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GUEST EDITOR
RENNÉE R. SHIELD, PhD
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Brain Warfare: Primates To Humans?

Yawning: Monkey see, monkey do

JOSEPH H. FRIEDMAN, MD
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Many readers probably are familiar with the surprising observation published recently showing that young chimpanzees, but not juveniles, were immune from the contagious form of yawning (Madsen EA.) Chimpanzees show a developmental increase in susceptibility to contagious yawning: a test of ontogeny and emotional closeness on yawn contagion. (PLoS One 2013;8(10)e76266). In a surprise development, a study of 33 orphaned chimps showed that juveniles only “caught” yawning when a human yawned, but that young chimps did not. Moveover, there was something special about yawning, in contrast to certain other stereotypic behaviors. Juveniles didn’t develop contagious gaping or contagious nose wiping, stereotypes in chimps. Equally interesting was the observation that the strength of the contagion didn’t matter if the yawning model, ie, the yawner, was their adoptive human mother or an unknown human.

I was surprised that the IRB had approved a plan that didn’t include a description of how the researchers were going to deal with the chimps which were caught yawning. Is there treatment for yawning? It’s presumably not life threatening but could it be? Is there a cure? Once present can it worsen? Does it lead to other problems?

One can imagine that persistent yawning may provoke a reaction from the other chimps that could possibly lead to embarrassment, possibly ostracism. Was this protocol sensitive to the needs of its subjects? One must also consider the other aspects of this protocol. What if “gaping” was contagious? How stigmatizing is it to be a gaping chimp? Would gaping interfere with socialization? Might a gaping chimp provoke antagonism, especially if it was also yawning? Imagine how hard life might be for a chimp which not only was yawning but was gaping? I’ve seen chimps suffer for lesser social miscues than these.

Imagine how hard life might be for a chimp which not only was yawning but was gaping? I’ve seen chimps suffer for lesser social miscues than these.

The chimp saw a yawn and the brain said, “boring,” and so another yawn was born. But the experiment did not include blind or blindfolded primates. And why should a chimp, which spends 8 hours eating and 16 hours sleeping, get bored by a yawn? No blind or blindfolded chimps were tested. Perhaps there are brain waves or exhaled particles which communicate yawning. We also do not learn from this project whether a yawning chimp, caged by itself, will continue to yawn, or whether it lessens or increases. Can the yawn be controlled? Does contagious yawning have a half-life?

Most importantly, can this be used by the state department to undermine our foreign opponents by putting yawning people in prominent advertisements to encourage yawning? Might there be a “critical mass” for yawning, so that after a number of chimps, or people, develop contagious yawning, most of the chimp/human colony become yawners? At this point, the shoe may shift to the other foot so that the chimps which are immune from the contagion become the...
outliers, possibly with severe repercussions that we can only guess at.

Can one die from yawning? Might gaping be contagious in adults?

In humans yawning, even contagious yawning, appears to die out over time. We don’t know this yet for chimps. But what if occasional people who developed contagious yawning continued to yawn?

What if it worsened over time? And what if they also developed contagious gaping and nose wiping?

I think there are several possible approaches. Yawning undoubtedly involves dopamine. We know that schizophrenics on drugs that block dopamine receptors are more apt to “catch” yawning than schizophrenics who are untreated. So, blocking a dopamine receptor, presumably D2, which is blocked by all the antipsychotic drugs, mitigates the contagion of yawning. Parkinson disease patients, who have a dopamine deficiency, also yawn more than others, although distinguishing a yawn from routine mouth opening may be challenging. Apomorphine induces yawning in people with Parkinson’s disease. Of course, it also induces nausea and vomiting, so that what looks like a yawn may be a partially suppressed act of vomiting. So dopamine agonism may be one approach to treat, or perhaps, prevent the contagion of yawning, but what about refractory contagious yawning?

Basic neurophysiology teaches us that the “yawning center,” a poorly defined collection of small, spindly, dull-spiny neurons in the pars intergalactica, is hyperactive within 15 ms of yawn commencement, then hypactive. Early experiments with deep brain stimulation suggests that properly calibrated stimulation effectively stifles yawns, whether contagious or not. But much work needs to be done to determine long-term outcome, and what target will be best if gaping or nose wiping become epidemic in our rapidly aging population. April fool.

Author
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Disclosures on website

Guidelines for Letters to the Editor

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

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

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

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

Ken and Mary Korr also checked out the Wells Fargo museum in Old Town, San Diego. This red and gold overland express coach was in use in 1867, carrying passengers and mail, and is similar to the one Mark Twain wrote about in an account of his stagecoach adventure from Missouri to Nevada in Roughing It. Average speed: 5 mph, stopping every 12 miles for a change of horses or mules.

SAUSALITO, CALIFORNIA

Dr. Barbara Roberts, director of The Women’s Cardiac Center at The Miriam Hospital, read RIMJ’s tribute to Dr. Stanley M. Aronson while staying on the S.S. Maggie in Sausalito, CA.

SAN DIEGO, CALIFORNIA

Dr. Ken Korr of Barrington at the Old Point Loma lighthouse (1855) within the Cabrillo National Monument, checks the March issue of RIMJ. He is standing in front of a historic Fresnel lens, in use from 1891. The lens relies on catoptrics (reflection) and dioptrics (refraction) to collect, redirect and intensify light. Divided into panels with a bull’s eye in the center, surrounded by both prisms, a rotating lens creates a flash pattern as it turns. The lighthouse was restored by the National Park Service in 2003.

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AUSTIN, TEXAS

Andreas Nicholas, (above) filmmaker/partner at Anderimage LLC viewed the March issue while attending the South by Southwest® Conference and Festival (SXSW®). Founded in 1987, SXSW now attracts 28,000 visitors annually as a showcase for independent films, music, and emerging technologies.

Andrew Migliori, (left) filmmaker/partner at Anderimage LLC (and RIMS’ Bicentennial filmmaker) viewed the March “We Are Read Everywhere” that featured his grandparents in Barcelona, before visiting the Texas State Capitol in downtown Austin. The Capitol, completed in 1888 and constructed of red granite, is at 308 feet in height, taller than the US Capitol building in Washington, DC.
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Journeys in Long-Term Care

RENNÉE R. SHIELD, PhD
GUEST EDITOR

I introduce this second themed issue on the subject of long-term care in Rhode Island (RI) by noting that it is again dedicated to the memory of DR. STANLEY M. ARONSON, an ardent and longtime champion of humane health care in general and the enlightened medical approach in particular for the care of older adults. The platform of being guest editor allows me to speak once more for the values Dr. Aronson held dear about how competent and excellent care must be based fundamentally in the unique needs, life story and preferences of the individual patient. His emphasis on respect for the person and superb medical competence were instrumental values that led to his initiating hospice care to RI (Home and Hospice Care of RI, founded in 1974), Interfaith Health Care Ministries (founded in 1975) as well as embedding interdisciplinary approaches to medical care in the Brown Program in Medicine (now The Warren Alpert Medical School of Brown University).


This issue focuses on the journey in long-term care, specifically transitions and end of life. Medical care for older adults is often marked by frequent transitions in sites of care, moves that are fraught with difficulty as physicians and other caregivers rush to move the patient from site to site, too often without adequate preparation and sufficient information to ensure that the move is accomplished well and safely.

Vognar and Mujahid describe how transitions between hospital and nursing home challenge the provision of the most effective care; they provide practical advice about how to manage transitions in a smoother and safer way. The article by Shield, Thomas and Ratchford takes the perspective of patients who have actually undergone these transitions. They focus on how patients recalled their journeys from home to hospital to nursing home for rehabilitation. They highlight how the transitions as seen from the patients’ point of view can be frightening and challenging, the patients also offer advice to physicians about how these moves could be managed better.

The final two articles discuss the role of hospice and palliative care in the long-term care institution. Miller describes how hospice and palliative care can best be utilized in this setting and how these approaches can effectively alleviate patients’ pain and suffering. Physicians are themselves sometimes the barrier to patients and their families accessing adequate relief for their conditions. Martin next addresses how physicians can talk with patients and families in “goals-of-care” conversations about end-of-life choices in a realistic and comforting way. He offers a blueprint of a clear approach to clarifying patient goals and preferences physicians can use to effectively implement these dialogues into their clinical practice.

Dr. Aronson intimately understood the inherent brevity and finality of our transient lives. His life is an example of how to enrich the limited time we have to maintain and heighten the preciousness of life itself. Older patients are at the end of long, complex and intensely unique lives. His painting featured on the cover speaks to a lengthy journey into a vast unknown. When we care for older patients, we need to respect their individuality and honor the specific experience of who each of them is. We thank Dr. Aronson for reminding us of the compassionate view of age and mortality and for helping us finding a practical and informed way to care for patients in the best ways possible. In continuing the spirit and example of Stan Aronson, I sincerely hope the articles in this issue convey the message of how to better care for older adults as they approach the ends of their lives.

Guest Editor
Renée R. Shield, PhD, is Professor of Health Services, Policy and Practice (Clinical) at the Center for Gerontology and Healthcare Research, Brown University School of Public Health.
Healthcare Transitions of Older Adults: An Overview for the General Practitioner

LIDIA VOGNAR, MD; NADIA MUJAHID, MD

ABSTRACT
Healthcare transition refers to the care “hand-off” of a patient among providers and treatment settings. Older adults experience more frequent care transitions than younger patients due to the presence of co-morbidities, cognitive impairment, increased dependence and medication use. Hospitalization and subsequent readmission after discharge to a nursing home represents a unique care transition situation. It is estimated that as many as 60% of readmissions from nursing homes can be avoided. Poor communication between hospital and nursing home staff, delayed, inaccurate, or missing discharge summaries, lack of accurate medication reconciliation, pending test results, inappropriate follow-up, and poor education of patient and families all contribute to poor care transition quality, and increase the probability of rehospitalization. Interventions for improved care transitions are suggested. They focus on patient and family-centered care effectiveness, minimizing adverse events, and increasing timely, accurate and complete communication.

KEYWORDS: Healthcare transitions, nursing home residents, hospital readmission rates

INTRODUCTION
A healthcare transition occurs when a patient moves among providers or treatment settings coincident with a change in a patient’s condition or health care needs. These care settings include hospitals, nursing facilities (NFS), rehabilitation centers, and home. Effective and safe care transitions depend upon a set of actions designed to ensure the coordination and continuation of healthcare as patients transfer between locations and levels of care. Optimal care transitions should include pre-hospital discharge activities, immediate post hospital discharge follow up at the next care setting, and should be part of a broader, integrated, multidisciplinary care plan.

The annual incidence of care transitions from nursing homes (NHS) to emergency departments (EDs) range from 23-60% in the U.S. Adults aged 65 years and above account for more than 400 ambulatory visits, 300 ED visits, 200 hospital admission, 46 admissions to SNFs, and 106 home care admissions per 1000 persons in 2000.

Advancing age and more complex disease are associated with frequent care transitions because of the increased likelihood of co-morbidities, cognitive impairment, increased dependence and polypharmacy; a variety of providers is needed to address the complex needs, which in turn can result in fragmented care, exposure to adverse events, and increased hospital readmissions. Seventy-four percent (73.7%) of older adults with dementia have a care transition from hospital to NH: the re-hospitalization rate is 23% annually. A review of more than 25,000 admissions of Medicare beneficiaries in Rhode Island revealed that patients with dementia were 20% more likely to be readmitted within 30 days of discharge than those without cognitive impairment.

Care transitions are expected to rise in frequency and complexity as the adult population ages and as older adults increasingly use SNF for the recovery of independence. The care transition to and from SNF is supported by appropriate communication of health information between these healthcare settings.
OUTCOMES OF POOR QUALITY CARE TRANSITIONS

Readmissions

It is known that one in five Medicare beneficiaries discharged from hospitals will be readmitted within 30 days, at a cost of $26 billion annually. Several performance measures aimed at reducing avoidable hospitalizations have been proposed by the Centers for Medicare and Medicaid Services (CMS). In 2010, the Patient Protection and Affordable Care Act imposed penalties related to hospital readmission rates. Penalties reduce Medicare payments to hospitals with higher than average rates of rehospitalization within 30 days of discharge when the hospitalization is for acute myocardial infarction, pneumonia, or congestive heart failure. Penalties are scheduled to increase and the list of conditions to expand in fiscal year 2015. It is estimated that avoiding 5.2% of preventable Medicare readmissions could save approximately $5 billion annually.

Hospitalization of NH residents and hospital readmissions of patients sent to SNFs for acute rehabilitation represent a unique care transition that is affected by many different factors, including both facility and patient specific characteristics. Readmissions from the NH happen most frequently due to infections, fractures, cardiovascular, and gastrointestinal disorders. One study reported that infections accounted for 25% of NH readmissions. Facility characteristics, such as nursing staff patterns, NH size, and percentage of Medicaid and Medicare reimbursed days also influence NH residents’ risk of hospitalization.

Sixty percent of hospital readmissions from NHs were identified as potentially avoidable. Medication errors, infections, and injuries represented the majority of potentially avoidable hospitalizations, indicating that measures aimed at infection control, falls, medication reconciliation, improved inter-provider communication, timely discharge summaries, follow-up plans, and patient and family education on care transitions may help reduce readmission rates.

Adverse Events

An adverse event (AE) is defined as harm resulting from medical management rather than from the disease process. About one in five patients discharged from hospitals will experience an AE within 3 weeks of discharge. More than half of post discharge AEs occur because of poor communication among providers, most commonly regarding medications and test follow-up errors. Test follow-up errors, defined as having a test result noted as pending at the time of discharge in the inpatient medical record but not acknowledged in the outpatient chart, have come to the attention of the Agency for Healthcare Research and Quality, as well as to large malpractice insurers. It has been shown that 41% of discharged patients had pending test results, and that a test follow-up error occurred in 8% of discharged patients. Fifty-four percent of patients experienced one or more medication error on admission to hospitals, with 39-45% of these considered dangerous to the patient.

Poor communication between hospital and NH staff, delayed, inaccurate, or missing discharge summaries on discharge, lack of medication reconciliation, pending test results, lack of a follow-up care plan, and poor education of patient and family regarding expectations at the next care setting are the most common reasons contributing to AE occurrences during care transitions. Patients with low health literacy, non-English language speakers (or English as a second language), who have cognitive impairment, limited social support, and a lack of resources, further contribute to the likelihood of an AE occurrence. Healthcare system-specific barriers, such as specialty care provided in silos, create further ambiguity about who is responsible for the patient; these factors lead to fragmented care and also possibly increase AE occurrence.

INTERVENTIONS TO IMPROVE CARE TRANSITIONS: NATIONAL

Interventions to improve care transitions often focus on readmission rates and cost containment for inpatient services, but there are domains in which beneficial interventions, such as care effectiveness, minimizing AE, reducing stress of residents, families, and staff, timeliness, and patient- and family-centered care could improve care transitions. Interventions include profession-oriented interventions, organizational interventions, and patient-family interventions.

To aid in the development of profession-oriented interventions, the Transitions of Care Consensus Conference (TOCCC), which aimed to create successful care transitions, developed standards for the transition of care. TOCCC standards include coordinating clinicians, providing a care plan/transition record, having standard communication formats, accounting for transition responsibility, timeliness, community standards, and including patients and their families in the transition process. The TOCCC standards insist that clinician communication happen whenever patients are at a transition of care. The standards list a minimal set of data elements that should be part of the transition record or discharge summary, including the principal diagnosis, problem list and medication list, the name of the transferring physician, the patient’s cognitive status and all pending tests.

It is important to realize that discharge summaries may be the only information regarding hospital events, medication changes, follow-up appointments, and pending tests that a provider in the community or NH has about a discharged patient. However, 75% of primary care physicians have not received a discharge summary by the first post-hospitalization visit, and often discharge summaries are incomplete or inaccurate, leaving providers at a total loss.

