense of internal peace, an impression of place within a larger purpose and connectedness to the sacred.[18,20, 21] This sense of meaning, connection and peace is relevant to our discussion because with the diagnoses of chronic illness, there is a disruption of one's internal peace and sense of self. There is a questioning, not only of the meaning of illness, but of the meaning of one's existence and identity. This intensifies during adolescence, when normal psychological development turns to abstract thinking and existential questioning.[12]

SPIRITUAL BELIEFS OF CHILDREN

Children have a deep religious and spiritual center. Fowler's foundational book *Stages of Faith*,[12] demonstrates that a spiritual basis develops in children as young as infancy. As

children's general development continues through stages, so too does their perceptions of God, spirituality, and their perspective of place within the universe. Initially these ideas take shape as symbolic narrative. However as development furthers, children are able to come to a higher meaning through abstract thinking and statements. Often adolescents grow to have a relationship with God or "decisive other" that they feel is accepting and affirming; a likeness which in late adolescence may shift to a more reflective, individualized sense of self.[12] (See **Table 1**.)

In Coles' landmark book *The Spiritual Life of Children*,[13] Fowler's concepts are seen through the stories of children whom Cole came to know. Through his interviews we see that many children express an internal relationship with God, as well as a deep questioning of "why" and purpose in tragedy. One such example is that of a young boy named Tony. After facing near-death during the polio epidemic in the 1950s in Boston, he eventually recovers and speaks to Dr. Cole. In this conversation he states:

"I hope I'm worth it – for God to smile and say I can stay here. I could have been a better person, I know that…I've been lucky, but I'm not sure I deserve it. Maybe God just gives you a second chance. Maybe He says, 'They're young, those polio kids, and they can have another chance'…Why do some who get sick die, though?"[12]

Numerous studies since then, focusing on American children, have shown us that children still hold a strong connection to religion and spirituality in their lives.[22-26] From these we learn that 95% of children believe in God and 85–95% state that religion is important in their life.[22-26] Furthermore, 93% believe God loves them, 67% believe in life after death, over 50% attend religious services at least monthly, and close to half frequently pray alone.[22-26]

SPIRITUALITY AND CHILDHOOD CHRONIC ILLNESS

Given the prevalence and depth of spiritual and religious belief in children, it is important to understand how chronic illness affects these beliefs to either help or hinder children's ability to cope with their disease. A recent study suggests that like other coping mechanisms, religious and spiritual views may impart both positive as well as negative outlooks on one's illness and ability to cope.[22] Literature examining this relationship between spirituality and pediatric illness

Table 1. Fowler, Stages of Faith[12]

Stage	Age	Characteristics
Stage 0 "Primal or Undifferentiated" faith	Birth – 2 years	• Early trust or distrust learned from their environment (i.e. secure versus neglect). • A nurturing environment can support infants in developing a sense of trust and safety about the world and the divine. • Negative experiences can cause the opposite.
Stage 1 "Intuitive-Projective" faith	3 – 7 years	• A relative fluidity of thought patterns. • Religion is learned mainly through narratives and images. • Learned from those mostly with the child.
Stage 2 "Mythic-Literal" faith	School-aged children	• Strong beliefs in justice and the reciprocity of the universe. • Deities are almost always anthropomorphic. • Metaphors and symbolic language are often taken literally.
Stage 3 "Synthetic-Conventional" faith	Adolescence: 12 years – to adulthood	• Conformity to religious authority. • Development of a personal identity. • Conflicts with one's beliefs are generally overlooked out of apprehension for inconsistencies.
Stage 4 "Individuative-Reflective" faith	~ Mid twenties – late thirties	• Angst and spiritual struggle. • Takes responsibility for and reflects on own beliefs. • Concern for however openness to new complexity of faith.
Stage 5 "Conjunctive" faith	Mid-life	• Acknowledgment of the paradox behind the symbols of formalized systems of faith. • Resolves conflicts from previous stages by a complex understanding of "truth".
Stage 6 "Universalizing" faith, or "enlightenment"	Most never reach realization of this stage in their lifetime.	• Views people as part of a universal community, and would treat any person with compassion. • Believes that everyone and should be treated with universal principles of love and justice.

Note: Information for this table was extracted from Fowler, "Stages of Faith"[12]

has for the most part focused on childhood cancer and end-of-life care.[14-17] Research that does focus on spirituality and chronic illnesses is currently limited to a handful of articles on children living with inflammatory bowel disease, asthma, cystic fibrosis and sickle cell anemia. However, from these articles, much is learned about how chronic illness deeply affects children's sense of self and ability to cope with and manage their illness.

Inflammatory Bowel Disease (IBD)

The incidence of IBD among 10-19 year olds in North America is 6 per 100,000 with 15–25% of cases of IBD presenting by 20 years of age.[27] Children suffer from both the direct symptoms of the disease and the side effects of the treatments. With this added stress, studies show that children with IBD have a greater risk of behavioral/emotional struggles, such as depression and lower self-esteem.[28,29] In a 2009 study of 155 adolescents in Cincinnati, Ohio, Cotton showed a stronger relationship between existential (spiritual) well-being and emotional well-being for those with IBD compared to healthy adolescents.[27] The presence of IBD almost tripled the effect of spiritual well-being on emotional functioning. For each 1-point increase in spiritual well-being scores, adolescents with IBD experienced a 3.62-unit increase in emotional functioning, compared to only a 1.22-unit increase in healthy peers.[27] In looking at these two studies side by side, we learn that those with IBD have higher incidence of behavioral and emotional struggles. However, the striking finding from Cotton's study suggests that having a sense of meaning or purpose innate within a spiritual foundation, is to a much greater extent, a considerable factor in the possibility of emotional well-being for adolescents living with IBD as compared to their healthy peers.

Asthma

An estimated 7.1 million or 9.5% of children in the US have asthma.[30] In a case study by Fulton of a young boy named Stephen hospitalized with asthma, we see that during his admission he becomes very withdrawn and resistant to care.[31] Fulton questions whether Stephen is trying to gain a sense of control by resisting his medical care, and hypothesizes that his behavior suggests a "loss of meaning and purpose in his life, and overall is indicative of "spiritual distress."[31]

Stephen's story touches on important concepts of health and spirituality that have been addressed in recent studies. A qualitative interview study of 151 urban adolescents with asthma found that levels of positive religious coping were similar to those in chronically ill adults.[32] However, compared with adults in hospice care or with cancer, these adolescents experienced negative religious coping more frequently (such as thinking God is "punishing me"). This finding is significant because negative coping has been shown to be related to poorer psychological adjustment at one month follow-up after hospitalization for asthma.[32] Importantly, additional studies of urban adolescents with asthma show us that 33% want their spiritual/religious needs addressed in the context of clinical care, 52% felt their provider should be aware of their beliefs; however, only 28% had told their provider about their beliefs.[33]

Sickle Cell Disease

Sickle cell disease (SCD) affects nearly 1 of every 500 African-Americans, resulting not only in increased risk of anemia, infections and organ failure but also unpredictable and repeated episodes of pain[34.] Children and adolescents with SCD have significant psychosocial struggles, including lower self-esteem, depression and impaired peer relationships.[34-36] A 2009 study[37] assessed how children with SCD, aged 11-19, drew upon religion and spirituality to cope. These adolescents reported high rates of religious attendance weekly (51%), belief in God (100%) and weekly prayer (64%).[37] Moreover, 63% of participants stated that religion/spirituality and prayer helped them cope with SCD, primarily as "distractors" from painful episodes. Many adolescents described a "collaborative" religious/spiritual coping style in which they relied on God for support and on prayer for symptom relief, and tried to see how God was "strengthening" them in such situations.[37] This study also found negative coping related to illness as well; 31% of adolescents "decided the Devil made this (SCD) happen," and 36% "questioned God's love" for them.[37]

Cystic Fibrosis

Cystic fibrosis (CF) is the second most common life-shortening, inherited disorder occurring in childhood in the United States, after SCD.[38] In a study examining non-medical therapies used by CF patients, religious/spiritual therapies were employed by 57% of children. Of these, group prayer was the most common, used by 48%, with 92% reporting benefit.[39] Pendleton, in a 2002 study of children ages 5-12 at an ambulatory CF clinic, identified the range and depth of religious/spiritual strategies that these children used.[6] In total, eleven religious/spiritual coping strategies were identified **(See Table 2)**. Through this work we see that there is a large spectrum of ways that children perceive their illness and how it relates or is changed by their spiritual/religious beliefs. Furthermore, in Pendleton's work, participants reported limited intensity and frequency of negative forms of religious/spiritual coping.[6]

SUMMARY AND FUTURE DIRECTIONS

The literature shows us that children have a fundamental spiritual basis that goes through stages of development, similar to general pediatric physical and psychological development.[12] Children view spirituality and religiosity in their lives in different ways and to different extents – some seeking higher meaning and connection in their lives, others relating to their relationship with God.[13] This spiritual foundation can be significantly altered by the diagnosis of

Table 2. Pendleton's Classification of Pediatric Spiritual/Religious Coping Strategies

Religious/Spiritual Coping Strategy	Locus of Control
Declarative religious/spiritual coping	Child Commands God.
Petitionary religious/spiritual coping	Child Asks God – God may or may not act on this request.
Collaborative religious/spiritual coping	Bidirectional: child acts on God, and God acts on child.
Belief in God's support	Shared between God and child, with more of the locus in God.
Belief in God's intervention	God acts on the child.
Belief that God is irrelevant	None.
Spiritual social support	Family. Group prayer. Others pray for you.
Ritual response	Going to Church out of ritual ("I go to church when I feel sick"). Reciting specific prayers from one's religion.
Benevolent religious/spiritual reappraisal	• God is challenging you through your illness, as a means to allow growth and increased fulfillment. • God can heal, but cannot all of the time, and is doing the best he/she can.
Punishing religious/spiritual reappraisal	Illness as a means of punishment for sin, for "doing something wrong".
Discontent with God or congregation	Child's response to thinking that God can help, but that he/she didn't, or that it did not work.

Note: Information for this table was extracted from text in Pendleton[6]

a chronic illness, leading to increased risk for psychiatric conditions, behavior problems and spiritual distress.[28,29,31,40,41] Although research specifically relating to spirituality in children with chronic disease is still sparse, evidence suggests that spirituality and religiosity play a prominent role in children's response to chronic illness and can have both positive and negative effects on overall well-being.[20] Children vary considerably in their desire to discuss their spiritual beliefs with medical providers.[6,20] Additionally, it appears that religious and spiritual coping strategies in children differ from the models seen in adults in some significant ways.[6]

Given the prevalence of spiritual coping in children with chronic illness, it is apparent that addressing spiritual issues is relevant in pediatric practice. Still, it remains unclear how best to approach this subject in the clinical setting and what resources can be offered. Although spiritual assessment models are available for adults,[42] it is unknown whether these are as effective for children and adolescents. Further research is needed in many areas, including examining spiritual coping in children with other chronic diseases and exploring effective approaches to spiritual assessment and spiritual care in children and adolescents. Moreover, exploring the needs and beliefs of parents of children with chronic illness, and finally studying differences in spiritual needs in culturally diverse patient populations is also pertinent to future research.

Children with chronic illness, like their healthy counterparts, have rich spiritual lives.[12,13] Understanding this aspect of their illness experience is essential to providing the best possible care to children, adolescents and their parents.

References

1. Van Cleave J, Gortmaker S, Perrin J. Dynamics of Obesity and Chronic Health Conditions Among Children and Youth. *JAMA.* 2010;303(7):623-630.
2. Halfon N, Newacheck P. Evolving Notions of Childhood Chronic Illness. *JAMA.* 2010;303(7):665-666.
3. Holaday B. The family with a chronically ill child: An Interactional perspective. In C.L. Gillis B.L. Highley, B.M. Roberts & I.M. Martinson (Eds.) *Towards a Science of Family Nursing*. 1989:300-321. Menlo Park, CA: Addison-Wesley.
4. Miller J. Assessment of loneliness and spiritual well-being in chronically ill and healthy adults. *Journal of Professional Nursing.* 1992;1(2):79-85.
5. Compas B, Jaser M, Dunn D, Rodrigues E. Coping with Chronic Illness in Childhood and Adolescence. *Annu Rev Clin Psychol.* 2012;8:455–480.
6. Pendleton S, Cavalli K, Pargament K, Nasr S. Religious/Spiritual Coping in Childhood Cystic Fibrosis: A Qualitative Study. *Pediatrics.* 2002;109.
7. Stern R, Canda E, Doershuk C. Use of nonmedical treatment by cystic fibrosis patients. *J Adolesc Health.* 1992;13:612–615.
8. Lester A. *When Children Suffer*. Philadelphia, PA: The Westminster Press. 1987.
9. Sommer D. Exploring the spirituality of children in the midst of illnessand suffering. *ACCH Advocate.* 1994;1:7–12.
10. Ebmeier C, Lough M, Huth M, Autio L. Hospitalized school-age children express ideas, feelings, and behaviors toward God. *J Pediatr Nurs*. 1991;6:337–349.
11. Reilly ST. Spiritual and religious concerns of the hospitalized adolescent. *Adolescence.* 1985;20:217–224.
12. Fowler JW. *Stages of Faith: The Psychology of Human Development and the Quest for Meaning.* San Francisco, CA: Harper & Row, 1981.
13. Coles R. *The Spiritual Life of Children.* Boston, MA: Houghton Mifflin, 1990.

14. Pérez J, Little T, Henrich C. Spirituality and Depressive Symptoms in a School-Based Sample of Adolescents: A Longitudinal Examination of Mediated and Moderated Effects. *Journal of Adolescent Health*. 2009;44; 380–386.
15. Purow B, Alisanski S, Putnam G, Ruderman M. Spirituality and Pediatric Cancer. *Southern Medical Journal.* 2011;104(4).
16. Wahl R, Cotton S, Harrison-Monroe P. Spirituality, Adolescent Suicide, and the Juvenile Justice System. *Southern Medical Journal.* 2008;101(7).
17. Zelcer S, Cataudella D, Cairney E, Bannister S. Palliative Care of Children With Brain Tumors: A Parental Perspective. *Arch Pediatr Adolesc Med*. 2010;164(3):225-230.
18. George L, Ellison C, Larson D. Explaining the Relationship Between Religious Involvement and Health. *Psycholical Inquiry.* 2002;13(3):190-200.
19. Koenig H, McCullough M, Larson D. *Handbook of Religion and Health*. New York, NY: Oxford University Press, 2001.
20. Cotton S, Zebracki K, Rosenthal S, Tsevat J, Drotar D. Religion/spirituality and adolescent health outcomes: a review. *Journal of Adolescent Health*. 2006;38:472–480.
21. Smith WC. (1962) *The Meaning and End of Religion*. First Fortress Press Edition, 1991.
22. Smith C, Denton M, Faris R, Regnerus M. Mapping American adolescent religious participation. *J Sci Study Relig.* 2002;41(4):597–612.
23. Gallup G, Bezilla R. (1992). *The Religious Life of Young Americans*. Princeton, NJ: The George H. Gallup International Institute.
24. Smith C. *National Study on Youth and Religion*. Available from:http://www.youthandreligion.org/. Accessed November 23, 2005.
25. Smith C, Denton M. *Soul Searching: The Religious and Spiritual Lives of American Teenagers.* New York, NY: Oxford University Press, 2005.
26. Wallace J, Forman T. Religion's role in promoting health and reducing risk among American youth [Special issue: public health and health education in faith communities]. *Health Educ Behav*. 1998;25(6):721– 41.
27. Cotton S, Kudel I, Roberts Y, Pallerla H, Tsevat J, Succop P, Yi M. Spiritual Well-Being and Mental Health Outcomes in Adolescents With or Without Inflammatory Bowel Disease. *Journal of Adolescent Health.* 2009;44: 485–492.
28. De Boer M, Grootenhuis M, Derkx B, et al. Health-related quality of life and psychosocial functioning of adolescents with inflammatory bowel disease. *Inflamm Bowel Dis.* 2005;11:400–406; 12:239–244.
29. Mackner L, Sisson D, Crandall W. Review: Psychosocial issues in pediatric inflammatory bowel disease. *J Pediatr Psychol.* 2004;29:243–257.
30. Summary Health Statistics for U.S.Children: National Health Interview Survey, 2011. http://www.cdc.gov/nchs/data/series/sr_10/sr10_254.pdf
31. Fulton R, Moore C. Spiritual Care of the School-Age Child With a Chronic Condition. *Journal of Pediatric Nursing.* 1995;10(4).
32. Benore E, Pargament K, Pendleton S. An initial examination of religious coping in children with asthma. *Int J Psychol Rel.* 2008;18(4):267–290.
33. Akinbami L, Moorman J, Garbe P, Sondik E. Status of Childhood Asthma in the United States, 1980-2007. *Pediatrics.* 2009;123(3): S131 -S145.
34. Smith J. The natural history of sickle cell disease. *Ann N Y Acad Sci*. 1989;565:104–108.
35. Barbarin O. Risk and resilience in adjustment to sickle cell disease: Integrating focus groups, case reviews, and quantitative methods. *Journal of Health and Social Policy.* 1994;5(3-4):97–121.
36. Lee E, Phoenix D, Brown W, et al. A comparison study of children with sickle cell disease and their non-diseased siblings on hopelessness, depression, and perceived competence. *Journal of Advanced Nursing*. 1997;25(1): 79–86.
37. Cotton S, Grossoehme D, Rosenthal S, McGrady M, et al. Religious/Spiritual Coping in Adolescents with Sickle Cell Disease: A Pilot Study. *J Pediatr Hematol Oncol*. 2009;31(5):313–318.
38. Centers for Disease Control and Prevention. Newborn Screening for Cystic Fibrosis *Morbidity and Mortality Weekly Report.* October 15, 2004;53(RR13):1-36.
39. Stern R, Canda E, Doershuk F. Use of nonmedical treatment by cystic fibrosis patients. *J Adolesc Health.* 1992;13:612–615.
40. Thomas RB. Introduction and conceptual framework. In M.H. Rose & R.B. Thomas (Eds.). *Children with chronic conditions.* 1987b;3-11. Orlando, FL: Grune & Stratton.
41. Miller W, Thoresen C. Spirituality, religion, and health: an emerging research field. *Am Psychol*. 2003;58(1):24 –35.
42. Anandarajah G, Hight E. Spirituality and Medical Practice: Using the HOPE Questions as a Practical Tool for Spiritual Assessment. *Am Fam Physician.* 2001;63(1):81-89.

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The Role of Spirituality in Diabetes Self-Management in an Urban, Underserved Population: A Qualitative Exploratory Study

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ABSTRACT

BACKGROUND: Although many studies examine motivators for diabetes self-management, few explore the role spirituality plays in this disease, especially in low-income urban populations.

METHODS: This qualitative, focus group study elicits thoughts of diabetic patients regarding spirituality in diabetes self-care, at an urban primary care practice in Rhode Island. Focus group discussions were audiotaped, transcribed verbatim, and analyzed using the immersion/crystallization technique.

RESULTS: Themes included: significant impact of diabetes on daily life; fear and family as prominent self-care motivators; relationships with self, others, nature and the divine as major sources of hope and strength. Patients varied considerably regarding the role spirituality played in their illness, ranging from minimal to profound impact. All appeared comfortable discussing spirituality within the context of strength and hope.

CONCLUSION: Patients in this urban, underserved population are willing to discuss spirituality related to their diabetes care. They vary in the role spirituality plays in their illness experience.

KEYWORDS: diabetes, spirituality, chronic disease self-management, chronic disease coping

INTRODUCTION

Diabetes, a prevalent, often preventable chronic disease can be life-altering for patients and families. Outcomes heavily depend on motivation for self-care, such as lifestyle modification, glucose monitoring and medication compliance.[1] Many studies have examined diabetes self-management motivators such as family, support groups, anxiety, and education.[2] However, other possible motivators, such as spirituality, although identified as relevant,[3] have not been explored in detail.[4]

Most studies on spirituality in medical care examine the role of spirituality in end-of-life care.[5] Very few look at how spirituality influences prevalent chronic diseases, like diabetes, that affect morbidity more than mortality.[6] Present studies on diabetes and spirituality are small exploratory studies,[7,8,9,10] primarily address nurses rather than physicians,[7] or have focused on African-American women,[7,8] or Latino patients,[11] subsets of the population identified as more likely to adhere to structured religion.[12] No studies examine the perspectives of patients from an urban, underserved Northeast population. Additionally, low-income, urban populations have an increased burden of preventable chronic conditions[13] and have worse outcomes with management.[13] Consequently, identifying and supporting all possible motivators for self-management is essential for enhancing health outcomes in this vulnerable population.

