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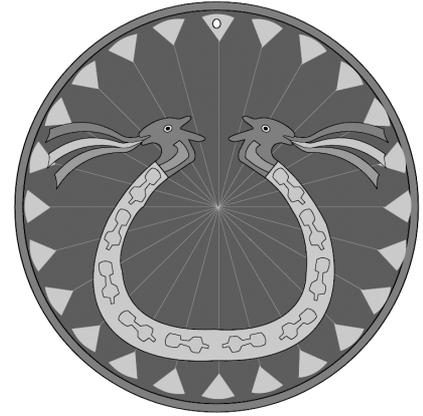
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Commentaries

Medical Notes



My daughter is an intern. She was lamenting the poor quality of her notes in patient charts. “I write sloppy notes. They don’t have all the information they should. They’re not complete. I’m embarrassed.” I reassured her that her notes were probably fine, maybe even excellent since she’s very exacting and her own harshest critic. Nothing she does is ever below average, which is, of course, the vicious cycle that most of us in medicine suffer from, high expectations and compulsive natures. In baseball, a batting average tells us who is average, who is below and who is above. In professional life, other than looking at income, which is usually not how we rate ourselves, grant dollars or numbers of publications for medical researchers, there are no hard data to use to rate ourselves. Like the children in Lake Wobegon, we all consider ourselves above average. However, back to medical notes...

I told her about my note on Johnny D when I was a subintern in pediatrics. Johnny was about 7 and suffered from hemophilia. He was a frequent flier who was admitted to the hospital every few weeks. One early time he had hit his head and bled into his brain. His hyperactivity either stemmed from that or simply worsened with that. Now that he was seven, he required admission with almost every baby tooth coming out. There was no factor VIII replacement in those days. In retrospect, Johnny wasn’t very complicated, but as a subintern I thought he was. After all, he had been admitted scores of times.

Medical student presentations at rounds at my medical school were expected to be “complete.” This required a review of each hospitalization (and from memory). Obviously this was well nigh impossible for Johnny’s case, but I did what I could. To prepare for this I decided to summarize each hospital admission for the admission note. I went through many charts, summarizing each clinical course. In retrospect I think this could have been collapsed into: 27 hospitalizations for bleeding related to

hemophilia, hyperactivity, all treated with epsilon amino caproic acid, a non-specific clot enhancing drug, no end in sight.

I thought I had done a good job. In fact, I had done a good job. More importantly, I learned an important lesson. The hematology fellow came by, reviewed the current record and asked to see the student who wrote the 5 page note on Johnny. I introduced myself. He said, “That’s a great note but you should know that no one is going to read it. It’s too long. Who has time to read a note so long?” I was crushed but he was correct. I wouldn’t read a note that long by a medical student, maybe by anyone other than a world renowned medical scholar.

When I was a neurology resident, I came across a note from the opposite end of the spectrum. At morning report we presented to the chair, in a microencapsulated form, all the admissions from the preceding day: “Mr. Jones, 76 year old man with a left middle cerebral artery stroke; Mrs. Smith, 46 year old woman with myasthenia exacerbation; Mr. Doe, 27 year old man with several seizures; Mr. X, 68 year old man with a spinal arachnoid cyst; Mrs...” “Stop”, said the chief.

“How did you diagnose a spinal arachnoid cyst?”

This was in the days before MRI or spinal CT.

“I didn’t,” said the resident. Dr V. did and the patient was admitted for a myelogram, and then for his operation.”

“How did Dr. V. diagnose a spinal arachnoid cyst?”

“I don’t know,” said the resident. “That’s all he wrote in his note, ‘Patient admitted for myelogram of spinal arachnoid cyst.’”

The next day the chief asked what the myelogram showed.

“Spinal arachnoid cyst.”

“How the heck did he know that,” asked the chief?

“I don’t know” replied the resident, “that’s all he wrote in the note.”

We all trained in the days of the “giants.” Although when I was in training there were few living giants, all my mentors had trained in the days of the giants. There used to be giants, but they all died out just before you started training, whenever that was. I sometimes do long for those days, although they were not good days for patients. I wish I could write a note in the chart that was three words long, “spinal arachnoid cyst,” but I couldn’t, and certainly I shouldn’t.

Medical notes should be accurate. I shudder when I think of the patients I referred to a famous neurologist who had peculiar theories relating handedness, autoimmune dysfunction and neurological problems. His histories were fictional. He made them up to fit his theories. Histories must be accurate. They must also be concise, so that the reader can read them in a brief time-frame. The examination should document what was evaluated and the impression should briefly give an hypothesis, or a diagnosis, explaining the thought process which led to the opinion.

It is an unfortunate aspect of our current medical predicament that we frequently lack the time to sit and think and then to write in a thoughtful manner. I worry that that time will never come back. It did exist though, back in the days of the giants.

— JOSEPH H. FRIEDMAN, MD

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One Man's Poison ... [is another's unfurrowed brow]



The ancient Sumerians, ancestors to the Babylonians, Hebrews and Assyrians, had shown resourcefulness in taking discarded scraps of meat, seasoning them with salt and herbs, chopping them up and then molding them into cylindrical shapes by stuffing the mash into cleansed animal intestine. Homer, in his *Odyssey*, talks of blood sausages; and there are sufficient references to this form of preserved meat to verify that the preparation of sausages was also widely practiced in ethnic cultures far removed from the Middle East and Mediterranean. The English word, sausage, is derived directly from the French word, *saucisse*, which in turn has descended from the Latin, *salsus*, meaning to salt and thus to preserve. Yet another Latin word for sausage is *botulus*.

The ancient Roman cuisine, particularly in the southern Italian region of Lucania, was richly enhanced by varieties of sausage. These meat-containing delicacies became closely associated with the promiscuous Roman fertility festival of Lupercalia; so much so that the early Church determined that eating sausage was a sin. By the Tenth Century, the Byzantine Empire outlawed its production and consumption.

In the Middle Ages sausages continued to enliven the peasant diet despite ecclesiastic disapproval. Each European nation developed its own formula of meats, animal blood and herbs such that geographic enclaves were closely identified with their own distinctive wines, cheeses and sausages. Germany took great pride in its immense variety of sausage, collectively called *wurst*, often naming them after one or another German city [eg, *Frankfurter*.]

The German penchant for sausage led inevitably to published instances of food poisoning associated with poorly prepared sausage. It is not that cases of sausage poisoning were confined to the German states. Rather, the German medical profession was then sufficiently advanced to underwrite numerous medical periodicals reporting new or unusual illnesses. In 1822 the German physician Justinus Kerner described cases of food poisoning, ascribing them to the consumption of indifferently prepared sausages. By 1870 these isolated cases of sausage poisoning were called botulism, named after the Latin word for sausage, to distinguish such cases from other varieties of food poisoning. The underlying biochemical cause of botulism, however, remained a mystery.

The incubation interval in individuals suffering from acute botulism—the time between ingestion of poisoned food and the arrival of symptoms—tends to be brief, generally less than a few hours. The roster of acute symptoms includes abdominal pain, nausea and vomiting, followed by a dry mouth and blurred vision. If the intoxication is more severe, these inaugural symptoms are followed by difficulty in speaking and swallowing and weakness of limb muscles. In even more severe cases, there is respiratory compromise due to the involvement of the muscles needed to breathe.

In 1895 the Belgian bacteriologist Emile van Ermengem isolated specific bacteria from sausages which had caused botulism, microorganisms now classified as *Clostridium botulinum*.

By 1944, the toxin elaborated by these bacteria was finally isolated and purified. Gram for gram, it became the world's most lethal poison. Scientists have since demonstrated that the toxin attacks the nerve endings, preventing nerve impulses from reaching, and thus activating, muscle fibers. In summary, the sole known effect of the botulinus toxin is to inactivate nerve endings and cause muscle flaccidity and paralysis. The effects are temporary, wearing off in weeks or months, but botulism will be fatal if the muscles needed to aid in breathing are widely impaired. Having isolated the neurotoxin, the development of an effective antitoxin vaccine was quickly achieved.

Cases of botulism caused by sausage contamination have become increasingly rare. Most cases of botulism now are secondary to improperly sterilized home canning of foods.

There had been a time, once, when the name Bo-Tox might have suggested a rising star from the movies or the world of jazz [such as Bo Diddley, Bo Diddie or Bo Derek]. But the discoveries of Jean and Alastair Carruthers, a husband and wife team of physicians, during the 1990s, brought specific meaning to the term as a shortening of the words, botulinus toxin. They noted that the injection of an extremely dilute solution of this toxin often flattened the folds of the human forehead, sometimes called the glabellar wrinkles, by paralyzing the subcutaneous muscles. The therapeutic erasure of these wrinkles, often associated with advanced aging, caused a rejuvenation of the cosmetically treated face lasting up to six months. By 1999 over 4.7 million botox treatments had been undertaken.

And thus, from a banal form of food poisoning in German sausage, to a recognition that certain *Clostridium* bacteria elaborate a highly poisonous neurotoxin, and finally the extracting of this botulinus toxin, taming it by extreme dilution and thus converting it into a widely used, safe cosmetic aid in erasing wrinkles and other unseemly skin folds. Other beneficial uses of bo-tox include counteracting the severe muscle spasms that often accompany limb fracture, the treatment of neck muscle spasms, strabismus [cross-eyedness], a newer therapy for tension or migraine headache and yet other medical conditions. Truly, beginning with the world's most powerful poison, a wondrous transformation, a Cinderella story.

— STANLEY M. ARONSON, MD

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Stanley M. Aronson, MD, has no financial interests to disclose.

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Anthropological Perspectives On Medicine: Introduction

Renée Shield, PhD, and Jeffrey Borkan, MD, PhD

Physicians and patients in RI are increasingly diverse. This simple fact underscores the relevance of anthropology to the practice of medicine in the US and RI. We offer this issue as a tantalizing glimpse into this field to demonstrate how anthropology's principles and methods illuminate understanding of health and healthcare.

A simple definition of medical anthropology is that it is the application of anthropological principles to the practice of medicine and health throughout the world. Anthropology broadly concerns itself with how individuals of varied cultures live their lives and interpret their experiences. Generally speaking, people are born, traverse childhood, suffer illnesses, age, and die. How these universal experiences are interpreted through the varied lenses of culture constitutes our field. Anthropological inquiry classically uses qualitative methods to suspend expectations, observe, participate, interview, conduct focus groups and oral histories, among other approaches, to question assumptions and seek these meanings; quantitative methods may also be used to enable generalization.

In RI numerous anthropologists teach, do research and often collabo-

rate with physicians. The editors of this issue are a cultural anthropologist whose career has focused on the experience of aging, health care, health policy, medical education and research in this country and a physician-anthropologist whose work has centered on primary care, health policy, medical education and research in RI and Israel.

This collection displays some of the current medical anthropological trends and perspectives in Rhode Island ranging from clinical research to medical education. The introductory paper by Dr. Borkan et al outlines practical principles of working effectively with patients from various cultures living in RI. Dr. O'Connor describes a particular medical case of culture clash in RI to underscore ways to bridge understanding. Dr. Gutmann's description of how Mexican men choose to have vasectomies shows the relevance of folk beliefs for medical decision making. Dr. Rosen et al show the use of focus groups and interviews in American Samoa to engage patients and providers in effective strategies for preventing and managing diabetes. Finally, Dr. Farrell's team demonstrates how the anthropologically-inspired method and analysis of medical

students' reflective journals about their geriatrics curriculum is an important window into how students perceive the curriculum and begin development into mature physicians. Each paper contains implications for medical practice that we hope RI physicians will find useful and relevant.

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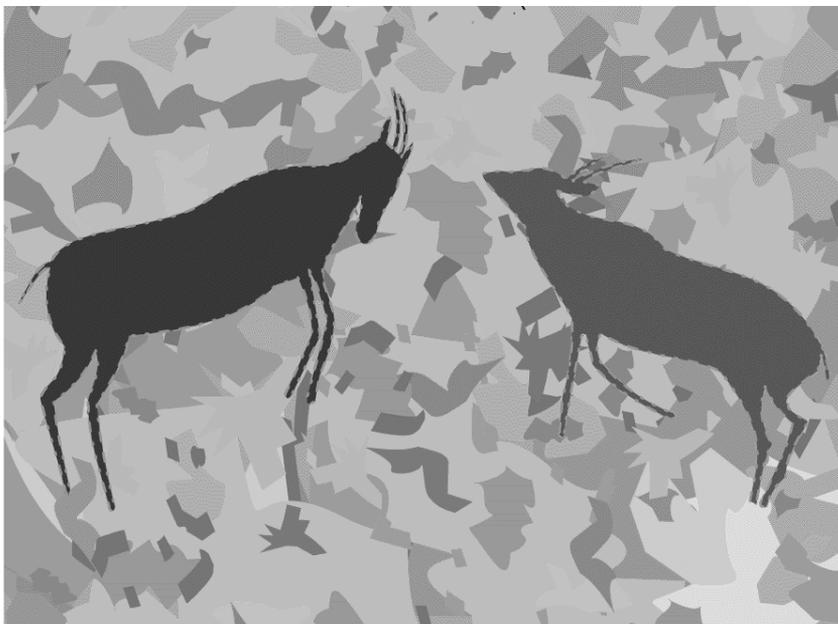
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Towards Cultural Humility in Healthcare for Culturally Diverse Rhode Island

Jeffrey M. Borkan, MD, PhD, Kathleen A. Culhane-Pera, MD, MA, Roberta E. Goldman, PhD

Patients, physicians, and society clamor for accessible, affordable, high quality health care. Though variously defined, quality care may mean, “doing the right thing, at the right time, in the right way, for the right people—and having the best possible results.”¹ Quality health care is *effective, safe, timely, patient-centered, equitable, and efficient.*² Patient-centered care “is respectful and responsive to individual patient preferences, needs, and values and ensuring that patient values guide all clinical decisions.”² To provide such care, physicians and ancillary staff must be culturally competent. Acquiring such competency may be daunting, given the range of ethnicities and groups in your practice area, not to mention local, familial, or individual variations. Where is the clinician to start? This article provides a general framework for achieving the competency, or as we prefer, the tools and the humility that are essential for delivering quality care.

Rhode Island has been described as a microcosm of the US population. In 2006, 23% of RI’s children lived in immigrant families, a percentage similar to that of the US (22%). About a quarter of these families are linguistically isolated; half of the children living in immigrant families are poor or low income; about half have parents with low education; almost a third have one or both parents with a college education or graduate degree.³ About 80% of Rhode Islanders are non-Hispanic White; 6.3% are Black; 2.7% are Asian; .6% are American Indian; and 11% identify as Hispanic or Latino of any race.⁴ Historically, many Rhode Islanders hail from English, Italian, Irish, Portuguese, and Cape Verdean ancestries. Portuguese and Cape Verdeans continue to migrate to the state, joined recently by immigrants from the former Soviet Union, Africa, Asia, Southeast Asia and India, and Latin America (particularly Colombia, the Dominican Republic, Puerto Rico, Mexico, and Guatemala). Between 1990 and 2000, the predominant regions of birth of immigrants were: Latin America (36.8%); Europe (32.9%); Asia (16.4%); and Africa (10.1%).⁴

CULTURALLY COMPETENT CARE AND CULTURAL HUMILITY

When physicians provide culturally competent medical care, they inquire about, respond to, and respect the patients’ beliefs and desires, regardless of the patient’s age, gender, religion, ethnicity, or language. (Other terms include cultural sensitivity, cultural responsiveness, or cultural appropriateness). Cultural humility is a life-long attitude and approach to cultural competence. We believe that healthcare professionals must be humble about their knowledge of patients’ beliefs and values, engage in self-reflection so that they are aware of their own assumptions and prejudices, and act to redress the imbalance of power inherent in physician-patient relationships.

Biomedicine tends to focus on the pathological processes of disease. Patients, in contrast, often focus on the psychological experience of illness, while the patient’s family and community focus on the patient’s sickness—the social determinants and ramifications of disease and illness. Culturally competent medical care requires that physicians understand cultural as well as social and psychological factors that influence how patients maintain health, treat disease, experience illness, and respond to suffering. Culture influences beliefs about nearly everything in the healthcare equation, from the understanding of bodily functions and disease etiology, to treatment choices.