The Community–based Care Transitions Program (CCTP) is an organizational intervention created by the Affordable Care Act to improve quality of care and reduce readmission rates for high-risk Medicare beneficiaries. Community involvement is encouraged through formation of
are often left uninformed about what to expect, often feel admitted to Rhode Island hospitals with a $10.4 million cost avoidance of 1000 Medicare beneficiaries, reflecting 1086 fewer patients attributed to a decrease in the readmission rate of 8.7 per health plans across multiple care settings. They have coordinated approach to care transitions. Patients and families are often left uninformed about what to expect, often feel that transfer was initiated too early and note a lack of preparedness for the transition from total care at the acute care site to near self-care at the NH.

**RHODE ISLAND**

Healthcentric Advisors (the Medicare Quality Improvement Organization for Rhode Island) developed Safe Transitions Best Practice Measures for improving care transitions of NH residents. This project created statewide standards for cross-setting care transitions, resulting in sustainable systems change and overall improved patient safety. These standards have been widely accepted and incorporated into health plans across multiple care settings. They have contributed to a decrease in the readmission rate of 8.7 per 1000 Medicare beneficiaries, reflecting 1086 fewer patients admitted to RI hospitals with a $10.4 million cost avoidance over the last 3 years. In addition, RI has a mandated continuity of care form that has led to dramatic improvement in cross-setting communication since inception in 2009, and our readmission rates have been dropping rapidly (20% decline in the last three years).

**CONCLUSION**

Poorly executed care transitions have been associated with increased hospital readmission rates, increased AEs, poor patient satisfaction, and negative overall patient health outcomes. Older adults, NH residents, and their families in the transition process.

---

**Table 1. Safe Transitions Best Practice Measures, Rhode Island**

<table>
<thead>
<tr>
<th>Best Practice #1</th>
<th>Interventions implemented for residents at highest risk for unplanned transfer</th>
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<tbody>
<tr>
<td></td>
<td>These interventions are targeted at residents with depression, falls, and &gt; 2 hospitalizations in the last 12 months.</td>
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<tr>
<td>Best Practice #2</td>
<td>Clinical information sent with emergency department (ED) referrals</td>
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<td></td>
<td>Information should include the resident’s baseline status, reason for referral, medications, advance directives, and phone number connecting the ED to nursing home (NH) staff who can address questions about resident</td>
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<tr>
<td>Best Practice #3</td>
<td>Real time verbal information provided to ED or hospital clinicians</td>
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<td></td>
<td>Clinical or clerical NH staff should be readily available to address the ED or hospital clinicians’ specific questions regarding the transferred resident.</td>
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<tr>
<td>Best Practice #4</td>
<td>Medication reconciliation completed after ED or hospital discharge</td>
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<td></td>
<td>Medication reconciliation includes the review of the patient’s discharge medication regimen, comparing the discharge medication regimen to the prior medication regimen to identify and resolve any discrepancies.</td>
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<tr>
<td>Best Practice #5</td>
<td>Structured communication used for clinical questions to physicians</td>
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<td></td>
<td>A framework for inter-provider discussions is recommended to ensure high urgency concerns are addressed efficiently.</td>
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<tr>
<td>Best Practice #6</td>
<td>End-of-Life care discussed with residents</td>
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<td>Conversations should take place regarding end-of-life topics such as comfort care, do not hospitalize, hospice, general goals of care.</td>
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<tr>
<td>Best Practice #7</td>
<td>Effective education provided to residents prior to NH discharge</td>
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<td></td>
<td>Education should incorporate the testing of resident’s understanding, and should include the reason for the NH stay; also includes medication changes, recommended follow-up appointments and tests, and condition-specific “red flags” to prompt the resident to seek attention.</td>
</tr>
<tr>
<td>Best Practice #8</td>
<td>Written discharge instructions provided to residents prior to NH discharge</td>
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<tr>
<td></td>
<td>This instruction should include the reason for the NH stay, all medication changes, recommended follow-up appointments, pending test results, and condition-specific “red flags” to prompt the resident to seek attention.</td>
</tr>
<tr>
<td>Best Practice #9</td>
<td>Follow-up appointment scheduled prior to NH discharge</td>
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<td></td>
<td>The appointment should indicate the date, time, location, and contact info for any questions.</td>
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<tr>
<td>Best Practice #10</td>
<td>Summary clinical information provided to outpatient physicians at discharge</td>
</tr>
<tr>
<td></td>
<td>This information should include a contact number to connect the NH staff to outpatient physicians for questions.</td>
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<tr>
<td>Best Practice #11</td>
<td>Residents have access to medication after NH discharge</td>
</tr>
<tr>
<td></td>
<td>Residents must receive enough medications after NH discharge until the end of the intended treatment course or until the first outpatient follow-up.</td>
</tr>
</tbody>
</table>
Acknowledgments

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Disclaimer

The views expressed herein are those of the authors and do not necessarily reflect the views of any other party.

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Disclosures

None

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Health Care Transitions: Perceptions from Older Patients in Rhode Island

RENÉE R. SHIELD, PhD; KALI S. THOMAS, MA, PhD; RACHEL RATCHFORD, ScB

ABSTRACT

Health care transitions are often dangerous for older patients. Interviews with older adults about their health care moves in Rhode Island (RI) were conducted to develop an Internal Medicine (IM) curriculum designed to provide IM interns with insights about the impact of transitions on patients. This paper describes some ways patients talk about their transitional experiences. Following pilot interviews, 10 nursing home residents were interviewed about their care transitions, conversations with physicians, and advice to doctors beginning their careers. The interviews were analyzed to identify themes. Patients described multiple moves, often did not know what to expect, appreciated help from a family member and desired effective communications with physicians. Learning about patient experiences may help new physicians appreciate the experiences of transitions on patients.

KEYWORDS: transitions of care, patient experiences, nursing homes

INTRODUCTION

Problematic transitions plague the experience of older adults in health care. Our rapidly aging population is at risk from a fragmented system of care in which transitions among sites of care are poorly conducted, and experiences of older adults can be of secondary consideration.1 Transitions among sites of care, even when appropriate, are linked to increased incidence of delirium, hospital-acquired infections and falls, and the exacerbation of pre-existing chronic conditions.2-4 Recent literature indicates that more research is needed about these transfers, and that improved communication and education among and by providers is key.5,6

There is increased interest in measuring patient satisfaction with hospital care during hospitalizations,7-9 however, since little is known about the patient perspective regarding transitions in sites of care, experiences of older adults must be better understood. Interviews can be effective in revealing aspects of health care that are otherwise difficult to quantify.7,10 During medical school, students may be exposed to principles of patient-centered care, the importance of communication, and in some cases, the dangers inherent in care transitions; however, these priorities are challenged after medical school by the exigencies of hospital routines and requirements.11-13 The purpose of the research was to use the patient perceptions of their transition experiences to develop a 3-hour curriculum with Internal Medicine (IM) interns on the impact of these transitions.

This paper describes these recollections, focuses on how patients perceived what happened to them and includes some ways patients would like physicians to speak with them. A separate paper, forthcoming, describes the development of the IM curriculum.

METHODS

Three nursing homes (NH) in RI agreed to participate in this project. The administrator, director of social work (SW) and director of nurses (DoN) of each facility helped identify NH residents who might be willing to participate. Six pilot interviews were conducted with recently hospitalized NH residents who the SW or DoN of the NH determined to be cognitively intact; these were followed by interviews with 10 community-dwelling older adults undergoing rehabilitation in a skilled nursing facility (SNF) following a hospitalization. The project was explained to all respondents through an informed consent process. The respondents were asked to recall the reason for hospitalization and to relate events regarding transfers to and care in the emergency room (ER), hospital, skilled nursing facility (SNF) and any conversations they remembered having with physicians. Interviews were audio-recorded and transcribed, then analyzed for themes. The research was reviewed by the Brown University Research Protections Office and determined to be exempt.

RESULTS

After the pilot interviews were completed, we decided to conduct subsequent interviews with community-dwelling individuals who had recently been hospitalized and were now undergoing rehabilitation in a SNF. Of these, one respondent was 61 years old, three were in their 70s, and 6 were in their 80s. All but two respondents were female. A few prominent themes from the interviews are discussed below with illustrative quotes from the respondents.
Respondents describe multiple moves

Multiple moves were common occurrences related in interviews. Some respondents had transfers beyond those from home to the ER, admission to the hospital, and eventual transition to the SNF. For example, one went to a local urgent care facility, then a hospital ER before admission to the hospital and transfer to the SNF. Three went to two hospitals after the ER. One was admitted to the hospital, then went to the intensive care unit and then back to a hospital floor before entering the SNF. After admission to the SNF, a few then experienced moves within the SNF. The following excerpts are examples of recollections of ER and hospital experiences. This respondent had positive memories:

“[All I] remember is the fast ride, sirens going and feeling this blood coming out of my legs you know. It just seemed like one big drama, personal drama anyway. And I don’t know, I wasn’t worried about it…They were so friendly… and they weren’t the least bit afraid [of] this bleeding patient…I realized this is not a big thing to those who are taking care of me…because they were so relaxed…I began to relax.”

An 87-year-old participant described caring ambulance drivers: “Their personality and the way they treated you, you know. Like you wasn’t just a nothing and they treated you with compassion and very nice.” In the ER,

“The team of people just…started hooking you up to IVs…And there was a lady doctor, very very nice…they had to take all these tests and x-rays. [The doctors] didn’t have too much to say. They were just asking the same questions like, ‘What happened!’ ”

However, another who recalled being in a great deal of pain said she was given a call bell to use in the ER. “They kept saying, ‘It’ll just be a minute.’ This was obviously a lie; it wasn’t just a minute. But nobody would pay attention to the fact that I was uncomfortable.” She noted that despite the staff’s “Ooey gooey speech” designed to be reassuring, [they] “really didn’t care and I was just part of the problem… I called, but nobody answered the call bell.”

Two respondents moved from one hospital to another. One’s daughter was instrumental in this decision. The 78-year-old respondent asked her daughter, “You understand that?”… She said, “Yeah, okay Ma.” And so I just forget about it because I get confused if you get more [information].”

Respondents often did not know what to expect

Confusion and/or not knowing what to expect was another refrain heard in these interviews. One respondent said, “I really didn’t know. I was just in ‘blah’, and I was kept thinking, where am I gonna go?” Another similarly recalled what may have been delirium:

“I had a really scary experience of not knowing what I was, who I was, or what was going on. It was scary frightening…I kind of went into la la land…it was really weird, and then they assured me that this…happens because of the pain medication… it was this terrible experience I had of being somewhere else, me being someone else. Just disoriented…I felt very much alone…”

Some wanted more information than they remembered was given. One respondent said, “They didn’t explain hardly anything…I did have questions but they never asked me about questions.”

Another recalled, “What really irritated the hell out of me” was that his wife knew about his upcoming hospital discharge shortly before he did.

[The case manager] said, “Mr. [patient name], you know you’re going to a rehab center!” I said, “Yeah I know. My wife told me. You didn’t have the decency to come down and tell me first! You went around my back?” “Well,” she said, “we were very busy…there was so much paperwork.”

Family members could be very helpful

The assistance of a family member figured in these interviews. A few respondents said they did not involve themselves in decisions about the moves or the care because a daughter was performing this role. For example, one daughter asked the respondent about the choice of SNF, and the respondent said, “Just do it.” The daughter retrieved the respondent’s belongings from the hospital and made sure the medications were correct. “My daughter took care of everything.” Another recalled crying much of the time and relying on her daughter for decisions because she became confused. When asked whether doctors or other providers explained the care, this 87-year-old respondent answered:

“Yes, they did explain. But…you’re not really listening for them. My daughter…really listened to them all…She said, ‘Mom, this is the best place for you because how else can you manage!…until we get to the bottom of this…you have to be at the hospital.’ ”

A 78-year-old respondent asked her daughter, “You understand that?”… She said, ‘Yeah, okay Ma.’ And so I just forget about it because I get confused if you get more [information].”
Communication with physicians was described as uneven
Communication with physicians was reported to range in quality and was connected to the advice respondents offered. One enjoyed being the object of concern by her providers:

“I loved it. I like to talk about myself. And they were interested. A couple of them even had good suggestions. And I felt as if we were moving forward, that something was being done.”

Another said:

“The doctors...were very nice talking to me...they were just proper...I liked them...they made you feel at home... They made me sit down, and then they sat down.”

On the other hand, one was frightened by what she recalled was a too-forceful manner in one physician’s recommendation:

“ ‘If you don’t do this, you will die.’ That really got me...scared the begeegbees right out of me. It didn’t help matters. It really shook me up.”

Advice for physicians
This respondent wanted the physician to “Put it a different way, you know. Sit my family down and say ‘Look, the blood work is this, this and that.’ But he didn’t do that.” Her advice was to, “Give [patients] the opportunity to talk. Be patient... they’re not hearing everybody, you know?” An 86-year-old woman said simply, “Treat them like they were their father. You know, be gentle.” A 77-year-old respondent said, “They need to be reassuring and not be the master of everything... people have their own way of thinking and organizing themselves. And it’s up to the doctor to pick up on that.” An 83-year-old respondent had this specific advice for physicians:

“Slow down. Just remember we have some physical difficulty...I think I am more with it than most of the patients here. And even I am exhausted by them. The people stand over me too close; if they move too fast, I get out of breath. And I am just physically wiped out. And I am perfectly capable of having a party with a team of doctors, but they’ve got to do it at my pace a little bit...It would be nice if they talked a little bit about our particular backgrounds. ...Many doctors make us feel that we’re cute and precious and gee just doing well. But, they don’t think of us as real human beings.”

CONCLUSION
This small sample of interviews reveals how some older patients in RI experienced their care transfers among hospitals and SNFs. Their stories reflect patient vulnerability after a hospitalization with disruptions in sleep and other routines and when pain is common.14 The quotes remind us that patient and provider perceptions of medical events can be markedly different.7 Individuals in these accounts described the variety of transfers they endured and their feelings of disorientation and confusion. Respondents had different needs for information and seemed reassured by a family member’s assistance in decisions and advocacy. Their advice to physicians about how they would like to be talked with is a vivid reminder that their perception of communication is a vital element in competent and compassionate care in difficult transitions. Attention to their stories can help improve their care at these vulnerable times.

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The Goals of Care Conversation: A tool to improve patient care in the nursing home at the end of life

EDWARD W. MARTIN, MD, MPH

ABSTRACT
Patients residing in nursing homes may undergo burdensome transitions in care during the final months of life. They may get care they do not want and are unlikely to benefit from. Patients and families may not understand prognosis or the potential benefits of treatment. A “goals of care” conversation can be the critical first step in identifying a patient's wishes and then developing a plan of care that honors those wishes. When the goal of care is to focus on comfort, hospice can be accessed. Hospice can help ensure that the patient's final time is spent in comfort and that the family's needs are attended to both before and after the patient dies.

KEYWORDS: end of life, hospice, communication, advance care planning

INTRODUCTION
Patients residing in nursing homes often undergo burdensome transitions in the final weeks and months of life. Patients may return to the hospital for care they did not want and were not likely to benefit from. Identifying the patient's goals, values and preferences and then developing a plan of care based on these can help to improve care in the final weeks of life. A goals of care discussion is the critical first step in determining what care is most likely to benefit the patient in achieving their goals, what care is not consistent with their goals, and what options, such as hospice, would help meet their goals. Common goals of care include: curing disease, avoiding premature death, maintaining or improving function, prolonging life, relieving pain, enhancing comfort, maintaining or improving function, and dying peacefully.

GOALS OF CARE MAY NOT BE STATIC
The goals of care will typically change as an illness progresses. A patient in the nursing home may have experienced a lifetime of medical care with goals that focused on curing illness and prolonging survival. Patients may have endured discomfort and, at times, suffering to achieve these goals. They may come to a point where cure is not possible and the goals of care may change to maintaining function and independence. As an illness progresses, the goal may then shift to maintaining or improving quality of life and then finally to having a peaceful death. Discussion of goals of care should be held on admission to the nursing home and then repeated at regular intervals, particularly when there are changes in health status.