The purpose of this study was to explore motivators for diabetes self-management in patients from a low-income, urban population in New England. In particular we aimed to clarify the role spirituality might play as a self-care motivator in a previously unstudied and vulnerable population.

METHODS

Design

We conducted a qualitative study of focus-group participants. The study was approved by the Institutional Review Board and informed consent obtained from all participants.

Setting

Patients were followed at the Family Care Center (FCC), Memorial Hospital of Rhode Island – the Brown Family Medicine Department's resident-faculty practice that serves the underserved communities of Pawtucket and Central Falls, Rhode Island.

Participants

Patients were recruited from existing diabetes group medical visits, regularly conducted at the FCC. Therefore all participants carried a diagnosis of diabetes. The only exclusion criterion was lack of fluency in English.

Instrument

A semi-structured interview guide (**Table1**) was developed for use during the focus groups. An adaptation of the HOPE questions for spiritual assessment,[14] a previously published interview tool, was embedded in the interview guide. Questions followed a natural progression from how diabetes affects participants' day-to-day life and factors that motivate them to do the self-care tasks required of them (eg,

check sugars, adhere to diet), to their sources of strength and hope in dealing with their chronic illness, to whether spirituality is a source of hope or strength for them, and how, if at all, spirituality or religion motivates them to manage their diabetes.

Analysis

Focus groups were audio recorded and transcribed verbatim. Transcripts were analyzed using the immersion/crystallization method for qualitative analysis.[15] Two researchers analyzed transcripts individually and then together in group analysis meetings until consensus was achieved regarding themes emerging from the transcripts.

RESULTS

Eighteen patients, all with type 2 diabetes mellitus, participated in this study. Eleven participants were female (61%), seven (38.8 %) were married, and the majority (83.3%) were born in the US. Fourteen identified themselves as Caucasian, one as Native American, one as Cape Verdean, one as Hispanic and one as African American. The average age was 58, and average time since diabetes diagnosis was 9.26 years. Fifty five percent identified themselves as Catholic, 11.1% as other Christian, 5.5 % as Jewish, and 27.7% as having no religious affiliation. Finally, on average participants were on 9.94 different medications.

The major themes found in this study are summarized in **Table 2**. A significant theme was the tremendous effect diabetes had on participants' daily lives. The majority felt that diabetes was life altering and 'rules lives': *"I am practically ruled by my diabetes. It affects my food…it affects my sleep…"* It leads to a regimented life, *"I think you constantly stop what you are doing and check everything,"* and a constant focus on food, *"It effects what I cook…"*; *"Scheduling lunch and snacks and all that in between is a lot too…"* This leads to significant stress on patients and their loved ones. *"I don't want my eyes to go blind, my feet to fall off and [I don't want to] drop dead."*

Participants identified several motivators for diabetes self-management. Fear and a desire for self preservation were frequently discussed. *"Because you don't want it to go so far you lose your eyes or your feet or have heart problems or kidney problems or whatever. So I think fear motivates me to get back on track."* Family responsibility was also a common theme. One participant said: *"Just knowing I have to be there for my kids. Ya know. I mean, other than that I don't know what else would make me do what I have to do."* Another explained: *"…family…when I'm with my children or now with my grandchildren I feel that I need to be there. The more I can the better. I want to enjoy life with them."* Another stated: *"My daughter wants to know all the time what my sugars are."*

Other motivators included group medical visits, being able to continue working, and adequate education. In explaining

Table 1. Focus Group Semi-Structured Interview Guide

We are holding this focus group to figure out what kinds of things motivate you to take better care of yourself and your diabetes.

1. It must be really hard to take care of your diabetes everyday. How does your diabetes affect your day-to-day life?
2. What kinds of things motivate you to do all the self-care things we talk about and ask you to do (checking sugars, checking feet, doctors' appointments, eye check-ups)?
3. When things are rough for you, what keeps you going and working on your diabetes?
   Suggested Probe: What are your sources of strength and hope?
4. For some people their spiritual or religious beliefs act as a source of strength or hope. Is that true for you?
   Suggested Probes (modify as appropriate):
   - How, if at all, does your spirituality or religion motivate you to manage your diabetes? Or help you cope with your DM?
   - What, if any, is the role of organized religion in your life? (and DM self-care/coping)
   - What, if any, are some of your personal spiritual practices? (related to DM self-care/coping)
5. Discuss other sources of hope mentioned early in the discussion. How does "X" motivate you to manage your diabetes?

Table 2. Main Themes from DM Focus Groups

Themes	Sub-themes
Effects of diabetes on life	• Life altering • Rules life; Constantly something to think about • FOOD
Motivators for diabetes self-management	• Fear / Desire for Self-Preservation • Family responsibilities and family support • The DM group • Quality of life • Being Able to Work • Education
Sources of Strength and Hope	• Relationships with self • Relationship with others • Relationship with nature • Relationship with transcendent
Role of Spirituality in Illness and Self-Care	• Variable importance to individuals • Several with strong role, some with weak • More associated with strength/hope than with motivators

the value of group medical visits for education, one participant explains: *"We learn a lot here. We learn about diabetes and other things. And that helps us."* Another says: *"Yah, it is a shocker when it first happens. It was for me, anyways. This mini group helped a lot…you get all this information. You wouldn't get all this just by coming in to see the doctor every three months."*

Given the significant stress that diabetes places on participants' lives, they were receptive to questions regarding sources of strength and hope. The major themes that emerged here were their relationships. These included participants' relationship with themselves: *"I get most of my strength from myself;"* with others, *"You help each other out with the little hurdles that we've had to go through;"* with nature, *"Nature…things like that keep you grounded and away from the craziness,"* and with the transcendent (God), *"My beliefs…my religious beliefs make me strong, ya know."* **Table 3** summarizes these subthemes with representative quotations.

All focus group participants willingly contributed to the discussion regarding the role of spirituality in their chronic illness (**Table 4**). The majority (15) cited spiritual views as a source of strength and hope. These participants varied on whether spirituality played a major or minor role in their ability to cope with their illness. When asked, are spiritual beliefs a source of strength and hope; one individual replied, *"That is a part of me, yes."* Another individual replied, *"I am Catholic, but get most of my strength from myself and my daughters."*

Others expressed a deep faith and reliance on their spiritual beliefs and practices to get them through the challenges they face with their diabetes. One stated: *"There is a force up there that keeps me going and affects how I feel."* Others spoke about spiritual practices that helped them: *"I'm always praying,"* and others expressed a belief in God's intervention in their lives to help them, *"…You weren't there by accident. There's a reason…Yeah, it was like divine intervention."* Three participates stated that spirituality was not important to them; however, two followed up with referring to a belief in some force in the universe. *"I think there is a force in the universe too. Why do you think Star Wars is so popular?"* In general, participants thought of spirituality more as a source of strength than as a specific motivator for diabetes self-management. Participants, including those who did not endorse personal importance of spirituality, appeared comfortable with discussing this topic within the context of hope and strength related to coping with chronic illness.

Table 3. Sources of Strength and Hope: Relationships

Subtheme	Representative Quotations
Relationship with Self	• "I get most of my strength from myself." • "Sometimes you need to just escape and find your own space." • "Bubble bath, books … take time to spend time with yourself." • "That's one of the kind of things that gets you through the humps, ME time." • "It's all about making a deal with yourself."
Relationship with Others (Family, friends, community, healthcare providers)	• "My family, my kids and even the caseworkers have been wonderful to me." • "Family is very important." • "Friends and family" • "So we can come here and tell our problems which you may not be able to do at home because you're busy being the mom … But we can come here because we know that we all face diabetes and we can tell our problems and sometimes talking might help someone else, too." • "We're in it together." • "You are not alone." • "You help each other out with the little hurdles that we've had to go through. And we're reminders of hey, this is not just you, alone. There's everybody else here to help you if you need them. That helps a lot." • "You have to believe in the doctors and what they are telling you to do."
Relationship with Nature	• "Nature…things like that keep you grounded and away from the craziness."
Relationship with God (Transcendent) • Prayer • Meditation • Having faith	• "My beliefs…my religious beliefs make me strong, ya know." • "I say the Rosary. I have been saying the Rosary since I was a little kid and when things don't go right, I say the Rosary." • "If I have depression or frustration, then I do some kind of relaxation, like deep breaths." • "I'm Catholic, so I pray every day."

Table 4. Variable Role of Spirituality in Patients' DM Illness Experience

Theme	Range of Responses	Representative Quotations
Personal Spiritual Beliefs and Role in Illness Coping	Not important	• "Um … it really doesn't actually." • "No … I'm Catholic. But I get my strength from myself and my daughters." • "Not so much for me. I do believe, but I don't practice." • "I don't think I'm spiritual at all."
	Plays some role	• "That is a part of me, yes." • "To give you strength." • "See, I believe something powerful is there. We don't know how it's working but it sits somewhere. You understand?"
	Plays an important role	• "I'm always praying." • "I read spiritual books all that time. That helps a lot… (in terms of DM). There is a force up there that keeps me going and affects how I feel." • "And there's always intervention, like you were there for L in the supermarket. You weren't there by accident. There's a reason … Yeah, it was like divine intervention."

CONCLUSIONS

In this exploratory study, participants confirmed the profound impact of diabetes on their daily life[16] and the need for support to help them cope with chronic illness. Although they varied in the role spirituality played in their own lives, all participants appeared comfortable discussing spirituality within the context of sources of hope and strength[17] as they faced the challenges of diabetes, with many describing spirituality as playing a central role in their life. However, in this population, fear of illness complications and family needs seemed to be stronger motivators for diabetes self-management than spiritual/religious belief.

Most studies regarding spirituality and diabetes focus on populations identified as placing a high value on religious practice, such as African American[18,19] and Latino patients,[11] or who present culturally diverse perspectives on health.[10] Findings of our study in an urban, underserved, New England setting suggest that patients with a broad spectrum of personal beliefs (highly religious to secular) are willing to explore spiritual coping strategies, when the discussion is initiated within the context of sources of hope and strength in dealing with their illness, and that for many this is an important and valuable conversation. Study limitations included small sample size, and restriction to English speaking subjects who attended the same clinic.

In order to optimally support patients in their diabetes self-management,[19] we need to identify all possible motivation and coping strategies. This exploratory study suggests that patients are willing to engage in conversations regarding spiritual coping strategies, when the conversation is initiated using a patient-centered approach within the context of sources of strength and hope. Further studies, with larger sample sizes, non-English speaking populations and different settings, need to be undertaken to further clarify the role of spirituality in diabetes chronic disease management.

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References

1. Norris SL, et al. Self-Management Education for Adults with Type 2 Diabetes: A meta-analysis of the effect on glycemic control. *Diabetes care.* 2002:25(7):1159-1171.
2. Spinale J, Cohen SD, Khetpal P, Peterson RA, Clougherty B, Puchalski CM, Patel SS, Kimmel PL. Spirituality, social support, and survival in hemodialysis patients. *Clinical J Am Soc Nephrology*. 2008 Nov;3(6):1620-7.
3. Leeman J, Skelly AH, Burns D, Carlson J, Soward A. Tailoring a diabetes self-care intervention for use with older, rural African American women. *Diabetes Educ*. 2008 Mar-Apr;34(2):310-7.
4. Deatcher J. Spiritual self-care and the use of prayer. *Diabetes Self Manag.* 2002 Nov-Dec;19(6):57-9.
5. Daaleman TP, Kuckelman CA, Frey BB. Spirituality and well-being: an exploratory study of the patient perspective. *SocSci Med*. 2001 Dec;53(11):1503-11.
6. O'Neill DP, Kenny EK. Spirituality and chronic illness. *Image J Nurs Sch*.1998;30(3):275-80. Review.
7. Newlin K, Melkus GD, Tappen R, Chyun D, Koenig HG. Relationships of religion and spirituality to glycemic control in Black women with type 2 diabetes. *Nurse Res*. 2008 Sep-Oct;57(5):331-9.
8. Polzer RL. African Americans and diabetes: spiritual role of the health care provider in self-management. *Res Nurs Health*. 2007 Apr;30(2):164-74.
9. Newlin K, Melkus GD, Chyun D, Jefferson V. The relationship of spirituality and health outcomes in Black women with type 2 diabetes. *Ethn Dis*. 2003 Winter;13(1):61-8.
10. Cattich J, Knudson-Martin C. Spirituality and relationship: a holistic analysis of how couples cope with diabetes. *J Marital Fam Ther.* 2009 Jan;35(1):111-24.
11. Welch G, Schwartz CE, Santiago-Kelly P, Garb J, Shayne R, Bode R. Disease-related emotional distress of Hispanic and non-Hispanic type 2 diabetes patients. *Ethnic Dis*. 2007 Summer;17(3):541-7.

12. Quinn MT, Cook S, Nash K, Chin MH. Addressing religion and spirituality in African Americans with diabetes. *Diabetes Educ*. 2001 Sep-Oct;27(5):643-4, 647-8, 655.
13. Kramer H, Dugas L, Rosas SE. Race and the Insulin Resistance Syndrome. *Seminars in nephrology*. Vol. 33. No. 5. WB Saunders. 2013.
14. Anandarajah G, Hight E. Spirituality and medical practice: Using the HOPE questions as a practical tool for spiritual assessment. *AmFam Physician*. 2001;63:81-89.
15. Borkan J. Immersion/crystallization. *Doing qualitative research 2.* 1999;179-194.
16. Devlin H, Roberts M, Okaya A, Xiong YM. Our lives were healthier before: focus groups with African American, American Indian, Hispanic/Latino, and Hmong people with diabetes. *Health Promotion Practice*. 2006 Jan;7(1):47-55.
17. Underwood LG, Teresi JA. The Daily Spiritual Experience Scale: Development, Theoretical Description, Reliability, Exploratory Factor Analysis, and Preliminary Construct Validity Using Health-Related Data. *Annals of Behavioral Medicine.* 2002;24(1):22-33.
18. Walker EA, Basch CE, Howard CJ, Zybert PA, Kromholz WN, Shamoon H. Incentives and barriers to retinopathy screening among African-Americans with diabetes. *J Diabetes Complications.* 1997 Sep-Oct;11(5):298-306.
19. Samuel-Hodge CD, Headen SW, Skelly AH, Ingram AF, Keyserling TC, Jackson EJ, Ammerman AS, Elasy TA. Influences on day-to-day self-management of type 2 diabetes among African-American women: spirituality, the multi-caregiver role, and other social context factors. *Diabetes Care*. 2000 Jul;23(7):928-33.

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Spirituality and Treatment of Addictive Disorders

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ABSTRACT

Spirituality is generally protective against the initiation of alcohol and drug use and progression to disordered use. In addition, mutual-help organizations, such as Alcoholics Anonymous, were founded on spiritual principles, and reliance on a "higher power" is a central component of the 12 steps. Despite this, spirituality is not commonly addressed in formal treatment of addictions. The purpose of this paper is to provide a summary of the role of spirituality in the development and recovery from addictive disorders for health care professionals.

KEYWORDS: spirituality, addictive disorders, treatment

INTRODUCTION

It would be difficult to work in the field of addictions' treatment for any length of time without considering the potential importance of spirituality to people in recovery. In mutual-help recovery organizations such as Alcoholics Anonymous, six of the 12 steps mention God or a "power greater than ourselves,"[1] and the majority of existing longitudinal research suggests that 12-step programs function, at least in part, by facilitating spiritual growth.[2,3] Empirical evidence in support of a general protective role of spirituality for the development of and recovery from substance use disorders suggests that increased attention to spiritual factors in formal substance use treatment is warranted as well.[4] This evidence is described in detail elsewhere,[5-10] and a thorough literature review is beyond the scope of this paper. The purpose of the present review is to supply a broad overview that may serve as a resource for health care professionals interested in the role of spirituality in addiction treatment.

Evidence for and Against the Importance of Spirituality

The inverse association of spirituality and substance dependence is one of the most well-documented protective relationships in the literature, on the same level as (lack of) family history and the availability of social support.[5-10] What's more, a growing body of evidence suggests that spirituality is a major component of change for the addicted individual.[11] Several longitudinal studies have found that spirituality variables significantly mediated the association of 12-step participation and drinking outcomes.[2-3] However, support for this mediated effect is inconsistent across studies and populations.[2,12]

How Might Issues of Spirituality Arise in Formal Treatment: A Local Example

In spiritual-issues groups held weekly on both an inpatient detoxification unit and an addictions rehabilitation program at Butler Hospital in Providence, RI, themes of lost meaning/purpose and renouncement of core values consistently emerge. Members often describe a loss of connection with themselves, significant others, and with "something greater." In describing this disconnect, the person may place her hand over her heart and say, "There is an empty hole here," or talk about being "alone in a crowd of people." Most have expressed feelings of guilt and profound shame. Some say openly that they have lost their spiritual direction. Whether the person seeking help defines it as a big hole, a sense of purposelessness, or a feeling of disconnectedness, he or she may be touching on the question of spirituality.

Although a universally accepted definition of spirituality is unlikely, spirituality may be operationally defined as *connectedness with self, others, and a broader perspective* to facilitate a discussion of the integration of spirituality into the recovery process. It has been suggested that addiction disrupts spiritual growth by moving the addicted individual away from the core of their being, offering an instantaneous and reliable distraction from unsettling questions of purpose.[6] Addiction has been described as a "progressive disease." Miller and Bogenschutz[9] suggest that addiction "progressively displaces previous priorities, relationships, and values, and becomes the central concern of a person's life." In sum, the drug(s) of choice offers a means of avoiding being present, an escape, and in doing so brings addicted individuals out of touch with their selves, others, and a larger perspective.

What Do the Experts Say?

Key individuals responsible for the formation of the current "standard-practice" addiction treatments have also noted the connection between addictive and spirituality processes. Bill W., co-founder of Alcoholics Anonymous, wrote "… we [those with addictions] have been not only mentally and physically ill, we have been spiritually sick. When the spiritual malady is overcome, we straighten out mentally and physically."[1] Carl Jung, world-renowned psychiatrist and

psychotherapist, wrote a letter to Bill W. in which he explained the relation of spirits (alcohol) and spirituality. He wrote, "You see, 'alcohol' in Latin is *spiritus,* and you use the same word for the highest religious experience as well as for the most depraving poison. The helpful formula therefore is: *spiritus contra spiritum*."[6] In other words, spirituality and addiction are in conflict; one displaces the other. A common and long-lived definition of *spirituality* is "our ability, through our attitudes and actions, to relate to others, to ourselves, and to God as we understand Him."[13] Recently, *addiction* has been oppositely defined as "a setting apart from one's self, others, and the world."[6]

William Miller, co-founder of Motivational Interviewing,[14] has written several reviews of the relation of spirituality and addictive behaviors yet continues to describe the link between spirituality and addictions as "mysterious."[4] Several factors may contribute to the "mysterious" relationship of spirituality and addiction. To start, spirituality is a multifaceted, latent construct, such as health or love, which cannot be directly observed. Like other intangible constructs, spirituality is difficult to define. Moreover, the very nature of spirituality could be seen by some as a personal experience that should *not* be universally defined, a notion that does not bode well for empirical study. However, it is unclear why the construct of spirituality should not be studied with the same rigor as any other intangible construct, and the argument that spirituality is outside the realm of scientific integrity is inconsistent with new research developments.