CLASSIFICATION OF DISEASES

Since ethnic groups have differing classification systems for diseases, it is difficult to translate disease concepts across cultures. Entities that are recognized by certain ethnic groups and not others are often classified as folk illnesses or culture-bound syndromes. Such ailments have a defined etiology, course, and treatment, and include expressions of mental or social distress. For example:

One of our patients, Mrs. Yolanda Jackson, a 72-year-old African-American woman, has what she conceptualizes as high blood. At times,*

Mrs. Jackson can feel her blood rising up to her head. When she drinks pickle juice and vinegar, she can feel her blood return back to normal. Her 28-year-old European-American male physician believes she has hypertension and recommends a low salt diet, exercise, and medication.

“High blood” is a culture-bound syndrome while “hypertension” is a mainstream biomedical disease. Concepts of folk illnesses and biomedicine may be consistent, complementary, or contradictory. In this case, the two cultural systems may conflict due to their differences explanations of the disease (symptomatic or chronic) and the treatment (foodstuffs or medication). Mrs. Jackson and her physician could take steps to understand each other, compromise, and implement an approach that relieves both her illness and her disease.

THEORIES OF DISEASE CAUSATION

Etiologies typically fall into four categories, influenced by the cultural group’s concepts of the natural, social, and supernatural realms. Biomedicine emphasizes individual and natural causes, but patients may consider these other causes to be equally or more important.

1. Individual etiologies include behavioral risk factors for disease (e.g., lifestyle, diet, habits, and sexual behaviors) and presume the individual is responsible for the illness.

2. Natural etiologies include germs, environmental factors, humoral factors (hot/cold elements), and the heavenly bodies (moon, planets, constellations). Because these etiologies are seen as factors beyond human control, the individual has little personal responsibility for causing the illness.

3. Social etiologies arise from social interactions or conflicts (e.g., conflict between friends or family members; jealousy, envy, or hatred; giving someone the “evil eye”).

4. Supernatural etiologies reflect the culture’s religious beliefs. For example, an angry God may punish sinful thoughts or actions; *kharma* forces from previous

lives will influence events in this life; lack of respect for ancestral spirits can cause sickness. Prevention or cure is provided by religious prescriptions.

Mr. Eugene Schmidt, a 65-year-old third generation German American man, has lung cancer and wonders why it happened to him. His physician says it developed because he smoked tobacco for 50 years. His wife thinks God is punishing him, as he had turned away from the Catholic Church early in their marriage. His daughter admonishes him for not eating the vitamin supplements she had bought for him. His son encourages him to sue the ship building industry where he worked during World War II.

TYPES OF TREATMENTS

The patient, family, or community members may apply a variety of popular and lay treatments to relieve symptoms, cure illnesses, or prevent further harm; e.g., herbs, amulets and other protective clothing, rituals (including prayers and offerings), massage, nutrition, sleep, or exercise, or hygiene. Coining and cupping are common Southeast Asian lay practices to treat illnesses caused by the build-up of bad wind, or pressure. The healer first rubs the skin with a mentholated cream, then rubs a silver coin vigorously over the affected area to release the pressure or create suction with a cup, which relieves the illness. (The bruises from such treatments have occasionally been interpreted as marks of child abuse.)

Ana Soares is a 76 year old woman from Portugal who prevents getting colds and other respiratory diseases by ensuring that her head is covered when she goes from her hot kitchen to any colder environment, even if it is for just a minute. If she does get a respiratory infection, she treats it with a hot mixture of water, honey, and sage.

Sacred or secular healers who have acquired authority through inheritance, apprenticeship, religious position, or divine choice apply folk treatments. Healers include herbalists, bonesetters, traditional midwives, spiritualists, shaman, and injectionists. For example in Rhode Island's Latino communities, Puerto Ricans and Dominicans may consult an "espíritista" in

a local "botanica", herbal/spiritist shop and purchase herbs, or colored and scented lotions, liquids and candles. The colors and scents are associated with particular health or life circumstance properties, and are used to improve health, love, wealth, relationships, and luck, among other attributes.

INTERPRETATION OF BODILY SIGNS AND SYMPTOMS

Individuals declare themselves "sick" when they explain their signs or symptoms as abnormal. Socially, family members or healers or healthcare providers must concur before the patient can assume the sick role and legitimately withdraw from work and family responsibilities and receive assistance from others. Different interpretations of bodily signs and symptoms as normal or abnormal will influence this process.

Mr. Garcia Lopez, recently settled in the US from Mexico, was confused. His son was sent home from school with a draining ear, a common occurrence in Mexico, and not a cause for alarm. But then later the same month, his son was not permitted by school authorities to stay home after he was frightened (asustado) from a near-miss car accident, which could have made him vulnerable to many types of illnesses.

The significance patients attach to signs or symptoms of an illness is influenced by the individual's cognitive ideas or **explanatory models (EM)** about the sickness event.⁶ People's EMs can change as symptoms change, as response to treatment occurs, or

as the patient accepts other ways of thinking or others' experiences. The patient, family members, social network, and health care providers all have their own EMs for the sickness event, which may be congruent, complementary, or contradictory. When physicians understand these diverse EMs, they can respond to patients' needs, expectations, and fears, aim educational messages at patients' uncertainties, and negotiate diagnostic and therapeutic approaches.

A necessary skill in providing culturally competent care is eliciting and listening to patients' and family members' stories of their illness experiences, which includes the events, their models and beliefs about causation, their feelings about their disease, their quest for therapy, and their reactions to biomedical recommendations. (Table 1)

MEDICAL DECISION MAKING

Cultural beliefs, knowledge and experience, explanatory models, access, cost, and perceived efficacy influence medical decision-making. Ethnic identity—the extent to which individuals align themselves with a socio-cultural group—may influence people to seek healers or professionals from their ethnic background. When people relocate, their ethnic identity may be modified through acculturation. Acculturation can change a person's alignment from traditional healing practices to mainstream healing systems and can lead to intra- and inter-familial conflicts regarding treatments. The degree of social dissonance—the distance between the patient and the healer in terms of differences in ethnicity, socioeconomic class and all that encompasses,

Table 1: Eliciting the Patient's and Family's Story and Models

1. Would you please tell me more about yourself?
 2. How does this illness fit into or change your story?
- Illness/Problem**
3. What health problems or illnesses do you have, what do you think caused them, and what kind of care have you sought? (conventional medical care, complementary-alternative, traditional)? How have they been helpful? Not helpful?
- Impact of the Illness on the Individual**
4. How is this illness affecting your daily functioning and the things that are most important to you?
 5. What do you miss most from before you were ill?
 6. What do you think will happen in the future?
- Impact of Illness on the Family**
7. What changes have occurred in the family since the illness began? (daily routines, care, finances, etc.)
 8. How well do you feel the family is coping? Is there anything the family wishes they could do differently?

language, or religion—may become important. The greater the dissonance, the less likely the patient will choose the healer or adhere to treatment recommendations.

Patients can sequentially or simultaneously seek assistance from the three types of treatments (lay, folk, and professional sectors): a hierarchy of resort. People often begin with lay treatments in the form of self-help or family remedies. If lay treatments are insufficient, patients seek out folk healers or professionals. Patients may make decisions themselves, or may look to family members or social networks members for advice. Patients seek assistance from different traditions depending on the situation, the fit between the sickness and the healing approach, the perceived effectiveness of the therapies, as well as their ethnic identity and degree of acculturation. Physicians should inquire what treatments and healers patients have already received, as well as whom they will consult to make decisions.

HEALER/SICK PERSON RELATIONSHIPS

Every cultural system has expectations about the healer/sick person/family relationship. The social and cultural rules governing this relationship influence the style of communication, the appropriateness of certain discussions, the protocol about sharing or withholding information, and the amount of power or authority the healer exerts over the patient and family.

To care for patients from other cultures, physicians must be sensitive to cultural differences between them and their patients. Physicians must be familiar with general information about a cultural group, but they cannot assume their patients' beliefs and values based on the general cultural information. Rather than stereotyping, physicians can use general information about a group to generate hypotheses about an individual person or family, and then ask people about their lives, their expectations, and their desires.

CLINICAL APPLICATIONS

Over-use of stereotypes and generalizations can lead to *too little* care.

Mai Nguyen, a 29-year-old female refugee from Vietnam, came to a community health center for a complete physical exam before starting a new job, and had numerous

somatic complaints. She was hesitant to talk about emotional, familial, or intimate matters and refused a gynecological exam. Her young physician consulted colleagues who advised accepting her complaints as being consistent with Vietnamese "culture". However, after several encounters with the patient, the physician learned that the patient had escaped Vietnam in a small over-crowded boat and had undergone significant trauma and sexual abuse while at sea, and realized that her behaviors were not just "cultural". Indeed, her multiple somatic complaints were related to post-traumatic stress disorder and required social and psychiatric interventions.

Over-use of stereotypes and generalizations can lead *too much* care.

Moshe Kadosh, a 54-year-old Jewish immigrant to the United State from a village in Morocco, saw his primary care physician soon after arriving for complaints of sinus pressure, headache, and dizziness. The physician became alarmed when the patient described discussions with spirits, including hearing the voices of some of his ancestors and long-dead local holy men, and so referred him to a psychiatrist. After the initial visit, the psychiatrist postulated he was schizophrenic and admitted him to the inpatient psychiatry ward. Only after working with a psychiatry resident from the same country who interviewed him in his native language, did it become ap-

parent that he was not psychotic, but was only exhibiting some of his normal spiritual beliefs, as well as expressing his distress in culturally appropriate ways.

CULTURE OF BIO-MEDICINE:

Like all healing systems, modern biomedicine is influenced by historical, social, economic, political, religious, and scientific events. It has its own language, vocabulary, and concepts. It also has its own values, and each discipline (family physicians, surgeons, psychiatrists, etc.) are sub-cultural groups with variations on the general biomedical beliefs, values, and behaviors towards health and disease. As a sub-culture of Western society, biomedicine has values of the larger society, which specifically fit bio-medicine.

Dr. Jim Zedler, a new intern begins working up his first patient in the outpatient clinic of his academic health center. The patient is a 32-year-old married woman recently arrived from Africa who complains of diarrhea and lower abdominal pain, which although present for the last several months, have worsened in the past week. He completes his history and physical examination, and orders a broad series of laboratory and imaging tests. He becomes disappointed and frustrated when he is unable to provide a definitive etiology and a patho-anatomical diagnosis. Even worse, the woman's complaints of pain worsen. After several visits, he decides that the woman's pain is "in her head", a conclusion which angers her. After an assessment by his preceptor, it becomes clear that

Table 2: Working with Interpreters

1. Discuss expectations with interpreter before beginning, including first-person singular, verbatim translation.
2. Make sure everyone has been introduced.
3. Sit facing the patient, and speak to the patient, not the interpreter.
4. Use lay English terms and non-complex language structure.
5. Pause intermittently to allow interpretation.
6. Don't assume universal meanings to nonverbal gestures.
7. Periodically check the patient's understanding.
8. Do not expect interpreters to resolve conflicts or disagreements or to actively negotiate outcomes.

Cultural Humility (HUMBLE) Model

- H:** Be Humble about the assumptions you make about knowing the world from your patients' shoes
- U:** Understand how your own background and culture can impact your care of patients
- M:** Motivate yourself to learn more about the patient's background, culture, health beliefs and practices, as well as the unique points of view of their families and communities
- B:** Begin to incorporate this knowledge into your care
- L:** Life-long learning
- E:** Emphasize respect and negotiate treatment plans

the woman has lactose intolerance, which has been exacerbated by her recent dietary changes after moving to the US, and she is a victim of domestic abuse. The intern had not picked up on the cues and had considered both her domestic situation and her diet out of the realm of his investigation.

her as though staring, and they called her by her first name rather than calling her Grandmother in a respectful tone of voice. She always feels as though they don't really care about her and her sufferings.

TRANSLATORS

Professionally trained interpreters provide grammatically correct first-person verbatim translations for physicians and patients, including interpreting medical language into lay terms. Using family members as interpreters is particularly problematic. Differences in age and gender, may result in discussions about inappropriate topics (children hearing about intimate details of their parent's lives). Differences in language skills may mean the relative has inadequate knowledge of English medical terminology or medical terms in their own language. Seeking trained interpretation services over the phone is preferable in such cases. In addition, recent legislation in Rhode Island makes it illegal to use an individual under the age of 16 to interpret, although many immigrants expect their children to interpret for them. In general, physicians should huddle with the interpreter prior to the clinical encounter, clarify guide rules and expectations, ask for "word for word" translations, and listen to the interpreter's insights about cultural practices, meanings, or idioms. (Table 2).

SUMMARY

This article presents a framework for quality care that attends to culture and ethnicity. Tools and approaches for achieving cultural competency and humility are provided that may help improve the care of the patients, irrespective of their backgrounds or beliefs.

*All names used in this manuscript have been changed to ensure confidentiality.

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CULTURALLY APPROPRIATE COMMUNICATION

Culturally appropriate communication that respects the individual's beliefs, practices, and background, yet allows the health care practitioner to make precise diagnoses, is a key skill needed in medical practice. Communication between the physician and patient is significantly influenced by culture, as reflected in non-verbal expressions, manner of address, and appropriate styles and topics of communication. Nonverbal expressions can have different, even opposite, meanings in different cultures. Appropriateness of style and topic of conversation can vary widely and physicians' sensitivity to such differences can improve the physician-patient relationship. Cultural generalities about non-verbal communication, like all cultural generalities, will not hold for all patients. Physicians have to monitor their patients' responses, ask for their input, and seek assistance from bicultural colleagues.

Victoria BearClaw, 82-year-old Native American, feels insulted every time she attends the medical clinic in the city rather than on the reservation. The doctors and nurses talk quickly; they don't wait even a full second before she can reply, and then they're asking her another question as though she's dumb or can't hear. And then they don't really listen to her concerns as she tells the full story. Also, they look directly at

Negotiating Clinically Workable Solutions Across Cultures: Lessons Learned

Bonnie B. O'Connor, PhD

For roughly 20 years, clinicians have recognized cultural competence as important to medicine. A case from early on illuminates what may have changed – and what has not – in the ensuing two decades. More importantly, it shows that cultural competence is a crucial clinical skill set, not simply an abbreviated form of anthropological knowledge.

CASE ANALYSIS

TBL, a 26 year-old Hmong man, was admitted via the Emergency Department to an urban, East Coast teaching hospital for upper GI bleed from previously undiagnosed esophageal varices. He had no history of hematemesis, and had complained of no discomfort prior to this sudden-onset event. On workup he was noted to have abdominal ascites and considerable edema of the extremities. He was diagnosed with chronic hepatitis and portal hypertension. Recommended treatments included sclerotherapy of the varices, and liver transplant.

Seen through biomedical eyes, a transplant offered Mr. L the hope of many years of good quality of life. No transplant portended rapid deterioration and high risk of re-bleeding (at 20-30% risk of fatality per episode). Other therapies included sclerotherapy of the varices, medical management of his portal hypertension, and a diet of clear liquids with supplemental intravenous nutrition. Meticulous informed consent procedures would be followed. The treatment plan would be demanding, but a team of skilled physicians and nurses would see the patient and family through it; the transplant center was top-notch. The patient was young and otherwise healthy, an excellent candidate for transplant. The informed consent process included careful explanations, with illustrations and simple sketches; the clinicians encouraged questions, and repeatedly and willingly answered them. The hepatologist was optimistic, willing to spend “extra” time with the family.

From the Hmong perspective, things looked very different. There were con-

siderable misgivings about the health care team and treatment plan—starting with the diagnosis. How could anyone be sick for years without knowing it, without even feeling bad? Who were all these people involved in Mr. L's care? Why were they all there? Where was the one you trusted? Some of these people were young and unskilled and clearly “practicing” on Mr. L. Alarming, many caregivers displayed poor knowledge and attention by asking questions that had been answered several times already. A great many declined to answer the family's questions, suggesting they “talk to the doctor about that” – but which one? and *when*? What were these people concealing, ducking their questions? Even the most senior doctor would not directly answer basic and straight-forward questions (“when will he get better?”). Obviously, family members would need to be ever-present and vigilant, actively protecting Mr. L.