Before establishing goals of care, it is important that patient and family understand where the patient is in his/her illness. Goals may change significantly as the prognosis is better understood. Research has shown that many patients are unaware of their prognosis. Many patients with heart failure, for example, did not understand that their heart disease would limit their life expectancy. Patients with renal disease on dialysis were much more optimistic about their prognosis than their physicians. Those patients who understood they had a poorer prognosis were less likely to want potentially life prolonging care. Families may not understand that dementia is a terminal illness. Honest discussion about prognosis can begin to address some of these misunderstandings. It is important when outlining prognosis that jargon be avoided. Also vague and evasive comments about prognosis like “only God knows” or “I don’t have a crystal ball” are not helpful, especially when it is clear the patient has a limited life expectancy and is seeking information to inform decision-making.

Concerns are sometimes raised by family or nursing home staff that discussing these issues may be upsetting to the patients. However, it has been shown that patients who have conversations about the kind of care they want at the end of life are not more likely to develop depression than those who do not engage in these types of conversations. They are, however, less likely to get aggressive care at the end of life.

DECISION-MAKING CAPACITY AND GOALS OF CARE
In the nursing home, many patients have dementia and it will be important to assess decision-making capacity. The patient must be able to understand the clinical information, use the information to make a decision and understand the consequences of the decision. If the patient is not able to make medical decisions, the surrogate named in the advance directive will need to be consulted. If a surrogate has not been designated, the family can assist in determining goals.
DEVELOPING A PLAN OF CARE

Once the patient’s goals and values have been elicited, a plan of care can be developed. When the goal is to have comfort for the final weeks of life, the plan of care will be very different than when the goal is prolonged survival, even if it requires burdensome interventions. Strong physician or practitioner input in developing the plan of care is critical.

One error that is sometimes made in discussing the plan of care is to focus solely on what will not be done (e.g., no intubation, no CPR, no hospitalization). This may leave the patient and family wondering what will happen as they are dying. They will need to be informed how pain, dyspnea, and suffering will be effectively managed and be reassured that care will not be withdrawn.

Patients and families may still have misconceptions about the benefits of various interventions. CPR in particular may be misunderstood. Patients and families may vastly overestimate the success of CPR and may make decisions based on that misinformation. Learning about the futility of this intervention in certain settings and conditions may change the likelihood of requesting it. Benefits of dialysis for nursing home patients may also be misunderstood. It has been shown that most patients residing in a nursing home who begin dialysis will die or have a significant decline in function in the year following initiation of dialysis. Patients receiving chemotherapy or radiation for advanced cancer often do not understand that the treatment is not likely to cure their cancer. Many families may assume that the placement of a feeding tube will benefit a patient with advanced dementia whose dietary intake has declined. Research has shown that the placement of a percutaneous endoscopic gastrostomy tube does not prolong survival. It is important to assess patient and family understanding of the benefits or the treatment options they are considering, or they may be opting for interventions that are unlikely to help them.

Patients, families, and nursing home staff may not understand the benefits of antibiotics in a dementia patient with pneumonia. Antibiotics are often viewed as a comfort measure by the staff; however, research has shown this is not the case. Patients with dementia who were given antibiotics were actually found to be more uncomfortable than patients who did not receive antibiotics. Antibiotics did however prolong survival of patients with advanced dementia and pneumonia. Again, it is critical to determine what the goals of care are at that point.

THE ROLE OF HOSPICE

If it is determined that quality of life and comfort are the goals of care, then hospice may be helpful in achieving those goals. Research has shown that nursing home residents who receive hospice care are less likely to be hospitalized. It has also been shown that management of pain is better for nursing home resident residents enrolled in hospice than for those not receiving hospice care. Many nursing home residents do access hospice care which can improve the quality of life. Unfortunately for many residents, it is only accessed for the final days of life, often after multiple hospitalizations. Some dying patients may leave the hospital and go to the nursing home as skilled patients so that Medicare will pay for the room and board. If they go to the nursing home with...
hospice care at the routine level, the family will be required to pay the daily room and board rate which can be up to $300 a day or more. Medicaid may cover this cost for those patients who meet eligibility guidelines and established in that state. This creates a disincentive for patients to access their Medicare hospice benefit following a hospitalization. Research has shown that patients who receive skilled care are less likely to use hospice and are more likely to have a short hospice stay, and those patients without hospice in place are much more likely to return to the hospital.14

If decisions have been made to limit potentially life-prolonging interventions, the Medical Orders for Life Sustaining Treatment (MOLST) form can be completed. This document ensures that the patient’s wishes for care will be honored if they leave the nursing home for another setting. It includes preferences for CPR, comfort care, feeding tubes, and hospitalization.

For many patients in the final weeks and months of life hospice can provide tremendous benefit not just to the patient but to the patient’s family and caregivers. Hospice can help ensure that the patient final time is spent in comfort and that the family’s needs are attended to both before and after the patient dies.

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Hospice and Palliative Care in Nursing Homes: Challenges and Opportunities for Enhanced Access
SUSAN C. MILLER, PhD

ABSTRACT
The use of hospice care in nursing homes (NHs) has grown exponentially, but an increasing concern is the lack of access to resident and family-centered palliative care when residents do not elect hospice, and in time periods prior to election. This concern is amplified by the high magnitude of palliative care needs present for NH residents (and their families) when the NH will be their final residence; and, it is amplified because of short hospice stays, half of which are 22 days or less. This manuscript describes the use of the Medicare hospice care in NHs and discusses the policy, staff and physician barriers to timely hospice referral. It also describes the challenges NHs face in expanding residents’ access to palliative care. Opportunities and approaches for increasing palliative care expertise and practice in NHs are presented.

KEYWORDS: Hospice, palliative care, nursing homes, Medicare

INTRODUCTION
This manuscript discusses the barriers to timely hospice care for nursing home (NH) residents and the associated need for expansion of nonhospice palliative care in NHs.

Hospice care provided in NHs is now common. While 14% of dying NH residents nationally received hospice in 1999, in the first six months of 2010, this proportion rose to 40% (see Figure 1); and, in 2010 it was 68% in Rhode Island. This growth in hospice use is believed to be beneficial to NH residents, given the substantial research showing hospice enrollment to be associated with lower end-of-life hospital use, lower use of aggressive end-of-life treatments (e.g., tube feeding, intravenous fluids, other), higher-quality symptom management, and family reports of superior care.1-6 However, there are concerns regarding the high rates of short hospice stays and thus the limited exposure to palliative care expertise by residents and their families. In NHs, major barriers to timely referral are the high proportion of residents with chronic terminal illnesses (for which determination of prognoses are difficult) and the use of Medicare Part A Skilled Nursing Facility (SNF) care by terminally ill (often dying) residents who cannot simultaneously choose hospice.

CONTEXT OF HOSPICE AND PALLIATIVE CARE USE IN THE NH
Sixty-three percent of hospice enrollees in 2012 had non-cancer diagnoses,7 but the proportion was closer to 80% in NHs. Also, 67% of older adults dying with dementia die in NHs.8 To be enrolled in Medicare hospice, physicians must certify that patients have a six-month terminal prognosis (if the disease runs its normal course). For NH residents with chronic terminal illnesses, and in particular with dementia, the determination of a six-month prognosis is imprecise in practice; research attempting to predict mortality has had only limited success.9 Given this difficulty and the high prevalence of chronic terminal illness in NHs, hospice NH residents have high proportions of both very short and very long hospice stays. In 2012, for example, the median length of hospice stays was 27 days for patients receiving home hospice compared to 22 days for NH hospice. Still, while 50% of NH hospice patients had stays of 22 days or less, 10% had stays of 335 days or longer, resulting in an average hospice length of stay of 112 days in NHs compared to 90 days for home hospice.10

In addition to the above, the admission or readmission...
of NH residents to Medicare Part A SNF care when they are near death or actively dying has a profound impact on Medicare hospice use since Medicare disallows simultaneous hospice and SNF care (if SNF care is related to the terminal condition). Still, 12% of Medicare SNF residents die within 90 days of admission. Residents admitted or returning to NHs from [3-day] hospital stays qualify for NH SNF care when skilled observation and assessment are required or when they receive therapy or complex services (e.g., intravenous feeding, intramuscular injections, other). There are financial incentives for choosing Medicare SNF care instead of private-pay or Medicaid NH care, and thus there is concern about its inappropriate use. For private-pay residents/families, with SNF enrollment, a substantial Medicare co-payment is received and out-of-pocket expenditures are substantially reduced. For NHs, admission of Medicare/Medicaid [dually] enrolled residents to SNF care translates into NHs receiving the substantially higher Medicare per diem payment instead of the lower Medicaid payment. Research on NH decedents with advanced dementia (i.e., moderately severe to severe dementia) found 40% received Medicare SNF care in the 90 days prior to death. Of these, 30% received hospice compared to 46% of those without SNF care; and, 40% of hospice enrollees (post-SNF) had short hospice stays (≤ 7 days) compared to 19% of those without SNF care. Additionally, 14% of residents with end-of-life SNF care died in a hospital compared to 9% of those without SNF care.12

While hospice eligibility guidelines and Medicare payment restrictions challenge timely hospital referral, other referral challenges exist as well. NH staff practices and knowledge also influence the timing of hospice referral. Through interviews conducted in RI, we found earlier hospice referral was facilitated when NH staff was able to recognize the familiar signs of terminal decline, took initiative in raising and discussing the option of hospice with physicians, residents and families, and when staff believed hospice added value and was not only for the “very end.”13 Also, at the time of our study none of the study NHs had written procedures regarding assessment of residents’ prognoses or eligibility for hospice, or for communicating with physicians, residents and families regarding such outcomes. However, according to new CMS surveyor interpretive guidelines,14 surveyors are instructed to assess whether NHs have practices in place to regularly assess whether residents are “approaching end-of-life;” and surveyors are instructed to look for evidence that interdisciplinary teams have addressed the discussions and considerations regarding advance care planning needed to clarify residents’ goals and care preferences.14

Figure 2. “Pocket Care” Information on When to Consider Palliative or Hospice End-of-Life Care
**How Physicians Affect Hospice Referral**

Ultimately, residents and their families (and NH staff) rely on physicians for information regarding prognosis, and for referral to hospice. Thus, physician behavior is a key determinant in enabling hospice access. However, several physician-related barriers to timely hospice referral have been found, including lack of knowledge about hospice, negative perceptions of hospice, discomfort communicating poor prognoses, fear of losing control of the patient, and delaying the discussion of hospice until the patient was actively dying.\(^{15,16}\) To assist physicians with determining when palliative or hospice care should be considered, “pocket card” information has been developed (see Figure 2). Also, the American Medical Directors Association (AMDA) has developed a palliative care tool kit to assist physicians in providing optimal care to long-term care residents with chronic and progressive illnesses.\(^{17}\) In particular, this tool kit addresses how “all members of the interdisciplinary team can help physicians become more proficient in the assessment and relief of suffering.”\(^{17}\) As discussed below, surveyor interpretive guidelines address the expected care practices when residents are assessed to be approaching end of life.

For NH residents approaching end of life, the Medicare/Medicaid surveyor interpretive guidelines ask surveyors to determine whether care is driven by resident preferences and is palliative—patient and family-centered care that optimizes quality of life by anticipating, preventing and treating physical or psychological suffering.\(^{14}\) This surveyor guideline pertains to all residents regardless of their hospice status; thus, it intensifies the need for NHs to increase the availability of palliative care expertise to enable assessment and management of residents’ physical and psychosocial needs. Since many RI NHs through their “culture change” efforts have adopted practices and environments enabling patient and family-centered care, they are well-equipped to meet this aspect of the guideline. However, these and other NHs may lack the palliative care expertise needed to ameliorate intractable symptoms such as persistent pain or dyspnea or the staffing or expertise to address residents’ (and families’) psychosocial and spiritual needs. NHs can gain this expertise internally through education and training efforts or through selected recruitment, and, it can be obtained externally as discussed below.

Medicare hospice expands the availability of palliative care expertise to NH residents, but for residents unable or unwilling to access hospice and prior to hospice enrollment, other approaches are needed. One approach for expanding access to palliative care expertise is the use of palliative care consults. These consults may be provided by internal NH experts but are also often available to NH residents by external providers [most often through hospice-affiliated organizations].\(^{18}\) Physicians order palliative care consults [often at the suggestion of NH staff] to assist in managing intractable physical symptoms or to assist in addressing resident/family psychosocial needs, including the need for help with end-of-life care decision making. There are no prognostic requirements associated with receipt of palliative care consults, and they can be provided to residents enrolled in Medicare SNF care. Anecdotal findings show the efficacy of palliative care consults in NHs to be promising,\(^{18}\) but there has been little comparative research of their benefits. However, one NH with a NH-staffed consult program found residents with consults had greater reductions in depression and in emergency room visits, compared to its matched residents without consults.\(^{19}\) Also, preliminary findings from our ongoing longitudinal research show that when NHs introduce palliative care consults, their residents’ rates of end-of-life hospital use decrease, compared to rates of NHs who have not yet introduced consults.\(^{20}\)

**Education and Training Efforts**

Selective staff recruitment and staff and medical director education and training are other ways for NHs to increase the presence of palliative care expertise. In recent interviews of NH administrators, most cited hospice alone as their only resource for providing staff with palliative care education.\(^{21}\) However, other resources for education and training are available but are certainly not in abundance. Through the End-of-Life Nursing Education Consortium (ELNEC) project a train-the-trainer education program in palliative care was developed, and there is palliative care geriatric curriculum.\(^{22}\) NHs can send a nurse for ELNEC training, and when they return, they can convey this information to other NH nurses and aides. Attendees also have the opportunity to become certified in hospice and palliative care. Also, in addition to AMDA’s palliative care tool kit discussed earlier, other relevant clinical guidelines are available.\(^{23}\) For example, guidelines on pain management and on managing an “acute change of condition” are available.

In addition to the above, quality improvement organizations (QIO) or culture change coalitions in some states have led initiatives to assist in improving NH staff’s palliative care knowledge and practice.\(^{23-25}\) In Rhode Island, for example, the QIO (Healthcentric Advisors) recently conducted a NH palliative care collaborative with staff from 16 facilities.

Staff-initiated improvement efforts focused on one of six hallmarks of palliative care: identifying proxy decision-makers, advance care planning, pain assessment, discussion of resident prognosis, discussion of resident goals, and assessment and access to spiritual care. The palliative care collaborative facilitated improvement through staff sharing of information on their change efforts and resulting achievements.\(^{24}\) In addition, other PC education was provided to staff; and 20 NH nurses were funded to attend ELNEC training. A product of this RI initiative is a palliative care toolkit that is available for free on Healthcentric Advisors’ website.\(^{25}\) This tool kit contains a wealth of information including guidance on assessing pain and having resident/family discussions regarding prognoses and goals of care. It also contains links to numerous palliative care organizations and guidelines.
CONCLUSION

While there has been a large increase in hospice use in NHs, many residents still do not access hospice or access it only weeks prior to death. To adequately care for residents with chronic and progressive illnesses, an increase in the presence of palliative care expertise within NHs is needed. This increase can be achieved through earlier hospice referral, use of external palliative care expertise, selected staff recruitment, or by investing in the training and education of staff and physicians. Resources are available to assist in this effort.

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Comparison of Substance-Use Prevalence among Rhode Island and The Miriam Hospital Emergency Department Patients to State and National General Population Prevalence Estimates

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ABSTRACT

OBJECTIVES: Compare the prevalence of recent alcohol, tobacco, and drug use among patients from two Rhode Island emergency departments (EDs) to Rhode Island state and United States national general population estimates between 2010 and 2012.

METHODS: Secondary analysis of ED patient data and the National Survey of Drug Use and Health.