A Multidimensional Approach

Miller and Thoresen[10] purport that spirituality is not a trait that is either present or absent — that is to say, people cannot be lumped into categories of "spiritual" or "not spiritual." They also suggest that defining spirituality as something one has more or less of (i.e., a one-dimensional approach) is also shortsighted.[10] Cook[13] searched MEDLINE and PsycINFO databases for papers on spirituality and addiction, finding 3231 papers with spirituality as a keyword and 265 papers with both addiction and spirituality as keywords. A total of 13 dimensions of spirituality were identified based on these results, viz.: relatedness, transcendence, humanity, core/force/soul, meaning/purpose, authenticity/truth, values, non-materiality, (non-)religiousness, wholeness, self-knowledge, creativity, and consciousness. Of these, relatedness and transcendence were the most often cited in relation to substance dependence. More and more, researchers are beginning to differentiate between spirituality/religiousness dimensions, utilize longitudinal datasets, and develop multi-dimensional measures with evidence of psychometric validity rather than single, one-note questions about spirituality/religiousness.[15] Additionally, dimensions of spirituality are beginning to be studied as focal variables rather than included only in post-hoc, exploratory analyses.[10]

Barriers to Including Spiritual Components in Formal Addiction Treatment

Aside from research on 12-step programs, scientific studies of spiritually-focused interventions (and such interventions themselves) are rare.[9] A lack of research support for spirituality as an "active ingredient" in formal treatment is problematic, as insurance companies now require that treatments be empirically supported. Personal beliefs or biases of clinicians and researchers may be a barrier to including spiritual components in addictions treatment. DiClemente,[16] co-developer of the Transtheoretical Model of behavior change, suggests, "Science, especially the science of psychology and psychiatry, has had a difficult time exploring and understanding the role that spirituality and religion play in addiction and recovery."[16] Among the general U.S. population, 9 of 10 Americans believe in God or a universal spirit, and only 6% do not believe in either.[17] In contrast, Western academics and clinicians are consistently less spiritual/religious than the populations they serve,[18] and as such, they may regard spiritual beliefs as unscientific or experience discomfort in addressing spiritual issues.

Resistance on the part of the client may also interfere with including spiritual components in treatment or the client's ability to benefit from the social aspects of mutual-help programs. There seems to be an increased negative connotation of religiosity and an increased emphasis (at least in Western culture) on distinguishing spirituality from religiosity, as evidenced by self-identification as "spiritual but not religious."[19] Religion is largely a social phenomenon, an organized structure involving mutual acceptance of doctrinal beliefs, social norms and interaction with like-minded others, and adherence to a religion involves certain observable behaviors, such as denominational affiliation and attendance at religious services.[7,8]

Conceivably, some aspects of religiosity may be antithetical to spirituality, and some spiritual teachings warn against this.[8] Many recovering individuals have difficulty with the idea of "God" or have a great deal of anger toward that which they define as God. Sometimes, those with addictions describe being brought up with the notion of a punitive God, which may be harmful as those who have engaged in addictive behaviors are already filled with self-loathing and shame. Even among 12-step programs, which have been spiritual in focus since their founding, there is a divide about the role of spirituality in addiction recovery. Between two competing schools of thought, Rational Recovery argues that AA's spirituality component should be excluded from the recovery program where the antithetical view of Celebrate Recovery movement, led by Rick Warren, author of *The Purpose Driven Life*, rallies for a faith-based approach and cautions against a watered-down or vague definition of the Christian God.[19]

Spiritual Competence

Unlike spiritual diversity, considerable attention has been paid to the importance of considering cultural diversity in research and treatment. Health care professionals are encouraged to develop their multicultural competence, and this is viewed as an active and ongoing process, an ideal to continually aspire to rather than a goal to be achieved.[20] In the same way that multicultural competence can increase the ability of health care providers to work effectively with culturally diverse populations, spiritual competence among health care providers may enhance their effectiveness when working with individuals struggling with addictions. Effective interventions such as Motivational Interviewing and Acceptance and Commitment Therapy acknowledge the importance of the provider's ability to allow a creation of an open, non-judgmental and compassionate environment. When working in the area of addiction treatment, spiritual competence may increase the ability of the provider to help the client to discover or rediscover their own purpose and core values, explore the negative consequences of the addictive behavior on these values, and to develop behaviors that support the identified core values. If the provider has not considered his or her own spiritual competence, or moreover, holds the view that spiritual competence is not important for treatment, he or she may be less able to recognize or attend to the client's needs or perspectives.

References

1. Alcoholics Anonymous. *Alcoholics Anonymous: the Story of How Many Thousands of Men and Women Have Recovered from Alcoholism, 4th Edition* [e-book]. New York: A.A. World Services; 2001. http://www.aa.org/bigbookonline/index.cfm. Accessed October 10, 2013.
2. Kelly J, Hoeppner B, Stout R, Pagano M. Determining the relative importance of the mechanisms of behavior change within Alcoholics Anonymous: A multiple mediator analysis. *Addiction*. February 2012;107(2):289-299.
3. Krentzman A, Cranford J, Robinson E. Multiple dimensions of spirituality in recovery: A lagged mediational analysis of Alcoholics Anonymous' principal theoretical mechanism of behavior change. *Substance Abuse*. January 2013;34(1):20-32.
4. Miller W. Addiction and Spirituality. *Substance Use and Misuse.* 2013;48(12):1258-9.
5. Bonelli R, Koenig H. Mental disorders, religion and spirituality 1990 to 2010: A systematic evidence-based review. *Journal of Religion and Health*. June 2013;52(2):657-673.
6. Forcehimes A & Tonigan J. Spirituality and Substance Use Disorders. In: Huguelet P & Koenig HG, eds. Religion and Spirituality in Psychiatry. New York, NY: Cambridge University Press. 2009:114-127.
7. Longshore D, Anglin M, Conner B. Are religiosity and spirituality useful constructs in drug treatment research? *The Journal of Behavioral Health Services & Research*. April 2009;36(2): 177-188.
8. Miller W. Researching the spiritual dimensions of alcohol and other drug problems. *Addiction*. July 1998;93(7):979-990.
9. Miller W & Bogenschutz M. Spirituality and addiction. *Southern Medical Journal*. 2007;100:433-436.
10. Miller W, Thoresen C. Spirituality, religion, and health: An emerging research field. *American Psychologist*. January 2003;58(1):24-35.
11. Lyons G, Deane F, Kelly P. Faith-based substance abuse treatment: Is it just about God? Exploring treatment providers' attitudes toward spirituality, forgiveness and secular components of treatment. *Counseling and Spirituality*. 2011;30(1):135-158.
12. Zemore S. A role for spiritual change in the benefits of 12-step involvement. *Alcoholism: Clinical and Experimental Research*. October 2007;31(Suppl 3):76S-79S.
13. Cook C. Addiction and spirituality. *Addiction*. May 2004;99 (5):539-551.
14. Miller W, Rollnick S. *Motivational Interviewing: Helping People Change (3rd Edition)* [e-book]. New York, NY: Guilford Press; 2013.
15. Monod S, Brennan M, Theologian E, Martin E, Rochat S, Büla C. Instruments measuring spirituality in clinical research: A systematic review. *Journal of General Internal Medicine*. November 2011;26(11):1345-1357.
16. DiClemente C. Paths through Addiction and Recovery: The Impact of Spirituality and Religion. *Substance Use & Misuse*. 2013:48(12):1260-1261.
17. Gallup. http://www.gallup.com/poll/1690/religion.aspx. Accessed October 10, 2013.
18. Greene G, Nguyen T. The Role of Connectedness in Relation to Spirituality and Religion in a Twelve-Step Model. *Review of European Studies*. 2012:4(1)179.
19. Brown E. Alcohol recovery and spirituality: Strangers, friends, or partners? *Southern Medical Journal*. 2006:99(6)654-657.
20. Sue D, Sue D. *Counseling The Culturally Diverse: Theory And Practice (6th Ed.)*. Hoboken, NJ.

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Professional Chaplains in Comprehensive Patient-Centered Care

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ABSTRACT

There is growing recognition of the valuable role that professional chaplains provide in the medical setting. Yet, most physicians are unfamiliar with or misinformed about chaplains and how they can be effectively utilized in providing quality patient care. Many physicians also feel unskilled and unprepared to identify or discuss patients' spiritual or religious concerns that arise. Using case studies, this article provides an overview of the training and skills of professional chaplains in a medical setting. Chaplains can be effective partners in assessing and treating patients' needs. They also provide ethical and spiritual support to the medical team. In an increasingly culturally diverse patient population, chaplains can offer a proactive, ongoing response to the needs of diverse patients. When integrated into medical teams, chaplains can bring fresh perspectives to patient care and are a highly skilled professional resource for successfully managing patients' spiritual needs.

KEYWORDS: professional chaplains, patient-centered care, spirituality, well-being, faith

INTRODUCTION

Medical literature, since the mid-1990s, has exhibited a growing interest in the positive link between spirituality and medical care. This literature reflects a greater appreciation of the positive role spirituality can serve in medical diagnosis and treatment. Although professional chaplains have been integral to hospice care from the beginning, chaplaincy is broadening as a valuable resource in a wider range of medical settings.[1] Accordingly, with better knowledge of professional chaplain training, roles and expectations, many more physicians could utilize chaplains in patient care. The following three cases (based on actual cases with factual changes to protect confidentiality) reflect the current challenges of practicing comprehensive, patient-centered medicine and the value of a utilizing a trained chaplain to help meet these challenges. Without the capable services of a professional chaplain, the outcome and overall patient comfort and family satisfaction in these both ordinary and extraordinary settings would have been entirely different.

Case 1

Dr. Jones was Jane Smith's primary care physician. Mrs. Smith was 76, Caucasian, widowed, Roman Catholic, with advanced chronic obstructive pulmonary disease (COPD). Dr. Jones observed, "In my first office exam she was on oxygen, in a wheelchair, with a depressed affect. I reviewed her treatment and made recommendations, but it didn't end there. She was consistently unhappy. I started her on a course of anti-depressants. Still, we spent hours discussing and meeting with her because although her COPD was stabilized, she was determinedly miserable with her medical care. Then I remembered that we were encouraged to utilize a chaplain employed by the clinic. I asked Chaplain Mark Osgood to see Mrs. Smith.

It was very fruitful. He reported that she was a devout Catholic all her life, and the suffering caused her by advanced COPD caused her a big crisis of faith. Chaplain Mark's spiritual counseling and support enabled Mrs. Smith to have a notably improved relationship with the medical team. Also, it is worth noting that during a conversation with Chaplain Mark, I shared my own faith background and current beliefs. He helped me to see this in the context of my expectations and communication with patients and their families."

WHAT ARE PROFESSIONAL CHAPLAINS?

Professional chaplains are a highly trained subspecialty of religious professionals that work in a medical setting along with physicians and other health professionals.[2] Overall, the professional chaplain training has a strong emphasis in sensitivity, openness, respect.[3] Respect means to honor patients', caregivers', and medical professionals' religious and cultural diversity. The professional chaplain training requirements are rigorous, including an advanced degree from an accredited theological school, credentialing with a recognized religious organization, and supervised internships in a clinical setting (**See Table 1**). Professional chaplains in a clinical setting generally provide spiritual support, prayers or rites of passage, for patients and their caregivers. They also offer staff support through spiritual counseling, ethical consultation, bereavement care and they give institutional support on policy and oversight committees and special events (**See Table 2**).

Table 1. Professional Chaplain Training Requirements

- College degree
- Master's degree (usually a three year Master's of Divinity) at an accredited theological school
- Credentialing of ordination or commissioning from a recognized religious organization
- Two (or more) supervised clinical pastoral education units. (One clinical pastoral unit is 300 hours with patients, plus 100 hours in classroom and individual supervision.)
- One year of fulltime post-graduate employment in chaplaincy setting

Table 2. What can professional chaplains offer?

- **Patient support:** calming presence, compassionate listening, hope & meaning, life review, spiritual counseling, prayers & rituals, rites of passage, caregiver support.
- **Staff support:** confidential ethical & spiritual counseling, bereavement support.
- **Institutional support**: special events, education, medical ethical committee, community outreach.

EFFECTIVELY UTILIZING PROFESSIONAL CHAPLAINS FOR PATIENT CARE

Professional chaplains are trained to diagnose and treat patients' spiritual needs, ranging from providing simple religious observances, to understanding their present illness in the context of their personal faith narrative, to spiritual counseling for complex existential and spiritual crisis. Patient Smith's religious affiliation was Roman Catholic on her medical face sheet. Why not simply refer her to a local Roman Catholic priest if she had a spiritual concern? In Mrs. Smith's case, because her historical relationship with her faith community was more formal and she was feeling estranged, this route would have initially been unsuccessful. With a chaplain she was able to speak more freely. As a professional chaplain, Mark provided this patient a safe environment in order for him to fully professionally assess her spiritual needs, to then identify an individualized spiritual care plan. In the course of their visits, the spiritual care plan would be reviewed and modified as needed, including Chaplain Mark adding the initiating of a discussion with the patient about contacting her parish priest.

PROFESSIONAL CHAPLAINS SUPPORTING PHYSICIANS AND OTHER HEALTH CARE PROFESSIONALS

Professional chaplains also provide staff support. They serve as a resource to help medical staff to be aware of and clarify their own values and religious history as it may impact patient care. Inadvertently, in bringing in a chaplain to address patient needs, Dr. Jones took a rare moment to share his own religious background and beliefs with Chaplain Mark. By being in the right place at the right time after a difficult clinical situation, a chaplain can help staff to defuse and debrief.[4] They can be on-site confidential, compassionate listeners for physicians and staff. Or they facilitate group gatherings to reflect on a difficult case or shared loss. A well-supported medical staff presumably aids job satisfaction, and patient care and happiness.[5]

Case 2

Dr. Costa, a neonatologist, cared for Samir Sharma, a ten-day-old infant, Indian, male, Hindu, with bronchopulmonary dysplasia in a neonatal intensive care unit (NICU). Dr. Costa shared, "Patient Sharma's father asked permission to take his infant son home for a baptism. I said his condition required him to be in the hospital. The father was obviously upset. Trying to be helpful, I added that I knew how important a child's baptism can be. Our daughter's baptism by Father Michael at Holy Names' Parish was *very* important. But, for his son's health, it would have to be done later. Mr. Sharma asked, 'when?' I said weeks, even months from now. Then he walked abruptly away – but I had no choice.

"At the NICU team meeting, I shared my conversation with Mr. Sharma. The team discussed Mr. Sharma's request and reaction, and Chaplain Elaine Walsh, who was customarily present, gently pointed out that perhaps there was some misunderstanding. I conceded that this could be true, and asked her to speak with Mr. Sharma."

Chaplain Elaine arranged for Mr. Sharma and his wife to meet with her at the hospital interfaith chapel. Beforehand, she consulted literature on Hindu ceremonies. In the chapel's quiet setting, the Sharmas expressed their needs more fully. She offered to contact a local Hindu priest to assist, and the family declined. In the end, the chaplain successfully negotiated a compromise that satisfied both the family's cultural and religious needs as well as the doctor's medical recommendations. The chapel was converted into a Hindu home-like environment. The infant was brought down from the NICU on portable oxygen and discretely monitored throughout the small gathering of the patient's immediate family, Dr. Costa and members of the NICU team. All enjoyed special foods brought by the family afterwards.

PROFESSIONAL CHAPLAINS – AN IMPORTANT ROLE ON MEDICAL TEAMS

The interdisciplinary medical team for patient care is being more widely utilized.[6,7] These teams that regularly bring together varied clinical disciplines can be more inclusive and effective in providing medical care. Chaplains serve an important role on these teams through spiritual assessment, support, and, as appropriate, engagement with the patient's faith community for the patient's overall care. When a chaplain has a regular seat at interdisciplinary medical meetings, this helps to build the efficiency and suppleness of her or his contribution to the team on ethical and spiritual matters in patient care.[8]

PROFESSIONAL CHAPLAINS FOR EXPERTISE ON DIVERSE PATIENT GROUPS

Chaplain Elaine's role in a sensitive patient's medical and spiritual situation at the NICU points to the larger question of what chaplains' roles presently are and are not. Not too long ago, a professional chaplain was primarily an ordained or lay representative of a Christian faith who attended to Christian's pastoral needs within a secular setting. However, now "chaplain" applies to lay people and ordained clergy from diverse religions or philosophical traditions who are trained in diverse clinical and non-clinical settings to work alongside or instead of clergy to provide multi-faith pastoral care. This was demonstrated by Chaplain Elaine's preparation and services to the Sharma family. Although Chaplain Elaine happened to be ordained in a Protestant Christian denomination, as a professional chaplain, she had a general knowledge of world faith traditions[9] and was prepared to make referrals to a faith leader in the greater community as needed. Quite simply, under current standards, professional chaplains are not advocates or representatives of any particular faith or moral agenda. They are, often on a time-limited basis, able to provide spiritual assessment, spiritual support, and as needed to refer to faith leaders in the community.

Case 3

Dr. Graber, a hospice and palliative medicine physician, treated Maria Flores, 36, Hispanic, married, female, and Pentecostal. "'Maria,' as she preferred to be called, was a beautiful, kind, mother of two young children. She had metastatic breast cancer. After a short course of palliative chemo she stopped treatment, and then she told our team that she wanted to spend her final days at her church – inside the actual church building itself.

"With end-of-life medical care we try to do everything possible for the patient's comfort and wishes, but this was beyond anything imaginable. At a team meeting, I identified a myriad of reasons why this request was unrealistic. Going into an unfamiliar place with an unknown group practicing their religion also felt like too much. Her request was denied, but Maria was persistent. All she wanted now was to spend her final time at her church.

"It was brought up again at team meeting. Chaplain Marie Cournoyer spoke up – saying, 'I think we could do it – we could care for Maria at her church. I spoke with her pastor and visited the church, it's a converted storefront.' Then she began brainstorming, and other team members joined in. Against all odds, we agreed to go ahead.

"Amazingly," said Dr. Graber, "all medical care thereafter was provided at the patient's church, sometimes during long, boisterous services. The pastor and members of this church were very welcoming and accommodating of our needs. Maria died according to her wishes: in the presence of loved ones, at her church. It was quite moving. The experience taught me to not reflexively say "no," to unusual patient requests. It will probably help us to be more flexible and creative in our work in the future."

PROFESSIONAL CHAPLAINS AIDING PHYSICIANS IN: DISCUSSING END OF LIFE SPIRITUAL CONCERNS AND THINKING 'OUTSIDE THE BOX'

Many physicians feel unskilled and unprepared to discuss patient spiritual or religious concerns at end-of-life.[10] What makes the previous case ordinary is the importance of clear communication and understanding about the patient's spiritual needs as it related to her medical- care decisions. Also, it points to the reality that excellent physicians can get in a rut out of habit or personal comfort. Working regularly with a chaplain and his or her unique training can shed new light onto good patient care.

SUMMARY

Professional chaplains are an important and often crucial component to successfully addressing patients' spiritual needs. In all three cases, had a chaplain not intervened, the patients and their families most likely would have been dissatisfied with major needs unmet. Occasional and ongoing utilization of chaplains for patient care is more likely to have a positive outcome in addressing the patient's spiritual needs.

In summary, professional chaplains as a subspecialty of religious professionals well serve the spiritual needs of medical patients, their caregivers, and as a resource for doctors and other medical staff. They are trained to do spiritual assessments, provide spiritual support, and work as colleagues in a medical, interdisciplinary setting.

When should you call on one? More often and more broadly than you may think. When physicians are asked what they tend to request a chaplain for, it is to perform rituals and to attend to families and patients at death. But when chaplains are asked, they say that they wish physicians called upon them sooner for a broader range of issues to provide patients and family greater wholeness and healing[11] while also helping to lessen the physicians' burden. In Case 1, a

primary care physician like Dr. Jones would rarely think to employ a chaplain for assistance. This is despite evidence to the contrary. Numerous patient surveys have indicated that people turn to spiritual and religious beliefs in times of serious illness, stress as well as loss and dying.[12] There is an emerging opportunity for chaplains to be employed as skilled colleagues for quality patient care. It is the hope of many religious professionals and a growing number of physicians that the ongoing utilization of professional chaplains for quality medical care becomes the standard.