In addition, there were three influential “disconnects” between the cultures and expectations of hospital medicine and the Hmong patient, family, and community: the special needs and appropriate treatment of sick people; the issue of consent and where, precisely, it was located; and the functions, meanings, and nature of the Liver.¹

TREATMENT OF THE SICK

The presence of family members at every juncture in illness and recovery, and the importance of proper nutrition in times of debility, were crucial for Mr. L, his family and community supporters. Hospital personnel would have preferred to limit visitors to two or three, during prescribed visiting hours, which family members declined to follow. The Hmong custom called for a family advocate to accompany Mr. L at all times, since the ultimate safety of patients—not to mention the gauge of practitioners' competence—is a family responsibility. The hospital's rejection of accompaniment during the first sclerotherapy in-

tensified distress, raising a “very big suspect that some of the doctor[s] might try to do something to my people” (TBL, author interview). Accommodating the request during the second treatment engendered even more distress: not having been given an explanation, Mr. L's accompanying ‘brother’ (in clan lineage terms, different from US definitions of sibling-brothers) feared he was being choked. His reports dovetailed with an existing oral tradition of potential bizarre American medical abuses: that after patients die, American doctors open up their heads to take out their brains; that American doctors take large amounts of blood out of patients; and that American doctors might try to eat the kidneys, liver, and brain of deceased patients.²

Mr. L's clear-liquid diet created deep distress for him, and concern within his support system. Several days into his hospitalization, when Mr. L was asked how he was doing he replied with quiet sorrow, “I want to eat rice.” For traditional Hmong, rice is the dietary centerpiece, their “staff of life.” It is the fundamental ingredient of every meal and, lacking other ingredients, can convey both the physical and emotional satisfaction of nourishment. How could a sick man be denied this quintessentially life-sustaining food? (Those too ill to eat are nourished with a rice-water broth.) Repeated entreaties for rice were met with sympathetic explanations of why this was impossible – but the conversations went no further. This was to remain one of Mr. L's most traumatic memories of the hospital experience (TBL, author interview).

LOCUS OF CONSENT

Hmong families traditionally seek and select the treatments for their sick members.³ The individualism so central to American culture—and underpinning the concepts of patient Autonomy and Informed Consent—is indifferent in traditional Hmong culture. Individuals are not expected to make important decisions for themselves; the more consequential

the decision, the more critical family and community consultation become. As a war orphan, Mr. L had no birth family to advise him. He was therefore exceptionally grateful to clan and lineage members: at one point 17 people in his room debated in minute detail the implications of suggested treatments.

Though his own opinions and preferences were sought in these discussions, Mr. L demurred. He worried that his family members' better judgment might be swayed by emotion if he expressed preferences. He also felt that since the problem was his own, he could not trust the clarity of his own thoughts: he was confused by its proximity and immediacy (TBL, author interview). Hospital staff were anxious about coercion or 'undue influence' of the patient by these numerous and 'unrelated' (by US kinship norms) advisors, and they continued to proffer the consent form, and address their questions, only to the patient. They would likely have found troubling the notion that the actual *consent* resided in a collective process: the patient could provide only the signature—and he wanted it that way.

CONSIDERATIONS SPECIFIC TO THE LIVER

To traditional Hmong, the liver carries the special symbolic significance with which American macro-culture invests the heart.⁴ It is the locus of feeling and personality, character and motivations. What kind of person might one become through liver transplant? Who would want to emerge from surgery a stranger to himself and others?

There were also ominous religious and spiritual implications. Alongside the Christianity they had practiced for many years, Mr. L and other community members retained several profoundly affecting traditional Hmong religious beliefs, including the existence of multiple souls per person, and anatomical location of one of the major souls in the liver. What if Mr. L should die during surgery, after removal of his liver? The ghastly prospect was a mutilated, soulless body, incapable of reanimation, and a rootless soul unable to pursue its proper spiritual destiny. Risks to reincarnation, and to Mr. L's surviving family members from an unquiet, earth-bound spirit, were numerous and frightful. Incredulity at the notion that

someone's "dead liver" could be installed and made functional in a new body paled by comparison. All things considered, the metaphysical risks of liver transplant considerably outweighed the physical risks, and their consequences were more severe, longer-lasting, and affected more people.

CONSTRUCTING COLLABORATIVE SOLUTIONS

The immense disjunction of expectations, treatment goals, and worldviews in this case seems to defy resolution. Yet solutions might have been found, had the resources and concerns of *both* belief systems been brought together. The hospital kitchen might have offered rice-water as part of Mr. L's clear liquid diet; or family members might have brought him clear rice broth from home. Worries about rumored American abuses might have been explored with empathy and reassurance, not dismissed with scorn. Questions might have been invited and answered as to why Mr. L seemed to choke during sclerotherapy, and why no one stopped the endoscopies when he did. Even the radically different 'moral anatomies' and concerns about the liver might have found a jointly crafted solution. Indeed, several friends and family members did generate a possible scenario for transplant. It went like this:

Could a Hmong shaman, skilled in the soul-calling that is often required in instances of soul loss, accompany Mr. L to the operating room? Could s/he call forth the soul from Mr. L's liver, maybe even tend it during surgery, and/or call it back to its new home after the transplant procedure was completed? Well, yes, that might be possible. If the liver donor could be assured to have received the proper last rites of his/her religion, so that the soul inhabiting that liver would have gone on its spiritual way and the organ could be received as an empty vessel, would that make a difference? Possibly; worth considering. Would the transplant surgeon permit the shaman into the OR? Mr. L's hepatologist was willing to propose it.

In the end, transplant was refused: it was just a step too far. Of the hepatologist's concern for his life expectancy without transplant, Mr. L observed philosophically, "If I am going to die, then I want to die with my liver."

RELEVANCE TODAY

What makes this 20-year old case relevant to the practice of medicine in Rhode Island today? Now that at least two generations of Hmong have been born and are growing up in the US, gaining acculturative distance from the old ways of the initial refugee generation? Now that the Hmong community of Rhode Island, relatively small to begin with, has largely migrated to larger US Hmong population centers? Now that the likelihood that many of you will treat Hmong patients is fairly slight, especially away from the greater Providence area?

One answer is that many of the challenging features of Mr. L's case might hold for *any person*, of any ethnicity, nationality, language fluency, or educational background—involving as they do the meeting of lay people and medical professionals, neither of whom has much understanding of the lives, goals, experiences, knowledge, values, and mandates of the others. Sadly, these features are as likely to be found in clinical settings now as they were then.

The central lessons of cultural competence, of culturally-responsive care, are not "content" lessons about specific identity groups. Rather they are about the nature of diplomatic relations between any two groups: lessons about the importance of understanding and accommodation, and the consequences of their absence; about the difficulty of explaining ourselves to others when so much of what propels us literally 'goes without saying'; and lessons about the potential for crafting workable solutions by drawing on the cherished beliefs, values, and goals of *all* parties, no matter how incongruent they may seem.

CULTURAL COMPETENCE RULES OF THUMB

The study of cross-cultural cases allows us to derive broadly applicable conceptual guidelines for culturally competent care.

Among them are the following:

"Culture is the entire non-biological inheritance of human beings. Everything that is socially constructed and learned is a part of culture."⁵

Anything that humans have acquired from other humans that has not come through biology, has been acquired through culture. This applies as much to medical knowledge and practice as to

shamanic knowledge and practice, to science as to religion, to systems of authority relations and recognition, to dietary rules, to kinship systems, and modes of communication. We *all* operate on the basis of cultural assumptions, expectations, and norms. This *self-awareness* is clinically relevant knowledge that wards off the false presumption that culture is a curiosity, or that it comes through the door only with patients.

“Difference” requires a reference point.

Different from *what?* from *whom?* Answering this question helps keep us honest and accurate. The answer (e.g., “different from me” or “from most of my other patients, with whom I seem to have a good working relationship”) provides a foundation for building solutions. Continue the inquiry: different in what respects? Which is important to the situation (“the difference that *makes* a difference”)?⁶ How do the differences affect providing care that is acceptable to both patient and physician? (Table 1) We must remind ourselves that “Difference does not equal Deficit.”

Cultural Barriers are always between the groups in question.

It is tempting to assign the barrier to the group that is “not-me.” We often (usually unconsciously) assign the barrier to the “other” group because our own cultural templates are largely invisible to us. Thus we commonly say that “the patient doesn’t speak English” to identify a “language barrier.” The *real* barrier is the fact that *we and the patient* do not share a language. It is easy—and incorrect—to leave ourselves out of the equation.

Culture is not identical to race, ethnicity, nationality, religious affiliation, or minority group status.⁷

Diversity *within* identity groups is as great as diversity among them. Phrases like “our culturally diverse patients” refer accurately to an entire patient population, but *not* to particular subsets. “Culturally diverse” is not a proper euphemism for ethnic minority membership – although its usage in the health professions gives that impression. A scan of journal articles quickly reveals this implicit equation, by

the juxtaposition of “cultural diversity” in titles and “ethnic minorities” in the opening sentences or paragraphs. The high value placed in medical culture on linguistic and conceptual precision should motivate us to reject these careless usages.

Cultural competence is not “snapshot anthropology.”

It is useless to memorize facts about “what *x people* believe” to facilitate cross-cultural interactions. The enormous range of variability within cultural groups, coupled with the tremendous dynamism of cultures, makes this a futile exercise. A little knowledge in this respect is dangerous, because it facilitates stereotyping and its resulting damage. Although physicians should have some basic understanding of the cultural repertoires of groups in their patient rosters, that understanding should be used like epidemiologic data: to outline a broad phenomenon that might be taken into account, but that gives no information about a particular patient.

If one of your patient groups were Hmong, the case of Mr. L would be informative about traditional beliefs and practices operating in the early resettlement years. Some of these will still be represented in the US Hmong population today; one might want to inquire about them. It would also be essential to know that today’s Hmong communities are extremely conversant with electronic technologies (used in part to preserve cultural traditions), use the Internet, include at least one state legislator and scores in local government positions, and are increasingly represented across the professions. The growing ranks of American Hmong holding doctoral degrees include 59 physicians – among them Xoua Thao, *Brown Med* 1989.⁸ Hmong culture has undergone rapid, extensive change in a short period of time. A static picture of “what Hmong people believe” would hinder good medical care.

CONCLUSION

In the end, culturally responsive care is *individually* responsive care, informed by understanding of the patient before you, in the context of family, community, and culture. Patients themselves are often the best sources for this information.

Table 1. Questions for Health Care Encounters⁹

Seek answers to the following questions with respect to **all the participants** (physicians, nurses, chaplains, patients, families, etc.)

- What do you/they feel is the most pressing problem?
- What does the particular diagnosis or treatment/prevention recommendation mean to you/them (cognitively, emotionally)?
- What special requirements or avoidances do you/they understand to accompany this condition?
- What are your/their goals for treatment/prevention? What do you/they want to gain from them? To avoid?
- What range of healing/health maintenance resources are you/they familiar with, and which do you/they feel are applicable to the patient’s situation?
- What level of priority do you/they assign to the medically indicated course of action, when weighed against other life goals and constraints?
- What is important to your/their sense of self or identity?
- What are your/their expectations of sick people and their care-givers?
- Who do you/they feel should be in charge of decisions and actions that affect the patient?
- Who is considered family, and how is their kinship defined (by you/them)?
- What do you/they feel is the proper or essential role of family members and significant others with respect to the patient? The role of health professionals?
- What do you/they define as an appropriate decision making process? Who needs to be involved? Why?
- What sources of authority do you/they recognize? Where does the authority of health professionals fit into your/their hierarchy?
- What concessions can you/they bear to make?
- What are the consequences of having your/their important values and goals disregarded or thwarted?
- What common ground can you discover?

Cultural competence is a key clinical competency, and like other clinical competencies it entails an interplay of knowledge, skills, and attitudes. It requires continual practice and updating through deliberate rehearsal and new learning. Perhaps more than others, it requires reflective and mindful practice. Cultural competence begins with self-assessment and self-awareness.

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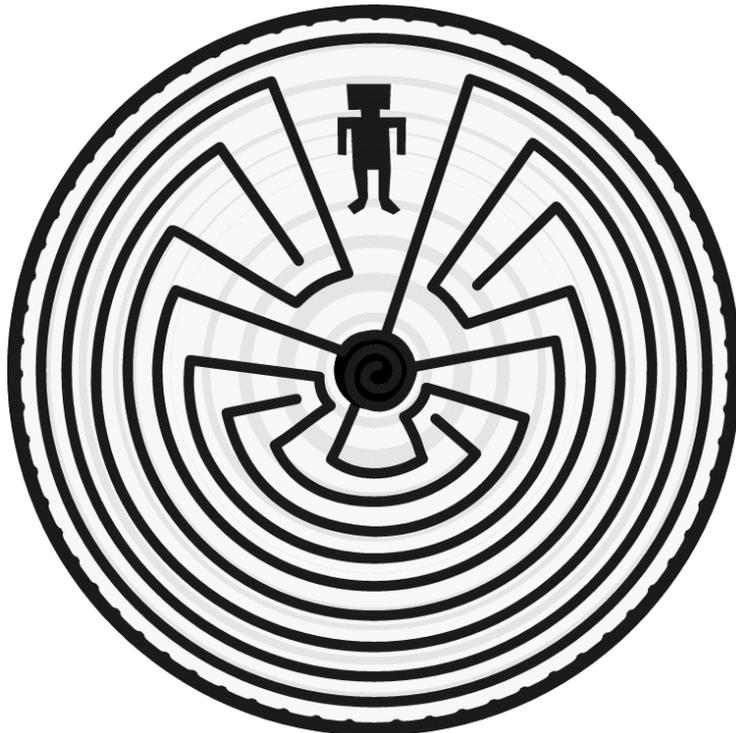
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Cultural Bias and ‘No-Scalpel Vasectomies’: Lessons Learned by a Brown Anthropologist in Mexico

Matthew Gutmann, PhD, MPH

“Well, you know, they did it to me a few years ago...” That is how I began my interviews with men who wanted vasectomies in Oaxaca, Mexico, at the beginning of each operation. It broke the ice and got the men talking. They told me why they decided to get sterilized, about discussions they had with their wives before the procedure, and, invariably, about anxieties as to their post-operative sexual desire and performance. Sometimes a man would get jumpy and I would excuse myself. The last thing he needed was to be interviewed, I assumed. But the doctors and the men themselves would insist, “No, stick around!” I became the anthropologist-as-emotional-anesthesiologist.

Vasectomies were not common in the mountain provincial capital of Oaxaca in southern Mexico, where I conducted ethnographic fieldwork from 2001-2002. But I was not looking for common men—whatever that term might mean. I was eager to understand the motivations of a small subset of men in Oaxaca who had been sterilized, why they decided to do so, and what lessons could be drawn for the population with regard to reproductive health and sexuality. The answer turned out to be deceptively straight-forward. For many if not all the men I spoke with throughout my year in Oaxaca, the most common explanation was that their wives had already suffered enough—taking birth control for years, getting pregnant, giving birth. Now it was their turn. When I asked these same men why they had long relied on their wives to use contraceptives in the past, and why they had not used a male form of birth control, the men responded with a simple incredulous question? “Like what? The condom?”

In Oaxaca as elsewhere in the world, most artificial, modern forms of contraception—and all the most reliable ones—are for women. The men asked me if I thought they had much of a choice about what form of birth control to use. I responded honestly that the choices avail-

able to the men of Oaxaca were part of a larger picture that involved, among others, the international pharmaceutical industry that develops and manufactures birth control devices and medications. Unless these companies make and market a modern contraceptive, it will not be available in Oaxaca or anywhere else.