RESULTS: Alcohol was the most commonly reported substance, and prevalence of its use was higher among ED patients than those in the national, but not the Rhode Island, general population. Drug use was higher among ED patients than in the state and national general population. For ED patients, tobacco and opioid use was highest among 26–34 year-olds, alcohol and marijuana highest among 18–25 years-olds, and cocaine highest among 35–49 years-olds.

CONCLUSION: Rhode Island Hospital and The Miriam Hospital ED patients report a greater prevalence of substance use than the national population and in many cases the state general population.

INTRODUCTION

Substance use and misuse has been associated with increased risk for economic, legal, physical, and psychosocial negative consequences.1,2 The emergency department (ED) is often the health resource utilized by individuals who use and misuse substances.3 In 2011, an estimated 2.5 million visits to EDs in the United States (US) involved drug misuse or abuse, which is equivalent to 790 visits per 100,000 people in the US.4 Between 2009 and 2011, US ED visits involving illicit drugs increased 29%.4

Research suggests that screening ED patients for substance use, providing access to interventions, and if needed, referring patients to treatment while in the ED may reduce substance misuse and health-related negative consequences.3 Determining the extent of substance misuse as well as the type of substances misused among the ED patients in Rhode Island, and understanding how their prevalence compares to national and state estimates, may better direct efforts addressing the need for interventions to reduce harmful substance misuse among ED patients.

The specific aims of this study were to: (1) compare the prevalence of alcohol, tobacco and recent (past one to three months) drug use/misuse among Rhode Island and The Miriam Hospital ED patients to Rhode Island state and US national general population estimates, (2) examine trends in substance misuse over time and age groups among these ED patients, as compared to national general population estimates.

METHODS

Study design

This investigation involved a secondary analysis of data from the National Survey on Drug Use and Health (NSDUH), which is an annual nationwide survey that provides national and state-level estimates on the use of tobacco products, alcohol, and illicit drugs (including non-medical use of prescription drugs).8 We used NSDUH national and Rhode Island State level data from the years 2010 to 2012. To compare the prevalence of substance misuse in the US and the State of Rhode Island to that of the Rhode Island Hospital and The Miriam Hospital ED patients, we compiled data from two federally funded studies: Increasing Viral Testing in the ED (InViTED) and Brief Intervention for Drug Misuse in the ED (BIDMED). InViTED and BIDMED were randomized, controlled trials conducted from July 2010 to December 2012. The hospital Institutional Review Board approved the InViTED and BIDMED studies.

Database Descriptions

NSDUH

NSDUH participants are randomly selected to obtain a representative cross-sectional sample of individuals 12 years-old or older residing in the US.8 Respondents are interviewed in their home [or another place denoted as their residence], and following a face-to-face screening interview with a NSDUH representative, answer questions on substance use and mental health using a computer-based survey. Using an audio computer-assisted self-interviewer (ACASI), the NSDUH asks participants about their frequency of tobacco, alcohol and illicit drug use [marijuana/hashish, cocaine/crack, heroin, hallucinogens, and inhalant use] and nonmedical use of prescription drugs [analgesic opioids, stimulants, tranquilizers, and sedatives] during the past 30 days. The NSDUH provides data on alcohol, tobacco, and marijuana
use individually, but combines illicit and prescription drug use into one drug use category. Data on specific drugs used only are available on a national and not a state level, and prevalence data are stratified for state level data in two age groups: 18–25 year-olds and ≥ 26 year-olds. National data are available in five age groups (12–17, 18–25, 26–24, 35–49 and 50+ year-olds).

**BIDMED/InVITED**

Also using an ACASI system, participants in the BIDMED and InVITED studies at the Rhode Island Hospital and The Miriam Hospital EDs answered questions about their past 90 days substance use and misuse using the Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST, Version 3). Data on demographic characteristics also were obtained. For purposes of direct comparisons to the NSDUH state and national prevalence estimates, the baseline data (before randomization) from the BIDMED and InVITED studies were combined as a one dataset, and data on drug misuse except for marijuana use were collapsed into a single category. These two studies included ED patients who were 18–64-year-old Spanish or English speakers who did not have a critical illness or injury, were not mentally or physically unable to participate in the study, intoxicated or in the ED for acute psychiatric illness care.

**Data analysis**

Prevalence of recent substance misuse was estimated by year and by substance misuse category (alcohol, tobacco, marijuana, and other drugs) for the NSDUH state and national and BIDMED/InVITED databases along with 95% confidence intervals (CIs). Prevalence estimates were stratified by age groups (18–25 year-olds and ≥ 26 year-olds). Prevalence of specific substances used recently (tobacco, alcohol, marijuana, cocaine, opioid analgesics, and illicit opioid use) were estimated and stratified by year and age group from the national NSDUH data and from the BIDMED and InVITED studies. Statistical comparisons of prevalence were made using 95% CIs. Non-overlapping 95% CIs indicate two prevalence estimates that are different at an α=0.05 level.

**RESULTS**

**Substance use/misuse prevalence by age group and population**

Table 1 shows the comparison of substance use/misuse prevalence by age group between the NSDUH and the BIDMED/InVITED studies. Alcohol was the most commonly used substance across all three populations, with the ED and Rhode Island state populations reporting more alcohol use than the national population. Among those 26 year-old or older, the Rhode Island state population reported significantly more alcohol use than the national and ED populations. Tobacco, marijuana and illicit drug use was generally greater among the ED than the other two populations for both age groups.

**Specific substance use/misuse prevalence trends by year and age groups**

Figure 1 depicts trends in specific substance use/misuse between 2010 and 2012 by age groups from the NSDUH national and ED data. For tobacco and all drugs, the ED population reported more use of these substances than those in the US population across all years and age groups. There was a trend towards greater alcohol use among the ED population as well. Among the ED population, tobacco and opioid analgesic use tended to be highest among 26–34 year-olds, alcohol and marijuana were highest among 18–25 year-olds, and cocaine was highest among 35–49 year-olds, as compared to other age groups. In general, prevalence of substance use was stable across the three years of data.

---

**Table 1. Recency of substance use from NSDUH national and Rhode Island State data and RIH/TMH ED data for the years 2010, 2011, and 2012**

<table>
<thead>
<tr>
<th>Substances</th>
<th>United States*</th>
<th>State of Rhode Island*</th>
<th>RIH/TMH ED**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=206,222</td>
<td>n=2,768</td>
<td>n=6,432</td>
</tr>
<tr>
<td>Tobacco</td>
<td>39.3 (38.8-39.8)</td>
<td>26.8 (26.3-27.3)</td>
<td>41.6 (38.5-44.8)</td>
</tr>
<tr>
<td>Alcohol</td>
<td>60.6 (60.0-61.3)</td>
<td>55.1 (54.5-55.7)</td>
<td>72.1 (69.1-74.9)</td>
</tr>
<tr>
<td>Marijuana</td>
<td>18.7 (18.3-19.2)</td>
<td>4.9 (4.7-5.2)</td>
<td>30.7 (27.9-33.7)</td>
</tr>
<tr>
<td>Illicit drugs including marijuana</td>
<td>21.4 (20.8-21.9)</td>
<td>6.6 (6.4-6.9)</td>
<td>33.4 (30.4-36.5)</td>
</tr>
<tr>
<td>Illicit drugs excluding marijuana</td>
<td>7.3 (7.0-7.6)</td>
<td>2.6 (2.4-2.7)</td>
<td>9.9 (8.2-11.9)</td>
</tr>
</tbody>
</table>

* = sample interviewed ages > 12 years-old; ** = sample included ages 18-64 years-old; ǂ = marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics (pain relievers, tranquilizers, stimulants, and sedatives) used non-medically; ǂǂ = marijuana, cocaine (including coke, crack), methamphetamines (crank, crystal methamphetamine, ecstasy or 3,4-methylenedioxymethamphetamine (MDMA), tweak), Inhalants, hallucinogens, illicit opioids (heroin or opium), gamma-Hydroxybutyric acid, Amphetamines, benzodiazepines, barbiturates, methadone, prescription opioids

Key: NSDUH= National Survey on Drug Use and Health; RIH=Rhode Island Hospital; TMH=The Miriam Hospital; ED=Emergency Department
Figure 1. Trends in specific substance use between 2010 and 2012 by age groups from the NSDUH national and RIH/TMH ED data.
DISCUSSION

This investigation highlights many concerning findings about substance misuse among Rhode Island residents and in particular those who receive medical care at the two Rhode Island EDs. As noted, substance misuse among these populations is higher than the general population across the rest of the US, which indicates the need for action to reduce the burden of misuse in our community. Of particular concern is the consistent trend from 2010 to 2012 of high substance misuse among younger ED patients (18–25 year-olds).

Screening brief intervention and referral for treatment (SBIRT) is an approach to identify individuals who might benefit from interventions for their substance misuse. This approach has been used in primary care as well as ED settings for tobacco, alcohol and other substance misuse. Our data suggests that the ED is a health care setting where many individuals who misuse substances could be identified as the first step to receiving appropriate treatment. We also found that age is an important factor in identifying where ED SBIRT resources might be directed. Our analyses showed that younger ED patients (18–25 years-old) are using substances such as alcohol and illicit drugs at greater frequency than older ED patients or those of the same age in the national and state population samples. Research suggests that early initiation of drug use is associated with an increased risk of a more negative drug use trajectory including an increased risk of injection drug use, as well as alcohol and drug dependence. Our finding suggests that secondary preventive interventions targeted for younger adults (18–25 years) who present for care at our EDs are needed.

There were several limitations to this investigation. We were unable to separate past month and past three-month prevalence because recency of use was estimated differently for the NSDUH than the BIDMED/InViTED studies. Past three-month prevalence, which encompasses past-month prevalence, was in many cases higher for the ED populations. Also, since data for both the NSDUH and BIDMED/InViTED was based on self-report, there may be inaccuracies because reporting might have been influenced by memory error and social desirability, leading to underreporting of use.

CONCLUSION

Compared to a national and state survey data on recent drug use, Rhode Island Hospital and The Miriam Hospital ED patients report a greater prevalence of use of tobacco, alcohol, prescribed and illicit substances than the national population and in many cases the Rhode Island general population. Misuse was generally stable and higher among ED patients than the national general population across the three years of data. As demonstrated in this study, these EDs are settings with high prevalence of patients who could be screened for substance misuse and offered intervention services.

Grants

This research was supported by grants from the National Institute on Drug Abuse (R01 DA026066, R21 DA28645) and the Lifespan/Tufts/Brown Centers for AIDS Research (P30 AI042853). Clinical-Trials.gov identifiers: NCT01419899, NCT01124591.

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References

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Training Family Medicine Residents to Build and Remodel a Patient Centered Medical Home in Rhode Island: A Team Based Approach to PCMH Education

RABIN CHANDRAN, MD; CHRISTOPHER FUREY, MD; ARNOLD GOLDBERG, MD; DAVID ASHLEY, MD; GOWRI ANANDARAJAH, MD

ABSTRACT
Primary Care practices in the United States are undergoing rapid transformation into Patient Centered Medical Homes (PCMHs), prompting a need to train resident physicians in this new model of primary care. However, few PCMH curricula are described or evaluated in the literature. We describe the development and implementation of an innovative, month-long, team-based, block rotation, integrated into the Brown Family Medicine Residency Program, within the context of statewide PCMH practice transformation in Rhode Island. The PCMH resident team (first-, second- and third-year residents) gain PCMH skills, with progressive levels of responsibility through residency. In addition to traditional supervised direct outpatient care, learning activities include: active participation in PCMH transformation projects, population health level patient management, quality improvement activities, interdisciplinary teamwork, chronic disease management (including leading group medical visits), and PCMH specific didactics paired with weekly projects. This new clinical block rotation and team holds promise as a model to train residents for future PCMH primary care practices.

KEYWORDS: primary care, PCMH, patient centered medical home, residency training

INTRODUCTION
The national drive to provide patient care within Patient Centered Medical Homes (PCMHs) makes it is essential that we prepare the next generation of primary care providers with the skills to successfully build and remodel these “homes.” The term “medical home” was first used in publication in 1967 by subspecialty pediatricians. However, in recent years, the PCMH model has rapidly evolved and has been increasingly recognized as a future model for primary care, with the potential to improve the health outcomes of both individual patients and populations of patients. In 2004, the American Academy of Family Physician’s Future of Family Medicine report called for every patient to have “a personal medical home,” and by 2007 key primary care organizations had defined 16 essential components of a Patient Centered Medical Home (List 1). Soon afterwards accrediting bodies, such as the National Committee for Quality Assurance (NCQA), began offering certification of PCMHs.

The PCMH model may be best understood as a state-of-the-art approach to primary care focusing on coordination of care, working in highly effective teams, and iterative improvement of systems to improve healthcare delivery to a population of patients. Thus the PCMH enhances the care provided during one-on-one doctor-patient encounters, using a variety of team and system-based techniques which improve quality and outcomes for both the individual patient and the population of patients served by a physician or practice. This approach is especially effective for such things as chronic disease management, prevention measures, and monitoring and management of high-risk patients within a practice (e.g., severely ill, geriatric, adolescent, pregnant, or substance abusing patients).

Despite a widespread movement towards the PCMH as a new model for primary care delivery, there remain many questions regarding the exact form this model will take both in Rhode Island and the country as a whole. Additionally, educators are only just beginning to explore the training that will be necessary for primary care physicians to optimally

List 1. Joint Principles of the PCMH

- Enhanced access to care
- Care continuity
- Practice-based team care
- Comprehensive care
- Coordinated care
- Population management
- Patient self-management
- Health information technology
- Evidenced-based care
- Care plans
- Patient-centered care
- Shared decision-making
- Cultural competency
- Quality measurement and improvement
- Patient feedback
- New payment systems

List 2. Acronyms and Abbreviations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCC</td>
<td>Family Care Center (the Brown Family Medicine’s resident/faculty practice)</td>
</tr>
<tr>
<td>GMV</td>
<td>Group Medical Visit (an emerging method for chronic disease management)</td>
</tr>
<tr>
<td>HRSA</td>
<td>Health Resources Services Administration</td>
</tr>
<tr>
<td>NCQA</td>
<td>National Committee for Quality Assurance (accrediting body for PCMHs)</td>
</tr>
<tr>
<td>PCMH</td>
<td>Patient Centered Medical Home</td>
</tr>
<tr>
<td>PDSA</td>
<td>Plan-Do-Study-Act Quality Improvement Cycles</td>
</tr>
</tbody>
</table>

(from Berenson’s summary of “Joint Principles of the PCMH” and Guidelines for PCMH and Accreditation Programs)
function within new PCMHs and take leadership roles in further development of the PCMH model. In this article we describe the development of a month-long, team-based, PCMH rotation for Brown family medicine residents, which was created within the context of a rapid transformation of our own resident-faculty practice into a PCMH. The overarching goals of this training program are to prepare residents to (1) practice within a PCMH, (2) actively participate in population health activities in the PCMH, and (3) assume leadership roles in the ongoing evolution of the PCMH.

GROWTH OF THE PCMH MODEL IN RHODE ISLAND

While several components of the PCMH model have been embraced by Rhode Island primary care practices for many years, a key step in the movement towards a statewide recognition of PCMH occurred in 1999 with the chronic disease management collaborative sponsored by the RI Department of Health. Another major milestone occurred in 2008 with the creation of Chronic Care Sustainability Initiative (CSI), a program bringing together several major stakeholders in primary care: providers, insurers, state government, and patients. In 2008 the CSI provided funding to support early adoption of the PCMH model in five RI practices. The funding subsequently expanded in 2010, 2012 and 2013 adding eight, three and twenty practices, respectively. In 2014, the CSI initiative, now called the Care Transformation Collaborative, comprised practices caring for over 260,000 patients. Several national initiatives have also helped shape the development of PCMH in RI. These include the Beacon Collaborative (a federally funded PCMH incentive program), Connect Care (the local regional health information organization for electronic health record interconnectivity), and the Meaningful Use electronic health record implementation initiatives from Medicare and Medicaid.