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References

1. VandeCreek L. Defining and Advocating for Spiritual Care in the Hospital. (2009) Paper.
2. Handzo G, Koenig G. Spiritual Care: Whose Job Is It Anyway? Southern Medical Association. 2004;1242-1244.
3. Professional Chaplain Competencies, Section III: PA1S1, Board of Chaplaincy Certification, Inc.
4. Jacobs MR. What Are We Doing Here? Chaplains in Contemporary Health Care. *The Hastings Center Report.* 2008;38(6):1.
5. Medical Chaplain improvement on family-team communication has been documented. See Fitchett G, Lyndes A, Cadge W, Berlinger N, Flanagan E, Misasi J. The Role of Professional Chaplains on Pediatric Palliative Care Teams: Perspectives from Physicians and Chaplains, *Journal of Palliative Medicine*. 2011;14(6):704.
6. Lahaj M. End-of-Life Care and the Chaplain's Role on the Medical Team. *JIMA.* 2011;43:173-178.
7. Piotrowski L. A Transdisciplinary Approach to Spiritual Care. *Spirituality and End-of-Life Care.* 2011;87-96. Hospice Foundation of America.
8. Wagner J, Higdon T. Spiritual Issues and Bioethics in the Intensive Care Unit. The Role of the Chaplain. *Critical Care Clinics*. Jan. 1996;12(1):16-27.
9. Bennett MJ. Becoming Interculturally Competent. Wurzel J., Ed. *Toward multiculturalism: A reader in multicultural education*, 2nd ed. (Newton, MA: Intercultural Resource Corporation), pp. 62.
10. Lo B, Ruston D, Kates L, Arnold R, Cohen C, Faber-Langendoen K, et al. Discussing Religious and Spiritual Issues at the End of Life, A Practical Guide for Physicians. *JAMA*. Feb. 13, 2002;287(6)749-754.
11. Cadge W, Calle K, Dillinger J. What Do Chaplains Contribute to Large Academic Hospitals? The Perspectives of Pediatric Physicians and Chaplains. *Journal of Religion & Health*. June 2011;(50)2:300-312.
12. Puchalski CM. Honoring the Sacred in Medicine: Spirituality as an Essential Element in Patient-Centered Care. *Journal of Medicine and The Person.* Sept. 2008;6(3):113-117.

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Assessment of Hypertension Guidelines Adherence at a Free Clinic Serving a Predominantly Latino Population in Providence, RI

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ABSTRACT

Hypertension affects more than 50 million people in the United States. A recent national health study (NHANES) found that the proportion of certain Hispanic ethnic groups with stage 1 and stage 2 hypertension was greater than for whites. In order to identify areas of improvement, as well as to examine trends in patient outcomes, Clínica Esperanza/Hope Clinic (CEHC), a free clinic for the uninsured, recently conducted a study to evaluate how well the clinic's hypertensive patients are treated, according to current guidelines for hypertension, as compared to other clinics in the U.S. that serve the uninsured. *For five out of the six health measures documented*, at least 50% of CEHC hypertensive patients met or exceeded the goal values; these numbers are on par with if not better than other national comparators. This study has provided encouraging baseline data, upon which CEHC plans to make further improvements.

KEYWORDS: Hypertension, Hispanic, Latino, Uninsured, Free Clinic

I. INTRODUCTION

The prevalence of hypertension stands at greater than 50 million affected individuals in the United States (U.S.), and it affects an estimated one billion individuals globally. Despite intensive efforts by the American Heart Association (AHA), clinical providers and public health officials, the National Center for Health Statistics reported that in 2009-2010, blood pressure was controlled in only 53% of hypertensive individuals in the United States.[1] Moreover, nearly 20% of hypertensive individuals living in the U.S. were unaware of their condition, many of whom are Hispanic or uninsured.[2] Chronic diseases such as hypertension, diabetes, and metabolic syndrome disproportionately affect Hispanic communities in the United States, for reasons that may be related to genetic or socioeconomic factors, diet, exercise, and uninsurance. A recent review of National Health and Nutrition Examination Survey (NHANES) data revealed that selected Hispanic groups were at much higher risk of having uncontrolled stage 1 or 2 hypertension than non-Hispanic whites,[3] and other research has shown a higher incidence of uncontrolled or improperly monitored hypertension among uninsured individuals.[4,5]

Clínica Esperanza/Hope Clinic (CEHC) serves uninsured patients from communities around Olneyville, a primarily Hispanic/Latino, low-income neighborhood in Providence, RI. The location of the clinic provides unique access to a patient population facing dual disparities – low access to health care (due to lack of insurance of roughly 12%) and health disparities, particularly hypertension, diabetes and being overweight.[6,7] Fifty-seven percent of Olneyville residents are Hispanic/Latino; 22% are non-Hispanic white; 14% are African-American; 7% are Asian or Pacific-Islander, and 7% claim two or more races.[8] The median family income is $19,046; the majority of residents do not have a high school diploma, and 41% percent of families live in poverty.[8]

In 2012, CEHC screened more than 2,145 individuals, providing free blood pressure checks, cholesterol and blood glucose screens, and "talk-to-the-doctor" sessions at the clinic location in Olneyville or at four outreach sites in Providence. To lower the barrier to healthcare access, CEHC established the CHEER Clinic, a free, nurse-run, walk-in clinic that addresses non-urgent healthcare needs.[9] We recently completed an evaluation of our ability to provide diabetes care, and found that our clinic met or exceeded standards established by the American Diabetes Association.[10,11] To evaluate the success of CEHC in managing hypertensive patients, we examined CEHC's adherence to current guidelines and compared CEHC's rates of goal achievement to those of other clinics and medical centers. The goal of this clinical management study was to identify areas of improvement, including discrepancies between CEHC and the current guidelines, as well as to examine trends in CEHC patient outcomes, which may help us improve care.

II. METHODS

We performed a retrospective chart review. The study population included 57 active hypertensive patients out of 119 total hypertensive patients who were actively attending clinic visits at CEHC from January 1, 2011 through July 30, 2013. Active hypertensive patients were defined as those who visited the clinic at least two times after their diagnosis of hypertension, at least three times in the study period, and had at least one visit on or after January 1, 2012. See **Table 1** for CEHC patient demographics.

Patient names were coded and de-identified, and patient information was recorded in a spreadsheet. Data included body mass index (BMI), systolic and diastolic blood pressure

Table 1. Clínica Esperanza/Hope Clinic patient and hypertensive patient demographics.

Demographics	2010-2011	2011-2012	2012-2013	Patient Population	Hypertensive Patients	%	Study Subjects	%
Race/Ethnicity								
Hispanic	947	1163	1445	72%	85	71%	44	77%
White	90	146	220	9%	10	8%	5	9%
Black or African American	92	144	179	8%	13	11%	6	11%
Asian	14	26	62	2%	-	-	-	-
Other/no answer	43	86	202	7%	11	9%	2	4%
Gender								
Male	544	711	997	46%	61	51%	29	51%
Female	658	839	1148	54%	58	49%	28	49%
Age								
0-18	18	8	18	1%	0	0	0	0%
18-40	340	605	817	36%	15	13%	6	11%
41-60	603	741	953	47%	73	61%	38	67%
61+	223	183	190	12%	30	25%	13	23%
n=	1202	1585	2145		119		57	

In this table, we compare the overall demographics (% population) of patients attending the Clínica Esperanza/Hope Clinic between 2010 and 2013 to the patients with hypertension (Hypertensives and the Study Subjects). The proportion of study subjects and patients who have hypertension, for each of the demographic categories, is similar to the overall population, although skewed towards higher age ranges, and slightly (but not significantly) higher among African-American patients.

readings, creatinine, and serum potassium. The values for sitting blood pressure readings from each patient's initial visit in the study period and the six most recent blood pressure readings were recorded. We compared the results to those of similar studies and JNC 7 guidelines.

III. RESULTS

Population

Our study population demographic data reflects CEHC's predominantly Hispanic patient population (**Table 1**). While slightly more of the patients at CEHC are female (51% versus 49% for males), the gender distribution is reversed among hypertensive patients (51% male versus 49% female).

Clinically Relevant Biomarkers

CEHC's results in comparison to AHA standards are shown in **Table 3**. The mean systolic blood pressure of hypertensive patients was 133.6 (SD 17.5mmHg); 68% of the patients had a systolic blood pressure that was at goal (<140mmHg[1]). See **Table 2** for definitions of 'at goal'. The mean of diastolic blood pressures of CEHC's hypertensive patients was 82.0 (SD 9.6mmHg), and 68% of clinic patients were at or below the goal (<90mmHg). Over time, 81% were at the diastolic blood pressure goal by their sixth visit. Fifty-five percent of patients had both systolic and diastolic blood pressures that were at goal. The average body mass index (BMI) in our cohort was 30.3 (SD 5.8kg/m^2). Only 11% of the hypertensive cohort of patients at CEHC had a BMI in the healthy range. In this study we did not examine BMI change over time.

Health Behaviors

Ninety-one percent of the patients in the cohort reported that they did not smoke. Eighty-nine percent of the cohort reported that they were not heavy drinkers, whereas only 11% were identified as heavy drinkers. Whether our hypertensive patients followed the Dietary Approaches to Stop Hypertension (DASH) diet was not recorded in their electronic medical record. Adherence to recommended daily exercise could not be evaluated: only nine out of the 57 patients' exercise habits were documented in the electronic medical records with eight reporting that they exercised on a regular basis.

Frequency of Lab Testing

Seventy-three percent of our hypertensive patients had their creatinine levels measured at least twice within the preceding year at the time of our survey. The same percentage of our cohort had their serum potassium levels measured at least twice within the last year. Eighty-nine percent of the patients also had their blood pressures measured at least twice within the last year, with eighty-three of our patients following the recommended frequency of blood pressure measurements for their specific stage of hypertension.

Comparison with Similar Studies

We compared our patients' results to other published results (**Table 3 and Figure 1**). For five out of the six health measures that were documented (systolic blood pressure, diastolic blood pressure, total blood pressure, BMI, smoking, and alcohol intake), at least 50% of CEHC hypertensive patients met or exceeded the goal values. The BMI was the only category for which less than 50% of patients were at goal,

Table 2. Summary of the Joint National Committee Guidelines on Hypertension Management[1]

ASSESSMENT	FREQUENCY OF MONITORING	GOAL	TAKE ACTION	TREATMENT
Cardiovascular				
Blood pressure monitoring	Every month for stage 1 hypertension until goal is reached. At least once a month for stage 2 hypertension until goal is reached Monitor every three to six months after goal is reached.	<140/90 mmHg <130/80 mmHg in patients with diabetes and/or renal disease	>140/90 mmHg >130/80 mmHg in patients with diabetes and/or renal disease	Encourage lifestyle changes for prehypertensive, stage 1 and 2 hypertensive patients. **Stage 1** hypertensive patients without compelling indication may take thiazide-type diuretics and may consider ACEI, ARB, BB, CCB, or combination. **Stage 2** hypertensive patients may undertake a two-drug combination of above of which one is a thiazide-type diuretic.
Laboratory Tests				
Serum Potassium	1 or 2 times annually	3.7 to 5.2 mEq/L.	<3.7 mEq/L	DASH Diet
Creatinine or eGFR	1 or 2 times annually	0.7 to 1.3 mg/dL for men and 0.6 to 1.1 mg/dL for women	>1.3 for men >1.1 for women Less than 60 GFR	Other antihypertensive drugs (diuretics, ACEI, ARB, BB, CCB) as needed
Lifestyle				
Nutrition	As needed	Healthy eating for blood pressure control	Poor serum potassium and/or calcium control or increased weight	DASH Diet
Exercise	Each visit	> 30 minutes a day on at least 5 days a week	< 30 minutes a day on at least five days a week, poor metabolic control	Exercise >30 min a day on at least 5 days a week.
Smoking	Each visit	No cigarette smoking	Cigarette smoking	Counsel to stop smoking
Drinking	Each visit	<1 oz of ethanol per day in men and <0.5 oz of ethanol in women.	>1 oz of ethanol per day in men and >0.5 oz of ethanol in women.	Counsel to reduce alcohol consumption
Self-management	Each visit	Healthy hypertension management with blood pressure control		Referral to health educators or health education classes.

This table provides a summary of the Joint National Committee Guidelines on Hypertension Management. The suggested frequency of blood pressure monitoring, goal values, and suggested courses of action are described for different categories of lab testing and hypertension-monitoring health behaviors.

underperforming compared to the two other studies. Since the number of hypertensive patients followed at CEHC is limited as compared to the other published studies, the statistical significance of these figures was not determined.

CEHC achieved a higher success rate for blood pressure being at goal, than three of the five other studies (**Figure 1**).[12–16] Only a single specialty clinic (Rush University Hypertension Clinic) and a hospital-based outpatient clinic were able to achieve success rates that were slightly higher (59% and 62%) than CEHC's overall success rate (55%).[10,13] CEHC patients achieved significantly lower mean total blood pressure, systolic blood pressure, and diastolic blood pressure than forty-four U.S. community health centers and six urban community-based clinics (**Figure 1**).[11,12]

For health behaviors related to hypertension, CEHC only documented information on smoking (91% of hypertensives reported that they were nonsmoking) and alcohol intake (89% reported that they did not consume alcohol). Dietary information (related to the DASH diet) and exercise information was not recorded in the electronic medical record. Based on self-reported information, the study patients had lower rates of smoking and drinking than three other similar studies. [12,17,18]

IV. DISCUSSION

As noted, the problem of access to health care is particularly acute for Hispanics, both nationally and locally.[19] Hispanics also have higher rates of obesity, high blood pressure, and are 50% more likely to die from diabetes than non-Hispanic whites.[20] One third of the 41.2 million uninsured in the United States are Hispanic/Latino – three times the rate of

Table 3. Comparison of hypertension-related biomarkers of CEHC patients with similar studies.

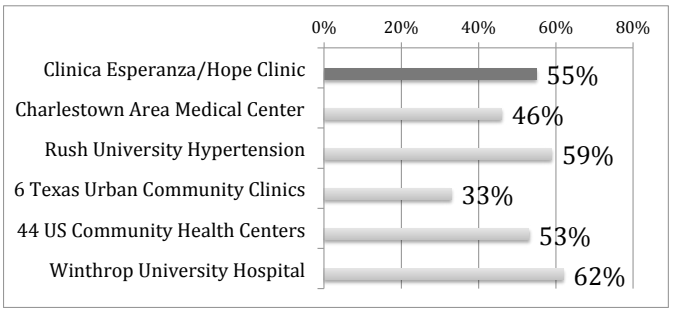
CATEGORY		PARAMETERS	BLOOD PRESSURE mm (Hg)		BMI (kg/m2)
			Systolic	Diastolic	
Clínica Esperanza/Hope Clinic	Goal	<140/90	<140	<90	<25
	Success Rate	**55%**	**68%**	**68%**	**11%**
	Mean ± SD	-	133.6±17.5	82.0±9.6	30.3±5.8
Charlestown Area Medical Center[9]	Goal	<140/90 and <130/80 for diabetics	-	-	<25
	Success Rate	46%	-	-	17.8%
	Mean ± SD	-	-	-	-
Rush University Hypertension Clinic[10]	Goal	<140/90	<140	<90	-
	Success Rate	59%	63%	86%	-
	Mean ± SD	-	137±15	79±9	-
6 Urban, Community-based Clinics[11]	Goal	<140/90	<140	<90	-
	Success Rate	33%	-	-	-
	Mean ± SD	142/84	142±18	84±12	32.1±6.4
44 U.S. Community Health Centers[12]	Goal	≤140/90 and <130/80 for diabetics	-	-	-
	Success Rate	53%	-	-	-
	Mean ± SD	-	-	-	-
Outpatient (2007)[13]	Goal	<140/90	-	-	-
	Success Rate	62%	-	-	-
	Mean ± SD	-	-	-	-

A BMI of ≥ 30 is defined as obese, a BMI that is ≥ 25 but < 30 is overweight, and <25 is healthy.

the non-Hispanic white population.[21] In Rhode Island, 28% of the uninsured population is Hispanic/Latino.[22] When choosing a location to provide free health services, Clínica Esperanza/Hope Clinic selected Olneyville because it has the greatest concentration of uninsured residents affected by undiagnosed health conditions and limited access to health care in Rhode Island (see Olneyville Report[23] and our own survey of neighborhood health needs[24]). Limited English proficiency and low health literacy are both prevalent among our Hispanic/Latino patients, and they affect numerous behaviors necessary for effective hypertension self-management (e.g., interpretation of food labels, analysis of salt content and measurement of blood pressure).[25]

Despite these disadvantages, the results of this study confirm that this volunteer-run free clinic's standard of success is comparable to that of other hospitals and clinics that serve both uninsured and insured patient populations. There is still significant room for improvement. The report provides a baseline level of data against which to compare future interventions, such as increased engagement of patients in physical exercise, one-on-one medication, diet and exercise adherence coaching, and home blood pressure monitoring.

Figure 1. Percentage of patients with blood pressure at AHA Goal.



Percentage of patients with overall blood pressure at goal compared to other published studies of JNC 7 guidelines adherence. CEHC shows a higher rate of achievement than 3 other major health institutions. At CEHC, Rush University Hypertension Clinic, Texas urban community centers, and Winthrop University Hospital Outpatient Clinic, goal was defined as <140mmHg systolic and <90mmHg diastolic. At Charlestown Area Medical Center and US community health centers, the additional criteria was added that hypertensive patients who were co-morbid with diabetes must have <130mmHg systolic and <80mmHg diastolic.

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References

1. Yoon SS, Burt V, Louis T, Carroll MD. (2012). Hypertension among adults in the United States, 2009-2010. National Center for Health Statistics Data Brief, 107.
2. Centers for Disease Control and Prevention (CDC). Racial/Ethnic disparities in the awareness, treatment, and control of hypertension - United States, 2003-2010. *MMWR Morb Mortal Wkly Rep*. 2013 May 10;62(18):351-5.
3. Centers for Disease Control and Prevention (CDC). Racial/Ethnic disparities in the awareness, treatment, and control of hypertension - United States, 2003-2010. *MMWR Morb Mortal Wkly Rep*. 2013 May 10;62(18):351-5.
4. Gai YW, Gu NY. Association Between Insurance Gaps and Continued Antihypertension Medication Usage in a US National Representative Population. *American Journal of Hypertension*. 2009;22(12):1276-1280.
5. Duru OK, Vargas RB, Kermah D, Pan DY, Norris KC. Health insurance status and hypertension monitoring and control in the United States. *American Journal of Hypertension*. 2007;20(4):348-353.
6. Liao Y, Bang D, Cosgrove S, Dulin R, Harris Z, Taylor A, White S, Yatabe G, Liburd L, Giles W. Division of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion; Centers for Disease Control and Prevention (CDC).
7. Surveillance of health status in minority communities - Racial and Ethnic Approaches to Community Health Across the U.S. (REACH U.S.) Risk Factor Survey, United States, 2009. *MMWR Surveill Summ*. 2011 May 20;60(6):1-44.
8. Olneyville at a glance (Providence Plan). http://local.provplan.org/profiles/oln_main.html. Accessed 23 Nov. 2013.
9. Bicki A, Silva A, Joseph V, et al. A Nurse-Run Walk-In Clinic: Cost-Effective Alternative to Non-urgent Emergency Department Use by the Uninsured. *J Community Health*. 2013.
10. Eldakroury A, Olivera E, Martin R, De Groot AS. Adherence to American Diabetes Association Guidelines in a Volunteer-run Free Clinic for the Uninsured: Better than Standards Achieved by Clinics for Insured Patients. *R I Med J* (2013). 2013;96(1):25-9.
11. American Diabetes Association. Standards of medical care in diabetes – 2012. *Diabetes Care*. 2012; 35 Suppl 1:S11.
12. Jami P, Smith P, Moningi S, et al. Compliance with joint national committee 7 guidelines in hypertension management in a teaching institution. *American Journal of Medical Quality*. 2007;22(4):251-258.
13. Singer GA, Izhar M, Black HR. Goal-oriented hypertension management - Translating clinical trials to practice. *Hypertension*. 2002;40(4):464-469.
14. Spranger CB, Ries AJ, Berge CA, Radford NB, Victor RG. Identifying gaps between guidelines and clinical practice in the evaluation and treatment of patients with hypertension. *American Journal of Medicine*. 2004;117(1):14-18.
15. Landon BE, Hicks LS, O'Malley AJ, et al. Improving the management of chronic disease at community health centers. *New England Journal of Medicine*. 2007;356(9):921-934.
16. Wang S, Berbaru N, Choi D, McNamara J, Feuerman M, Bucci K, Malone B. Managing hypertension in patients with or without comorbidities in a teaching hospital outpatient setting. *Pharmacy & Therapeutics*. 2007;32(1):32-43.
17. Collins T. Adherence to hypertension management recommendations for patient follow-up care and lifestyle modifications made by military healthcare providers. 2000.
18. Guthmann R, Davis N, Brown M, Elizondo J. Visit Frequency and Hypertension. *The Journal of Clinical Hypertension*. 2005;7:327–332. doi: 10.1111/j.1524-6175.2005.04371.
19. Beckles GL, Zhu J, Moonesinghe R. Centers for Disease Control and Prevention Diabetes - United States, 2004 and 2008. *MMWR Surveill Summ*. 2011 Jan 14;60 Suppl:90-3. (CDC). http://www.cdc.gov/mmwr/preview/mmwrhtml/su6001a20.htm#tab1
20. Heron M. Deaths: leading causes for 2007. *Natl Vital Stat Rep*. 2011 Aug 26;59(8):1-95.
21. Cersosimo E, Musi N. Improving treatment in Hispanic/Latino patients. *Am J Med*. 2011 Oct;124(10 Suppl):S16-21.
22. Kaiser Family Foundation. Health Coverage & Uninsured. State Health Facts. http://kff.org/state-category/health-coverage-uninsured/. Accessed 23Nov2013.
23. Olneyville: Action for A healthier community. Olneyville Housing Corporation and the Rhode Island Department of Health. Published online, 2012. http://www.olneyville.org/Healthier_Olneyville_Assessment_Report.pdf. Accessed 23 Nov 2013.
24. Khan S, Velazquez V, O'Connor C, Simon RE, De Groot AS. Health care access, utilization, and needs in a predominantly Latino immigrant community in Providence, Rhode Island. *Med Health R I*. 2011 Oct;94(10):284-7. 2011.
25. Leyva M, Sharif I, Ozuah PO. Health literacy among Spanish-speaking Latino parents with limited English proficiency. *Ambul Pediatr*. 2005 Jan-Feb;5(1):56-9.