This article discusses why some men in Oaxaca, Mexico, get vasectomies. Through this research I explore broader issues relating to men’s sexuality, including common assumptions about men’s “natural” sexual desires and practices. Numerous issues influence a man’s decision to get this permanent form of contraception, including cultural, historical, physiological, commercial and individual factors. A key issue that emerged in the course of a larger study on men’s reproductive health and sexuality in Oaxaca is how cultural folk beliefs about supposed male sex drives influence men’s decisions about birth control. Indeed, I have spent the better part of my professional career as an anthropologist of Mexico trying to untangle common-place stereotypes about what men—and Mexican men, working class Mexican men, Latino men, and so on—do and don’t do or think.^{1,2}

This research is a small piece of a larger study of heterosexual couples that I conducted in Oaxaca de Juárez, a metropolitan area of around 500,000 people located in a mountain region 300 miles south of the Mexican capital.² Approximately half the population of the state, totaling over 3 million people, self-identifies as belonging to one or another indigenous group (the largest being Zapotec and Mixtec). According to nearly all indices, living standards in Oaxaca are among the lowest in Mexico, especially in the countryside. My ethnographic fieldwork in Oaxaca City in 2001-2002 was carried out in two vasectomy clinics, the state-run AIDS clinic, and in the Ethnobotanical Garden of Oaxaca, where I worked as a laborer clipping cactus and digging ditches for planting and irrigation. I interviewed dozens of Oaxacans from all walks of life,

focusing on men who were considering vasectomies, as well as their wives and girlfriends. Most of our conversations took place in clinics and the homes of these men and women.

I observed 22 vasectomies in three different clinics and I interviewed dozens of other men and women in clinic corridors. Interestingly, both ethnographic fieldwork with dozens of men and archival research on files for hundreds of other men in this project show that men who get vasectomies are not clearly distinguished by any particular demographic features related to age, income, education, or being of particular ethnic groups. I interviewed dozens of men before, after, and during their vasectomies. Initial contact took place in clinics. With several men I followed up with visits to their homes, where I would talk with both the man and his wife for several hours. With some men contact continued after the two interviews; with most, this was it. Demographically, men who sought sterilization reported already having as many children as they wanted. While they had income and education levels slightly higher than the state average, far more impressive was the range of these levels. I also watched three tubal ligations to witness what I had been told was a dramatically more serious surgery. As performed in Oaxaca’s public clinics, there can be no doubt about this.

When talking with medical personnel in Oaxaca I was often offered a culturalist explanation to explain what men in Oaxaca who were thinking about the operation had to overcome. In fact, this cultural rationale was sometimes used to explain why fewer men opted for sterilization in Mexico compared to men in certain other countries and to women in Mexico itself: supposedly there were differences between “macho” and “non-macho” cultures, as if those men who do get sterilized in Oaxaca might be acting in a manner unrepresentative of their macho culture. In addition to the fact that “macho” means different things to men and women of different ages,¹ such

a line of reasoning skirts the larger context of decision-making about birth control in Oaxaca. Building on the notion of a female contraceptive culture, it is of great significance that there were few modern forms of artificial birth control designed for men. This circumstance is not unique to Oaxaca. Therefore, the problem of how to understand men's participation in birth control, such as by choosing to get a vasectomy in Oaxaca, is governed by the cultures of global pharmaceutical companies and basic research on male hormones³ as much as by specifically local gender identities and relations of inequality (e.g., "machismo").

Factors influencing the vasectomy decision.

Despite their best intentions, and to their great chagrin, contrary to what they might like to have others believe, doctors in Oaxaca (as in Rhode Island) are greatly influenced by folk beliefs about male sexual practices and urges. As often as not, these beliefs are based in "what everyone knows" far more than scientific knowledge.

The most common series of events leading to a vasectomy in Oaxaca involved women receiving counseling about contraception at a clinic either from a nurse or a doctor, who raised the idea of vasectomy. Often women were shown a board depicting birth control pills, I.U.D.s, condoms, and drawings of hypodermic needles and male and female sterilization. If women liked the idea of their husbands getting sterilized, they could tell them about the operation. If the man was amenable, he and his wife returned for a visit with a doctor who specialized in the procedure.

Most of the men I interviewed as to why they opted for vasectomies expressed sympathy for women's suffering in the past and their desire to have the women avoid such suffering in the future, either through another unwanted and potentially harmful pregnancy or through a tubal ligation. "You've already suffered in one way or another with the kids, in childbirth, so there's nothing wrong with them operating on me," Marcos, a taxi driver originally from Mexico City told me, adding, "We don't appreciate that women really suffer in childbirth with our children." Another man, also in his mid-forties and a bus driver, said suc-

cinctly, "women suffer with I.U.D.s," Marcelo, 29 years old, the father of three children, and a policeman on the outskirts of the city, confessed that his wife had instructed him, "*Te toca un poco sufrir*" (It's your turn to suffer a little). Esteban, in his late 20s, also reflected the critical role that negotiations with his wife had played in leading to his decision to get sterilized: "Because I didn't want her to go through with it. I, well, the truth is that I love her a lot, no? So I don't want her to suffer. So I say to her, 'So you don't have to be...' Because [male sterilization] is simpler, more than anything, and then the time you need to recuperate is less. First I talked with the social worker and I said to her, 'What do I need to do it?'"

Virtually all men I talked to about their desire for sterilization cited their relations with their wives and other women, a significant factor when considering health care education and promotion.

No-Scalpel Vasectomies and Other Half-Truths

In Mexico since the mid-1990s the "no-scalpel" method of vasectomy has been central to efforts to promote male sterilization. (A scissors-like instrument tears rather than cuts the skin.) Medical practitioners in Oaxaca insisted to me that the no-scalpel vasectomy represented the difference between few patients and no patients. The development of this procedure had more to do with seeking ways to attract more men to the operation by removing the dread of the incision than it did with technical advantages. This may stem from a basic symbolic distinction that men make, so that the more metaphorically feminine scissors—more delicate than scalpels, some say—threaten men less than the hypermasculine surgical knife. That is, the reasons men today accept vasectomies more readily may have more to do with symbolism than the technical aspects of the procedure that now tears rather than cuts a tiny hole in their scrotum.

Misunderstandings about vasectomies: Animal models.

Another example of seemingly innocuous symbolic interventions on the part of health personnel was evident when a particular doctor began many vasectomies by asking the patient in a joshing tone, "Have you talked to your wife about

this?" When the man responded that he had, the doctor followed up: "And have you talked to your girlfriend, too?" I never heard a woman getting a tubal ligation asked a corresponding question about her husband and boyfriend.

Among those who reported knowledge of vasectomy on epidemiological surveys, few men outside vasectomy clinics had a clue what the operation entails. Anthropologist friends in both Mexico and the United States asked me what parts of the penis and/or testicles were cut in the procedure. Men commonly told me that before their vasectomies they thought the procedure was "like with animals," that it involved castration and/or cutting off part of the penis. Some men who grew up in the countryside said they knew what was involved.

With bulls, two men wrap a rope around the girth, then pull on it hard to knock the air out, forcing him to fall and temporarily debilitating him. They tie the ends of the rope to two trees and begin to massage the area, approximately 10 centimeters, between the body and the testicles of the bull. This will make the scrotum relax. Then they tie a string around the bull's scrotum. When the string is tightened, the vas deferens are effectively severed.

With pigs and goats, the testicles are laid on a hard surface (like a rock) and the vas are smashed with a hammer. Or, alternatively, as a friend from the Ethnobotanical Garden advised, you can twist the testicles of a goat and smash them with a rock. You should definitely not cut off the testicles of sheep and goats, he believed, because these animals infect easily. Pigs, on the other hand, could be castrated without running the risk of infection, though this involved cutting through three layers of skin in order to extract the *bolitas*.

It may be understandable that few men consider sterilization.

Fears about sexual relations.

The main fear men expressed about vasectomy was that they would never again have sexual relations with a woman. Their apprehension was twofold: many men feared that they would be physically unable to sexually perform after the vasectomy. As Enrique put it, "I think that more than anything it scares you, no? To

think that...to think that afterwards it's not going to work." Some men also worried that they would not *want* to have sexual relations with women again. During numerous vasectomies the half-joking banter revolved to a related sexual anxiety, i.e., worry that they might "be turned" as a result of the procedure. That is, that they would want to have sex with only men.

Men's sexualized relationship with women in Oaxaca was often the thorniest to analyze. "Will it work" was not for most men simply a question of "Will I still be able to have an erection and ejaculate?" The relationship of vasectomy to manhood and manliness (*hombria*), and men's concerns about the outcome of the operation with respect to their subsequent sex lives, was described by some men as a consuming anxiety about being able to still satisfy a woman sexually. The relationship between vasectomy and manliness is intimately connected to that between vasectomy and sexual pleasure. And to the extent that men's sexual pleasure is associated with women's sexual desires and fulfillment, one may well ask, again, about male sexual predilections and urges.

When commonsense notions and approaches to men's sexuality gain the imprimatur of scientific explanation, rationale, and rationalization as delivered by duly licensed health personnel, they become medicalized. The belief that men "can't help themselves" (such as, regarding adolescent masturbation and extramarital affairs) was pervasive in Oaxaca across class and ethnic lines and reflected in popular sayings and attitudes. What constituted natural and normal male sexuality in Oaxaca was informed by both international family planning programs and local conventions and convictions that helped shape the policies that doctors and other health workers considered appropriate for the region. The language of family planning manuals was replete with references to masculinity and male sexual drives.

Among health care specialists and the population at large in Oaxaca several beliefs concerning male sexual practices and urges that have little basis in biologically established fact are enshrined as scientific truth. In this process of medicalization, men's sexualities are made to seem inherently problematic, and many medical practitioners assume that men's sexualities are more or less similar, that men are "controlled" by their sexualities, and that their sexualities are innately problematic.⁴ Further, in considering health problems associated with male sexualities like impotence and infertility, a medicalized model considers as secondary the broader social and political relationships—for example, between women and men and between men themselves. Instead, such a model accentuates individual bodily malfunctions and abnormalities, for example, a lack of sexual desire on the part of men. The broader study on which this article is based considers in more depth the ways such ethnomedical beliefs about male sexualities among biomedical personnel are grounded in folk wisdom yet presented as scientific truth, and the relationship of medicalized thinking about male sexualities to broader questions of sexual reproduction and women's sexuality.

Why men choose vasectomies in Oaxaca, Mexico, may appear of no more than esoteric interest to medical personnel in Rhode Island. However, this case study illustrates how cultural bias interferes with medical practice. Few doctors are eager to acknowledge cultural bias in their treatment of patients, yet such recognition is important if health care is to be understood as more than biomedical processes. Although this example is specific to one region in Mexico, it may provide an approach to understanding men's reluctance regarding vasectomies anywhere, and it illustrates how cultural beliefs are critical factors in the acceptance of certain medical procedures.

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Overweight and Diabetes In American Samoa: The Cultural Translation of Research Into Health Care Practice

Rochelle K. Rosen, PhD, Judith DePue, EdD, MPH, Stephen T. McGarvey, PhD, MPH

This paper describes the qualitative methods and research process for translating evidence-based methods for managing type 2 diabetes in the US to the American Samoan context.

The US territory of American Samoa is 2600 miles southwest of Hawaii, about halfway between Hawaii and New Zealand. The independent country of Samoa lies just to the west. Together they form an island chain populated by the same ethnic group of native Pacific islanders. Before World War II residents used subsistence farming and fishing; diabetes was rare. More recently, non-communicable chronic disease rates are rising in both adults and children.¹

Increases and changes in dietary intake and reductions in physical activity, the "nutrition transition," began in earnest in both Samoas after World War II.² These changes, which were rapid from 1970–2000, led to levels of overweight and type 2 diabetes, especially in American Samoa, the more economically developed of the two polities. Adults in American Samoa and Samoa now suffer from a high prevalence and 4-year incidence of overweight, obesity, type 2 diabetes, hypertension and lipidemia and temporal increases in each location.^{2,3,4} These levels are higher in American Samoa, with >80% of men and >90% of women overweight, based on Polynesian BMI standards, $BMI \geq 26 \text{ kg/m}^2$.

Type 2 diabetes has reached epidemic proportions in American Samoa. The prevalence rate among men aged 25 to 54 years in 1990 was 12.9%, 17.2% in 2002.² Among women of the same age range, the prevalence rate doubled from 8.1% in 1990 to 16.7% in 2002. Type 2 diabetes prevalence rates among adults aged 18 to 74 years in 2002 were 21.6% and 18.0% in men and women, respectively.

Socio-economic status (SES) plays a role. Samoans of higher SES in American Samoa have more favorable profiles of obesity and chronic disease risk.⁵ We speculate this is due to higher SES indi-

viduals and families learning about over-nutrition and health and having more access to high quality health care. We have much to learn about how non-Samoan foods are related to social prestige, from the earliest imported canned meats in the 19th century to fast-food today.

These rapid changes in obesity and associated health conditions occurred so quickly that health care systems, communities, families and individuals have not readily responded.^{2,6} Concepts such as the health risks of obesity, patterns of body image favoring substantial body size, and the low awareness of the need for lifetime management of chronic conditions, facilitate obesity and obesity-related disease such as diabetes.

METHODS

To tailor an intervention to local needs, the research team sought to learn about diabetes care as well as the experience of living with diabetes in American Samoa via several qualitative research steps. (Table 1)

Preliminary meetings with community partners

Our team met with community partners for extensive meetings before and after the grant funding was achieved. Subsequently, we chose a community health worker model where lay health workers served as a bridge between patients and health professionals to support diabetes self care.

Qualitative interviews with diabetes care providers and focus groups with diabetes patients

These steps sought to identify attitudes about food, exercise, self care, and the challenges of being diagnosed with diabetes, or caring for people with diabetes.

We conducted 15 in-depth interviews with providers and staff at the community health center where we worked. We also conducted 6 focus groups with 39 patients, both recently diagnosed and those living with diabetes for decades.

Translation and adaptation of measures to the local context and language

The randomized trial will employ a baseline assessment using diabetes belief and self care assessments, an assessment of depression symptoms, and the Patient Activation Measure. These instruments have been developed and psychometrically evaluated in English,^{7,8} but never used in American Samoa. Linguistic translation involved a forward and back process: one member of our staff translated the assessment questions. Another staff member back-translated the Samoan-language items into English. The original English question was compared against the English version translated from the Samoan. Where necessary, alterations were made for accuracy.

Cognitive interviews

We used cognitive interviews to find out whether participants understood the Samoan translation of the original English-language question. A researcher administered a sub-set of the survey questions to a participant, who answered using the required response format. Then, guided by questions and probes, the participant was asked to think aloud, explaining how and why s/he answered the question as s/he did. Through this process we clarified the meaning of words or phrases, probed the recall and retrieval from memory of information needed to answer the question, and considered whether the available response formats enabled the participant to provide an appropriate, accurate answer.⁹

Assessments of the planned intervention by local research staff

We reviewed material from both focus groups and provider interviews with the local Samoan research staff who would be making home visits. These materials included flipcharts for teaching about diabetes, communication strategies, referral resources and documentation forms. This process identified where edits and revisions were needed.

Post-intervention provider interviews and intervention patient focus groups

At the conclusion of the one-year intervention we will again use qualitative methods to assess the success and sustainability of the intervention through interviews with providers and focus groups with participants.

RESULTS

Preliminary analysis of provider interviews and focus groups

We present early results of our qualitative interviews and focus groups, highlighting how these data have informed our intervention design. Since many of the major themes within the two data sets overlap we present these results according to those themes, rather than by provider interview or patient focus group modality.

Barriers to self care

Most diabetes patients understood that a high fat diet, lack of exercise, and stress caused or contributed to diabetes, and that the best control strategy was to limit high fat, sugar-laden food, and to exercise regularly. But many patients struggled to incorporate those strategies into their lives.

Many participants noted that healthy food is costly, and that much of the imported foods are processed, frozen and/or expensive. The inexpensive foods, such as turkey tails and mutton flaps, are very high in fat. Both patients and providers articulated how difficult it can be for patients to maintain a healthy diet. Patients worried they would not feel full or be satisfied eating healthy foods. Some

patients had no control over the foods prepared by family members, and could not resist the foods at ritual family gatherings, called *fa'alavelaves*. Others asked whether traditional foods, like taro and banana, could be eaten in moderation or should be avoided completely.

Providers identified other barriers to care; e.g., patients did not have enough money to pay for medication co-pays, clinic visits and blood draws. Some patients could afford to fill only one prescription at a time. Only those who were financially secure could buy glucometers and strips.