PCMH AT THE BROWN FAMILY MEDICINE RESIDENCY PROGRAM

The Brown Family Medicine Residency Program has focused on training primary care physicians since its inception in 1975. The main faculty/resident practice is the Family Care Center (FCC), at Memorial Hospital of Rhode Island, which serves a primarily urban underserved community from Pawtucket and Central Falls. The FCC covers 9,000 primary care patients and has over 25,000

<table>
<thead>
<tr>
<th>Table 1. Objectives for the first-year residents (PGY-1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>By the end of the first year rotation, the resident will be able to:</td>
</tr>
<tr>
<td>General PCMH</td>
</tr>
<tr>
<td>• Help represent the interdisciplinary team and coordinate with both the local FCC Operations Committee and PCMH Transformation Committee.</td>
</tr>
<tr>
<td>• Effectively communicate with staff and providers by collaborating with administrative support personnel to update PCMH bulletin board, newsletter, and “Tabletop Tips” in preceptor rooms.</td>
</tr>
<tr>
<td>• Compare and contrast the implementation of the PCMH in at least one health center, one private/group practice site, and the FCC.</td>
</tr>
<tr>
<td>• Be familiar with the most recent rendition of the three levels of NCQA recognition and newest meaningful use guidelines for the electronic health record.</td>
</tr>
<tr>
<td>• Articulate the principles of the open access delivery system and the telephone coverage system in the FCC and its application to meet the goals of the PCMH</td>
</tr>
<tr>
<td>• Actively participate in daily interdisciplinary “PCMH Morning Rounds”</td>
</tr>
<tr>
<td>Chronic Disease Management/Population Health</td>
</tr>
<tr>
<td>• Articulate the key elements of the Chronic Care Model.</td>
</tr>
<tr>
<td>• Facilitate at least one interdisciplinary Group Medical Visit by helping prepare the pre-visit data, being present and supportive during the GMV, and assisting with documentation after the visit.</td>
</tr>
<tr>
<td>• Synthesize and present current article related to chronic disease management during didactics.</td>
</tr>
<tr>
<td>Quality Improvement and Monitoring</td>
</tr>
<tr>
<td>• Demonstrate teamwork in the completion/dissemination of one brief PDSA (Plan-Do-Study-Act) cycle that assists the medical director with Quality Improvement in the FCC.</td>
</tr>
<tr>
<td>• Review their own Chronic Disease Dashboard(s) and the FCC chronic disease registries, and articulate the targets for their own practice improvement.</td>
</tr>
<tr>
<td>Practice Management</td>
</tr>
<tr>
<td>• Apply the correct CPT Evaluation and Management code to each of 4 outpatient FCC encounters on a standardized exercise.</td>
</tr>
<tr>
<td>• Present and provide a one page word document on an ambulatory case vignette, a key teaching point (or points), and a reference(s) in outpatient morning report.</td>
</tr>
<tr>
<td>Care of Complex/Vulnerable Patients/Safety</td>
</tr>
<tr>
<td>• Assist the PGY-3 in providing coordinated care on two Nursing Home/home bound patient encounters.</td>
</tr>
<tr>
<td>• Work with the Pharm D student to conduct a medication review for one geriatric patient (preferably a home bound patient) from the PCMH PGY-3 resident panel and review with the PGY-3.</td>
</tr>
<tr>
<td>• Help facilitate coordinated care for a Centering Pregnancy Group Medical Visit</td>
</tr>
<tr>
<td>Provide Patient Care within a PCMH</td>
</tr>
<tr>
<td>• Utilize PCMH resources appropriately for the care of their own patients in the FCC</td>
</tr>
<tr>
<td>• See their own continuity patients in the FCC, appropriately utilizing PCMH resources, 2 to 3 sessions per week.</td>
</tr>
</tbody>
</table>

Legend. ACGME: Accreditation Council for Graduate Medical Education; FCC: Family Care Center; MK: Medical Knowledge; PBLI: Problem Based Learning and Improvement; PC: Patient Care; PDSA: Plan-Do Study Act; CPT: Current Procedural Terminology; SBP: Systems Based Practice; PGY: Post Graduate Year
patient visits per year. It is the primary continuity practice site for 39 residents and 14 faculty family physicians. Physicians follow their patients in multiple settings in addition to the FCC, including in nursing homes, patients’ homes, and the hospital.

The FCC was an early adopter of the PCMH model, paralleling early statewide and national trends. Residency faculty and FCC staff participated in the RI Department of Health sponsored Chronic Disease Collaborative beginning in 2002, a first step towards PCMH practice transformation. Additional funding in 2005 from the Robert Wood Johnson Foundation and Institute for Healthcare Improvement for “improving care by engaging patients” helped establish many of the principles of the Chronic Care Model and PCMH in the FCC practice. Next, in early 2010 the FCC was invited to join the RI Chronic Care Sustainability Initiative [CSI] as one of the first resident physician PCMH training sites in RI. Later that year the FCC earned NCQA recognition as a Level 3 Medical Home, the highest of three possible levels of PCMH certification. During this time, consistent with other residency sites in early phases of PCMH transformation,6,7,8 we primarily used residency-wide lectures and workshops, practicing in a functioning PCMH, and elective PCMH opportunities to convey PCMH concepts to residents.

NATIONAL TRENDS IN PCMH RESIDENCY TRAINING

As the PCMH has become increasingly recognized as a future model of primary care, leaders in primary care education have begun to focus on preparing resident physicians for practice and leadership in this environment.9 Several groups have articulated guidelines for PCMH-specific skills that residents should possess prior to graduation.10,11,12 Initial curriculum development efforts have focused on transforming residency continuity clinics into PCMHs,13,14,15 or applying PCMH transformation principles to specific aspects of care, such as chronic pain, substance abuse and prenatal care.16,17,18 Unfortunately, many residency clinics do not meet all PCMH attributes and the process of transforming resident clinics can be challenging.19 Other teaching strategies described include: didactic teaching on PCMH principles, supervised resident experiences in quality improvement, and individual two- to six-week block rotations.6 There is some evidence that incorporating PCMH concepts into residency training can increase residents’ sense of competence with and utilization of some important

Table 2. Objectives for the second-year residents (PGY-2)

<table>
<thead>
<tr>
<th>Competency</th>
<th>ACME Competency</th>
</tr>
</thead>
<tbody>
<tr>
<td>General PCMH</td>
<td></td>
</tr>
<tr>
<td>Work collaboratively with the faculty practice leaders to set the agenda and run the residency clinic Team Meeting for this month, including presenting an update and distributing individual reports on the team’s productivity and PCMH dashboards</td>
<td>PBLI 1; SBP 3</td>
</tr>
<tr>
<td>Actively participate in daily interdisciplinary “PCMH Morning ROUNDS”, assuming co-leader role with faculty physician when PGY3 resident is unavailable.</td>
<td>PC 8</td>
</tr>
<tr>
<td>Chronic Disease Management/Population Health</td>
<td></td>
</tr>
<tr>
<td>Review each team’s chronic disease (CSI) Dashboard(s)/Registry on a rotating schedule and highlight outliers for each team.</td>
<td>PBLI 1</td>
</tr>
<tr>
<td>Facilitate and help lead a Group Medical Visit helping provide motivational interviewing to patients during the visit, helping patients set self management goals, and assisting with the documentation after the visit.</td>
<td>PC 1,3,8; ICS 1,2</td>
</tr>
<tr>
<td>Jointly care with a PCMH Nurse Care Manger for one chronic disease patient.</td>
<td>PC 8</td>
</tr>
<tr>
<td>Quality Improvement and Monitoring</td>
<td></td>
</tr>
<tr>
<td>Demonstrate teamwork and leadership in the completion of one brief PDSA (Plan-Do-Study-Act) cycle with the other PCMH residents that assists the medical director in Quality Improvement in the FCC.</td>
<td>PBLI 1; PC 8</td>
</tr>
<tr>
<td>Practice Management</td>
<td></td>
</tr>
<tr>
<td>Conduct chart audits each on patients of the PCMH PGY-1, the PCMH PGY-3, and a PCMH faculty member, to assess appropriateness of the Evaluation and Management coding and documentation.</td>
<td>SBP 2</td>
</tr>
<tr>
<td>Review and update one office policy and present as a proposal at the FCC Operations Committee.</td>
<td>PC 8;PBLI 1; SBP 2</td>
</tr>
<tr>
<td>Present and provide one page word document on an am-bulatory case vignette, a key teaching point (or points), and a reference(s) in outpatient morning report.</td>
<td>PBLI 2,4&amp;5</td>
</tr>
<tr>
<td>Care of Complex/Vulnerable Patients/Safety</td>
<td></td>
</tr>
<tr>
<td>Work with Nurse Care Manager to identify and track patients being referred from the FCC, and transitioning out of the inpatient setting.</td>
<td>PC 8; SBP 3</td>
</tr>
<tr>
<td>Conduct acute coordinated home visits and Nursing Home acute visits/admissions.</td>
<td>PC 4&amp;8</td>
</tr>
<tr>
<td>Provide Patient Care within a PCMH</td>
<td></td>
</tr>
<tr>
<td>Appropriately triage and schedule patients identified from overnight calls into an acute visit in her/his schedule after taking sign-out from the on-call resident. This must include the notes of 4 examples that are reviewed with the PCMH faculty.</td>
<td>PC 4</td>
</tr>
<tr>
<td>Conduct acute home visits and Nursing Home acute visits/admissions with the geriatric nurse practitioner and/or geriatric physician and jointly manage coordinated care related to that patient visit, 1 session per week.</td>
<td>PC 4&amp;8</td>
</tr>
<tr>
<td>See their own continuity patients in the FCC, appropriately utilizing PCMH resources, 4 sessions per week.</td>
<td>PC 8; SBP 2,4</td>
</tr>
</tbody>
</table>

Legend. CSI: Chronic Care Sustainability Initiative; ACME: Accreditation Council for Graduate Medical Education; FCC: Family Care Center; MK: Medical Knowledge; PBLI: Problem Based Learning and Improvement; PC: Patient Care; PDSA: Plan Do Study Act; SBP: Systems Based Practice; PGY: Post Graduate Year.


A P R I L  2 0 1 5  RH O D E I S L A N D M E D I C A L J O U R N A L  3 7
PCMH components, such as team-based care, access to care, and quality improvement. However, literature review does not reveal the optimal training model, or support the idea that clinic transformation alone will prepare residents for practice and leadership in the PCMH.

**PCMH CURRICULUM DEVELOPMENT AT THE BROWN FAMILY MEDICINE RESIDENCY PROGRAM**

We conducted a targeted needs assessment with interviews of all third-year residents in 2011, after the FCC had achieved Level 3 PCMH recognition. Since family medicine residency is heavily focused on preparing physicians for primary care practice, all residents are required to follow a panel of patients for all three years of residency with a minimum of 1650 continuity clinic encounters during residency. Third year residents at the Brown FM Residency spend 3-5 sessions per week in their FCC continuity clinic during most rotations, allowing for ample immersion in this PCMH practice. The needs assessment revealed that, despite practicing in a certified PCMH, resident education regarding the PCMH model was insufficient [manuscript submitted]. Residents did not perceive themselves as integral to PCMH activities, but rather simply as physicians who happened to practice in a PCMH. Additionally, our primary teaching methods – residency-wide didactics and workshops, immersion in a PCMH practice, and elective PCMH opportunities – did not appear to offer adequate education on specific PCMH concepts or skills.

In order to improve PCMH training, we conducted a literature review, drew upon local expertise, and obtained funding through a Title VII HRSA Primary Care Training Grant. Our initial premise was that to meet the educational needs of family medicine residents in the rapidly changing healthcare environment, it is not sufficient to have achieved NCQA Level 3 status, to have excellent PCMH role models within the practice, or to have PCMH didactics. Instead, more in-depth, experiential, longitudinal training with opportunities for leadership and teaching was necessary.

**THE CREATION OF THE PCMH BLOCK ROTATION AND RESIDENT TEAM**

To meet these educational needs we created a new PCMH block rotation and resident team. We evaluated existing residency block rotations, reorganize rotations that already contained PCMH-related activities, but rather simply as physicians who happened to practice in a PCMH. Additionally, our primary teaching methods – residency-wide didactics and workshops, immersion in a PCMH practice, and elective PCMH opportunities – did not appear to offer adequate education on specific PCMH concepts or skills.

In order to improve PCMH training, we conducted a literature review, drew upon local expertise, and obtained funding through a Title VII HRSA Primary Care Training Grant. Our initial premise was that to meet the educational needs of family medicine residents in the rapidly changing healthcare environment, it is not sufficient to have achieved NCQA Level 3 status, to have excellent PCMH role models within the practice, or to have PCMH didactics. Instead, more in-depth, experiential, longitudinal training with opportunities for leadership and teaching was necessary.

**Table 3. Objectives for the third-year residents (PGY-3)**

<table>
<thead>
<tr>
<th>By the end of the third year rotation, the resident will be able to:</th>
<th>ACGME Competency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General PCMH</strong></td>
<td></td>
</tr>
<tr>
<td>• Represent the interdisciplinary team and coordinate with the local FCC practice Operations Committee and PCMH Transformation Committee.</td>
<td>SBP 1</td>
</tr>
<tr>
<td>• Lead the PCMH team in preparing for maintenance of certification for NCQA recognition.</td>
<td>PBL 1; SBP 2</td>
</tr>
<tr>
<td>• Co-lead daily interdisciplinary “PCMH morning rounds” with faculty physician leader</td>
<td>PC 4,8</td>
</tr>
<tr>
<td><strong>Chronic Disease Management/Population Health</strong></td>
<td></td>
</tr>
<tr>
<td>• Lead a Group Medical Visit, including providing educational topic to patients, helping manage group dynamics, providing motivational interviewing, helping patients set self management goals, and assisting with documentation and billing after the visit.</td>
<td>PC1,3,5,8; ICS1 &amp; 2</td>
</tr>
<tr>
<td><strong>Quality Improvement and Monitoring</strong></td>
<td></td>
</tr>
<tr>
<td>• Demonstrate teamwork and leadership in the completion of one brief PDSA (Plan-Do-Study-Act) cycle with the other PCMH residents that assists the medical director in Quality Improvement in the FCC.</td>
<td>PBL1; PC 8</td>
</tr>
<tr>
<td><strong>Practice Management</strong></td>
<td></td>
</tr>
<tr>
<td>• Demonstrate an attitude of helping lead change by preparing the agenda and facilitating the FCC Operations Committee and PCMH Transformation Committee meetings with the Medical Director</td>
<td>PC 8; ICS2; SBP 2</td>
</tr>
<tr>
<td>• Conduct four chart audits for quality care and documentation using the residency’s chart audit EValue tool.</td>
<td>SBP 2</td>
</tr>
<tr>
<td>• Present and provide a one page word document on an ambulatory case vignette, a key teaching point (or points), and a reference(s) in outpatient morning report. Could be Morbidity and Mortality (near miss) presentation.</td>
<td>PBL 2, 4, 5</td>
</tr>
<tr>
<td><strong>Care of Complex/Vulnerable Patients/Safety</strong></td>
<td></td>
</tr>
<tr>
<td>• Facilitate the successful transitions, working with the Nurse Care Manager, of patients from the hospital to home/Nursing Home/Home Bound Residence including family and team communication.</td>
<td>PC 4, 5, 8; SBP 2, 3, 4; ICS 1</td>
</tr>
<tr>
<td><strong>Provide Patient Care within a PCMH</strong></td>
<td></td>
</tr>
<tr>
<td>• Appropriately triage and schedule patients identified from overnight calls into acute visits in her/his schedule after taking sign-out from the on-call resident.</td>
<td>PC 4</td>
</tr>
<tr>
<td>• Conduct acute home visits and nursing home acute visits/ admissions and provide mentoring/teaching for PGY 1 resident, 4 sessions per week.</td>
<td>PC 4, 8; PBL 5</td>
</tr>
<tr>
<td>• See their own continuity patients in the FCC, appropriately utilizing PCMH resources and teaching medical students, 2 to 3 sessions per week.</td>
<td>PC 8; SBP 2, 4</td>
</tr>
</tbody>
</table>

**Legend.** ACGME: Accreditation Council for Graduate Medical Education; FCC: Family Care Center; MK: Medical Knowledge; PBL: Problem Based Learning and Improvement; PC: Patient Care; PDSA: Plan Do Study Act; SBP: Systems Based Practice; PGY: Post Graduate Year
content, and reclaimed time from rotations which exceeded ACGME family medicine training time requirements for certain content areas. Specifically, we restructured a first-year ambulatory rotation focused on practice management, a second-year ward medicine rotation (exceeded requirements by 3 months), and a third-year rotation focused on managing the FCC’s complex nursing home and homebound patients. These changes required significant residency director leadership (GA).