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Compliance with Postoperative Cataract Surgery Care in an Urban Teaching Hospital

AMANDA B. SALTER, MD; ALLISON J. CHEN, BA; DAVID W. LEE, BS; PAUL B. GREENBERG, MD

ABSTRACT

The quality of postoperative care received by patients undergoing resident-performed cataract surgery is not well described. In a retrospective chart review, this study investigated the prevalence and preoperative predictors of noncompliance with postoperative cataract surgery care in an urban teaching hospital. It found that one in four patients was noncompliant with cataract surgery postoperative care and that age 50 years or less was a key predictor of non-compliance.

KEYWORDS: Cataract surgery, resident, postoperative care, compliance

Cataracts account for 50% of visual impairment in adults over 40 years old in the United States.[1] Cataract surgical training is an important component of ophthalmic graduate medical education and this includes ensuring that patients receive appropriate postoperative care for the detection and treatment of complications and monitoring patient outcomes.[1] However, the quality of postoperative care received by patients undergoing resident-performed cataract surgery is not well described. To this end, we investigated the prevalence and preoperative predictors of noncompliance with postoperative cataract surgery care in an urban teaching hospital.

After obtaining approval from the Rhode Island Hospital (RIH) Institutional Review Board, we performed a retrospective chart review of patients undergoing resident-performed first-eye cataract surgery from May 2010 to December 2012 at the RIH ophthalmology clinic. Patients receiving combined surgeries for cataract and glaucoma or retina, and legally incarcerated patients were excluded. Data obtained included demographics, insurance status, medical comorbidities measured by the Charlson Comorbidity Index (CCI), the presence of psychiatric illness, ocular comorbidities, preoperative visual acuity and noncompliance with postoperative care, defined as missing one or more of the three recommended postoperative visits (one day, one week and one month) following cataract surgery. Statistical analysis included descriptive statistics to compare the prevalence of baseline characteristics, using 2-sided t-tests for continuous variables and chi-square tests for categorical variables. Multivariable logistic regression was used to identify factors associated with noncompliance. Ocular comorbidities and insurance status were excluded in the multivariate analysis due to multicollinearity.

Of 309 charts reviewed, 281 patients met the inclusion criteria. The characteristics of compliant and noncompliant patients are outlined in **Table 1**. There were no significant differences between the two groups of patients except for

Table 1. Characteristics of Patients Based on Compliance with Postoperative Cataract Surgery Care

Characteristic	Number (%) of noncompliant patients	Number (%) of complaint patients	Test statistic, P-value
Age, mean [SD]	58.5 [1.6] years	63.0 [0.81]	t-test=2.36, p=0.02
<50	17 (23.6)	25 (12.0)	
≥50	55 (76.4)	184 (88.0)	
Gender			χ^2=1.19, p=0.27
Male	36 (50.0)	89 (42.6)	
Female	36 (50.0)	120 (57.4)	
CCI			χ^2=0.22, p=0.63
<2	51 (70.8)	154 (73.7)	
≥2	21 (29.2)	55 (26.3)	
Ocular comorbidities			χ^2=0.0, p=.99
0	41 (56.9)	119 (56.9)	
≥1	31 (43.1)	90 (43.1)	
Psychiatric illnesses			χ^2=0.47, p=0.49
0	60 (80.3)	181 (86.6)	
≥1	12 (16.7)	28 (13.4)	
Pre-op visual acuity in logMAR units (mean, SD)	0.68 (.14)	0.73 (.11)	χ^2=2.09, p=0.14
<1.00	44 (61.1)	147 (70.3)	
≥1.00	28 (38.9)	62 (29.7)	
Insurance			χ^2=0.44, p=0.51
Health insurance	36 (50.0)	114 (54.6)	
No Health insurance	36 (50.0)	95 (45.4)	

CCI = Charlson Comorbidity Index

age: the mean age was 58.5 and 63 in noncompliant and compliant patients respectively (p=0.02). The rate of noncompliance with follow-up visits was 25.6% (72/281). In the multivariable logistic regression (**Table 2**), age was an independent predictor for noncompliance with postoperative cataract surgery care: patients aged 50 years or less had higher odds of failing to complete recommended postoperative follow-up visits (OR: 2.07, 95% CI: 1.02 -4.21).

This study suggests that one in four patients was noncompliant with cataract surgery postoperative care at our teaching hospital. While nearly half of all patients miss follow-up visits in resident glaucoma clinics,[2] noncompliance with postoperative care is particularly worrisome: patients are at risk for untreated complications such as endophthalmitis, cystoid macular edema, or steroid-induced glaucoma; they also can miss the full benefits of cataract surgery due to uncorrected refractive error.

Burden of illness, younger age and socioeconomic factors have been associated with poor follow-up in resident clinics in other specialties.[3-5] In our study cohort, we found that age 50 years or less was a key predictor of noncompliance for postoperative cataract surgery care. Further research is needed to identify potential barriers – such as conflicting work obligations – to postoperative care in this age group.

Potential limitations of this study include its retrospective design and its focus upon identifying patients at risk preoperatively, which precluded assessing the impact of surgical complications and postoperative vision on compliance with postoperative care. In addition, we did not evaluate the impact of resident characteristics such as poor communication skills. Finally, the study was conducted at one teaching hospital and its findings may not be generalizable to other settings.

In summary, this study suggests that younger patients are at particular risk for noncompliance with postoperative cataract surgery care in urban teaching hospitals and that efforts to improve compliance should target this patient cohort.

Table 2. Odds Ratios of Noncompliance with Postoperative Cataract Surgery Care

Characteristic	Odds Ratio (95% Confidence Interval)
Age	
<50	2.07 (1.02-4.21)
≥50	1 [reference]
Gender	
Female	0.79 (0.46-1.38)
Male	1 [reference]
CCI ≥2	1.13 (0.61-2.10)
Psychiatric illnesses ≥1	1.17 (0.54-2.54)
Pre-op visual acuity in logMAR units ≥1	1.44 (0.80-2.60)

CCI = Charlson Comorbidity Index

References

1. American Academy of Ophthalmology Cataract and Anterior Segment Panel. Preferred Practice Pattern® Guidelines. Cataract in the Adult Eye. San Francisco, CA: American Academy of Ophthalmology; 2011. Available at: www.aao.org/ppp. Accessed April 11, 2013.
2. Ngan R, Lam DL, Mudumbai RC, Chen PP. Risk Factors for Noncompliance with Follow-up Among Normal-tension Glaucoma Suspects. *Am J Ophthalmol.* 2007;144(2): 310-311.
3. Nguyen DL, DeJesus RS, Wieland ML. Missed Appointments in Resident Continuity Clinic: Patient Characteristics and Health Care Outcomes. *J Grad Med Educ.* 2011;3(3): 350–355.
4. Hixon AL, Chapman RW, Nuovo J. Failure to Keep Clinic Appointments: Implications for Residency Education and Productivity. *Fam Med.* 1999;31(9): 627-630.
5. Guse CE, Richardson L, Carle M, Schmidt K. The Effect of Exit-Interview Patient Education on No-Show Rates at a Family Practice Residency Clinic. *J Am Board Fam Pract*. 2003;16(5): 399-404.

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Avascular Necrosis of the Trapezoid Bone Following Carpometacarpal Arthroplasty

PATRICK KANE, MD; GREG WARYASZ, MD; JULIE KATARINCIC, MD

ABSTRACT

A 58-year-old female developed avascular necrosis of her trapezoid approximately 3 months after undergoing carpometacarpal arthroplasty. The patient was treated conservatively with immobilization and had complete resolution of her clinical symptoms during her year of follow-up. Additionally, radiographic examination showed complete restoration of the height of her trapezoid approximately 1 year after the index procedure. Avascular necrosis of the trapezoid is extremely rare with very few cases described in the literature. This is the first description of avascular necrosis following carpometacarpal arthroplasty.

KEYWORDS: Carpal Bone Avascular Necrosis, Carpometacarpal Arthroplasty, Surgical Complication

INTRODUCTION

Avascular necrosis of the carpal bones is rare, with the most frequently reported cases involving the scaphoid, lunate and capitate.[1] We present a case report of avascular necrosis of the trapezoid following carpometacarpal arthroplasty. The patient developed symptoms approximately 3 months post-operatively and with conservative treatment the patient had full resolution of her symptoms.

CASE REPORT

A 58-year-old woman was treated with a right thumb carpometacarpal arthroplasty with flexor carpi radials tendon transfer in August 2011 for stage III CMC arthritis. Prior to surgical intervention the patient had failed conservative treatment with splinting and a corticosteroid injection given in April 2011. The patient tolerated the procedure well, there were no intraoperative complications. However, at 12 days post-op the patient presented complaining of increased pain and erythema around the surgical wound and the patient was started on a 10-day course of Keflex for presumed treatment of a superficial cellulitis; the erythema resolved uneventfully. The remainder of her course is benign. She started hand therapy at 4 weeks post-op. X-rays at 4 (**Figure 1**) and 7 weeks were unremarkable with standard post surgical changes observed.

At 15 weeks (**Figure 2**) the patient returned to the office complaining of increased acute onset of pain in her wrist; x-rays taken at this time showed increased sclerosis and

Figure 1. AP radiograph of right wrist 4 weeks post-op from CMC arthroplasty.

Figure 2. AP radiograph of right wrist 15 weeks post-op from CMC arthroplasty.

Figure 3. MRI of right wrist showing avascular necrosis of trapezoid.

Figure 4. Coronal T1 with Gado and Coronal T2.

collapse of the trapezoid. Given the radiographic findings an MRI of the carpus was obtained which showed imaging consistent with avascular necrosis of the trapezoid (**Figure 3 and 4**).

The patient was treated conservatively with splinting for comfort, and gradually the patient's symptoms improved. The patient was last seen in follow-up August of 2012, repeat x-rays (**Figure 5**) were obtained which showed restoration of bone height and reconstitution of the trapezoid. Patient has been clinically asymptomatic since March 2012.

Figure 5. AP radiography of right wrist approximately 1 year post-op from CMC arthroplasty.

DISCUSSION

Avascular Necrosis (AVN) of the carpal bones is rare. The most frequently reported cases involve the scaphoid, lunate and capitate.[1] Risk Factors for AVN include a history of trauma, alcohol intake and steroid medication use. In this case, there were no identifiable risk factors; however, there was a potential precipitating event. Other cases of AVN described in the literature had no identifiable cause.[2,3] Disruption of the blood supply from trauma resulting in enucleation of the trapezoid from its bed have been proposed as a mechanism for AVN[4,5]; however, even with an open dislocation and nearly all soft tissue attachments being stripped, there is no guarantee of AVN.[5] In our review of the literature, AVN of the trapezoid following CMC arthroplasty has not previously been described.

Most of the research into AVN has been extrapolated from the femoral head model. Death of bone is thought to be due from either arterial occlusion, venous congestion, elevated intraosseous pressure or microtrauma.[6] After the insult to the bone is complete, the bone begins angiogenesis to revascularize. The next step is resorption of dead bone. Since the articular surface is supplied nutrition from the synovial fluid, the bone's ability to rebuild its subchondral surface will determine the degree of collapse and fracturing.[6]

MRI is a capable imaging modality to determine AVN from other pathologies that can cause pain related to the trapezoid. Fracture, dislocation and arthritis are known pathologies, but there have also been reports of intraosseous ganglion[7] and coalition.[8] MRI of AVN can show subtle changes such as increased signal due to initial edema and then decreased signal as there is ischemia and necrosis.

In a cadaveric vascularity study by Gelberman et al. various vascular patterns of the carpal bones were correlated with the clinical incidence of avascular necrosis and at-risk patterns of vascularity were identified.[1,9,10] The carpal bones were divided into 3 groups, which correlated with risk pattern. The first group of carpal bones which were considered to be most at risk for post traumatic AVN consisted of the scaphoid, capitate and 20% of the lunates; all carpal bones had a large area of bone dependent on a single intraosseous vessel. The trapezoid was placed into group 2 along with the hamate. The authors concluded that although these bones were theoretically at risk because of the lack of internal anastomoses, they do not undergo AVN.

The trapezoid benefits from a varied extraosseous blood supply. Branches from the intercarpal, dorsal radiocarpal and basal metacarpal arches as well as the radial recurrent artery all contribute blood supply to the trapezoid. This rich supply of blood vessels may explain why AVN is such a rare occurrence in the trapezoid.[11]

AVN of the trapezoid in other case reports has been usually treated conservatively with casting/immobilization[3]; when this fails curettage, iliac crest bone graft, and core revascularization using graft from the dorsal metacarpal vascular bundle to the second ray has been used to achieve partial revascularization.[2] In our case, only immobilization was required to achieve imaging consistent with revascularization.

In our case, there was not a clear vascular injury or enucleation of the trapezoid from its soft tissue bed to explain the resultant AVN. Given the dual blood supply to the trapezoid, it is possible that our patient only had a single vessel supplying the trapezoid or some other vascular anomaly making it behave more like the lunate/scaphoid/capitate bone. Based on the imaging performed and the improvement in patient symptoms and plain radiographs, there can be no conclusion made as to the exact cause of the trapezoid AVN in our case after CMC arthroplasty.

References

1. Gelberman RH, Gross MS. The vascularity of the wrist. Identification of arterial patterns at risk. *Clin Orthop*. 1986;202:40-49.
2. Sturzenegger M, Mencarelli F. Avascular necosis of the trapezoid bone. *Journal of Hand Surgery - British and European Volume*. 1998;23B(4):550-551.
3. D'Agostino P, Townley WA, Roulot E. Bilateral avascular necrosis of the trapezoid. *J Hand Surg [Am]*. 2011;36(10):1678-1680.
4. Clarke SE, Raphael JR. Combined dislocation of the trapezium and the trapezoid: A case report with review of the literature. *Hand*. 2010;5(1):111-115.
5. Cuenod P, Della Santa DR. Open dislocation of the trapezoid. *J Hand Surg [Br]*. 1995;20(2):185-188.
6. Bain GI, Durrant AW. Arthroscopic assessment of avascular necrosis. *Hand Cli*n. 2011;27(3):323-329.
7. Brown DM, Young VL, Groner JP, Higgs PE, Gilula LA. Intraosseous ganglion of the trapezoid. *J Hand Surg [Am]*. 1994;19(4):607-608.
8. Peters S, Colaris JW. Carpal coalition: Symptomatic incomplete bony coalition of the capitate and trapezoid--case report. *J Hand Surg [Am]*. 2011;36(8):1313-1315.
9. Panagis JS, Gelberman RH, Taleisnik J, Baumgaertner M. The arterial anatomy of the human carpus. part II: The intraosseous vascularity. *J Hand Surg [Am]*. 1983;8(4):375-382.
10. Gelberman RH, Panagis JS, Taleisnik J, Baumgaertner M. The arterial anatomy of the human carpus. part I: The extraosseous vascularity. *J Hand Surg [Am]*. 1983;8(4):367-375.
11. Freedman DM, Botte MJ, Gelberman RH. Vascularity of the carpus. *Clin Orthop*. 2001(383):47-59.

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Racial Disparities in Infant Sleep Position in Rhode Island

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Positioning an infant to sleep on the back (supine positioning) has been recommended by the American Academy of Pediatrics (AAP) since 1992 to reduce the risk of Sudden Infant Death Syndrome (SIDS).[1] SIDS is defined as a sudden death before 1 year of age that cannot be explained despite a thorough case investigation, including a complete autopsy, death scene examination, and review of the clinical history.[2,3] SIDS is the leading cause of post-neonatal (1-12 months of age) mortality, and the third leading cause of infant (under 1 year old) mortality in the United States.[3,4] In 2010, 2,063 deaths were reported as SIDS.[3] The rates of SIDS are disproportionately higher for non-Hispanic black and American Indian/Alaska Native infants than the rest of the population.[3,4]

Infants who are placed to sleep on their stomachs or sides (non-supine positioning) are at higher risk for SIDS than infants who are placed on their backs to sleep (supine positioning).[4] Therefore, to reduce the risk of SIDS, infants should be placed to sleep in a supine position for every sleep by every caregiver until 1 year of life.[5] The Healthy People 2020 target is to increase the proportion of infants who are put to sleep on their backs to 75.9%.

This report describes 1) the trends in the prevalence of supine sleeping among black and white infants in Rhode Island, and 2) the disparities in spine sleeping position among subgroups. This report also provides the most recent AAP recommendations on a safe infant sleep environment.

METHODS

Data from the Rhode Island Pregnancy Risk Assessment Monitoring System (PRAMS) were analyzed. PRAMS is a survey of recent mothers, which collects state-specific, population-based data on maternal behaviors and experiences before, during, and after pregnancy. The survey is conducted two to six months after the baby's delivery.[6] Each year in Rhode Island, about 1,300 recent mothers complete the survey.

The 2002–2011 individual year data were analyzed to assess the trends in the prevalence of supine sleeping position for black and white infants. The 2009-2011 aggregated data were analyzed to identify disparities among subgroups. During 2009–2011, a total of 5,582 recent mothers were sampled and 3,828 completed the survey, yielding a 69.5% weighted response rate.

The infant sleep position was assessed using the following survey question: "In which one position do you most often lay your baby down to sleep now?" Response categories included "on his or her side," "on his or her back," and "on his or her stomach."

In accordance with the AAP's recommendation, only the category of "on his or her back" (supine positioning) was examined against all other non-supine positioning. To assess the trends, the proportion of infants placed to sleep on their backs was examined by infant birth year. To assess subgroup disparities, the proportion was examined by race as well as other socio-demographic characteristics (i.e., maternal age, ethnicity, education, marital status, annual household income, and insurance type). Race groups included black, white, Asian/Pacific Islander, and other (American Indian, Alaska Native, mixed race, and other non-white). Data analyses were performed using SUDAAN software to account for the complex survey design. The linear regression analysis was performed to examine the trends. The chi-square tests and the multivariable logistic regression were conducted to determine group disparities. All statistical results presented here were weighted to represent the Rhode Island PRAMS population.