Patients often sought care only after a crisis, like hospitalization, blurred vision, or numbness. Some patients' symptoms had reached an advanced stage, even to the point of blindness, or the need for amputation of a leg or foot. Many were aware of their symptoms for a long time, but did not seek help either because they feared learning they had the disease and would have to change their lifestyle or because they just did not want to believe they had diabetes.

Many patients did not understand the fluctuations in their blood sugar and why this happened, even while taking their medications. A participant remarked: "As of now, when I check my sugar level, I really don't know what is high and what is low...". At times, some participants found that the medications did not appear to relieve their symptoms. As a result, many stopped taking medications: they felt the medications were ineffective or even worsened their symptoms. In addition, many participants lacked transportation to get to the hospital or clinic

for appointments.

The Role of family and family events

Many islanders live in extended family residences, a social organization that influences diabetes management. A few older participants noted that their children, who were responsible for preparing foods, were not receptive to the wishes of the family member with diabetes: "There are times for me because I am getting old now, all I want to eat is soup... but my kids fix something else and all that comes to my mind is that I am going to just throw it away because it's not what I wanted...kids like to eat fried foods...and they don't prepare it in favor of the person who wants it."

Fa'alavelaves are Samoan ceremonies and cultural gatherings, usually connected to a lifecycle event like a wedding or a funeral, which require significant donations of money or time. They are widely cited as central to *fa'a Samoa*, the Samoan way of life. Yet our interviews and focus groups pointed to the *fa'alavelaves* as a source of stress as well as of social solidarity. Many participants indicated that the events were an obstacle to their diabetes care. One participant remarked, "the truth is that one of the causes of this disease called diabetes in our country is *fa'alavelave* that happens within our own families."

In addition to the stress accompanied by organizing and contributing money to these events, many participants said that it was very difficult to eat healthy during them. "Even though there are guidelines set for diabetics about what kinds of things to eat, there are times in our culture when *fa'alavelaves* happen...when they serve the food, you are not thinking about what foods are restricted for eating and what foods are healthy. When the food is served at those times, you just eat it." One participant described the cultural and social expectations related to food consumption: "If you don't eat the food, there are also cultural feelings about this. You know, like you are not a man if you do not eat all the food."

Stress, depression and Diabetes

American Samoans have said, anecdotally, that their blood sugar rises with stress.⁶ The most commonly cited source of stress is family financial obligations, including those

Table 1. Qualitative research design for Diabetes Care in American Samoa

1. Preliminary meetings with community partners
2. Qualitative in-depth interviews with diabetes care providers
3. Focus groups with diabetes patients
4. Linguistic translation and adaptation of measures to the local context in the Samoan language
5. Cognitive interviews using translated and back translated questionnaire items
6. Assessments of the planned intervention by the projects' American Samoan research staff

INTERVENTION IN RANDOMIZED CONTROLLED TRIAL

7. Post-intervention in-depth interviews with providers
8. Post-intervention focus group with intervention patient-participants

(Actual headlines in support of AMA's efforts)

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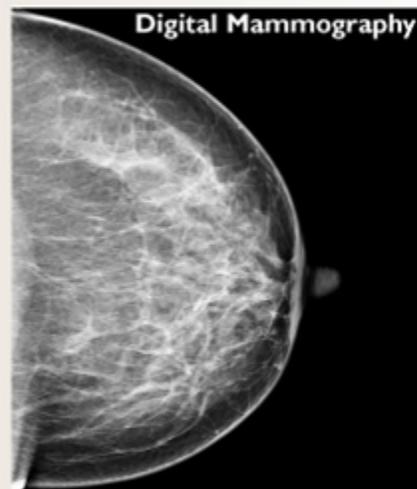
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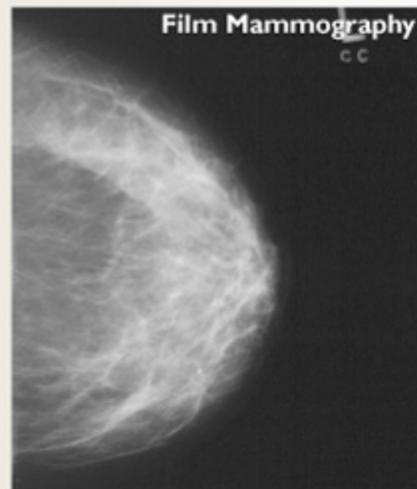
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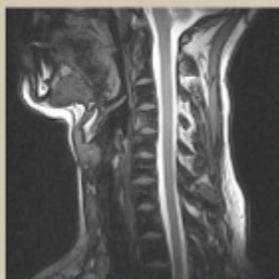
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related to *fa'alavelave*. Here a participant addresses the pull of these commitments:

if they are supposed to give something for the church versus the money to spend on the medication or the going into the hospital, [patients] will take the fa'alavelave and church first and this is second. So when it comes to health, health is low priority as far as the Samoan. You've got to give to the church first, you've got to give to the fa'alavelave... They will go borrow money to give to the fa'alavelave, give to the church, but as far as something for themselves, [like] health... it come at less of a priority.

Other sources of stress include lack of income; job difficulties; disagreement with a spouse; children; and illness.

Providers suggested that patients would not independently raise concerns about depression or stress, so research staff would need to ask about them directly. Patients might not even know of the link between stress and health. While our clinician participants articulated several sources of stress in their patients' lives, some felt the patients did not recognize the linkage:

"I very seldom hear people talk about [stress] like it is a big issue or a big problem ... most of the people [I] have encountered, they said 'stress? what does stress have to do with it?' It is like new to them when I say stress. So I think that is one thing that most of our healthcare providers need to try to talk about instead of just food and exercise ... [they] need to mention that too, stress."

As for older patients,

"...they don't know what stress is. They think that when they get a lot of stress it's from the fa'alavelave, a lot of fa'alavelave that [they] are involved in, something bad or someone in the family passed away. And all those things that they think of, it's that but not from the disease that they have.

For Samoans, stress and depression are deeply private concerns, rarely discussed. Consequently, it may take several

times to introduce the topic before people are willing to discuss it candidly, or at all.

How to be an effective Community Health Worker (CHW)

In interviews with clinicians and care providers, participants were positive, even enthusiastic, about our use CHWs. (They had been used on island for other health concerns.) Our participants had a variety of suggestions about how and when to visit patients. Particularly important was that CHWs needed to show cultural signs of respect, both to patients and to family members, including greeting elder family members first:

First and foremost in the Samoan culture you gotta learn to excuse yourself before the family. You know maybe they were doing something and we are there interrupting. So in a respectful manner you would excuse yourself and then introduce yourself and what you are doing.

Since the patient with diabetes may not be the person who cooks the family food, it is important to involve that cook—often a difficult task.

I think that one of the challenges is getting the family involved. Most of the time... I tell them to come in [and] please bring in your family members so we can teach them at the same time. Because the patients themselves aren't cooking the meal... the family members are. So if we can get the family members to come in, and teach them as well, and educate them about diabetes, I think that is the biggest challenge I face now.

CONCLUSION

The transition from a traditional to a modern lifestyle has been rapid in American Samoa since WWII and especially since the 1970s. A similar transition has occurred among immigrant communities in the mainland US. Rhode Island has a variety of immigrant groups. Just as preparing for our research intervention in American Samoa required careful attention to cultural translation, clinical practice with patients also requires keen attention to the patients' backgrounds, experiences, languages and beliefs.

The qualitative methods used in preparing for this diabetes intervention in American Samoa can guide clinical care and behavioral research in Rhode Island. Interviews with local community members helped us learn how patients sought out care. Interviews with care providers and focus groups with patients helped us learn about barriers and facilitators of care. Because we sought to design materials for CHWs, we needed to learn about both the patients' perspective of living with a chronic illness and the providers' experience of providing care. In our preliminary analysis, both patients and providers identified similar challenges, especially: healthy eating, exercise and understanding stress. Both sides stressed *fa'alavelave* and the challenges these feasts offer to healthy eating, as well as the role of those feasts as a cultural stressor.

Whenever a research or clinical instrument is translated, back translation provides an opportunity to confirm and clarify the effectiveness of the translation. In this project we used cognitive interviews, commonly used in survey item development and design, to clarify not only the effective linguistic translation of the language used in the questions, but also to further understand the cultural elements that shaped participants' understanding of, and answers to, the survey questions.

Reviewing our intervention materials with the staff who are going to implement them and inviting their insights was particularly useful. For example, the staff recommended using both English and Samoan on each page of materials, and we are now adapting our materials. Staff suggested hands-on teaching techniques and helpful logistical strategies for coordination of care. Additionally, our staff valued the opportunity to be treated as experts in their culture and appreciated their role in the design of the materials they would be using with patients.

In clinical practice with patients of different cultural backgrounds, it is important to assess patients' and providers' beliefs and understanding about the medical condition. We find that it is also important to inquire about patients' own solutions, and to seek the expertise of health workers, because the integration of patients' cultural elements with modern intervention practices ensure that the intervention will be most effective.

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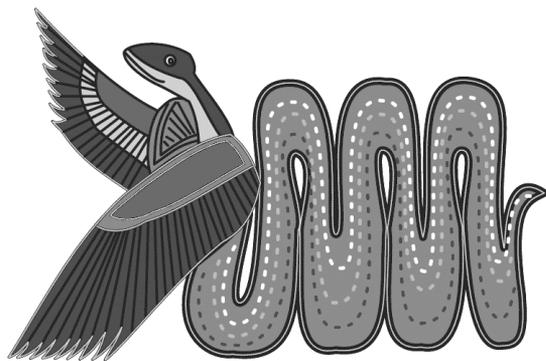
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Timothy W. Farrell, MD, Susan Campbell, MA, Aman Nanda, MD, Renée Shield, PhD, and Terrie Wetle, PhD

"I really enjoy the conversations I have with the elderly as part of the Doctoring course, but my comfort in interacting with them as a health care provider is still low...the more exposure I get to the elderly, however, the less aversive the idea of working with older patients becomes...the most significant change in my thinking about the elderly was the acknowledgement of a couple of misconceptions..."

This article discusses the experiences of first-year medical students with older patients in the "Doctoring" course in the fall of 2007, as well as their responses to aging content integrated into the curriculum. We developed an evaluation project to assess the impact of the new curriculum and its aging content. Rather than rely solely on a quantitative survey of pre-post attitude change related to the curricular changes, we elicited students' reflections on the relevance of the geriatrics curriculum to their medical education, their emerging identities as physicians-in-training, and their experiences via entries in weekly journals.

The goals of this journaling project were threefold. First, we hoped to analyze successes and opportunities for improvement within the new geriatrics curriculum. Second, we attempted to gauge students' changing views regarding the prospect of caring for elders. Finally, we aimed to shed light on the "meta-theme" of students' development towards becoming medical professionals. The integration of geriatrics content within the redesigned medical school curriculum has been developed with Donald W. Reynolds Foundation support, now completing the second year of a four-year grant. We recruited eight first-year volunteers in the spring of 2007 to write weekly journal entries on their reactions to and evaluations of aging-related course content and exposure to older patients. We wanted to know: "How have medical students responded to the recent inclusion of geriatrics within the new curriculum at Brown Medical School?"

Our interdisciplinary team adopted a qualitative approach inspired by anthropological field methods and increasingly used in health services research to "code" the journals. These journals also enabled faculty to capture students' responses to curriculum in real time, allowing for mid-course corrections.

Although previous analyses of medical student responses to geriatrics curricula used quantitative surveys,¹ qualitative strategies have gained greater recognition in recent years. The AGS (American Geriatrics Society) competencies guided the development of a coding structure to evaluate medical student responses to a geriatrics curriculum at the University of Cincinnati.^{3,4} Medical students at the University of Missouri-Kansas City paired with elderly "mentors" kept reflective journals limited to this component of the geriatrics curriculum.² Web-based geriatrics portfolios developed at the University of Michigan tracked students' mastery of geriatrics curriculum, but did not allow for students' reflections.⁵ To the best of our knowledge, our project is the first attempt to qualitatively analyze medical students' responses to a geriatrics curriculum without using a survey instrument or an *a priori* guide to coding responses. We chose to better understand students' range of experiences by asking them to reflect and write about them.

METHODS

After obtaining Brown University IRB approval, we asked the MD class of 2010 for volunteers via e-mail. Interested students came to an informational meeting. Prospective participants returned for

individual meetings to review and sign the consent document. Students who successfully completed the semester's journal assignments were provided a modest honorarium. Two members of our team conducted all correspondence with journalers throughout the semester. Weekly emails to the participants were sent with journal assignments consisting of two standard questions. (Table 1) During most weeks the team added a third question, tailored to that week's content. For example, in the middle of the Doctoring course, the third question asked students to assess their interviewing skills. (Table 2) Student names were replaced by code numbers. Each week our team correspondents acknowledged receipt of the journals and frequently provided feedback.

Eight student journalers began the project; four students completed the semester. When the semester was over, all journalers, including those who had dropped out, were invited to a "thank you lunch" to gain feedback. Students who had not completed the project were asked their reasons for stopping; most cited competing responsibilities and course work demands. Recruitment of journalers has continued. We have just completed two more semesters of journaling in which both first and second-year medical students participated, and we expanded the journaling project to the clerkship years in 2008-2009.

Coding committee and process

All journals were first reviewed by the two team members who ensured that names and identifying information

Table 1. Standard Journal Questions

1. What are your experiences, reactions, and insights related to the geriatrics content you have received in your medical school courses?
2. What are your experiences, reactions, and insights regarding the older patients (> or = 65) you have encountered in your community mentoring through the Doctoring course? (This includes standardized patients.) You may also report on encounters you may have with the elderly in other settings. You may wish to compare your experiences with older patients to experiences with younger patients.

of students and others named in the reports were eliminated. Journals were transformed into a standard format and distributed to our interdisciplinary analysis team (a health services researcher, gerontologist, medical anthropologist, and two geriatrics-trained physicians). The team members read the journals numerous times to develop an analytic “coding structure,” i.e., a list of relevant and common thematic elements.⁶ The initial coding structure emerged from preliminary readings of journal transcripts between fall 2007 and spring 2008, and was based largely on a division between didactic (i.e., students’ coursework) and experiential (i.e., clinical contacts with older patients) content. Codes also identified topics, such

as students’ social and cultural backgrounds, their perspectives on ageism, and their views regarding the care of geriatric patients. Weekly team meetings involved a line-by-line review of the coded transcripts to discuss each team member’s rationale for assigning a given code to specific material. As the team progressed through the journals, the coding structure was revised and refined. During this process, the team gained familiarity with the narrative material and developed consensus about code definitions. Throughout this process, a detailed “audit trail” documented team decisions, alterations in codes, and emerging themes.

The development of a coding structure to identify themes arose in a man-

ner similar to that described by Weston et al. for the analysis of qualitative data. Weston stressed three main principles for the analysis of qualitative data:

1. “Coding is not what happens before the analysis, but comes to constitute an important part of the analysis. There is a reciprocal relationship between the development of a coding system and the understanding of a phenomenon.
2. A team builds codes and coding builds a team through the creation of shared interpretation and understanding of the phenomenon being studied.
3. Collaboration in qualitative research requires a kind of rigor that a lone or independent researcher might not be aware of or need.”⁶

In keeping with Weston’s principles, themes and subthemes generated from the conceptual framework of our initial coding structure were revised during each meeting. Both the initial coding structure and the identification of new themes required consensus among the group. Finally, the interdisciplinary nature of our team fostered vigorous discussion and led to rigorous development of codes and themes.

STUDENTS’ RESPONSES TO THE GERIATRICS CURRICULUM

The overall goals of this medical student journaling project were threefold. First, we hoped to analyze successes and opportunities for improvement within the new geriatrics curriculum by gauging students’ responses. This analysis led to mid-course corrections, e.g., discussion with the relevant course directors to streamline and better integrate the delivery of geriatrics content during didactic sessions. Student suggestions for additional content were also noted:

“I would have liked to hear about how anxiety manifests in older patients. Perhaps there are different concerns that older patients have. Also, I would have liked to hear about how receptive older patients are to psychotherapy and cognitive behavior therapy.”