Our goal was for residents to increase the number of individual continuity clinic visits they conducted during residency while gaining additional PCMH population health level expertise. To accomplish this goal, we created an interdisciplinary PCMH team, including a resident from each year of residency. The inclusion of senior residents on the team created a similar leadership structure to that of traditional inpatient ward teams, with senior residents accepting progressive levels of responsibility, modeling leadership qualities, and teaching junior residents (and potentially medical students). The resident and faculty physicians work closely with administrative staff, pharmacists, social workers, nurse care managers, and other staff in the practice. The primary focus of this team is to utilize PCMH and population health principles to manage the complex care of primary care patients seen in the FCC. We developed specific learning objectives based on our existing PCMH curriculum, literature review regarding proposed PCMH competencies, and deficiencies suggested by our needs assessment. ([Tables 1–3](#)). The total curricular time is 4 weeks per year for a total of 12 weeks during residency.

**PCMH ROTATION EDUCATIONAL STRATEGIES**

We use multiple educational strategies in this block rotation. These include direct patient care (both individual and in group medical visits), population health experiential activities, practice management activities, didactics, and progressive levels of responsibility with opportunities for teaching junior residents and students. The residents on the team remain embedded in our primary care practice site and continue to see their own patients several sessions per week. However, they are also given time and responsibility for conducting population health level patient care and quality improvement activities, as well as providing proactive direct care to FCC patients who are acutely ill or particularly complex or vulnerable.

There is a four-week repeating didactic curriculum with twice-weekly, two-hour sessions (see Table 4) that anchor each week on Monday and Friday afternoons, lead by the curriculum director (RC) or FCC medical director (DA). Each week also has specific practical projects, such as: reviewing patient chronic disease registries and providing feedback to providers, performing chart audits, and preparing for and leading group medical visits focused on chronic disease management. Projects are assigned on Mondays, residents are assigned project time during the work week, and projects are reviewed on Fridays. Residents also help the FCC medical director and interdisciplinary PCMH team design and implement least one larger quality improvement project (PDSA cycle) each month. In addition, specific clinical content reinforces and helps provide a real life context.

### Table 4. Overview of Curriculum Content

<table>
<thead>
<tr>
<th>Didactic themes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Week 1 - PCMH, NCQA certification, PDSA cycles, registries</td>
</tr>
<tr>
<td>• Week 2 - Patient Safety, trigger tool audits, root cause analysis</td>
</tr>
<tr>
<td>• Week 3 - Practice Management, coding/leveling, chart auditing</td>
</tr>
<tr>
<td>• Week 4 - Group Medical Visits, Chronic Disease Management, interdisciplinary teams</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Examples of Clinical Content:</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Daily Interdisciplinary PCMH Team Meetings (“PCMH Morning Rounds”)</em></td>
</tr>
<tr>
<td>• Review of inpatient census – looking for “Hot Spots”</td>
</tr>
<tr>
<td>• Work with nurse care managers and geriatric team with transitions of care</td>
</tr>
<tr>
<td>• Review overnight phone calls to the practice; triage patients needing acute visits (with ability to schedule patients from PCMH morning rounds)</td>
</tr>
<tr>
<td><em>Direct Patient Care</em></td>
</tr>
<tr>
<td>• Acute nursing home &amp; home bound patient visits with geriatric interdisciplinary team.</td>
</tr>
<tr>
<td>• Continuity clinic.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Examples of weekly projects:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Review with medical director and distribute chronic disease quality measures/registries to each resident and faculty provider.</td>
</tr>
<tr>
<td>• Review safety concerns and present at practice wide monthly team meetings a safety pearl for the whole practice.</td>
</tr>
<tr>
<td>• Perform chart audits for resident colleagues looking for quality use of the EMR and appropriate documentation.</td>
</tr>
<tr>
<td>• Prepare for Group Medical Visit (PCMH resident team leads the group medical visit). Interdisciplinary team includes behavioral health, nutrition, pharmacy, nursing, physical therapy.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Examples of Monthly PDSA Cycles:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Improving ordering and documentation of hgbA1c values for diabetics.</td>
</tr>
<tr>
<td>• Improving the process for ordering and tracking of referrals to consultants.</td>
</tr>
<tr>
<td>• Improving the evaluation of osteoporosis patients that may need a holiday from bisphosphonate therapy.</td>
</tr>
</tbody>
</table>
to apply principles related to PCMH (Table 4). Finally, and importantly, daily morning interdisciplinary PCMH team rounds, lead by the PGY3 resident and faculty, anchor the management of complex FCC patients from a population health and case-management perspective, through activities such as reviewing and following up on overnight phone calls and reviewing hospital admissions and transitions of care of FCC patients. Interdisciplinary team members initially included: nurse care managers, the geriatrics team, behavioral health providers, a dietician, and pharmacy students.

**EARLY OUTCOMES**

As an early process measure, nine months into implementing the new curriculum, we (CF, RC) conducted an online survey of the third-year residents who had completed their first PCMH rotation to gather rotation feedback and resident self-assessment of learning. Although residents’ confidence to “implement PCMH principles” after this short period of time remained moderate, there appeared to be an improvement in the number of group medical visits (GMVs), chart audits and PDSA cycles completed by residents, as well as confidence in their ability to incorporate PCMH components in their practice, compared to reports of comparison residents in the baseline needs assessment. A formal, multi-method curriculum evaluation process is underway including qualitative interviews with intervention residents, rotation evaluations, and concrete outcome measures.

**NEXT STEPS**

There is still no clear consensus in the literature on how best to prepare resident physicians to be leaders in PCMHs. Our preliminary process measures suggest that there is potential benefit to supplement existing longitudinal direct patient care experience in a PCMH with a resident team-based block rotation. There are currently no similar PCMH educational interventions described in the literature. We are implementing additional curricular elements to challenge senior residents as they progress through each year of this longitudinal curriculum, and our curriculum evaluation is ongoing.

**CONCLUSION**

The PCMH is emerging as a dominant model for primary care delivery in the US, and holds promise to improve quality of patient care and enhance health care outcomes. Given the rapid healthcare changes happening in Rhode Island and the United States, educators are challenged to train young physicians to practice in this new model of care and to lead further practice transformation. The PCMH block rotation and team approach described in this article may provide a model for other residency programs working to prepare the next generation of primary care physicians in evolving models of care delivery.

**Acknowledgments**

We thank Melissa Nothnagle, MD, and Patricia Stebbins, MA, for reviewing this manuscript. We also thank all the members of the interdisciplinary teams that make up the family medicine residency faculty and Family Care Center staff, who collectively play a critical role in the ongoing success of this program. We thank Judith Walker for her organizational support in implementing this new curriculum, Helen Bryan for her assistance in survey data analysis, and Nicola Pallotti for assistance with literature review. This work was supported by HRSA Primary Care Residency Training Grant # D58HP20805 [PI – G. Anandarajah]

**References**


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**Too Weak to Move**

WENDY H. WONG, MD; NATHAN HUDPOHL, MD; BRUCE BECKER, MD; WILLIAM BINDER, MD

*From the Case Records of the Alpert Medical School of Brown University Residency in Emergency Medicine*

**DR. WENDY WONG:** Today’s case is a 31-year-old woman who presented with generalized weakness which had been worsening over 2 weeks. She was seen at an outside hospital 24 hours prior to her presentation and was diagnosed with a urinary tract infection (UTI). She was discharged home but her weakness worsened in severity. Just prior to arrival, she had been ambulating to the bathroom with a cane but became so weak that she slid to the ground. She denied loss of consciousness or any injuries.

The patient's medical history was significant for systemic lupus erythematosus (SLE), hypertension, deep vein thrombosis (DVT), and pulmonary embolus (PE) diagnosed 3 months ago. She takes prednisone daily, but has missed several doses of rivaroxaban and blood pressure medications due to nausea.

On review of systems, she reported a migraine headache associated with photophobia and blurry vision which improved minimally with Fioricet. She noted diffuse abdominal discomfort over the past few months associated with occasional nausea, vomiting, and anorexia. She reported normal bowel movements, denied dysuria, but reported decreased urinary output.

The patient’s vital signs were: blood pressure 219/143 mm Hg, pulse 112 beats/min and regular, temperature 98.7°F, respirations 18 breaths/min, and oxygen saturation 98% on room air. The patient was somnolent but easily arousable. She was oriented to person, place and time and appeared much older than her stated age. She had symmetric mild weakness of the arms and legs she was able to stand and ambulate with assistance. Reflexes were normal. Sensation was intact. Her oral mucosa was dry. Her cardiac exam revealed tachycardia without murmurs and her capillary refill was brisk. The patient’s lung exam was clear to auscultation. Her abdomen was soft, obese, with normal bowel sounds but diffusely tender to palpation, without rebound or guarding. She had severe alopecia but the skin was otherwise unremarkable.

**DR. ELIZABETH NESTOR:** Her complaints were non-specific and her physical exam is non-focal. How did you direct your laboratory testing?

**DR. NATHAN HUDPOHL:** Her vital signs were most significant for hypertension and tachycardia, which could be a response to infection as well as a cause of end-organ damage or ischemia. The use of immunosuppressants as well as her report of a UTI prompted us to look for an infectious etiology. We obtained a CBC, chem 7, troponin, and urinalysis which revealed acute renal failure and proteinuria >500 units. Her creatinine had increased to 1.99 from a baseline of 0.86. We also obtained an EKG which revealed sinus tachycardia without evidence of ischemia and a chest X-ray which revealed pulmonary edema. Computed Tomography Angiography (CTA) was negative for PE.

**DR. MATTHEW SIKET:** The patient had a hypertensive emergency with evidence of end-organ damage to her kidneys, brain and lungs. Do you think her signs and symptoms were due to poorly controlled hypertension and non-compliance with medications? Premature closure is the most common diagnostic error in clinical decision making, and this diagnosis did not encompass all of the patient's symptoms. Was there a unifying diagnosis?

**DR. HUDPOHL:** The patient's history of SLE and immunosuppression, in combination with her severe hypertension and myriad of signs and symptoms led us to consider a central nervous system cause of her weakness. Posterior Reversible Encephalopathy Syndrome (PRES), a clinico-radiologic diagnosis, is associated with autoimmune diseases and use of immunosuppressive medications. We confirmed this diagnosis with CT brain and MRI brain imaging (see Figures 1, 2).

**DR. DAVID PORTELLI:** What exactly is PRES? How is PRES different from RPLS?

**DR. WONG:** PRES is a unique pattern of brain vasogenic edema associated with a number of medical conditions including hypertension, eclampsia/pre-eclampsia, autoimmune disease, use of cytotoxic/immunosuppressant drugs, chemotherapeutic agents, bone marrow or solid organ transplant, sepsis, collagen vascular disease, or renal failure. The disorder is a clinico-radiologic syndrome first described in a cohort of 15 patients with symptoms of altered mental status, headache, seizures, and loss of vision who also had “prominent white matter abnormalities” on CT consistent...
Figure 1. CT Brain. Multiple areas of hypoattenuation bilaterally. The largest is centered at the right internal capsule and extends inferiorly to the right cerebral peduncle, midbrain and pons. An additional is found at the left periventricular white matter. Involvement at the left cerebellum concerning for underlying mass lesion.

Figure 2. MRI Brain. Scattered areas of T2/FLAIR signal hyper-intensity within the cerebrum, cerebellum, deep gray matter structures and pons, which are most suggestive of posterior reversible encephalopathy syndrome (PRES).

with posterior leukoencephalopathy. The symptoms and CT abnormalities resolved in all 15 patients after 2 weeks of anti-hypertensive medication and withdrawal or reduction of immunosuppressive treatment. Originally called Reversible Posterior Leukoencephalopathy Syndrome (RPLS), the disorder was re-named PRES because the reversible white matter abnormalities did not appear to be true leukoencephalopathy.

**DR. NOAH ROSENBERG:** Clinical findings of PRES include seizures, which this patient did not have. How did you diagnose PRES?

**DR. WONG:** PRES is characterized by diminished mental status, headache, seizure, nausea/vomiting, and visual abnormalities. Decreased alertness, the most common feature, can range from drowsiness to stupor. Seizures may not be reported on initial presentation. Abnormalities in visual perception can range from blurry vision to visual neglect or hallucinations. On CT brain, the most characteristic presentation is white matter edema in the posterior cerebral hemispheres that does not necessarily follow a vascular territory. Accumulation of large amounts of edema occurs in the subcortical white matter because the cortex is more resistant to edema as a result of being more tightly packed and organized. The posterior circulation is most affected because the vertebrobasilar circulation with its relative lack of sympathetic innervation, is more susceptible to sudden elevations in blood pressure.

**DR. JEFF FEDEN:** Is it possible to have PRES with a normal CT brain? What is the best imaging modality to diagnose PRES? Is it always reversible?

**DR. WONG:** In a large multi-center retrospective study, 16% of patients had a normal CT of the brain. Brain MRI with FLAIR sequencing is the most sensitive imaging modality and T2 hyper-intense vasogenic edema is noted. PRES is neither always posterior nor reversible. While the parietal occipital pattern is the most characteristic, it is only
present solely in that location in 22% of cases. PRES has been seen to affect other regions of the brain: frontal lobe 77%, temporal lobe 64%, cerebellum 53%, basal ganglia 34%, brainstem 27%. Spinal cord involvement in PRES (PRES-SCI) has also been noted in a recent case report of patients with neurologic signs referable to the spinal cord, MRI lesions that extend to the cervicomedullary junction, or grade IV hypertensive retinopathy. Cerebellar involvement is most commonly associated with autoimmune disease. Although PRES is characterized by reversible symptoms and radiologic abnormalities, it occasionally may not be as benign or reversible as the name implies. In a retrospective study of 90-day outcomes, the case fatality rate was 16%, with 37% of patients experiencing significant functional impairments from secondary complications such as status epilepticus, intracranial hemorrhage, or ischemic infarct.

**DR. OTIS WARREN:** What is the pathophysiology of PRES?

**DR. WONG:** There are several competing theories, all of which involve disruption of the blood brain barrier resulting in the development of vasogenic edema. The most widely accepted theory is that severe increases in blood pressure cause a failure of cerebral auto-regulation, resulting in vasodilation, hyper-perfusion, extravasation and edema. Control of hypertension with anti-hypertensive medication often improves symptoms. However, PRES can develop in normotensive or mildly hypertensive patients and the severity of hypertension does not predict the development or severity of PRES. Furthermore, PRES patients often do not have a mean arterial pressure high enough to overcome cerebral auto-regulatory capacity.

Angiography of the posterior circulation in PRES reveals a “string of beads” appearance most consistent with vasospasm or arteritis, suggesting that vasoconstriction, vasospasm, and resultant hypoperfusion leads to ischemia and vasogenic edema. MR perfusion imaging shows reduction in the relative cerebral blood volume indicating cerebral hypo-perfusion rather than hyper-perfusion.

Patients with PRES are often on cytotoxic medications, which may have a direct toxic effect on cerebral endothelium, resulting in vascular leakage. Symptoms may improve after discontinuing a potentially inciting agent. However, levels of cytotoxic agents in PRES patients do not correlate with the development or severity of PRES; PRES can occur even at therapeutic blood levels.