RESULTS

Trends in Supine Sleep Position

Overall, the proportion of Rhode Island infants placed to sleep in a supine position increased from 65.9% (95% CI: 62.9%-68.7%) in 2002 to 76.5% (95% CI: 73.7%-79.2%) in 2011 (16.1% increase; $p < 0.0001$ for a linear trend). In 2011, Rhode Island achieved the Healthy People 2020 target of 75.9%. For black infants, the proportion of supine positioning increased from 42.6% in 2002 to 62.0% in 2011 (45.5% increase; $p < 0.01$ for a linear trend), and for white infants, the proportion increased from 68.2% in 2002 to 83.1% in 2011 (21.8% increase; $p < 0.0001$ for a linear trend). Although the proportion of supine positioning increased significantly during 2002-2011 for both black and white infants, the gap between the two groups did not narrow significantly during the period. In 2011, black-white difference remained > 20%. (**Figure 1**)

Supine Sleep Position and Selected Characteristics

In the cross tabulation analysis using the three-year combined data (2009–2011) shown in **Table 1**, the proportion of infants who were placed to sleep in a supine position varied significantly by race: 80.9% of white infants, 56.3% of black

Figure 1. Trends in the prevalence of supine sleeping among black and white infants, Rhode Island, 2002-2011

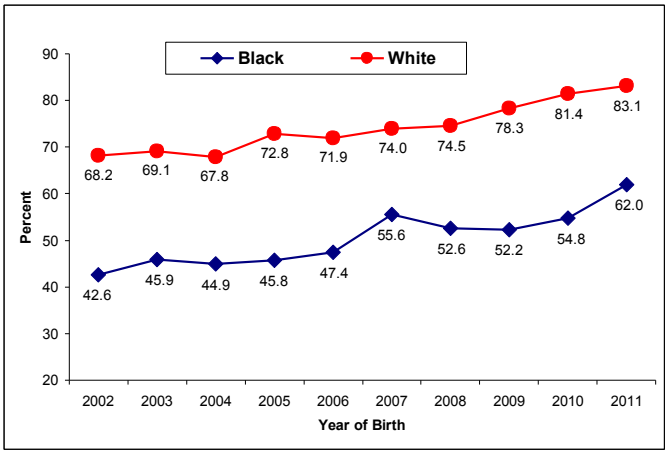

Table 2. Adjusted[a] Effects of Race on Non-Supine Sleep Positioning Rhode Island, 2009-2011, Combined

	Adjusted[a]		
	Adjusted OR[b]	95% CI[c]	P- value
White	1.0	1.0	---
Black	2.50	1.73-3.61	< .0001
Asian/Pacific Islander	0.87	0.51-1.49	0.6159
Other[d]	1.64	1.16-2.33	0.0057

a: Adjusted for maternal age, ethnicity, education, marital status, annual household income, and insurance type
b: OR: Odds Ratio
c: 95% Confidence Interval
d: includes American Indian, Alaskan Native, mixed race, and other non-white

Table 1. Percent of Women Who Placed Their Infants to Sleep on Their Backs by Selected Maternal Characteristics, Rhode Island, 2009-2011, Combined

	Number of Respondents[a]	Percent[b]	95% CI[c]	P-value
State-Wide	3568	74.7	73.0-76.3	
Race				<.0001
White	2211	80.9	78.9-82.7	
Black	261	56.3	48.8-63.5	
Asian/Pacific Islander	173	78.8	70.5-85.3	
Other[d]	815	62.5	58.5-66.3	
Hispanic Ethnicity				<.0001
Hispanic	777	62.9	58.9-66.7	
Non-Hispanic	2735	78.1	76.2-79.8	
Age				<.0001
< 20 yrs	253	60.4	53.1-67.3	
20 - 29 yrs	1653	71.8	69.3-74.3	
>= 30 yrs	1662	80.5	78.2-82.5	
Education				<.0001
< High School	457	63.6	58.2-68.6	
High School	859	69.6	65.9-73.2	
> High School	2009	80.4	78.4-82.3	
Marital Status				<.0001
Married	2080	80.5	78.5-82.3	
Unmarried	1488	67.2	64.4-70.0	
Annual Household Income				<.0001
< $10,000	588	64.8	60.0-69.3	
$10,000 - $24,999	682	69.5	65.3-73.4	
$25,000 - $49,999	623	74.9	70.7-78.7	
$50,000/+	1417	84.0	81.8-86.1	
Health Insurance				<.0001
Public	1638	67.1	64.4-69.8	
Private	1829	82.0	79.9-83.9	

Source: Rhode Island Pregnancy Risk Assessment Monitoring System (PRAMS), 2009-2011
a: Unknown and missing categories were excluded
b: Weighted percentage
c: 95% Confidence Interval
d: includes American Indian, Alaskan Native, mixed race, and other non-white

infants, 78.8% of Asian or Pacific Islander infants, and 62.5% of "other" race infants were placed to sleep on their backs ($p < 0.0001$). The prevalence of supine positioning also varied significantly by other maternal characteristics: mothers who were older than 30 years (80.5%), Non-Hispanic (78.1%), married (80.5%), and mothers who had more than a high school education (80.4%), annual household incomes greater than $50,000 (84.0%), and private health insurance (82.0%) were more likely to place their infants to sleep on their backs, compared to their counterparts ($p < 0.0001$ for all characteristics).

In the logistic regression model (**Table 2**), even after adjusting for all other covariates (maternal age, ethnicity, education, marital status, annual household income, and insurance type), the odds of non-supine positioning remained significantly higher for black infants (AOR=2.5; 95% CI=1.7-3.6; p < 0.0001) and for "other" race infants (AOR=1.6; 95% CI=1.2-2.3; p < 0.01), compared to white infants. However, Asian or Pacific Islander infants did not differ from white infants (AOR=0.9; 95% CI=0.5-1.5; p =0.6159).

DISCUSSION

The findings in this report provide useful data that demonstrate the racial disparities in sleep position among Rhode Island infants. In 2009–2011, nearly half of black infants (43.7%) and more than one third of "other" race infants (37.5%) were placed to sleep in non-supine positions, compared to fewer than one in five white infants (19.1%). The rate for Asian or Pacific Islander infants (21.2%) was similar to that of white infants. The likelihood of non-supine sleeping remained significantly higher

for black and "other" race infants, compared to white infants, even after controlling for socio-demographic covariates. In this report, however, because the "other" race category includes multiple races, such as American Indian, Alaska Native, mixed race, and other non-white, it is unclear which race in the "other" category exactly had higher prevalence of non-supine positioning.

New Infant Safe Sleep Recommendations: Despite substantial declines in the non-supine positioning and the incidence of SIDS since the early 1990s, the decline in SIDS has become stagnant in recent years. Meanwhile, other causes of sleep-related deaths, including suffocation, asphyxia, and entrapment have increased in incidence. In response to these trends, the AAP has recently expanded its recommendations from focusing only on "Back to Sleep" positioning to focusing on a broad safe sleep environment that can reduce the risk of all sleep-related infant deaths, including SIDS.[4,5] The summary recommendations include:[4,5]

1. Back to sleep for every sleep
2. Use a firm sleep surface
3. Room-sharing without bed-sharing is recommended
4. Keep soft objects and loose bedding out of the crib
5. Pregnant women should receive regular prenatal care
6. Avoid smoke exposure during pregnancy and after birth
7. Avoid alcohol and illicit drug use during pregnancy and after birth
8. Breastfeeding is recommended
9. Consider offering a pacifier at nap time and bedtime
10. Avoid overheating
11. Do not use home cardiorespiratory monitors as a strategy to reduce the risk of SIDS.

Health care providers and other health professionals should educate all persons who care for infants (all parents, grandparents, and other infant caregivers) about these new AAP recommendations to reduce the risk of all sleep-related infant deaths, particularly black and American Indian/Alaska Native populations.

The Rhode Island Department of Health has partnered with birthing hospitals, healthcare providers, community-based organizations, state agencies, and the state's Child Death Review Team to promote and support safe infant sleep practices in Rhode Island communities. Activities include the provision of home-based intervention, educational materials, social media, trainings for child care providers, and outreach to baby stores. Anyone can refer a family for help creating a safe sleep area in their home by contacting the family's local First Connections provider (www.health.ri.gov/find/firstconnectionsproviders).

References

1. American Academy of Pediatrics (AAP), Task Force on Infant Positioning and SIDS. Positioning and SIDS. *Pediatrics.* 1992;89(6, part 1):1120–1126.
2. Willinger M, James LS, Catz C. Defining the sudden infant death syndrome (SIDS): deliberations of an expert panel convened by the National Institute of Child Health and Human Development. *Pediatr Pathol*. 1991;11(5):677– 684.
3. Centers for Disease Control and Prevention (CDC). Sudden Unexpected Infant Death and Sudden Infant Death Syndrome Available at: http://www.cdc.gov/sids/
4. Rachel Y, Moon RY, Fu L. Sudden Infant Death Syndrome: An Update. *Pediatrics in Review*. 2012;33(7):314 -320.
5. American Academy of Pediatrics (AAP), Task Force on Sudden Infant Death Syndrome. Policy statement: SIDS and other sleep-related infant deaths: expansion of recommendations for a safe infant sleeping environment. *Pediatrics.* 2011;128(5):1030–1039.
6. Centers for Disease Control and Prevention (CDC). Pregnancy Risk Assessment Monitoring System (PRAMS). Available at http://www.cdc.gov/prams/

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The authors and/or their significant others have no financial interests to disclose.

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CME EVENT

Eleventh Hour Education Event

May 17, 2014, 7:00 am
Crowne Plaza Hotel
801 Greenwich Avenue, Warwick RI 02886

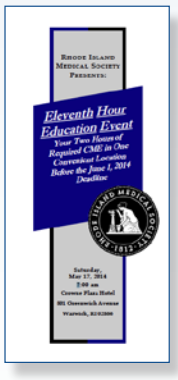
The RI Medical Society has organized your opportunity to obtain required Continuing Medical Education (CME) on Saturday, May 17, 2014.

The required topics to be covered are **Pain Management** and **Risk Management**, while we will also cover important education on a non-required topic.

The Rhode Island Department of Health states that "unless you were in training or became Board Certified or Re-Certified within the past two years, (physicians) need to complete 40 hours of Continuing Medical Education (CME) during each two-year license cycle. The current license renewal cycle requires that you obtain and submit your credits no later than **June 1, 2014**. At least two hours of this education must be related to one of the following topics:

- Risk management
- Opioid pain management/chronic pain management
- End of life/palliative care
- Ethics"

Registration



Program and Registration form

The program agenda and registration details for this event can also be found at www.rimed.org. RIMS members may log onto the Member Portal to register or complete the form and return as noted.

If you are not a RIMS member but would like to join, please complete the online membership application. The member rate will be offered to applicants upon receipt of your membership application.

Please email Megan E. Turcotte with questions, or call 401-331-3207.

NOTICE

The Rhode Island Medical Society no longer endorses the collection agency **IC System** and is currently seeking a high-quality, professional collection agency that will provide superior service to RIMS members at favorable rates.

RIMS joins panel discussion on medication adherence

DR. ELAINE JONES, president of the Rhode Island Medical Society, participated in a panel discussion and audience Q&A on medication adherence February 10 at Brown University. U.S. Senators Jack Reed and Sheldon Whitehouse, also on the panel, joined Prescriptions for a Healthy America and the Script Your Future campaign to explore the health and cost-saving benefits of medication adherence.

U.S. Senator Jack Reed

"When medications are used as directed, patients are healthier and we reduce costs in our health care system – it's a clear win-win," Senator Whitehouse said. He said e-prescribing, improvements in technology, and the health care exchange can be effective in improving adherence, care coordination and health outcomes. He noted that the Rhode Island Quality Institute has been a leader in this area.

Panelists also included Jef Bratberg of the University of Rhode Island College of Pharmacy; Stephen Evangelista, CEO of the Arthritis Foundation of New England and chairman of the Rhode Island Health Advocacy Forum; Sally Greenberg, executive director of the National Consumers League and coordinator of the Script Your Future campaign; Peter Simmons, vice president for product development at CVS Caremark; and Joel White, executive director of the Council for Affordable Health Coverage. ❖

U.S. Senator Sheldon Whitehouse; RI Secretary of Health and Human Services Steven M. Constantino

Why You Should Join the Rhode Island Medical Society

The Rhode Island Medical Society delivers valuable member benefits that help physicans, residents, medical students, physican-assistants, and retired practitioners every single day. As a member, you can take an active role in shaping a better health care future.

RIMS offers discounts for group membership, spouses, military, and those beginning their practices. Medical students can join for free.

Above: State House press conference on health care, Brown MSS at the AMA, CPT update seminar, bike helmet distribution, medical student volunteers; Upper right: Meeting of RIMS membership committee

APPLY FOR MEMBERSHIP ONLINE

RIMS MEMBERSHIP BENEFITS INCLUDE:

Discounts on career management resources
Insurance, collections, medical banking, and document shredding services

Discounts on Continuing Medical Education
InReach online CME program discounts; RIMS is an ACCME accrediting agency

Powerful advocacy at every level
Advantages include representation, advocacy, leadership opportunities, and referrals

Complimentary subscriptions
Publications include *Rhode Island Medical Journal*, *Rhode Island Medical News*, annual *Directory of Members*; RIMS members have library privileges at Brown University

Member Portal on www.rimed.org
Password access to pay dues, access contact information for colleagues and RIMS leadership, RSVP to RIMS events, and share your thoughts with colleagues and RIMS

SPECIAL NOTICE: 2014 AMA DUES PAYMENTS

The American Medical Association (AMA) will direct bill its Rhode Island members for their 2014 dues. Beginning August 2013, AMA members will receive a separate dues statement from the AMA instead of paying AMA membership dues through the Rhode Island Medical Society (RIMS) membership invoice. This is simply an operational change so that both RIMS and AMA can concentrate on their respective member satisfaction. There remains no requirement for RIMS members to join the AMA.

Please let us know if you have questions concerning this change by emailing Megan Turcotte or phoning 401-331-3207.

Brothers build a health care legacy to honor their parents

Dr. Milton Ochieng' is a GI Fellow at Rhode Island Hospital

MARY KORR
RIMJ MANAGING EDITOR

PROVIDENCE – "I am a son of Lwala," said Milton Ochieng', MD, a gastroenterology fellow at Rhode Island Hospital. This month he returns to Lwala, his southwestern Kenyan village near Lake Victoria, to work in the community health center he and his brother, Dr. Fred Ochieng', founded in 2007, along with the nonprofit Lwala Community Alliance. The health center has now expanded to include a 12-bed hospital – with electricity and running water, milestones in the village.

The documentary, *Sons of Lwala*, recently shown at the Alpert Medical School, tells the remarkable story of these two brothers who fulfilled their late father's commitment to bring medical care to a place where the only ambulance was a wheelbarrow and the nearest hospital several hours away.

The work is daunting, the challenges great in an area where HIV rates are 16%-20%, triple the national average, and the life expectancy hovers at 40 years.

Prior to his departure for Lwala, Dr. Ochieng' spoke to the RIMJ about his journey from Lwala to Rhode Island, via Dartmouth College, the Vanderbilt University School of Medicine, and a residency in St. Louis, Mo.

And while he is looking forward to his trip, his return will be a momentous one as well. He and his wife are expecting their second child, and will be relocating to the St. Louis area, where he will begin his practice, this summer.

COURTESY OF LWALA COMMUNITY ALLIANCE

The Lwala Community Hospital opened in 2011 to provide primary care, maternal health and reproductive services, and HIV/AIDS care and treatment. The most common illnesses treated are malaria, respiratory infections, parasites, diarrhea, TB and HIV.

COURTESY OF LWALA COMMUNITY ALLIANCE

Dr. Milton Ochieng' tends to a little patient in Lwala.

WHO: Dr. Milton Ochieng', GI Fellow, Rhode Island Hospital
Dr. Fred Ochieng', medicine/pediatric residency, Vanderbilt U. Medical Center

WHAT: Founders of Lwala Community Alliance, a nonprofit health and development agency in Lwala, southwestern Kenya

COURTESY OF LWALA COMMUNITY ALLIANCE

Fred Ochieng', MD

AT A GLANCE:

- Clinic opened in 2007
- 12-bed hospital with consultation rooms, maternal health wing opened in 2011
- Patient traffic averages almost 3,000 per month
- More than 1,100 patients being treated for HIV/AIDS
- Hospital workers provide 32,000 health visits a year
- Education, economic and public health outreach programs developed
- New ambulance, outreach motorcycles
- Donated iPads loaded with Skyscape medical reference app for outreach workers

PARTIAL LIST OF PARTNERS

Ronald McDonald House Charities, Vanderbilt University Medical Center, Segal Family Foundation, Clinton Global Initiative, Planned Parenthood Global, Real Medicine Foundation, Blood:Water Mission, FACES, Kenyan Ministry of Health, Johnson & Johnson, Health eVillages, Watsi.

COURTESY OF LWALA COMMUNITY ALLIANCE

In 2011, Milton Ochieng', MD, was invited to participate in the Clinton Global Initiative's annual meeting in New York. During the plenary session, President Clinton interviewed him on the stage.

Q. Is there a significance to the name of your village, Lwala?

A. I am of the Luo tribe – there are almost 42 tribes in Kenya. Lwala is an adjective, and describes the characteristics of the soil. Everything else is derived off of that.

Most of the villagers are subsistence farmers. When I was a boy, my mom woke us up at 5 a.m. to work on the family farm. We grew sugarcane, corn and beans. There were six of us; part of the work we did was to raise money for our education.

Q. What is your earliest memory as a boy growing up in Lwala?

A. The sense of community. You don't belong to any one person; you belong to everybody. Everybody pitches in to make sure you grow up to be a good citizen. You are not just the son or daughter of your parents; you are the son or daughter of your village. That's my favorite memory. In Lwala, the more fortunate take care of the less fortunate. That's our social security.

When I was admitted to Dartmouth College [on a full scholarship] my parents could not afford the flight, and they held a fundraiser. The villagers sold their chickens and cows to buy the $900 ticket. They told me: 'Make sure you represent us well; make sure you come back.' I always felt I needed to give back to the community.

Q. What was your home life like?

A. It was full. I have three brothers and two sisters. My mom also took in several of my cousins who were orphans. We lived in a mud house with a thatched roof. When I was in 5th grade my parents built a house made of cement blocks with an iron sheet roof. That was a big deal. When I return to Lwala now, I sleep in my *simba*, something young men in the village do. It's a mud hut with a sheet metal roof.

Q. Who has been the greatest influence on your life?

A. My mom. She was an elementary school teacher and sacrificed a lot for all of us. She instilled in us the values of community and of service. Values inculcated when you are really young and which you see in the community every day – they follow you along in your life. Mom spent many sleepless nights working really hard with all of us. She and my dad, a chemistry teacher, felt an education was an investment, for the person and the entire community.

COURTESY OF LWALA COMMUNITY ALLIANCE

Parents and children waiting to be seen; overall, about 2,800 patients are seen each month. In Lwala and the surrounding area, rates of infant and maternal mortality are high. Out of 1,000 live births, 95 babies will die before their first birthday.

Q. What made you decide to become a physician?

A. Growing up in this village with no electricity, no running water, and where many a time I saw family members and friends die before they could get to the hospital. I remember the day my friend's mom died in childbirth. They were trying to get her to nearest hospital and she died in the wheelbarrow and they brought her back. That was one of my formative moments in deciding I wanted to become a doctor.

My father kept saying, 'this should not be happening.' He introduced me to this book, *Where There Is No Doctor*. I learned a lot from that. My goal as a boy was to get to Nairobi, where the best high schools were. I was admitted to the prestigious Alliance High School, the first in my village to go there.

COURTESY OF LWALA COMMUNITY ALLIANCE

A son of Lwala, with his cow. [Below] Outreach workers from the Lwala Community Alliance, whose efforts extend to prevention and education, visit a new mom in her home. Health care workers serve a catchment area of approximately 25,000 people.

COURTESY OF LWALA COMMUNITY ALLIANCE

Q. When you look back on what you and your brother Fred have accomplished, what thoughts come foremost to mind?

A. I have a mixture of feelings. Part of it is this dichotomy of celebrating what we've been able to accomplish but realizing there is a lot to be done. My father died from complications from HIV/AIDS the month before the clinic's groundbreaking ceremony in 2007.