Table 2. Additional (Third) Journal Questions

- Wk 1: 3rd question not asked
- Wk 2: Do you see a clinical application of course content this week, especially as it might pertain to older people?
- Wk 3: What has been most surprising or unexpected about what you’ve learned regarding dementia or memory loss?
- Wk 4: How might stereotypes you hold influence your care of older patients?
- Wk 5: How might aspects of culture (your own and that of the older patients you see) affect how you interact with them?
- Wk 6: Do you see particular challenges and/or opportunities in counseling older persons on psychiatric issues?
- Wk 7: Write about how alcohol and/or drug abuse might pose different issues for an older person and/or for the clinician treating him or her.
- Wk 8: In assessing your interviewing skills at this point, are you noticing any particular challenges or satisfactions in interviewing older as compared to younger patients?
- Wk 9: What are your thoughts about the hospital experience for older patients?
- Wk 10: Please discuss special concerns older patients might have with diabetes.
- Wk 11: How did the epidemiology/quantitative reasoning course content help you to understand aging populations?
- Wk 12: Please reflect on how your interviewing skills improved over this year and how your approach to older patients may be different than that with younger patients.
- Wk 13: Looking back over your experience in the community last year, what observations or insights have you developed regarding the care of older persons?
- and
- Please describe whether and/or how the course content in MedMicroID may have particular relevance to older persons compared to younger persons.
- Wk 14: Please write about how your exposure to older patients over this academic year may have changed your level of interest in working with older patients in the future.
- Wk 15: Thinking back to the beginning of the year, please write about any new insights you’ve had about older patients that you might not have predicted then. For instance, do you look at older people differently now? If so, how?

Based on positive comments, the anatomy lab “treasure hunt,” in which experienced geriatrician faculty members used cadavers to demonstrate findings unique to geriatrics patients, was expanded in the project’s second year. Particular successes within the first-year didactic curriculum, such as the inclusion of geriatric patient guest lecturers and patient videos, were noted with enthusiasm. One student put it this way:

“But with a simple procedure that was done, we saw this woman walk briskly in weeks, without a walker and without assistance. We cannot doubt the power of the elderly to recover.”

The second goal was to gauge students’ responses to the prospect of caring for elders. Students wrote eloquently about stereotypes (e.g., ageism), challenges in caring for the elderly (e.g., multiple comorbidities, polypharmacy, and complex psychosocial situations), gratifying aspects of geriatrics (e.g., learning about older patients’ fascinating life stories), and the relevance of their own individual and cultural backgrounds to caring for the elderly. One student wrote:

“Care for the elderly is a crucial part of my culture, as we view the elderly not only as sources of wisdom and experience, but also our living legacy; we exist in many ways because of them, and because of this it is our obligation to care for them.”

Students often expressed surprise at their lack of awareness:

“What really didn’t occur to me before this year was striving for healthy aging. I had encountered older patients, but it was always in the hospital setting. I didn’t know that there was assisted living. Perhaps because my family believes that older people need to be taken care of by their children, I had never thought that independence could be a positive attribute for an older person.”

Another student noted:

“Outside of the geriatric content, we seem to study perfect systems. This integration provides a good opportunity to appreciate the inevitable complexities of all our patients— young and old.”

Third, we examined the “meta-theme” of students’ development towards becoming medical professionals. Part of this development involves an appreciation of the challenges and uncertainties inherent in patient care, especially in geriatrics. Where students sometimes commented on the complexity of care for older patients, they also recognized that complexity was a part of the practice of medicine. One student wrote:

I feel that...the most important ‘take-home message’ for me is that it’s a person that I am treating, not a medical chart or series of symptoms.”

Students’ responses to journaling

In addition to the journals, feedback from students at the “thank you lunch” provided additional perspectives. Students liked the regular chance to reflect on the week’s studies and clinical encounters; they enjoyed writing as a contrasting relief to memorization and science. Students took seriously their contributions to the improvement of the curriculum. They witnessed the curriculum changing and understood that they had a hand in its evolution. One of the journalers subsequently expressed a view that we heard from others:

“...though on busy weeks [journaling] is an extra thing to do, it was also nice to have a reason to do some reflective thinking and writing.”

The few negative perceptions from students included running out of new things to say, feeling too pressured by coursework to spend time writing, and feeling constrained by the questions asked.

Overall, the excitement and apprehension of these students about entering the medical profession comes through in the journals, even among those students who were not interested in geriatric medicine as a career. It is hoped that this type of self-

reflection, as exemplified by the following journal excerpt, contributes to the development of the medical student journalers as emerging medical professionals:

“I hate that my grandmother’s last hospital visit was characterized by doctors who didn’t listen...this introspective process has helped me to see the real importance of communication and understanding. I hope the geriatric integration helps Brown produce the type of physicians that I would want caring for my grandmother.”

IMPLICATIONS Implications for Medical Students

What are some of the preliminary lessons learned from this medical student journaling project? First, qualitative research methods offer insights which are difficult or impossible to obtain using quantitative strategies.⁸ For example, students reflected thoughtfully about the contribution of the geriatrics curriculum to their medical education. For many students, even those entering pediatrics, exposure to geriatrics was felt to have honed their interviewing skills and increased their comfort in caring for complicated, frail patients. For students contemplating careers involving geriatric patients (e.g., primary care and surgical specialties), this early exposure to geriatrics generated recognition of its crucial importance to high-quality patient care. For students considering geriatrics as a career, integration of geriatrics appeared to increase their interest.

Implications for faculty

The preliminary lessons learned for faculty and community mentors are compelling. Courses with an uneven or ineffective approach to integrating geriatrics into the curriculum were identified so that adjustments could be made. Students generated ethical questions about the intensity of medical care (especially at the end of life) and resource allocation, even when not specifically asked to comment on these weighty issues. This focus suggests that increased attention to such ethical themes may be warranted. Students also seemed to arrive at the independent conclusion that, while not ev-

ery medical student will graduate as a geriatrician, a basic knowledge of geriatrics is essential in almost any medical discipline. Finally, students appreciated the opportunity to participate in the journaling process: they were stakeholders in the geriatrics curriculum.

Overall, the message from students was: "Give us geriatrics content, as long as it is well-integrated and allows time for thoughtful discussion." At the very least, even among those students without an interest in geriatrics, the habit of thoughtful interviewing accompanied by attentive listening during the patient encounter and active reflection after the patient encounter will serve them well. This evaluation journaling project is an example of a valuable research tool to inform the education of and clinical impact on medical students. This ongoing effort to qualitatively assess insights from medical student journalers, even as they enter their clerkship years, will continue to inform the integration of geriatrics content within the Warren Alpert Medical School curriculum.

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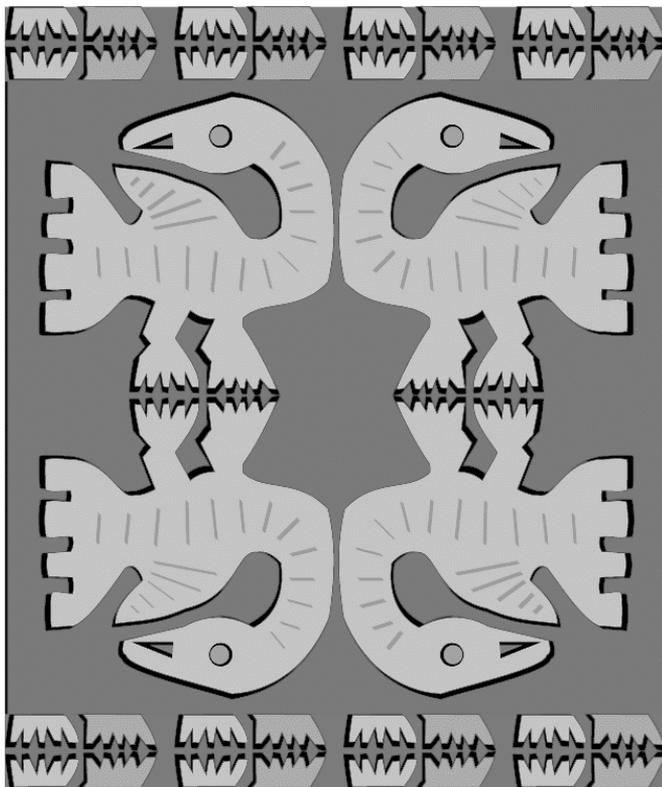
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The Practicing Physicians' Guide To Pressure Ulcers in 2008

Rachel Roach, MSN, ANP, GNP, WCC

A 78 year-old woman is sent to the emergency department (ED) from a nursing home for evaluation following a fall. She has a medical history of hypertension and osteoporosis, and takes metoprolol XL, HCTZ, and calcium carbonate with vitamin D. After spending 7 hours in the ED, she is admitted to the orthopedic floor with a right hip fracture. The admitting nurse finds a stage 2 pressure ulcer (PU) on her coccyx and blisters on her heels. The nursing home record does not document PUs. This article discusses evaluation of patients for risk of PUs and reviews measures for PU prevention. Evaluation and treatment will be addressed in a future column.

BACKGROUND

Hospitalized patients have an incidence of PUs as high as 30%; more than half of those ulcers occur in older adults. Beginning in October 2008, CMS stopped reimbursement to hospitals for treatment of hospital-acquired PUs.¹ As a result, it is hoped that hospitals will focus on early evaluation of patients at risk to assess for preexisting ulcers and take preventive measures. Similar measures should follow in nursing homes.

PU prevention and management have been mandated for years in nursing homes that receive Medicare funding. The regulations became more stringent in 1994.² Prevalence of PUs in long term care facilities (LTCF)s is as high as 23.9%.³ Medicare dictates that nursing homes which receive federal dollars institute protocols for prevention and management of PUs. Facilities failing to institute wound care procedures risk citation, loss of reimbursement and fines. These procedures include assessment of the patient's skin on admission, a comprehensive risk assessment, creation of a plan of care based on that individual's risks, and on-going monitoring. Early assessment is critical to establish where the ulcer developed—the nursing home or the hospital—for reimbursement purposes. The initial assessment should include a skin examination in the ED for hospitalized patients as part of the admission diagnosis list to up-code for PU treatments, which average \$18,688 per ulcer.⁶ If a PU is not recognized and documented on admission, even though present, the PU will be considered hospital-acquired, and the hospital will not be reimbursed.

RISK ASSESSMENT

Standardized assessment tools will stratify an individual's risk of developing a PU. The Norton⁴ and Braden⁵ Scales rate patients based on mental status, mobility, nutrition, activity, moisture/continence, and sensory perception. Raising awareness of the individual's risk can allow preventive measures to be implemented in a timely fashion. Assessment needs to occur early and often during hospitalization. As a patient's condition

changes, interventions need to be adapted.

Assuming that the patient's skin is intact at the initial examination, a risk assessment on admission should be obtained using those scales. The score will dictate interventions for prevention of hospital-acquired PUs.

ADDRESSING RISK FACTORS OF MOBILITY AND PRESSURE

A common PU risk for patients in the hospital or nursing home is decreased mobility, resulting from either illness or treatment modalities. It is important to encourage and facilitate mobility in patients able to ambulate. Avoiding sedation and restraints, and eliminating IVs and Foley catheters enable patients to be active. Initiating physical therapy early in the admission can be invaluable for mobilizing patients. For patients unable to ambulate or position themselves in bed, it is necessary to assist them to change position at frequent intervals. Tissue ischemia occurs in areas compressed between bony prominences and support surfaces in a short time, and permanent injury can occur in as little as two hours.⁷

Most hospitals and many nursing homes use pressure reduction mattresses on all their beds. For prevention of PUs, such mattresses may be sufficient for patients at average risk. For patients at high risk, alternative surfaces should be ordered. Inexpensive options, such as egg crate mattresses, sheepskins and water or gel-filled overlays, do not provide pressure relief. They may even increase moisture, compounding the problem. More advanced surfaces include low air loss mattresses, which allow slow leakage of air through a system of small holes, causing the patient to "float."⁸ Air-fluidized mattresses and alternating pressure mattresses are more costly, and generally are reserved for patients with an existing PU or with unusually high risk.

Shear

Shear adds injury to pressure. Shearing occurs when gravity acts to cause internal opposing motion of tissue against bone. The classic example is the patient who is positioned in bed with the head of the bed up too high: they will gradually slide down toward the foot of the bed, causing movement of tissue planes. This force will contribute to pressure ulcers just as the pressure effect itself will. Shearing can stretch tissues and produce tears in capillaries.⁹ Prevention of shearing injury is achieved by maintaining the angle of the head of the bed elevation or lateral rotation of the body at 30 degrees or less.

Moisture

Moisture increases the risk of PUs. Perspiration, urine, feces and wound exudates alter the pH of the skin, strip away

the acid mantle and make the skin more prone to breakdown.¹⁰ Superimposed candidiasis or cellulitis is also more likely in the face of excessive moisture, and encourages skin breakdown. Minimizing moisture and protection of intact skin is important to PU prevention. Incontinence is best managed by scheduled toileting. Urinary catheters should be avoided. Multiple barrier products are available for skin protection.

NUTRITION

A patient's nutritional status has substantial impact on prevention and healing of PUs. A serum albumin of less than 3.5 increases pressure ulcer risk. Other factors associated with the risk of under-nutrition and weight loss include the need for assistance with eating; consumption of less than half of meals or snacks; oral pain; poorly fitting dentures; dysphagia; vegetative signs of depression; mental status deficits; and certain diseases—diabetes, COPD and cancer. Consultation with a dietitian and speech therapist will help prevent and address nutritional deficits.¹¹

CONCLUSION

The recent CMS quality improvement initiatives provide strong encouragement to hospitals and hospital practitioners to improve assessment and prevention of patients' risk for PUs or face lower reimbursement rates for treatment of the ensuing PUs. In the future, nursing home practitioners are likely to see similar incentives for PU prevention. Documentation of preexisting ulcers, PU risk assessment and measures in place for prevention of PUs will facilitate reimbursement for the costly and important care provided to patients.

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RESOURCES

Braden Scale: <http://www.hartfordign.org/publications/trythis/issue05.pdf>
 Norton Scale: <http://www.woundcarehelpline.com/NortonScale.pdf>

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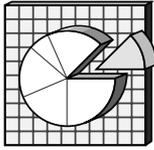
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Evaluation of Case Management Services for Lead Poisoned Children In Rhode Island

Daniela N. Quilliam, MPH, and Peter R. Simon, MD, MPH

Rhode Island mandates that all children under the age of six be screened for lead annually, and that all lead test results be reported to the RI Department of Health. Following the recommendations of the Centers for Disease Control and Prevention (CDC), the Rhode Island Childhood Lead Poisoning Prevention Program (RI CLPPP) considers children under the age of six with a venous blood lead level (BLL) ≥ 10 micrograms per deciliter ($\mu\text{g}/\text{dL}$) to be lead-poisoned.¹ Health effects below this level are well documented;^{2,3} however, due to lack of efficacious interventions below 10 $\mu\text{g}/\text{dL}$, RI CLPPP has retained this threshold as its “action level” for childhood lead poisoning.

The services offered to lead poisoned children in RI vary depending on the severity of the poisoning. (Table 1) Case management services are offered through one of four certified lead centers, non-profit Medicaid-funded agencies.

In 2007, RI CLPPP conducted an evaluation of case management services. The three main objectives of the evaluation were to determine if: 1) there were demographic differences between families accepting and refusing services; 2) parental knowledge of lead increased after receiving services; and 3) case management services had an impact on children’s BLLs.

METHODS

Data from three databases maintained by the RI Department of Health were linked in order to conduct the analyses.

A total of 827 children were referred to case management between January 1, 2004, and December 18, 2006. The complete dataset was used to calculate acceptance rates of case management services. The remaining analyses were conducted on a subset of data that excluded 340 cases with incomplete data, either because the cases were on-going or lost to follow-up. This subset of data included 487 cases where families had successfully completed case management services, or had refused services.

Parent knowledge was measured using an assessment tool comprised of

eleven multiple-choice questions. The family completed the assessment during the first visit (pre-test) and again several visits later (post-test). Scores on the pre- and post-test were compared to determine if there was a change in knowledge after case management services were administered.

RESULTS

Of the 827 referrals made to case management during the study period, 611 (73.9%) accepted services. The acceptance rate for case management services increased from 68.1% in 2004 to 84.5% in 2006, while the refusal rate declined during this time. (Figure 1)

The subset of 487 cases for which there was complete data was used to compare the demographic characteristics of families accepting services with those refusing services. (Table 2) The two groups are similar in terms of mother’s education, primary language spoken, and race/ethnicity.