Interestingly, renal failure is a common manifestation of the conditions associated with PRES such as eclampsia, hypertension, sepsis, autoimmune disease and use of chemotherapeutic agents. Release of Vascular Endothelial Growth Factor (VEGF) from the kidney in response to damage can increase endothelial permeability with resultant cerebral vascular leakage, leading to edema.

**DR. ERIC GOLDLUST:** Is PRES considered a neurologic emergency? How do we manage these patients?

**DR. WONG:** PRES does not reverse spontaneously and delay in the diagnosis and treatment can result in permanent neurological sequelae. With prompt treatment, complete reversal of PRES occurs within several days to weeks (range 2-15 days) with radiological improvements lagging behind clinical recovery. Management includes: 1. Discontinuing the offending agent (ie. removal of cytotoxic/immunosuppressive drugs), 2. Controlling blood pressure with anti-hypertensive medications, 3. Treating seizures/status with anti-epileptics.

**DR. WILLIAM BINDER:** Do you stop immunosuppressives when severe hypertension is thought to be due to poor control of the underlying autoimmune disorder?

**DR. WONG:** Patients with autoimmune disease pose a unique problem as it can be difficult to ascertain if PRES is caused by hypertension due to poor control of the underlying autoimmune disorder or if the use of immunosuppressive medications are to blame. Although there are case reports of symptom resolution while immunosuppressives are maintained, removal of cytotoxic drugs or substitution of another immunosuppressive agent is usually recommended if the inciting factor is unclear. If symptoms are improving with control of hypertension and etiology of PRES likely due to severe hypertension, it is reasonable to continue immunosuppressives. However, it is not recommended to reintroduce agents that were known to induce PRES in a patient as recurrence of PRES has been reported in this setting.

**DR. BECKER:** What are your take-home points from this case?

**DR. WONG:** Consider PRES in the differential diagnosis of decreased mental status or headache in those with co-morbidities of hypertension, eclampsia/pre-eclampsia, autoimmune disease, use of cytotoxic/immunosuppressant drugs, chemotherapy, bone marrow or solid organ transplant, sepsis, collagen vascular disease, or renal failure. CT brain may be normal and diagnosis may require MRI brain if clinical suspicion is high. Once diagnosed, PRES is a neurologic emergency and should be treated promptly with control of blood pressure, removal of inciting drugs, and treatment of seizures. Although some case series support continuation of seizure prophylaxis for 1-3 months, there is no indication that PRES patients are at long-term risk for seizure recurrence or epilepsy. Anti-epileptics can be safely tapered as symptoms and neuroimaging abnormalities resolve, usually after 1-2 weeks.

**FINAL DIAGNOSIS:** Posterior Reversible Encephalopathy Syndrome (PRES)
References


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Uninsurance is only half the problem: Underinsurance and healthcare-related financial burden in RI

DORA DUMONT, PhD, MPH; TARA COOPER, MPH; YONGWEN JIANG, PhD

In both Rhode Island and the nation, political leaders are concerned with the public burden of health care costs. There has been less discussion among political and medical leadership about the financial burden of health care on individuals and families. The weight of medical expenses makes some people forgo necessary care and contributes to over half of household bankruptcies [1].

Most of the national discussion on reducing financial barriers to health care has focused on uninsurance, but underinsurance is similarly associated with reduced access to care and financial distress (2-5): only 22% of people filing for medical bankruptcies were uninsured, and 60% of them had private coverage [1]. Underinsurance is operationalized in different ways (2, 6, 7), but a typical definition is “having insurance that does not adequately meet an individual’s need”(3). Underinsurance is primarily a function of copays and deductibles, though other mechanisms may also play a role [2]. Nationally, underinsurance rates have risen steadily as comprehensive coverages plans have declined (2).

The Affordable Care Act (ACA) has been framed largely in terms of reducing uninsurance, and expectations of its effects on underinsurance are mixed. Expanded coverage of behavioral health services addresses a critical gap in many pre-ACA plans. At the same time, copays and deductibles are a primary component of plans on the state and federal exchanges. Woolhandler points out that silver plans on the exchange cover about 70% of average medical expenses, compared to 80% of the average job-based policy [1]. We analyzed data from the 2013 Rhode Island Behavioral Risk Factor Surveillance System (RI BRFSS) to assess the financial burden of health care on adults in RI on the eve of implementing the state health exchange, in order to encourage discussion of what further reforms need to follow the reduction in uninsurance.

METHODS

The Rhode Island Behavioral Risk Factor Surveillance System (RI BRFSS) is a telephone-based survey conducted annually by the RI Department of Health with funding and technical support from the Centers for Disease Control and Prevention (CDC). Additional information on RI BRFSS methodology is available at http://www.health.ri.gov/data/behaviorriskfactorsurvey/index.php.

We constructed several measures of insurance status and healthcare-related financial burden. Respondents who answered “No” to “Do you have any kind of health care coverage?” or “None” to “Are you currently covered by any of the following types of health insurance or health coverage plans?” were identified as uninsured. Adults who identified one or more sources of health care coverage were identified as underinsured if they met one of the following criteria: they were unable to see a doctor due to cost in the past year; they were unable to take prescription medications due to cost in the past year; or they had been without insurance at some point in the past year. The latter is based on previous studies that used gaps in coverage as an estimate of underinsurance and findings that a recent spell of uninsurance increased risk of foregoing care or not filling prescriptions [8]. We identified health care as constituting a financial burden if [regardless of insurance status] respondents met one of the following criteria: they were unable to see a doctor due to cost in the past year; they were unable to take prescription medications due to cost in the past year, or they currently had medical bills they were paying off over time.

We examined several demographic and economic factors to construct a profile of people who in some way did not have adequate coverage [either underinsured or carrying healthcare-related financial burden]. Work status was categorized as working; out of work or unable to work; homemaker or student; and retired. People over 65 who said they were out of work were categorized as retired. Type of insurance coverage was categorized as uninsured, privately insured, Medicaid, Medicare, and military /any other source of coverage. If people reported two or more sources of coverage [most commonly a combination of Medicare and private insurance], their category was assigned according to the following order of priority: Medicaid, Medicare, private insurance, military/other. Race/ethnicity was categorized as Hispanic; non-Hispanic black; and non-Hispanic white. People who indicated any other racial/ethnic identity were included in analyses but are not reported separately, given the heterogeneity of this “other” category. Because only landline interviews included a question on the number of people in the household, we could not determine per-capita income; for the full sample, instead, household incomes were categorized as under $25,000, $25,000-49,999, $50,000-74,999, and $75,000 or above.

2013 was the first year the RI BRFSS contained the questions of interest. The survey is conducted over the course...
of the full calendar year as part of its randomization. In order to avoid “contaminating” the sample with early effects of the ACA, we restricted the sample to interviews completed no later than October 1, 2013, the date HealthSource RI (RI’s health care exchange) became operational for a final n=4971. With the exception of income (15%), no single variable had more than 6.3% missing observations. We conducted bivariate analyses and multivariate logistic regressions in SAS 9.3, using survey weights and strata information provided by the CDC to account for complex sampling methodology.

RESULTS

In addition to the 18.2% of adults who reported having no health insurance at the time of their interview, another 13.3% [representing about 79,400 people] reported having insurance but meeting one of our criteria for underinsurance. They included 15.5% of people who said they had private insurance and 26.6% of people on Medicaid [Table 1]. Rates were not significantly better for people in the workforce, of whom 68.7% had adequate coverage.

Nearly a third (31.7%) of adults had some form of healthcare-related financial burden [Table 2]. As expected, the rate of financial burden was highest (67.5%) among the uninsured, but even the lowest rate [among people with military/other coverage] was 20.8%. One in four (25.2%) people with private insurance also reported one or more criteria for medically-related financial burden [Table 3]. Controlling for income, sex, age, and race/ethnicity, type of insurance [public or private] was not associated with being underinsured or carrying healthcare-related financial burden [Table 3]. Controlling for income and other covariates also eliminated the associations with race/ethnicity seen in bivariate analyses [data available on request]. Unsurprisingly, people who were uninsured had 3.61 [95% CI 2.52-5.18] the odds of bearing medical costs relative to people with private insurance, while people with military/other insurance were about half as likely [AOR 0.53 [0.32-0.87]].

<table>
<thead>
<tr>
<th>Age group</th>
<th>n</th>
<th>Uninsured 18.2% (n=592)</th>
<th>Underinsured 13.3% (n=584)</th>
<th>Adequately insured 68.5% (n=3496)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-34</td>
<td>675</td>
<td>29.3 (24.9-33.7)</td>
<td>15.5 (12.2-18.8)</td>
<td>55.2 (50.4-60.0)</td>
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<tr>
<td>35-64</td>
<td>2683</td>
<td>18.4 (16.3-20.4)</td>
<td>13.5 (11.8-15.3)</td>
<td>65.7 (61.8-69.6)</td>
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<tr>
<td>65 or older</td>
<td>1562</td>
<td>1.7 (0.7-2.6)</td>
<td>9.3 (7.1-11.5)</td>
<td>89.0 (86.7-91.4)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Race/ethnicity</th>
<th>n</th>
<th>Uninsured 18.2% (n=592)</th>
<th>Underinsured 13.3% (n=584)</th>
<th>Adequately insured 68.5% (n=3496)</th>
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<tbody>
<tr>
<td>Hispanic</td>
<td>371</td>
<td>45.3 (38.6-52.1)</td>
<td>17.2 (11.9-22.5)</td>
<td>37.5 (31.1-43.9)</td>
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<tr>
<td>Black, non-Hispanic</td>
<td>181</td>
<td>32.6 (22.6-42.7)</td>
<td>10.4 (5.1-15.6)</td>
<td>57.0 (46.9-67.1)</td>
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<td>White, non-Hispanic</td>
<td>4076</td>
<td>12.9 (11.2-14.6)</td>
<td>12.5 (11.0-13.9)</td>
<td>74.6 (72.6-76.6)</td>
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<table>
<thead>
<tr>
<th>Income</th>
<th>n</th>
<th>Uninsured 18.2% (n=592)</th>
<th>Underinsured 13.3% (n=584)</th>
<th>Adequately insured 68.5% (n=3496)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;$25,000</td>
<td>1185</td>
<td>39.7 (35.6-43.9)</td>
<td>15.6 (12.7-18.4)</td>
<td>44.7 (40.7-48.7)</td>
</tr>
<tr>
<td>$25,000-$49,999</td>
<td>1070</td>
<td>19.0 (15.4-22.6)</td>
<td>17.7 (14.4-21.0)</td>
<td>63.3 (59.1-67.4)</td>
</tr>
<tr>
<td>$50,000-$74,999</td>
<td>665</td>
<td>7.5 (3.8-11.1)</td>
<td>14.0 (10.3-17.7)</td>
<td>78.6 (73.8-83.3)</td>
</tr>
<tr>
<td>=$75,000</td>
<td>1304</td>
<td>3.9 (2.0-5.8)</td>
<td>7.1 (5.0-9.2)</td>
<td>89.0 (86.3-91.7)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employment status</th>
<th>n</th>
<th>Uninsured 18.2% (n=592)</th>
<th>Underinsured 13.3% (n=584)</th>
<th>Adequately insured 68.5% (n=3496)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working</td>
<td>2482</td>
<td>18.1 (15.8-20.5)</td>
<td>13.2 (11.2-15.1)</td>
<td>68.7 (66.0-71.3)</td>
</tr>
<tr>
<td>Out of work/unable to work</td>
<td>673</td>
<td>37.6 (32.3-43.0)</td>
<td>22.1 (17.9-26.4)</td>
<td>40.2 (35.2-45.3)</td>
</tr>
<tr>
<td>Homemaker/student</td>
<td>342</td>
<td>16.1 (10.8-21.5)</td>
<td>10.9 (6.5-15.3)</td>
<td>73.0 (66.5-79.5)</td>
</tr>
<tr>
<td>Retired</td>
<td>1436</td>
<td>3.0 (1.7-4.2)</td>
<td>8.1 (6.3-9.9)</td>
<td>89.0 (86.8-91.1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of insurance</th>
<th>n</th>
<th>Uninsured 18.2% (n=592)</th>
<th>Underinsured 13.3% (n=584)</th>
<th>Adequately insured 68.5% (n=3496)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>2134</td>
<td>—</td>
<td>15.5 (13.2-17.7)</td>
<td>84.5 (82.3-86.8)</td>
</tr>
<tr>
<td>Medicaid</td>
<td>388</td>
<td>—</td>
<td>26.6 (20.5-32.7)</td>
<td>73.4 (67.3-79.5)</td>
</tr>
<tr>
<td>Medicare</td>
<td>1600</td>
<td>—</td>
<td>13.9 (11.4-16.5)</td>
<td>86.1 (83.5-88.6)</td>
</tr>
<tr>
<td>Military/other</td>
<td>212</td>
<td>—</td>
<td>20.4 (12.0-28.9)</td>
<td>79.6 (71.1-88.0)</td>
</tr>
</tbody>
</table>

DISCUSSION

Measuring state progress is complicated in the changing coverage landscape. Rhode Island generally matches or surpasses US averages on health care access indicators such as uninsurance or failure to access medical care due to cost [9]. Even so, RI results point to the serious problems with benefit design in both private and public plans under the ACA. Merely reducing uninsurance is not sufficient to either remove all financial barriers to health care or prevent health care from constituting a serious financial burden on individuals.

Ongoing reform of the health care system will need the cooperation of health care users, as well as systems and the government. However, the argument that cost-sharing in the form of copays and deductibles will increase cost-consciousness and responsibility in decision-making among clients [7]...
may be putting excessive financial burden on people who do need ongoing health care. The problem may be especially acute for the newly-insured who forwent care while uninsured, 80% of respondents who had no insurance in 2013 had been uninsured for a year or longer [data available on request]. Low-income families in particular may feel the need to simply choose the plan with the lowest premium and hope they will not need medical care, but our data support previous studies indicating that middle-income families too are highly vulnerable to underinsurance (5, 7, 10).

In revisiting Woolhandler’s warning that the ACA may unintentionally increase underinsurance and thus the financial burden of health care (1), we draw attention in particular to its application to both private and public coverage. Over one-quarter of Medicaid recipients already experience financial hardship associated with health care, so efforts to reduce state Medicaid expenses by increasing cost-sharing might backfire by making recipients delay care until the condition has progressed and become more expensive to treat (3, 11).

There are several limitations to our analysis. The utilization of interviews only prior to the opening of the state health exchange may have introduced some sort of seasonal bias in the data, though there is no evidence that respondents differ over the course of the calendar year. The questions in the BRFSS Health Care Access Module may capture only a limited portion of actual financial burden, and in particular provide no data on the age and scale of medical debt. Results on some questions in the module also suggest confusion on the part of respondents. Despite these limitations, even conservative interpretations of the data reflect a real need for medical, public health, and policy professionals to ensure that health care reform continues beyond the mere reduction of uninsurance.