My mom died a year before that. I thought maybe if we had only opened the clinic a couple of years earlier, they would have seen the fruits of their labor, or at least gotten a chance to attend our graduations. My mom passed away four months before my graduation; she was 47; and my dad was 55 when he died a year later, just before my brother Fred's graduation from Dartmouth.

And so we've come through all of this.

I look at is as a mixture of celebrating in terms of honoring their memories and in terms of helping other HIV/AIDS orphans and trying to prevent other kids from losing their parents. Strengthening our HIV program is a major goal with the hope of eliminating mother to child transmission.

I am proud of the progress we've made – 96 percent of the children in the village and surrounding areas are now delivered in a health care setting. But we want that to reach 100 percent. And the hospital has been recognized as the best sub-district hospital, which has brought in support from the government in public health, education, medical outreach and economic developed. We are digging wells and putting in latrines.

There is despair and poverty there, but it is not hopeless. I see this as a story about hope.

I hope others will, too, and 'pass its spirit forward' in their own communities. ❖

Community forum seeks ways to quell overdose epidemic in RI

Less than 20 percent of physicians use prescription monitoring database

MARY KORR
RIMJ MANAGING EDITOR

Dr. Michael Fine, Rebecca Boss, and Michelle McKenzie listen to Elise Reynolds, who shared her story of how she lost her two sons to overdoses.

PROVIDENCE – At a community forum on overdose prevention held February 19 at the Miriam Hospital, Director of the R.I. Dept. of Health Dr. Michael Fine's words gave the grim statistics: seven more dead of drug overdoses in the past week, 45 since January. He said that 28 of the dead had shown evidence of fentanyl-laced heroin in their bloodstream.

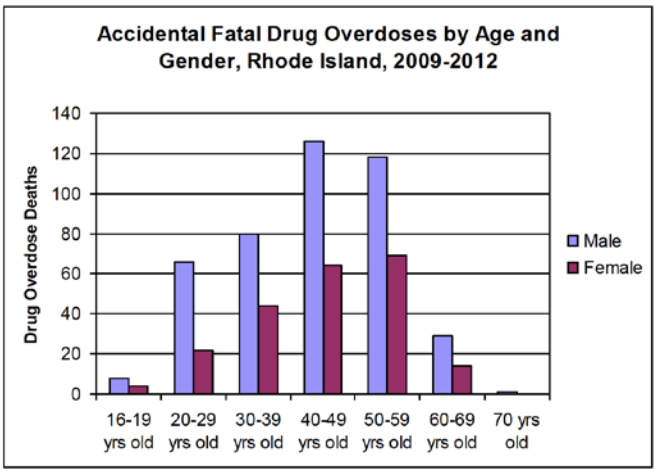
On the podium, gold lights remembered the dead and symbolized the hope that something can be done to reverse the epidemic. Kim, a mother from Woonsocket, was one of a handful of parents who put a face to the numbers. "I lost my son from an overdose a week-and-a-half ago. He is being buried tomorrow."

One man related how he has been in recovery for 40 years. He has lost one son to addiction; another has been sober for six years. He also has a grandson in recovery, he said. His purpose in speaking was to describe the sense of isolation a person suffering from addiction often feels, and the stigma attached to it.

"This stigma can keep people from accessing care," said Rebecca Boss, the administrator of Behavorial Healthcare Services for the state. She said the medical community, too, has much to learn about medication-assisted addiction recovery and related the story of a physician who would not prescribe methadone to a patient, because he didn't like the drug. "That's like offering a patient open-heart surgery because the doctor doesn't like angioplasty. Abstinence does not work – medicated-assisted recovery in a treatment plan does."

She said expanding treatment options in "health homes" and access to the opioid antagonist Narcan once patients leave treatment can save lives. "Patients are most vulnerable when they first step out the treatment door," she said.

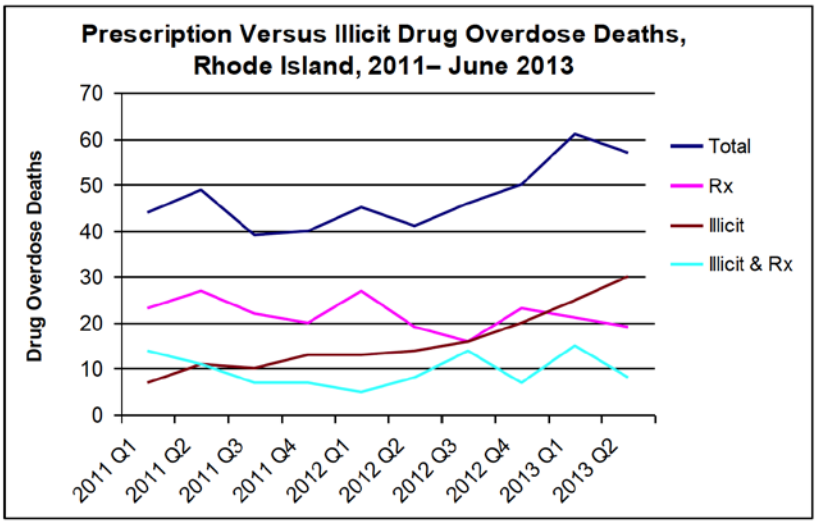
A.T. Wall, director of the Dept. of Corrections, said those leaving incarceration are at great risk of relapse into drug use and said the department is engaged with Dr. Jody Rich in a pilot project providing suboxone and



Data source: Office of the Rhode Island Medical Examiners, 2009–2012

PHOTOS BY MARY KORR

Jonathan Goyer, in recovery, overdosed last year and was saved when a friend who is a nurse found him and injected him with Narcan. Both spoke at the meeting.



Rx = Prescription drug

Data source: Office of the Rhode Island Medical Examiners, 2011–2013

educational training to inmates before returning them to the community.

Miriam Hospital researcher Michelle McKenzie, director of the Preventing Overdose and Naloxone Intervention (PONI) program at Miriam, educates high-risk populations on drug-overdose risk and prevention, and trains them to administer Naloxone, and then distributes the drug following training. She said making the drug available, such as Walgreen's does, saves lives.

PHOTO BY MARY KORR

A T-shirt, held up by a member of the audience, remembers an overdose victim.

Dr. Fine said key intervention strategies have been implemented in the state over the past year and that Naloxone is now available to anyone at all Walgreens pharmacies without a prescription. In addition, the Dept. of Health launched its prescription monitoring program, but it has been under-utilized. Only 18 percent of prescribers have registered. He would like to more physicians utilize it, and for the program to expand and include schedule 1V and V drugs prescribed nationwide. The program now allows prescribers to currently see what schedule II and III drugs their patients are taking in the state.

At the forum, Craig S. Stenning, the director of the Department of Behavior Healthcare, said the department recently issued emergency regulations requiring that all substance abuse and mental health treatment agencies in Rhode Island have their staff educated in overdoses and the use of Naloxone and then to provide that education to all of their patients.

In addition, state police officers are now being trained to administer the opioid antidote and should soon have Narcan on the job as they are often first responders to overdose cases. Kim, the mother from Woonsocket, hoped it gets to her town's local police.

Presenters at the forum stressed prevention, expanded treatment options, increased behavioral health funding, and reducing the stigma attached to addiction all need to happen before the epidemic can be controlled.

The forum was sponsored by RI-CARES, an advocacy and recovery organization, the Miriam Hospital, the Department of Health, and the state department of Behavioral Healthcare. ❖

For Physicians:

Special Focus on Opioid Prescribing

from the RI Dept. of Health, RIMJ, Nov. 2013

Patterns of Prescribing – The Rhode Island Prescription Monitoring Program

Catherine Cordy, RPh; Patrick Kelly, RPh

Opioid Prescribing: Guidelines, Laws, Rules, Regulations, Policies, Best Practices

James V. McDonald, MD, MPH

Bryant U. to start School of Health Sciences with PA program in Jan. 2015

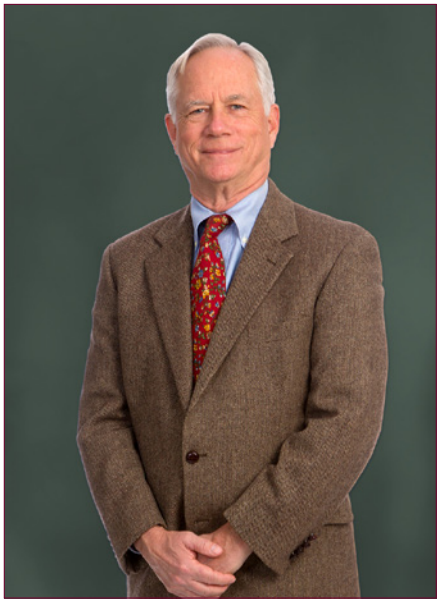
Will partner with Alpert Medical School

SMITHFIELD – Bryant University and The Warren Alpert Medical School have signed an agreement granting the use of the Alpert Medical School facility for key aspects of Bryant's new Master of Science in Physician Assistant Studies graduate program (MSPAS).

The physician assistant program, currently in the process of accreditation, will begin accepting applications in April 2014. The inaugural class of 32 students will begin the 27-month program in January 2015. It will be housed in a new facility to be constructed this year on the Bryant campus.

MSPAS students will complete the majority of the first year's preclinical study at Bryant and study the foundational human anatomy course at the medical school. Alpert Medical School Morphology Director **DALE RITTER, PhD**, will teach the course. Brown and Bryant will facilitate adjunct appointments for faculty.

After the first year, the Bryant PA students will take part in 15 months of clinical rotations provided through Bryant's clinical affiliations with partners including Care New England, Southcoast, and multiple specialty practices throughout the Lifespan health system, as well as independent clinical providers.



Boyd 'Peter' King, MD, is medical director for the new graduate program.

Jay Amrien, MPAS, PA-C, will serve as program director.

PHOTOS: BRYANT

JAY AMRIEN, MPAS, PA-C, serves as program director and **BOYD "PETER" KING, MD**, is medical director for the new graduate program. ❖

The planned School of Health Sciences will be housed in a new facility to be constructed this year on Bryant's 428-acre campus in Smithfield.

RIH, Brown researchers identify components in C. difficile that may lead to new diagnostic tools

BROWN

Leonard Mermel, DO

PROVIDENCE – Rhode Island Hospital researchers have identified components in Clostridium difficile (C. diff) that may lead to new diagnostic tools. The study is published online in advance of print in *The Journal of Molecular Diagnostics*.

"With the emergence of a more severe C. diff strain (NAP1/027/B1), there is an urgent need for a highly sensitive and rapid method of detection and strain typing," said **LEONARD MERMEL, DO**, medical director of the department of epidemiology and infection control at Rhode Island Hospital. "The assay we have developed has the potential to quickly and accurately indicate the presence of specific markers of certain hypervirulent strains of C. diff. We believe that rapid identification of this bacterium will assist in timely initiation of antimicrobial therapy and admission to a setting where the patient is more appropriately observed based on his or her signs, symptoms and strain of bacteria causing the infection."

The technology revealed in this study can be integrated as a point-of-care device to help quickly detect and identify C. diff strains that pose significant health threats in hospitals and other health care settings.

The funding was provided in part by the National Science Foundation and the National Institutes of Health. Other researchers involved in the study are Stephanie L. Angione and Anubhav Tripathi of the Center for Biomedical Engineering at Brown University, Aleksey Novikov, MD, and Jennifer Fieber, both of Brown University, and Aartik A. Sarma of Harvard Medical School. ❖

Classified Advertising

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Update

Appeals court directs UHC, CT. physicians to arbitration

NEW YORK, NY – On February 7, a three-judge panel on the U.S. Court of Appeals for the Second Circuit directed UnitedHealthcare and Connecticut physicians in the Hartford and Fairfield County Medical Associations to arbitration after an attempt at mediation failed.

The Court upheld an earlier district court injunction, with an amendment, keeping the physicians in the Medicare Advantage physician provider network and gave the physicians 30 days to initiate arbitration, at which time the preliminary injunction expires.

"This is a victory for our member physicians who have won another round in court to protect our patients and to let UnitedHealthcare know that we will not allow them to manipulate patient care," said Dr. Robert D. Russo, chairman of the board, Fairfield County Medical Association.

"This once again reinforces the fact that big insurance companies can't just come in the way of the doctor-patient relationship and do whatever they want derailing continuity of care. They are answerable to the law and to the public. Doctors and the associations that represent them will continue to demand accountability on the part of insurance companies like UnitedHealthcare that strayed from their expected mission of providing care through access, improving quality and cost effectiveness (to decrease premiums) but not just focus on their profits to fill their pockets," said Dr. Bollepalli Subbarao, president of the Hartford County Medical Association. ❖

UHC drops Yale-New Haven

In a related matter, UnitedHealthcare recently notified customers that, effective April 1, 2014, Yale-New Haven Health System will no longer be a provider of the company's Medicare Advantage plans.

In a statement, Conn. Gov. Daniel Malloy said that due to this change, beneficiaries enrolled in this plan will not be able to continue seeing their doctors in the Yale-New Haven network, unless they re-enroll in original Medicare by February 14, 2014.

State Department of Aging (SDA) Commissioner Edith Prague said, "I am extremely concerned that so little notice was given to Medicare Advantage beneficiaries about this change. This is not only a disruption in the lives of these seniors, but it also severs the relationships current beneficiaries have established with their trusted doctors." ❖

Women & Infants researchers uncover way to target ovarian cancer treatment

PROVIDENCE – Researchers at Women & Infants Hospital have developed a biologic drug that would prevent the production of a protein known to allow ovarian cancer cells to grow aggressively while being resistant to chemotherapy. This would improve treatment and survival rates for some women.

The work coming out of the molecular therapeutic laboratory directed by **RICHARD G. MOORE, MD**, of the Program in Women's Oncology, entitled "HE4 (WFDC2) gene overexpression promotes ovarian tumor growth" was recently published in the international science journal *Scientific Reports*, a Nature publishing group.

WOMEN & INFANTS HOSPITAL

Richard G. Moore, MD

"We have known that the protein HE4 is present in women who have ovarian cancer," says Dr. Moore, who created the Risk of Ovarian Malignancy Algorithm (ROMA) to determine if a pelvic mass is cancerous based on the levels of HE4 and another protein. "What no one knew was why the protein is there or what activates it."

The WFCD2 gene produces a "messenger RNA" that encodes for the HE4 protein, not only imparting an aggressiveness to the tumor, enabling it to grow quickly, but also conveying a resistance to chemotherapy drugs used to treat the tumor.

"It plays a part in allowing the cancer to grow without restriction," Dr. Moore says. "We have determined that HE4 plays a part in allowing ovarian cells to become cancer cells, giving them the ability to grow and resist chemo."

Once they identified the function of the protein, Dr. Moore's research team was able to design a biologic drug that can prevent the messenger RNA gene from creating HE4. The novel biologic has been tested in cell and animal models, and the results are that the cancer does not grow as aggressively and responds to chemotherapy.

"We would give this biologic – which has minimal side effects – to any patient we identify through a blood test as producing HE4," he says, adding that oncologists have recognized that women with high levels of HE4 do not respond to treatment and their survival rates are lower. "This would be an individualized treatment that could increase survival rates of some women with ovarian cancer."

Dr. Moore and his team will continue testing the biologic drug, preparing for clinical trials in humans.

"This is a tremendous discovery and could mean the difference between life or death for some women with ovarian cancer," says **MAUREEN G. PHIPPS, MD, MPH**, chief of obstetrics and gynecology at Women & Infants. "Dr. Moore's research is ground-breaking in the area of ovarian cancer, and it's all happening in his laboratory in the Knowledge District of Providence." ❖

Maternal-fetal specialists at W&I question oxygen use for intrauterine resuscitation

PROVIDENCE – When a fetal heartbeat pattern becomes irregular during labor, many practitioners give oxygen to the mother. But questions remain whether this oxygen supplementation benefits the fetus or may actually be potentially harmful.

A clinical opinion written by third-year resident **MAUREEN HAMEL, MD**, along with maternal-fetal medicine specialists **BRENNA ANDERSON, MD**, and **DWIGHT ROUSE, MD**, of the Department of Obstetrics and Gynecology at Women & Infants Hospital, has been published in the January 10, 2014 online edition of the *American Journal of Obstetrics & Gynecology*.

The manuscript, entitled "Oxygen for intrauterine resuscitation: Of unproved benefit and potentially harmful," aimed to make recommendations about the safety of the use of maternal oxygen supplementation in laboring women.

According to lead author Dr. Hamel, "Maternal oxygen is often given to laboring women to improve fetal metabolic status or in an attempt to alleviate non-reassuring fetal heart rate patterns. However, there are only two randomized trials investigating the use of maternal oxygen supplementation in laboring women. These studies did not find that supplementation is likely to benefit the fetus and may even be harmful."

Based on their research, the team concludes that until it is studied properly in a randomized clinical trial, maternal oxygen supplementation in labor should be reserved for maternal hypoxia (lack of oxygen) and should not be considered an indicated intervention for non-reassuring fetal status. ❖

Stroke Survivor, Lisa Deck shared her story at the Go Red For Women Luncheon accompanied by her mother Ann and daughter Kaitlyn.

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News briefs

CharterCARE, Prospect Medical Holdings begin official HCA process for approval

PROVIDENCE – CharterCARE Health Partners (CCHP), the corporate parent of Roger Williams Medical Center, Our Lady of Fatima Hospital and Elmhurst Extended Care, recently joined with California-based Prospect Medical Holdings (PMH) to make an initial presentation to the Rhode Island Health Services Council, one of two regulatory agencies that is reviewing the CCHP-PMH proposal.

Senior management of CCHP and PMH co-presented a 90-minute description of the joint venture proposal. This included a review of the planned regional coordinated care health system, the benefits this would bring to CCHP and to Rhode Island, and why PMH's expertise in designing innovative managed-care reimbursement models, strong allied physician networks and management and fiscal processes is a natural fit for CharterCARE.

The next step in the regulatory review process, as proscribed by the Rhode Island Hospital Conversion Act, will include additional hearings before the review committee and a series of public hearings in the metropolitan and north central Rhode Island areas. ❖

Lifespan's Comprehensive Cancer Center opens clinic to target upper GI cancers

PROVIDENCE – The Comprehensive Cancer Center at Rhode Island, The Miriam and Newport hospitals has opened the Upper Gastrointestinal Multidisciplinary Clinic (UGMDC) for the treatment of esophageal, stomach, pancreatic, liver and bile duct/gallbladder cancers.

"Receiving a cancer diagnosis is overwhelming for the patient and his or her loved ones," said **KEVIN CHARPENTIER, MD**, director of the UGMDC. "There is a lot of information to absorb and a lot of clinicians involved in the patient's care. At the UGMDC, we coordinate all care in one setting and walk patients and family members through every step of their care – from diagnosis to treatment to survivorship."

At diagnosis and during one visit, patients meet with physicians in all related disciplines including surgical oncology, medical oncology, radiation oncology and vascular radiology. The team then meets with the patient to recommend a personalized care plan.

Each patient also will meet with a nurse practitioner who is trained in oncology, specializing in gastrointestinal cancers and who serves as a patient navigator. ❖

HARI: Hospitals provide $6.7B to RI economy

CRANSTON – The Hospital Association of Rhode Island (HARI) released its annual economic impact report on Feb. 11, which details $6.7 billion in economic contributions. "Hospitals are a key ingredient to Rhode Island's quality of life. They are a major contributor to the state economy and to keeping families healthy and secure by providing needed health services," said **EDWARD J. QUINLAN**, HARI president. "The financial health of hospitals is directly tied to the strength of our state overall. Hospitals must be financially strong to continue investing in our state's economy."