Figure 1. Lead Poisoning Case Management Capture Rates, Rhode Island, 2004-2006

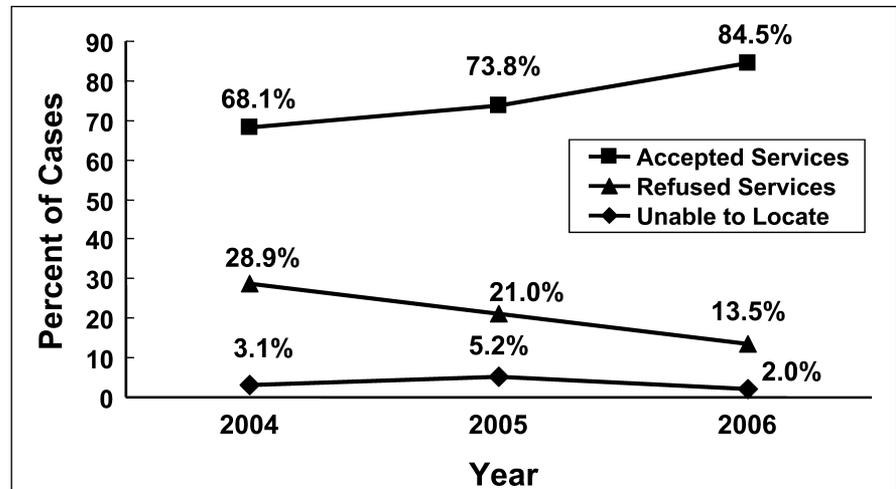


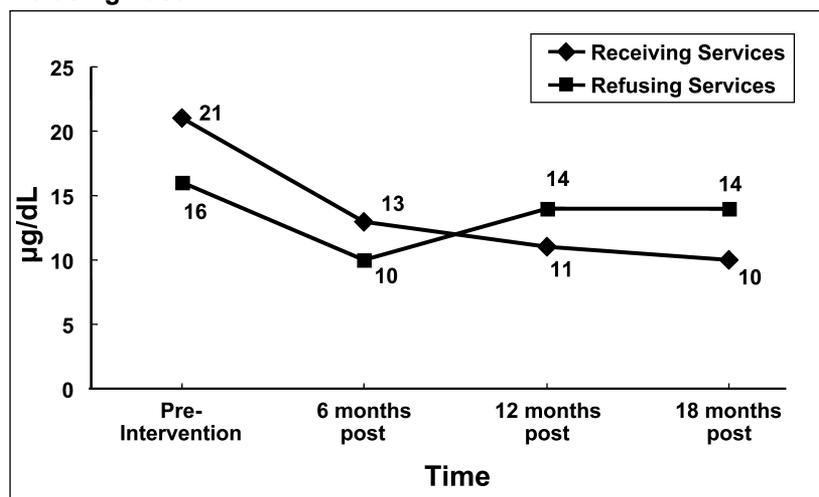
Table 1. Lead Action Levels in Rhode Island

Category	Action Level	Action
Elevated Blood Lead Level	One venous blood lead level 10-14 $\mu\text{g}/\text{dL}$	Family is sent educational material about lead poisoning in the mail. Beginning in January 2008, these children are also offered an in-home lead education visit.
	One venous blood lead level 15-19 $\mu\text{g}/\text{dL}$	Family is referred to a lead center for an in-home lead education visit and a visual assessment to identify lead hazards.
Persistent Lead Poisoning	Two venous blood lead levels 15-19 $\mu\text{g}/\text{dL}$ done between 90-365 days apart	Family is referred to a lead center for an in-home lead education visit and a visual assessment to identify lead hazards, AND the family is offered an environmental inspection.
Significant Lead Poisoning	One venous blood lead level ≥ 20 $\mu\text{g}/\text{dL}$	

Table 2. Demographic Characteristics of Families Accepting Case Management Services Compared to Families Refusing Case Management Services

	Accepted Services (N=300)		Refused Services (N=187)	
	#	%	#	%
Mother's Education				
Less Than High School	80	26.7%	50	26.7%
High School	84	28.0%	60	32.1%
More Than High School	45	15.0%	37	19.8%
Unknown/Missing	91	30.3%	40	21.4%
Primary Language				
English	186	62.0%	136	72.7%
Spanish	29	9.7%	13	7.0%
Other	7	2.3%	4	2.1%
Unknown/Missing	78	26.0%	34	18.2%
Race/Ethnicity				
White	109	36.3%	92	49.2%
Black	37	12.3%	15	8.0%
Hispanic	59	19.7%	24	12.8%
Other	19	6.3%	15	8.0%
Unknown/Missing	76	25.3%	41	21.9%

Figure 2. Changes in Blood Lead Levels Over Time: Children Accepting Case Management Services Compared to Children Refusing Case



Parental lead knowledge was assessed using a pre- and post-test format. The average score on the pre-test was 62.0%; the average score on the post-test was 85.5%. Post-test scores were not associated with the number of home visits received or parent's primary language. However, post-test scores did increase slightly the longer families were enrolled in case management.

An analysis was also conducted to determine the rate of change in the BLLs of children before and after case management services. Six months after referral to case management services, children accepting services had a mean BLL decline of 8 µg/dL; those refusing services had a 6 µg/dL decline. At twelve months after referral, the BLLs of those accepting services had declined an additional 2 µg/dL, while the BLLs of those children refusing services had increased by 4 µg/dL. The blood lead levels of children accepting services declined another 1 µg/dL by 18 months after referral, while the BLLs of those who refused did not change. (Figure 2) Overall, the children receiving services had a greater decline

in average BLLs from 20.9 µg/dL to 9.8 µg/dL, compared to 15.9 µg/dL to 14.1 µg/dL among the children that refused. This decline was significant among those children accepting services.

DISCUSSION

The percent of families accepting case management services has increased in recent years, indicating that RI CLPPP is reaching more families of lead-poisoned children. This can be explained, perhaps, by the fact that case managers have smaller caseloads, which allows them to dedicate more time to each family, and be more persistent when offering services. The demographics of the families accepting and refusing services are similar, indicating that our outreach efforts are not missing a particular subgroup. The increase in scores on the lead knowledge assessment from the pre-test to the post-test suggests that the educational component of the case management services are effective in increasing parents' awareness and knowledge about lead. The results of the analysis suggest that the BLLs of children receiving services decrease more steadily than those refusing services. This indicates that case management is one of many factors that can have a positive impact on a child's blood lead level.

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Disclosure of Financial Interests

The authors have no financial interests to disclose.

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The Quadrivalent Human Papillomavirus Vaccine

Anna Wheat

The human papillomavirus (HPV) is a group of over 100 viruses, 40 of which can be transmitted through mucosal cells during vaginal or anal intercourse, thereby infecting genital areas. Different HPVs infect the body in distinctive ways. In many cases there are no obvious symptoms (until late sequelae such as cervical cancer manifest themselves), but some of the viruses cause genital warts, genital lesions (abnormal cells), and some of the viruses cause cancers of the cervix, vulva, vagina, anus, or penis. Most people's immune systems will clear HPV within two years,¹ but sometimes the virus persists, and if untreated, may eventually cause cancer.

HPV is the most common sexually transmitted disease. According to the Centers for Disease Control and Prevention (CDC), 20 million Americans are currently infected with HPV, and 6.2 million are newly infected every year. At least 50% of sexually active men and women will become infected with HPV at some point in their lives.¹ At any given time, about 1% of the population is infected with genital warts caused by HPV.²

THE QUADRIVALENT HPV VACCINE

Gardasil[®], manufactured by Merck and Co, is a quadrivalent HPV vaccine approved for administration to females between the ages of 9 and 26. It confers immunity against four of the most common types of HPV – types 6, 11, 16 and 18. HPV types 6 and 11 are responsible for 90 percent of genital warts; types 16 and 18 are responsible for 70 percent of cervical cancers. The vaccine is a bioengineered, component vaccine made up of virus-like particles produced from the surface proteins of HPV types 6, 11, 16 and 18. The vaccine contains no viral DNA and is not infectious.³ Approved by the FDA in June 2006, it does not contain antibiotics or mercury compounds such as thimerosal⁴ (the vaccine preservative alleged – without supportive data – to cause autism).

HPV vaccine should be used to prevent HPV infection in women who are not infected. Vaccination before sexual debut is recommended, as early as age 9 at the discretion of the physician. Routine vaccination is recommended for girls ages 11-12. "Catch-up" vaccinations are recommended for girls and young women ages 13 - 26. The FDA has not approved the vaccine for males.

ADMINISTRATION

Gardasil[®] is administered in three independent 0.5 ml doses at 0, 2, and 6 months. The vaccine is available as a sterile suspension for injection in a single-dose vial or a pre-filled syringe.⁴ The vaccine should be stored at 2°C–8°C (36°F–46°F) and should not be frozen or exposed to light; its shelf life is 36 months. Side effects include soreness at the injection site, headache, fatigue, or vague feeling of discomfort after injection. Persons should not receive the vaccine if (1) they have

ever had a life threatening allergic reaction to yeast, any other component of the vaccine, or a previous dose of the vaccine, (2) they are pregnant, or (3) they are suffering from a moderate or severe illness. The vaccine retails for \$120 per dose for a total of \$360, not including the price of the office visit.

EFFECTIVENESS

Four clinical trials have been completed to test HPV vaccine; one evaluated a monovalent (HPV 16) vaccine — a phase II study; three evaluated the quadrivalent vaccine — one phase II and two phase III studies.⁴ As reported in 2007 by the Advisory Committee on Immunization Practices,⁴ the quadrivalent vaccine was shown to be quite effective:

“Various endpoints were assessed in the different studies, including vaccine type-related persistent HPV infection, cervical intraepithelial neoplasia (CIN), vulvar intraepithelial neoplasia (VIN) and vaginal intraepithelial neoplasia (VaIN), and genital warts. The primary endpoint and the basis for licensure was the combined incidence of HPV 16- and 18-related CIN 2/3 or AIS. These endpoints served as surrogate markers for cervical cancer. Studies using an invasive cervical cancer endpoint were not feasible because the standard of care is to screen for and treat CIN 2/3 and AIS lesions to prevent invasive cervical cancer. Furthermore, the time from acquisition of infection to the development of cancer can exceed 20 years. ... Quadrivalent HPV vaccine has a high efficacy for prevention of vaccine HPV type HPV 6-, 11-, 16-, and 18-persistent infection, vaccine type-related CIN, CIN 2/3, and external genital lesions (genital warts, VIN and VaIN) when analyses were restricted to participants who received all 3 doses of vaccine, had no protocol violations, and no evidence of infection with the relevant vaccine HPV type (seronegative and HPV PCR-negative through 1 month after dose 3). ... Participants infected with one or more vaccine HPV types before vaccination were protected against disease caused by the other vaccine HPV types. No evidence exists that the vaccine protects against disease caused by non-vaccine HPV types.”⁴

RECOMMENDATIONS

The CDC⁴, The American Academy of Pediatrics (AAP)³, The Society for Adolescent Medicine (SAM)⁵, The American College Health Association (ACHA)⁶, The American Cancer Society (ACS)⁷, and The American College of Obstetricians and Gynecologists (ACOG)⁸ have developed recommendations for the use of quadrivalent HPV vaccine. The following consensus has emerged in the scientific literature:

1. Routine vaccination is recommended for girls 11-12 years old, ideally before sexual debut. Vaccination can be administered as young as age 9 at the discretion of the physician.
2. Catch-up vaccination is recommended for girls 13-26 years old who have not been vaccinated or who have not completed the three-dose vaccination series.
3. Quadrivalent HPV vaccine is administered in a 3-dose schedule. The second and third doses should be administered 2 and 6 months after the first dose.
4. The minimum interval between the first and second doses of vaccine is 4 weeks. The minimum recommended interval between the second and third doses of vaccine is 12 weeks. Inadequate doses of quadrivalent HPV vaccine or vaccine doses received after a shorter-than-recommended dosing interval should be re-administered.
5. Quadrivalent HPV vaccine can be administered at the same visit as other age appropriate vaccines, however each vaccine should be administered using a separate syringe at a different anatomic site.
6. Lactating as well as immunosuppressed females can receive the vaccine.
7. Pregnant women, females with moderate to severe acute illness, or anyone allergic to any part of the vaccine (such as yeast) should not get the vaccine.
8. Regular cervical cancer screenings should ensue despite vaccination status.

Several additional recommendations are well worth noting:

CDC: If the quadrivalent HPV vaccine schedule is interrupted, the vaccine series does not need to be restarted. If the series is interrupted after the first dose, the second dose should be administered as soon as possible, and the second and third doses should be separated by an interval of at least 12 weeks. If only the third dose is delayed, it should be administered as soon as possible.⁴

ACOG: Testing for HPV is currently not recommended before vaccination.⁸

ACOG: Sexually active women can receive the quadrivalent HPV vaccine. Women with previous abnormal cervical cytology or genital warts also can receive the quadrivalent HPV vaccine. The quadrivalent vaccine can be given to patients with previous CIN, but practitioners need to emphasize that the benefits may be limited, and cervical cytology screening and corresponding management based on ACOG recommendations must continue.⁴

CURRENT HPV VACCINE CONTROVERSIES

Expected Impacts vs. Unanswered Questions

Dr. Anne Schuchat, Director of CDC's National Center for Immunization and Respiratory Diseases, notes that the quadrivalent HPV vaccine "has been tested in thousands of women around the world and has been found to be safe and effective in providing protection against the two types of HPV that cause most cervical cancers."⁹ Projected clinical gains include decreased incidence of

genital warts, cervical lesions, cervical dysplasia, and cervical cancer. Furthermore, the quadrivalent vaccine has the potential to be cost-effective if administered to females of the appropriate ages. For example, a study done by the Department of Health Policy and Management at the Harvard school of Public Health demonstrated the potential monetary savings of large-scale immunization. Assuming that the vaccination gives lifelong immunity, savings will be seen to the highest degree when girls are vaccinated in preadolescence (before age 14), theoretically allowing the delay of initial cervical cancer screening, and allowing longer intervals between subsequent screenings. Both outcomes would produce substantial savings¹⁰ for those vaccinated as well as third-party payers.

Despite the potential advantages of quadrivalent HPV vaccine, the medical world has been cautious in its adoption, primarily because the vaccine is new, and the usual questions attendant at the time of vaccine roll-out have arisen. Will the vaccine actually decrease the burden of cervical cancer and death? For how long will effective immunity be conferred by the three-dose series?¹¹ Will boosters be needed? (When? How frequently? At what cost?) Will use of the vaccine create selective pressure on particular HPV types, causing other types to become dominant in cervical lesions, genital warts, and other conditions? Given the current price of the quadrivalent HPV vaccine, will it be accessible in the developing world?¹² Will the price decline, and how soon? Will developing nations have access to vaccine at reduced cost? And most importantly, will use of the vaccine strengthen or weaken the existing (highly effective) infrastructure for cervical cancer screening in the U.S. and internationally? Resolving these questions will require decades of use and careful observation.¹³

Parental Consent vs. Child's Sexuality

Adolescents under 18 years of age represent a group that can be targeted before the initiation of sexual activity, but do not have the authority to vaccinate themselves against the virus.¹⁴ Currently, if a parent opposes the HPV vaccine because they see it as a "go ahead" for their child to engage in sexual activity, a teenager under the age of 18 can be denied permission to receive the vaccine, even though they *do not* need such permission to access birth control and testing for sexually transmitted infections. Assuming that the use of HPV vaccine becomes the *community standard of practice* throughout the United States, the issue of parental permission will undoubtedly be addressed.