Highlights of hospitals' economic impact in 2012 include:

- Employing 20,800 health care professionals
- Supporting 22,300 jobs with economic activity
- Paying $1.9 billion in wages
- Spending more than $1.4 billion on goods and services
- Dedicating $90 million to improving facilities and upgrading technology ❖

Bryant University announces its new School of Health Sciences

and its first Clinical Program: Physician Assistant Studies

Architectural rendering courtesy of LLB Architects

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- Strong teams and a supportive learning environment, experienced educators, small group learning opportunities for students, and a low student-faculty ratio.
- A newly-constructed state-of-the-art facility on Bryant's Smithfield campus, including new classrooms, a high-fidelity simulation laboratory, and a physical exam laboratory, with training in the anatomy lab and access to the medical library at The Warren Alpert Medical School of Brown University.
- A distinctive focus on the business of health care, with an introduction to the management principles of medical practice — from quality management to organizational governance — in the program's second year.
- Rich and rigorous clinical experiences, with 13 specialty rotations — more than any other regional program. Students will be teamed with preeminent doctors affiliated with The Warren Alpert Medical School of Brown University, Care New England, Southcoast Health System, and the Lifespan health system as well as distinguished independent clinical providers throughout southern New England.

Future programs will include Health Care Management and Health Care Policy.

Visit www.bryant.edu/WearTheWhiteCoat to learn more.

Bryant University has applied for provisional accreditation from the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA). The University anticipates matriculating its first class in January 2015, pending provisional accreditation in September 2014. Provisional accreditation is an accreditation status for a new PA program that has not yet enrolled students, but at the time of its comprehensive accreditation review, has demonstrated its preparedness to initiate a program in accordance with the accreditation standards. The program will not commence in the event that this provisional accreditation is not received.

Bryant University | Smithfield, RI

Recognition

Angela Anderson, MD, Receives Hamolsky Outstanding Physician Award

Award honors a physician who has made exceptional contributions to medicine

PROVIDENCE – Hasbro Children's Hospital pediatrician **ANGELA ANDERSON, MD**, has received the 2013 annual Milton Hamolsky Outstanding Physician Award from the Rhode Island Hospital medical staff.

Dr. Anderson, associate professor of pediatrics and emergency medicine at the Alpert Medical School, is quadruple board certified in pediatrics, pediatric emergency medicine, clinical pharmacology/toxicology, and hospice and palliative care medicine. For nearly 18 years, Anderson was an attending physician in the Hasbro Children's Hospital pediatric emergency department where she still consults on toxicology cases and pain management. In 2010, she began her current role as director of pediatric pain and palliative care at Hasbro Children's Hospital.

"Dr. Anderson's contributions to our pediatric emergency department are immeasurable as a clinician, educator, and advisor to others," said **SUSAN DUFFY, MD**, medical director of the Hasbro Children's Hospital emergency department. "She has spent many years bringing expertise, comfort and humor into an emergency setting that can be frightening and stressful for families."

"Dr. Anderson has not only tirelessly served our hospital, but also our local community and far beyond," said **ROBERT KLEIN, MD**, pediatrician-in-chief of Hasbro Children's Hospital. "Her dedication to pain management and palliative care services embodies our patient and family centered care mission, but more importantly, exemplifies her endless compassion and humility."

LIFESPAN

Angela Anderson, MD

She has also provided volunteer medical care to refugees in Somalia and Ethiopia, and to underprivileged patients in Jamaica. She was deployed to New Orleans with Rhode Island Disaster Medical Assistance Team 1 for relief efforts following Hurricane Katrina in 2005. ❖

U.S. Preventive Services Task Force appoints W&I's Dr. Phipps

CNE

Maureen Phipps, MD, MPH

PROVIDENCE – **MAUREEN G. PHIPPS, MD, MPH**, chief of obstetrics and gynecology at Women & Infants Hospital of Rhode Island and executive chief of obstetrics and gynecology at Care New England Health System, has been appointed to the U.S. Preventive Services Task Force (Task Force) as one of its newest members.

The Task Force is an independent, volunteer panel of national experts in prevention and evidence-based medicine. Members come from many health-related fields, including internal medicine, family medicine, pediatrics, behavioral health, obstetrics/gynecology, and nursing.

Dr. Phipps is the Chair and Chace-Joukowsky Professor in the Department of Obstetrics & Gynecology and assistant dean for teaching and research in women's health at the Alpert Medical School, and professor of epidemiology at the Brown University School of Public Health.

"Dr. Phipps has conducted extensive research in obstetrics and gynecology, with a focus on improving health among vulnerable populations, improving pregnancy outcomes, and reducing disparities and adolescent pregnancies. I look forward to working with her to fulfill the Task Force's mission of improving clinical preventive care for all Americans," said Dr. Virginia Moyer, Task Force chair.

Dr. Phipps' research focuses on improving health for vulnerable populations and her research interests include adolescent pregnancy, pregnancy outcomes, postpartum depression, prenatal care, contraception, and reducing disparities. She is an associate editor for the *American Journal of Obstetrics and Gynecology* and past chair of the American Congress of Obstetricians and Gynecologists Committee on Health Care for Underserved Women. ❖

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Recognition

NHPCO

Dr. Joan Teno accepts the National Hospice and Palliative Care Organization's inaugural Quality Leadership Award last year.

Robert Wood Johnson Foundation awards Dr. Teno investigator award

$335,000 grant will support study on palliative care, hospice teams

BOSTON – The Robert Wood Johnson Foundation (RWJF) has awarded gerontologist **JOAN TENO, MD**, professor of health services, policy and practice in the Brown University School of Public Health, an Investigator Award through its Health Policy Research program. Dr. Teno is one of 11 scholars nationwide to win the honor, which comes with $335,000 in support for her work.

Dr. Teno said she will use the funding over the next three years to study the role of palliative care teams and hospice providers, including publicly traded chains, in the evolving health care system. Her previous research has found that although Medicare has made hospice mainstream, many elderly patients still experience unnecessarily aggressive care and burdensome transitions, for instance from the nursing home to intensive care, shortly before dying. She will use a variety of methods including in-depth interviews and Medicare data analysis in her research "to envision a future that promotes patient- and family-centered medical care." ❖

Brown neuroscientist wins innovations' award form research foundation

BROWN

Christopher I. Moore, PhD

CHICAGO – **CHRISTOPHER I. MOORE, PhD**, Department of Neuroscience at Brown University, was one of three winners of the 2014 Scientific Innovations Award from the Brain Research Foundation (BRF).

With the $150,000 grant he will conduct research to determine if biological strategies can be effective at modulating thalamic bursts. A "burst" is a brief period of high-frequency activity within neurons that can have a powerful impact on brain circuits. Symptoms in human diseases like Parkinson's and epilepsy are thought to be influenced by "overly-exuberant" bursting.

Data gathered may indicate potential for entire new treatment strategies, reducing or eliminating the need for intrusive and painful electrode implants.

"The innovation that these researchers bring to addressing the scientific understanding and potential treatment of devastating diseases is inspiring," said Terre A. Constantine, PhD, BRF's executive director. "If this research proves these approaches successful, many areas of neuroscience will benefit."

The SIAs support innovative discovery in both basic and clinical neuroscience. This funding mechanism is designed to support creative, cutting edge research in well-established research laboratories, under the direction of established investigators.

The grants are specifically for projects that may be too innovative and speculative for traditional funding sources but still have a high likelihood of producing important findings in a very short time frame. It is expected that investigations supported by these grants will yield high impact data and result in additional major grant funding and significant publications in key journals.

The other recipients are W. Mark Saltzman, PhD, Department of Biomedical Engineering, Yale University, and Anthony Zador, MD, PhD, Department of Neuroscience, Cold Spring Harbor Laboratory. ❖

Hasbro earns Silver Beacon Award

PROVIDENCE – The Hasbro Children's Hospital pediatric intensive care unit (PICU) has earned a Silver Beacon Award for Excellence from the American Association of Critical Care Nurses (AACN). This three-year award recognizes Hasbro Children's Hospital for meeting or exceeding national quality standards for improved patient outcomes and for a healthy work environment. The hospital's PICU is one of only 21 in the U.S., there are 337 nationally, and one of only three in New England to hold this designation. ❖

Recognition

LIFESPAN

The 2013 Brite Lites ceremony at Hasbro Children's Hospital honored Brite Lites Award winners Petra Klinge, MD; Kimberly Taylor, RN; Miladys Guerrero, RN; Tara Brown, RN, and Roxanne Price.

Hasbro honors 'Brite Lites' employees

PROVIDENCE – Hasbro Children's Hospital recently honored five hospital employees as "Brite Lites" for 2013. The Brite Lites recognition program, now in its 11th year, singles out hospital employees who have provided outstanding care to patients. This year's Brite Lites were chosen from more than 90 nominations made by patients and their families. The celebration coincided with the 20th anniversary of the official opening of Hasbro Children's Hospital, which first opened on Valentine's Day 1994. ❖

Fatima honors Dr. Veltri for outstanding contributions to hospital

PROVIDENCE — **FRANK VELTRI, MD**, was recently honored by the medical staff of Fatima Hospital/St. Joseph Health Services of Rhode Island for his outstanding contributions to the hospital. Dr. Veltri has practiced dermatology for more than 40 years and was recognized at the ceremony by Dr. Steven Colagiovanni, St. Joseph medical staff president, for his professionalism and the example he has set for generations of physicians at Fatima Hospital. ❖

FATIMA

Dr. Frank Veltri (center), shown with CharterCARE President and CEO Kenneth H. Belcher and Dr. Steven Colagiovanni, was recently honored by the medical staff of Fatima Hospital.

Obituary

EARLE TRAVIS, DO, 83, of East Greenwich, RI, passed away February 18, 2014 at Rhode Island Hospital. A native of Rhode Island, Dr. Travis graduated from University of Rhode Island in 1954 and Philadelphia College of Osteopathic Medicine in 1958.

He served the United States Army in the 705th, AAA Gun Battalion, BTRY D from 1950 to 1952 in the Korean Conflict.

Dr. Travis completed an internship at Cranston General Hospital in 1959 and radiology residency at Pontiac Osteopathic Hospital in Pontiac, Michigan 1966. He was member of the medical staff at Cranston General, Notre Dame, Fuller Memorial and Kent County Hospitals. Dr. Travis served in the capacity of radiology department chairman, chief of staff and on the Board of Trustees at Cranston General Hospital.

He was a member of the American Osteopathic Association and past president and secretary of the Rhode Island Society of Osteopathic Physician and Surgeons. Dr. Travis was a faculty member of the University Of New England College Of Osteopathic Medicine, serving as clinical professor of radiology, member board of trustees, finance committee and Deans Advisory Board.

Dr. Travis had an incredible work ethic, loved and lived for his family. He was an avid outdoorsman. His loves and hobbies included genealogy, fishing, hunting, Veterans of Foreign Wars Post 8955 and remained very active, meeting weekly with fellow surviving members of 705th AAA Gun Battalion BTRY D.

He also was a member of the Hopkinton Historical Association and the Franklin Lodge of Masons Number 20.

He is survived by his loving wife Carolyn (Spencer) Travis, brother; Kenneth L. Travis of Springfield, Virginia, four children; Doreen Kells, Dr. Earle Travis Jr., Diane Gapoold, Dean Travis and six grandchildren.

Donations will be accepted on behalf of Dr. Earle Travis for 705th AAA Gun Battalion BTRY D at Santander Bank, 765 Main St., East Greenwich, RI 02818.

Appointments

MHRI

Laura Forman, MD

Laura Forman, MD, appointed Physician-in-Chief of Emergency Medicine at MHRI

PAWTUCKET – Memorial Hospital of Rhode Island recently appointed **LAURA FORMAN, MD, FACEP**, as the new Physician-in-Chief of emergency medicine. Dr. Forman is a member of Affinity Physicians and will work at Memorial Hospital.

She earned her medical degree from the University of Vermont College of Medicine and completed her emergency medicine residency at Baystate Medical Center through Tufts University School of Medicine. She was chief resident in her final year. Dr. Forman worked as an attending physician in the Emergency Department at Memorial Hospital of Rhode Island before going to Kent Hospital, where she was assistant director of the Emergency Department. She also completed the American College of Emergency Physicians Teaching Fellowship.

Dr. Forman is a clinical instructor in emergency medicine at the Alpert Medical School. A fellow of the American College of Emergency Physicians, she is a member of the Rhode Island Medical Reserve Corps, American College of Emergency Physicians, American Medical Association, Rhode Island Medical Society and Women in Medicine. She is fluent in Spanish.

Dr. Forman's areas of clinical interest include: medical education, international health and disaster management. ❖

RWMC

Cynthia M. Alves, MD

Dr. Cynthia M. Alves named President of Medical Staff at RWMC

PROVIDENCE – **CYNTHIA M. ALVES, MD, FACC**, has been elected president of the medical staff at Roger Williams Medical Center. She succeeds **DR. MARK BRAUN**, who completed his term as president on December 31. Other officers elected are **DR. ANDREA DOYLE** (vice president), **DR. PONNANDAI SOMASUNDAR** (treasurer/secretary and Medical Executive Committee chair), and **DR. GREGG ALLEN**, **DR. RAJNISH BANSAL**, and **DR. RITESH RATHORE** (at-large members).

Dr. Alves' expertise is in clinical, non-invasive, and preventive cardiology. She has sub-specialty training and board certification in nuclear cardiology. A member of the Cardiovascular Institute of New England, Dr. Alves is a faculty member in the internal medicine teaching program at Roger Williams. ❖

RWMC names Dr. Thomas M. Ruenger Chairman of Dermatology

Formerly vice chair of dermatology dept. at Boston University

RWMC

Thomas M. Ruenger, MD

PROVIDENCE – **THOMAS M. RUENGER, MD, PhD**, has been named chairman of the Department of Dermatology at Roger Williams Medical Center. He joins Roger Williams from Boston University, where he served as vice chairman of the Department of Dermatology. He will retain his academic appointment at Boston University School of Medicine as Professor of Dermatology, Pathology and Laboratory Medicine.

Following his graduation from the Medical School of Christian-Albrecht University (Kiel, Germany), Dr. Ruenger completed a postdoctoral fellowship in the Laboratory of Molecular Carcinogenesis at the National Cancer Institute in Bethesda, MD.

His clinical interests include phototherapy, photodermatology, psoriasis, melanoma, cutaneous lymphona, and general medical dermatology. He has also worked on skin aging, scleroderma, and wound healing.

Currently, he is editor-in-chief of the journal *Photodermatology, Photoimmunology & Photomedicine* and serves on several committees of the Society for Investigative Dermatology, the American Academy of Dermatology, and the Photomedicine Society. ❖

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The Communicable Infections of Childhood

STANLEY M. ARONSON, MD

THE PRACTICING PHYSICIANS OF THE UNITED STATES MAY BE NEATLY divided into two groups: those who currently prescribe the many effective vaccines to prevent such diseases as measles and chickenpox; and those older practitioners, in the absence of such vaccines, who had daily encountered these exanthematous viral infections of childhood.

'Rash', in English, conveys two meanings: as an adjective describing actions that are quick or impulsive ("Picking up the check for the entire class reunion was a rash act.") and as a cutaneous manifestation of some systemic process (and then derived from the Old French, *rasche*). And its synonym, *exanthem*, is from the Greek, *anther*, meaning to blossom, to erupt forth and has generated such current words as anthology, enanthema and anthozoa – but not anthrax which comes from another Greek word meaning coal, as in anthracite.

Measles, literally skin spots or blemishes, is a borrowing from the Middle Dutch *masel* (a blemish) evolving then into early English, *maseles*, a word in the 14th Century that also meant leper. Another descendant is the Latin, *miser*, meaning wretched or unfortunate.

Chickenpox is known alternatively as *varicella,* a diminutive form of the Latin, *varius*, meaning evolving or changing, and descends immediately from the Latin, *variola*, the classical name for smallpox.

Mumps, not an exanthematous infection but nonetheless a viral contagion of childhood, gets its name from the Germanic word, *mump*, meaning facial grimace, and perhaps earlier from the Old German, *mump*, meaning to sulk.

The word, pox, as in chickenpox, was the plural of the Old English, *pock*, meaning a small scar. It defined the pandemic smallpox (which, in turn, was called 'small' to distinguish it from the late 15th Century epidemic of syphilis, then called the great pox). The word, pox, by the 19th Century, had become a generic word meaning venereal infection or curse. Thus, when one member of Parliament declared to a fellow member: "You will die either on the gallows or of the pox." The response was: "That must depend on whether I embrace your principles or your mistress."

PAGE FROM *CATOPTRUM MICROSCOPICUM*, JOHANN REMMELIN, 1619 FROM THE RIMS COLLECTION AT THE HAY LIBRARY

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Back in the Day: Tenement Surgery in the Kitchen

MARY KORR
RIMJ MANAGING EDITOR

Seventy-five years ago, in the April 1939 issue of the *Rhode Island Medical Journal*, **DR. WALTER LEE MUNRO** of Providence reported on a surgical case of his 40 years prior, in 1899.

In this instance, apparently there was some kind of mix-up at Rhode Island Hospital, where the baby girl was brought in and diagnosed with spina bifada, but then "discharged untreated," according to Dr. Munro. The frantic mother returned to the family doctor, a **DR. M. P. MAHONEY**, who referred her to Dr. Munro.

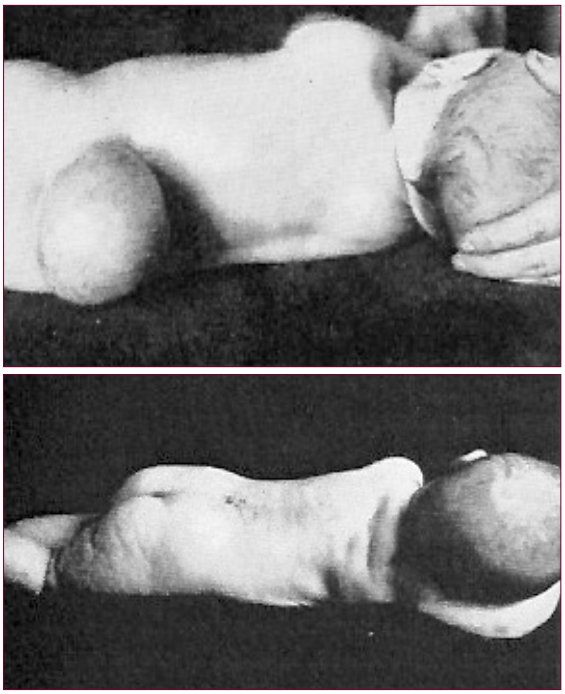
He described his patient, 7-week-old Josephine N., as "strong, well-nourished, free from any blemish or imperfection except for a large tumor in the region of the second and third lumbar vertebrae…about three-quarters as large as the child's head."

Dr. Munro agreed to operate, and admit her to his service at RIH, but the mother would not return as a result of her first "abortive attempt." And so on April 12, 1899, Dr. Munro operated on the infant in the kitchen of the family's two-story tenement house in East Providence. The procedure was performed on an ironing board set between two tables.

Dr. Munro wrote that the room was neat and clean "but there could be no approach to asepsis." The instruments were boiled and then dipped in alcohol, and the cotton and sponges were baked in the oven; an antiseptic solution was used throughout the operation.

DR. ALBERT H. MILLER, who would later become the managing editor of the *Rhode Island Medical Journal*, administered ether to the infant. Dr. Mahoney assisted. The case is described as follows by the surgeon:

A shallow longitudinal incision was made over the circumference of the tumor and the outer tegumentary coat and the dura carefully dissected separately and reflected back, and the delicate, transparent arachnoid, its inner surface covered with nerve filaments, was exposed. A clear fluid was evacuated from the sac, the arachnoid tucked as gently as possible into the defect of the spinal column and covered in by the dura which was held in place by buried sutures. The redundant flaps were now trimmed to size and the external wound closed by interrupted sutures and dressed with sterilized gauze and cotton.



PHOTOS: RHODE ISLAND MEDICAL JOURNAL

Before-and-after photos of the infant Josephine N., who was operated on for spina bifada in the family kitchen in East Providence, 1899.

Little Josephine recovered without incident and Dr. Munro noted that the success of the operation was due to a simple fact: "no attempt was made to remove the sac of the meningocele…and the arachnoid was preserved intact… thus obviating the dangers of paralysis and loss of function."

He concluded the article by noting that, back in the day, "sixty or more years ago, every surgeon, however eminent, was at the same time a general practitioner."

Dr. Munro included a quote in Latin under his byline: *Tempora mutantur et nos in illis mutamur.* The times are changed and we are changed with them. ❖