DISCUSSION

The most important question remains: "Do the benefits of HPV vaccine outweigh the unknowns?" On the one hand, there is considerable evidence that the vaccine is safe and effective in preventing HPV types 6,11,16 and 18, and nothing has been published to discredit either the safety or the efficacy of the vaccine. On the other hand, the duration of immunity conferred by the vaccine is unknown, and concerns have arisen that receipt of the vaccine may cause some women to eschew regular pelvic examinations and Pap smears. As well, suppression of current dominant oncogenic serotypes may cause other types to become dominant, with unknown results. At five-year follow-up the vaccine is 100%¹⁵ effective; there is no indication of diminished efficacy. Time will tell whether a booster is indicated, when, and for whom. Nonetheless, five years of protection (and counting) during the early, high-risk years of sexual

activity (ages 15-24) is good protection. Public health must advocate for the continued use of pelvic examinations and Pap smears; HPV vaccine promises to reduce disease burden, but is *not* a cure-all for cervical cancer. As for the “type spreading” phenomenon, the quadrivalent HPV vaccine is no different than any other vaccine. Suppressing specific microorganisms creates selective pressure for the emergence of formerly insignificant genetic variants, and “new” genetic variants, as well. Only careful monitoring and cost-benefit analysis can determine if the intervention is worthwhile, despite its unintended but predictable consequences.

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The author has no financial interests to disclose.

Letters To the Editor

Dear Dr. Friedman,

Thank you for writing about electronic medical records in *Medicine & Health/Rhode Island* [September 2008]. I am writing this letter to inform you of the best-kept secret in electronic medical records (EMR): the VA Medical Center.

I always enjoy your articles, and this one was no exception. In my own internist's office I often feel like my doctor does not even know the color of my eyes. I always feel nervous when my one-word answers lead to a half-minute interlude of typing. Just recently the Rhode Island Free Clinic, where I volunteer, switched over to EMR, and the frustrations from those scroll-down boxes may have led to our losing some of our invaluable volunteer providers.

The advantages of EMR, as you listed, are numerous. At the VA, where I am currently on my medicine clerkship, they have had EMR since 1995. When a patient is admitted to the hospital, I can immediately see everything from a cardiology consult note 10 years ago to his last five EKGs. I can see his most recent CT scan of the head as well as his outpatient neurologist's recommendations based on those findings. With a simple double-click I can see a patient's weight over the last 15 years displayed as a line graph. Labs and pending orders appear on the computer screen. I can start a note in the morning and finish it later in the day. Clinical reminders such as “colonoscopy due” pop up on the screen when the patient meets preventative medicine guidelines for these procedures.

I would argue that EMR not only offer numerous advantages, they are crucial to how medicine should be practiced. Handwriting at Rhode Island Hospital, where I was a student

on the psych consult service, made me feel like an archeologist deciphering hieroglyphics. Medicine teams make recommendations, but the assessment and plan could be impossible to read. Health care workers seem to accept these limitations as “the way things are.” Instead of deciding that electronic medical records are a middle ground, we should figure out how to maximize our abilities with the best technology that is available.

Doctors at the VA have taken advantage of this system. They write notes faster than they would if writing them by hand. They make good eye contact with patients and show them x-rays and lab values as they pop up on the screen. They show the patients trends in their weight, blood pressure, and cholesterol to improve health education. Some primary care physicians do look at the screen more than they talk to the patient, but I believe that it is our medical training that will need to adapt, rather than EMR.

Please visit the VA in Providence and see how wonderful electronic medical records can be.

David Margolius

David Margolius is a student at the Warren Alpert Medical School of Brown University.

Disclosure of Financial Interests

The author has no financial interests to disclose.

Dear Editorial Staff:

I read the July 2008 issue of *Medicine & Health/Rhode Island* about Lyme disease and would like to share a different perspective of this disease and how the medical community could better serve the people of RI.

As a biostatistician, I interpret the results of infectious disease clinical trials and assess the generalizability of the findings. I have followed the literature on Lyme disease for the past 3 years and am aware of the controversy surrounding this illness.

I believe the medical community in RI should acknowledge that an infection with *Borrelia burgdorferi* can be serious and difficult to diagnose and treat, contrary to the opinions presented in the *Medicine & Health/Rhode Island* issue. In searching the literature, I have not been able to find proof that the Lyme bacteria is *always* eradicated following short-term antibiotic therapy.

Unfortunately in the writing of their diagnosis and treatment guidelines, members of the IDSA have ignored and downplayed many studies that provide convincing evidence of chronic and seronegative Lyme disease. A review article by Dr. Stricker provides 13 references describing Lyme serologic tests as too insensitive for diagnosis and 21 references documenting persistent symptoms and/or evidence of continuing infection following antibiotic treatment (Stricker RB, Counterpoint: Long-term antibiotic therapy improves persistent symptoms associated with Lyme disease. *Clin Infect Dis* 2007; 45: 147-57).

In addition, the Stricker article provides evidence of the complexity of *B. burgdorferi*, explaining that it has 132 functioning genes compared to the 22 found in syphilis and 3 times more plasmids than any other known bacteria. The article pro-

vides biological explanations (with citations) of how *B. burgdorferi* can evade antibiotic therapy and why longer courses of treatment can be helpful.

In this letter, I cannot provide a detailed critique of the three NIH-funded randomized clinical trials studying re-treatment of chronic Lyme disease. In summary, two of these studies demonstrate that symptoms can be measurably lessened by treatment but that a cure for the chronic stage of Lyme disease has not been found. Improvement of symptoms in the antibiotic treatment groups compared to placebo, but relapse upon discontinuation of antibiotic treatment, can indicate that the treatment studied, although helpful, was not curative and the infection remained (Fallon BA, et al. *Neurol* 2008; 70:992-1003).

I believe it is the moral and ethical duty of the medical community to acknowledge the uncertainty and charged political atmosphere surrounding this disease. Physicians should provide patients with information on all viable treatment options so they can make their own informed choices.

Availability of longer-term antibiotic therapies could make the difference between a life of disability and a full and productive life for those not cured by an initial course of antibiotics or diagnosed months or years after the tick bite occurred.

Sincerely yours,
Allison DeLong, MS
e-mail: adelong@stat.brown.edu

The author is a statistician in the Center for Statistical Sciences, Department of Community Health, Brown University.

Response from Drs. Jerome Larkin and Jennifer Mitty:

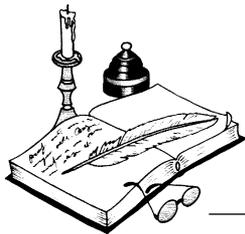
Ms. DeLong raises a number of issues warranting reply. We agree that characterizing *B. burgdorferi* as the “the less devastating relative of syphilis” is an oversimplification. Degrees of genetic relatedness, while fascinating, only rarely imply similarities in virulence or pathogenicity. The most that science can say about *T. pallidum* and *B. burgdorferi* is that they are both spirochetes, of which there are literally hundreds of varieties, including many which are part of the normal flora of the human mouth.

It is not surprising that she is unable to find evidence in the literature for the eradication of infection with *B. burgdorferi*: it doesn't exist. There is no technology, assay or culture method to demonstrate such eradication. Most testing in the realm of infectious diseases is specific; it is rarely sensitive. It is indeed a tricky business to disprove (as opposed to convincingly demonstrate the presence of) infection and is not the standard we apply to the vast majority of infections in clinical medicine. A common error in practice is to follow “titers,” meaning the ELISA or Western Blot, in a given patient with Lyme Disease, presuming persistence of antibody levels or bands on the Western Blot to indicate persistent, active infection. No data support such a presumption. While antibody levels may decline over the course of years to decades, positive tests should be

expected in the short-term (< 5 years) at a minimum, including in the face of adequate treatment.

Stricker's opinion piece from *Clinical Infectious Disease* is primarily just that: opinion. This is true also of the rejoinder by Auerwater in the same issue (*Clin Infect Dis* 2007; 45: 143-8). Stricker's references consist primarily of animal studies, case reports and molecular biology. While the last may be the basis for furthering our understanding of Lyme Disease, none of the studies cited constitute a sound basis for the leaps he makes. First, do no harm. In the absence of a randomized controlled study demonstrating a benefit and given the trials of prolonged antibiotic therapy which show no difference compared to placebo, we cannot in good conscience recommend prolonged antibiotic therapy for an unproven entity. Our moral and ethical duty is not only to “acknowledge uncertainty,” but also to practice based on the best available medical evidence.

Ultimately, all patients make their own decisions. Physicians can only help guide them. If someone wants an antibiotic, they can probably find a medical professional willing to prescribe it. This is as true of Lyme Disease as it is of the common cold, but we all know that chicken soup would do just as well and in all likelihood is in fact better.



Physician's Lexicon

A Purgatory of Ambiguous Words

Each of the noble professions has its own vocabulary; and medical dictionaries attest to medicine's awesome gathering of 25,000 or so technical words. Certainly there are overlapping terms [between surgery and carpentry, for example] but words in the medical domain are singular to medicine with but rare clusters of words shared with still other vocations. Some of the words pertaining to gastrointestinal medications [purgative, cathartic], for example, are also employed by theologians to signify the acts of cleansing, penitence and expiation.

Purge, in the sense of cleaning, appears as a Latin verb meaning to cleanse, to purify. In a document dated 1185, St. Bernard was apparently the first to employ the Latin derivative noun, *purgatorium*, originally meaning a specific place for physical cleansing, now to mean a station where dead souls, who had died penitent, are gathered; and are

then purified of venal sins or undergo punishment for forgiven mortal sin prior to their passage to heaven. In ecclesiastic writing, Purgatory was then assumed to be a place of great purpose and geographic specificity. The word, purgative, however, remains essentially medical, describing those chemical agents which hasten the "cleansing" of the colon. The word, expurgate, now also yields a narrower meaning: to amend something by erasing its offensive elements. The Latin verb, *purgare*, to cleanse, is closely related to the verb *putare*, meaning to purify.

Purge, as an ideologically motivated social action, defines an act of cleansing, but with sharp and often, in certain European nations, mortal undertones.

A cathartic, medically speaking, describes a chemical agent designed to enhance bowel activity. The word derives from the Greek, *catharos*, meaning cleansing, purify-

ing; and perhaps from an earlier word meaning tree-pruning. Psychiatrists often employ the word, catharsis, to denote a purification [or clarification] of human emotions. The Catharists [the pure ones] were a heretical Christian sect of the 12th and 13th Centuries centered in the Languedoc region of French Provence; the sect was destroyed in the Albigensian Crusade.

A laxative, meaning a purgative or cathartic, is the most common word to describe a bowel-cleansing agent. It stems from the Latin, *laxus*, meaning to loosen, to widen or to open [cf. words such as relaxation]. Commercially offered laxatives have been given names as explicit as Ex-Lax; and as ambiguous as Serutan [the word, Nature's, spelled backwards.]

— STANLEY M. ARONSON, MD



RHODE ISLAND DEPARTMENT OF HEALTH
DAVID GIFFORD, MD, MPH
DIRECTOR OF HEALTH

VITAL STATISTICS

EDITED BY COLLEEN FONTANA, STATE REGISTRAR

Rhode Island Monthly Vital Statistics Report Provisional Occurrence Data from the Division of Vital Records

Underlying Cause of Death	Reporting Period			
	December 2007	12 Months Ending with December 2007		
	Number (a)	Number (a)	Rates (b)	YPLL (c)
Diseases of the Heart	261	2,719	254.2	3,654.5
Malignant Neoplasms	188	2,280	213.1	5,972.5
Cerebrovascular Diseases	37	385	36.0	642.0
Injuries (Accidents/Suicide/Homicide)	37	516	48.2	8,078.5
COPD	47	424	39.6	322.5

Vital Events	Reporting Period		
	June 2008	12 Months Ending with June 2008	
	Number	Number	Rates
Live Births	1,082	12,736	11.9*
Deaths	760	9,992	9.4*
Infant Deaths	(4)	(78)	6.1#
Neonatal Deaths	(4)	(58)	4.6#
Marriages	437	6,372	6.0*
Divorces	179	2,863	2.7*
Induced Terminations	357	5,047	396.3#
Spontaneous Fetal Deaths	37	816	64.1#
Under 20 weeks gestation	(37)	(746)	58.6#
20+ weeks gestation	(0)	(70)	5.5#

(a) Cause of death statistics were derived from the underlying cause of death reported by physicians on death certificates.

(b) Rates per 100,000 estimated population of 1,067,610

(c) Years of Potential Life Lost (YPLL)

Note: Totals represent vital events which occurred in Rhode Island for the reporting periods listed above. Monthly provisional totals should be analyzed with caution because the numbers may be small and subject to seasonal variation.

* Rates per 1,000 estimated population

Rates per 1,000 live births

THE RHODE ISLAND MEDICAL JOURNAL

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NINETY YEARS AGO, DECEMBER 1918

From October 1918 through December 1919 the Rhode Island Medical Society suspended publication of the journal, because key staff members were serving in World War I.

FIFTY YEARS AGO, DECEMBER 1958

In "Panel Discussion: Prevention and Treatment of Cardiac Emergencies," J. Scott Butterworth, MD (New York University Postgraduate Medical School), James V. Warren, MD (Harvard Medical School), Allan Friedlich, MD (Harvard Medical School), and Louis Dexter, MD (Harvard Medical School) traded opinions.

Harold W. Williams, MD, in "The Clinician: In the Mode of Today's Thinking," opined on modes of analysis. "The clinician emphasizes. He recognizes overlooking and neglecting to do is a reality of his human nature."

Arthur B. Kern, MD, in "Treatment of Cutaneous Reactions to Antibiotics," noted that the key was "elimination of cause and secondarily treatment of the skin."

C. Aguilera Maruri, MD, in "Riehl's Melanoma of Emotional Origin," described the case of a 60 year-old woman who had had vitiligo since age 22. One winter day, she "opened the door to her brother who fell dead in her arms. The following night her face became red and swollen, with severe itching." A few days later, the erythema subsided, replaced by darkening of the skin.

TWENTY-FIVE YEARS AGO, DECEMBER 1983

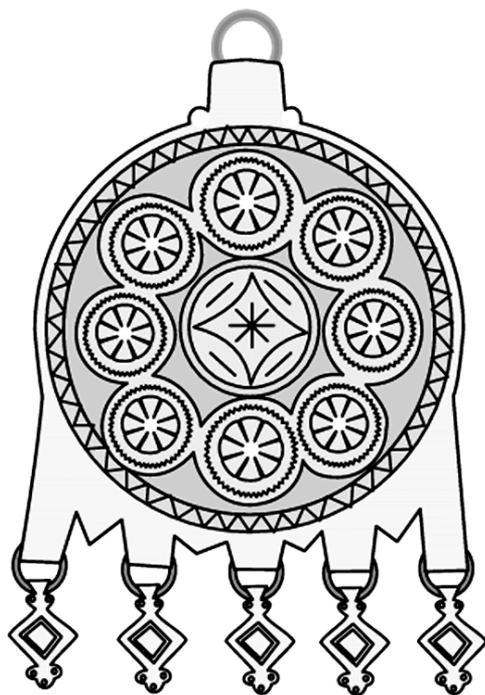
Charles P. Mosher, Administrative Director, Rhode Island Blood Center, contributed an Editorial: "Blood Use in Rhode Island." "Rhode Islanders use more blood transfusions per person than the residents of any other state." The author attributed this to the "complexity of cases" in the state's acute care hospitals. Since 1980, red cell transfusions increased 16%; red blood collections increased 36% (twice the national average, four times the rest of New England). The use of platelet concentrates and fresh frozen plasma increased 45%. The author noted: "A transfusion of blood or blood components is performed every 5 minutes in Rhode Island." The editorial emphasized the need for blood-donors.

On the President's Page, Charles P. Shoemaker, Jr, MD, discussed "Medicare: Usual, Customary and Reasonable and the Prospect of Medicare Assignment." Medical societies opposed mandatory assignment.

Erminio R. Cardi, MD, FACS, in "Choledochoscopy," explained "The flexible fiber optic choledoscope promises to reduce significantly the incidence of ...common duct stones."

David M. Barry, MD, FACS, in "Microsurgical Removal of Ruptured Lumbar Disks", cautioned: "While early excellent results appear likely to be permanent, long-term studies are needed."

Robert E. Newhouse, MD, John R. Stuart, MD, and Joanne Baldwin contributed "Blood Usage: Physicians' Order Provides for 4 Elective Surgical Procedures." An audit of hospitals in Rhode Island revealed a high incidence of unnecessary routine blood cross-matching "due to lack of awareness of the problem by surgeons as to procedures which do not commonly require transfusions."



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