References

Table 2. Prevalence of healthcare-related financial burden among RI adults, 2013

<table>
<thead>
<tr>
<th>Financial burden</th>
<th>31.7% (n=1236)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighted % (95% CI)</td>
<td>41.2 (36.4-45.9)</td>
</tr>
<tr>
<td>35-64</td>
<td>32.8 (30.4-35.2)</td>
</tr>
<tr>
<td>65 or older</td>
<td>15.4 (12.8-18.0)</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>31.3 (28.9-33.8)</td>
</tr>
<tr>
<td>Male</td>
<td>32.3 (29.1-35.3)</td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>55.0 (48.3-61.8)</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>43.0 (33.3-52.7)</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>27.2 (25.1-29.2)</td>
</tr>
<tr>
<td>Income</td>
<td></td>
</tr>
<tr>
<td>&lt;$25,000</td>
<td>47.1 (43.0-51.3)</td>
</tr>
<tr>
<td>$25,000-$49,999</td>
<td>37.7 (33.6-41.8)</td>
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<tr>
<td>$50,000-$74,999</td>
<td>29.9 (24.3-35.4)</td>
</tr>
<tr>
<td>$75,000</td>
<td>16.0 (12.9-19.2)</td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
</tr>
<tr>
<td>Working</td>
<td>32.3 (29.6-35.0)</td>
</tr>
<tr>
<td>Out of work/unable to work</td>
<td>53.9 (48.7-59.1)</td>
</tr>
<tr>
<td>Homemaker/student</td>
<td>25.9 (19.2-32.6)</td>
</tr>
<tr>
<td>Retired</td>
<td>15.1 (12.6-17.5)</td>
</tr>
<tr>
<td>Type of insurance</td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>25.2 (22.5-27.9)</td>
</tr>
<tr>
<td>Medicaid</td>
<td>29.7 (23.2-36.2)</td>
</tr>
<tr>
<td>Medicare</td>
<td>21.3 (18.3-24.4)</td>
</tr>
<tr>
<td>Military/other</td>
<td>20.8 (12.7-29.0)</td>
</tr>
<tr>
<td>None</td>
<td>67.5 (62.5-72.6)</td>
</tr>
</tbody>
</table>

Table 3. Adjusted odds ratios of underinsurance and healthcare-related financial burden by type of insurance coverage

<table>
<thead>
<tr>
<th>Type of insurance</th>
<th>Underinsured</th>
<th>Financial burden</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>1.00 (Ref)</td>
<td>1.00 (Ref)</td>
</tr>
<tr>
<td>Medicaid</td>
<td>0.97 (0.61-1.54)</td>
<td>0.73 (0.47-1.13)</td>
</tr>
<tr>
<td>Medicare</td>
<td>0.75 (0.47-1.20)</td>
<td>1.39 (0.85-2.26)</td>
</tr>
<tr>
<td>Military/other</td>
<td>1.25 (0.66-2.35)</td>
<td>0.53 (0.32-0.87)</td>
</tr>
<tr>
<td>None</td>
<td>—</td>
<td>3.61 (2.52-5.18)</td>
</tr>
</tbody>
</table>

Adjusted for income, sex, age, and race/ethnicity. Boldface indicates statistical significance.


Authors

Dora Dumont, PhD, is a Senior Public Health Epidemiologist in the Division of Community, Family Health and Equity at the Rhode Island Department of Health.

Tara Cooper, MPH, is the Health Surveys Manager in the Center for Health Data and Analysis at the Rhode Island Department of Health.

Yongwen Jiang, PhD, is a Senior Public Health Epidemiologist in the Center for Health Data and Analysis at the Rhode Island Department of Health, and Clinical Assistant Professor in the Department of Epidemiology, School of Public Health, Brown University.
Rhode Island Monthly Vital Statistics Report
Provisional Occurrence Data from the Division of Vital Records

### VITAL EVENTS

<table>
<thead>
<tr>
<th></th>
<th>OCTOBER 2014</th>
<th>12 MONTHS ENDING WITH OCTOBER 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Number</td>
</tr>
<tr>
<td>Live Births</td>
<td>978</td>
<td>11,305</td>
</tr>
<tr>
<td>Deaths</td>
<td>841</td>
<td>9,903</td>
</tr>
<tr>
<td>Infant Deaths</td>
<td>3</td>
<td>57</td>
</tr>
<tr>
<td>Neonatal Deaths</td>
<td>2</td>
<td>47</td>
</tr>
<tr>
<td>Marriages</td>
<td>786</td>
<td>7,063</td>
</tr>
<tr>
<td>Divorces</td>
<td>273</td>
<td>3,168</td>
</tr>
<tr>
<td>Induced Terminations</td>
<td>222</td>
<td>3,051</td>
</tr>
<tr>
<td>Spontaneous Fetal Deaths</td>
<td>55</td>
<td>582</td>
</tr>
<tr>
<td>Under 20 weeks gestation</td>
<td>43</td>
<td>481</td>
</tr>
<tr>
<td>20+ weeks gestation</td>
<td>12</td>
<td>78</td>
</tr>
</tbody>
</table>

* Rates per 1,000 estimated population
# Rates per 1,000 live births

### Underlying Cause of Death Category

<table>
<thead>
<tr>
<th></th>
<th>APRIL 2014</th>
<th>12 MONTHS ENDING WITH APRIL 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number (a)</td>
<td>Number (a)</td>
</tr>
<tr>
<td>Diseases of the Heart</td>
<td>219</td>
<td>2,282</td>
</tr>
<tr>
<td>Malignant Neoplasms</td>
<td>184</td>
<td>2,401</td>
</tr>
<tr>
<td>Cerebrovascular Disease</td>
<td>27</td>
<td>394</td>
</tr>
<tr>
<td>Injuries (Accident/Suicide/Homicide)</td>
<td>59</td>
<td>746</td>
</tr>
<tr>
<td>COPD</td>
<td>63</td>
<td>474</td>
</tr>
</tbody>
</table>

(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 1,051,511 (www.census.gov)
(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.
It’s a new day.

The Rhode Island Medical Society now endorses Coverys.

Coverys, the leading medical liability insurer in Rhode Island, has joined forces with RIMS to target new levels of patient safety and physician security while maintaining competitive rates. Call to learn how our alliance means a bright new day for your practice.

401-331-3207
Working for You: RIMS advocacy activities

March 2, Monday
Conference call, Connecticut State Medical Society, legal counsel and staff regarding potential RIMS member benefit event in May 2015
Bryant University Physician Assistant Program ribbon cutting, RIMS staff attending
Governor’s Medicaid Reform Workgroup, RIMS staff attending
Chairman Shekarchi Fundraiser

March 3, Tuesday
Physicians Health Committee, Herbert Rakatansky, MD, Chair
Meeting with RI Podiatric Medical Association, RIMS staff attending
DOH Health Services Council meeting
Legislative Hearings

March 4, Wednesday
OHIC Administrative Simplification Workgroup, RIMS staff attending
RI Academy of Family Physicians Legislative Advocacy Day, RIMS staff attending
Legislative Hearings

March 5, Thursday
Tobacco Free RI Volunteer Recognition event, RIMS staff Newell E. Warde, PhD, and Steven R. DeToy recognized
Legislative Hearings

March 6, Friday
Meeting with speakers, staff, regarding legislation; RIMS Public Laws Chair Michael E. Migliori, MD, and RIMS staff attending

March 9, Monday
Department of Health Hearing, E-cigarette regulations; RIMS staff attending

March 10, Tuesday
Meeting with Secretary of the Executive Office of Health and Human Services (EOHHS), Peter Karczman, MD, Russell Settipane, MD, RIMS staff attending
State Innovation Model Steering Committee meeting, RIMS staff attending
Legislative hearings

Immediate Past President Elaine Jones, MD, and RIMS Public Laws Chair Michael Migliori, MD, made House Calls at the State House
Representative Edwards fundraiser; RIMS staff attending

March 11, Wednesday
Board of Medical Licensure and Discipline Meeting with OHIC legal counsel regarding RIMS legislative agenda
Meeting with RI Quality Institute regarding legislation
Legislative hearings

On March 24, approximately 50 Alpert Medical School students attended a luncheon to learn about civic engagement. Grayson Armstrong, MD’15, (above) discussed the importance of organized medicine at both the state and national levels. Megan Turcotte, RIMS Director of Member Services, explained ways that RIMS provides local opportunities for involvement and offers free membership in both the AMA and RIMS for first year medical students.
Medical Odysseys Available!

*Medical Odysseys: A Journey through the Annals of the Rhode Island Medical Society,* was published for the Society’s Bicentennial in 2012.

A limited number of copies remain. Readers of Dr. Stanley Aronson’s uniquely erudite and entertaining essays on medicine, medical history, language and forensic folklore will cherish this compilation, which also includes commentaries by Dr. Joseph Friedman, executive editor of the *Rhode Island Medical Journal,* as well as essays on aspects of RIMS’ history by RIMJ managing editor Mary Korr.

The cost is $15 and includes postage. Please contact Sarah at the RIMS office: ssstevens@rimed.org or 401-528-3281.

March 12, Thursday
Meeting with Chief Administrative Officer, Board of Medical Licensure and Discipline, regarding medical record copy fees
DOH Health Services Council meeting
Legislative hearings

March 16, Monday
Governor’s Opioid Overdose Taskforce meeting, RIMS staff attending
Conference call, American Medical Association regarding potential SGR legislation
RIMS Board of Directors Meeting

March 17, Tuesday
OHIC Health Insurance Advisory Committee
Legislative Hearings

March 18, Wednesday
DOH Primary Care Physician Advisory Committee, Department of Health
OHIC Administrative Simplification meeting
Health Professional Student Loan Program, RIMS staff attending
Workers Comp Advisory Committee, RIMS staff attending
Legislative Hearings

March 19, Thursday
Meeting with RI Quality Institute regarding Current Care; RIMS staff attending
Committee Hearings
Chairman Felag fundraiser, RIMS staff attending

March 20, Friday
Conference call, American Medical Association regarding potential SGR legislation

March 23, Monday
Meeting with American College of Emergency Physicians, RI Chapter (RI ACEP) Executive Committee; RIMS staff attending
AMA Advocacy Resource Center Executive Committee conference call, RIMS staff attending
RIMS Finance Committee meeting, Jose R. Polanco, MD, Chair

March 24, Tuesday
Meeting with physical therapists, occupational therapists, et al. al., regarding Governor’s budget; RIMS staff attending
Meeting with State Director of Administration and the YMCA alliance of Rhode Island regarding state employees’ health insurance; RIMS staff attending

March 25, Wednesday
OHIC Administrative Simplification meeting, RIMS staff attending
Legislative Hearings
Chairman Gallison fundraiser, RIMS staff attending
Sen. Nesselbush fundraiser, RIMS staff attending; RIMPAC Chair Michael Silver, MD, and RIMS staff attending

March 26, Thursday
Mental Health and Substance Abuse Coalition meeting, RIMS staff attending
Meeting RICARES and other advocates on Good Sam legislation, RIMS staff attending
Meeting with Congressman Cicilline’s Chief of Staff, RIMS staff attending
Legislative Hearings

March 27, Friday
RIMS Exhibits at RIAFP 23rd Annual Family Care Conference; RIMS staff attending

March 30, Monday
Meeting with BCBRSRI; Peter Karczmar, MD; Russell Settipane, MD; and RIMS staff attending
Nominating Committee meeting, Peter Karczmar, MD, Chairman

March 31, Tuesday
Board of Medical Licensure and Discipline community review of proposed regulatory changes, RIMS staff attending
Legislative Hearings
Why You Should Join the Rhode Island Medical Society

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

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

RIMS Membership Benefits Include:

- Career management resources
- Insurance, medical banking, document shredding, collections, real estate services, and financial planning
- Powerful advocacy at every level
- Advantages include representation, advocacy, leadership opportunities, and referrals
- Complimentary subscriptions
- Publications include *Rhode Island Medical Journal*, *Rhode Island Medical News*, annual Directory of Members
- RIMS members have library privileges at Brown University
- Member Portal on www.rimed.org
- Password access to pay dues, access contact information for colleagues and RIMS leadership, RSVP to RIMS events, and share your thoughts with colleagues and RIMS
You’re Invited to a free
Rhode Island Medical Society and Baystate Financial
Educational Event designed specifically for physicians.

Rhode Island Medical Society and Baystate Financial have embarked upon a long-term relationship to bring good financial advice and quality, fee-based financial planning to Rhode Island physicians.

This free one hour seminar will be covering the topic of:

**Retirement Income Distribution Strategies**

*Avoiding the Potholes in Retirement*

This educational seminar will provide guidance on:

- Maximizing your cash flow
- Reducing investment risk
- Minimizing income tax
- Maximizing social security

Join us on either of the following dates

- Thursday, April 30 2015
  Registration 6:30 pm - 7:00 pm
  Seminar 7:00pm - 8:00pm
  235 Promenade St. #500
  Providence, RI 02908
  (401) 331-3207

  Light refreshments and hors d’oeuvres will be provided

- Wednesday, May 13 2015
  Registration 6:30 pm - 7:00 pm
  Seminar 7:00pm - 8:00pm
  235 Promenade St. #500
  Providence, RI 02908
  (401) 331-3207

  Light refreshments and hors d’oeuvres will be provided

Please RSVP to Brian Falconer at:

bfalconer@baystatefinancial.com || 401.432.8836

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Dr. Nicole Alexander-Scott with Governor Gina Raimondo

Dr. Nicole Alexander-Scott Named Director of the Department of Health

PROVIDENCE – Today, **DR. NICOLE ALEXANDER-SCOTT** begins in her new role as Director of the Department of Health, succeeding Dr. Michael Fine, who announced his resignation last month.

“Dr. Alexander-Scott brings tremendous experience from her work at Rhode Island Hospital, the Department of Health, and Brown University,” said Secretary of the Executive Office of Health and Human Services Elizabeth Roberts. “She was a tremendous asset to our state during the recent meningitis outbreak at Providence College, and will be a great addition to our team as we work to provide all Rhode Islanders with access to the information and care they need to be healthy.”

Dr. Alexander-Scott is board certified in pediatrics, internal medicine, pediatric infectious diseases, and adult infectious diseases. She is an assistant professor of pediatrics and medicine at the Alpert Medical School, serving in the divisions of Pediatric and Adult Infectious Diseases at the affiliated hospitals in Rhode Island. She also serves as a consultant medical director for the Office of HIV/AIDS, Viral Hepatitis, STDs, and TB at the Rhode Island Department of Health in the Division of Infectious Diseases and Epidemiology.

“I’ve had the opportunity to work with Dr. Alexander-Scott, and I believe she is the best of the best,” said Dr. Fine. “The Governor has made an excellent choice for our state, and I look forward to working closely with Dr. Alexander-Scott over the coming weeks to ensure a smooth transition.”

“It is a privilege to have this opportunity to work with so many talented health care and public health professionals to strengthen our care system across the state,” said Dr. Alexander-Scott. “My passion is advancing public health across all ages, economic backgrounds and communities. I am committed to helping to ensure all Rhode Islanders receive the kind of care they deserve.”

She received her bachelor of science degree from Cornell University and her medical degree from SUNY Upstate Medical University at Syracuse. She also holds a master of public health degree from Brown University.

Rhode Island Hospital Offers First Fellowship in Addiction Medicine in RI

PROVIDENCE – Rhode Island Hospital has established a fellowship program in addiction medicine, the first of its kind in the state. Funded in part by a grant from CleanSlate Addiction Treatment Centers of Massachusetts, the new fellowship is one of the ways the hospital is responding to the public health crisis posed by addiction in Rhode Island and southern New England.

According to the Centers for Disease Control and Prevention (CDC), Rhode Island is perched at the top of the list for illicit drug use and has the third highest rate of alcohol poisoning deaths in the nation. Opioid abuse is rampant, including not just heroin but prescription opioids such as Vicodin, Percocet, methadone, and oxycodone. Heroin is the most commonly cited drug among primary drug treatment admissions in the state. Tobacco addiction is also on the list of the most difficult substances to quit, and 20 percent of Rhode Island’s adult population smoke cigarettes.

“Training doctors in addiction medicine serves not only to improve public health, but also to advance the knowledge and skill of our own physicians in addressing substance use problems,” said PETER D. FRIEDMANN, MD, MPH, FASAM, FACP, director of the new fellowship based in the division of general internal medicine at Rhode Island Hospital.

The physician fellows will work with physicians certified in addiction medicine and addiction psychiatry as well as those trained in internal medicine, family medicine, obstetrics and gynecology, pediatrics and emergency medicine. The fellows will work with varied populations, including but not limited to youth, veterans, patients with HIV, health professionals and those within the criminal justice system.

“We’re actively recruiting candidates from all specialties who will help us make evidence-based addiction prevention and treatment more available to those who need it,” said Dr. Friedmann.

Rhode Island Hospital was one of four new fellowship programs accredited recently by the American Board of Addiction Medicine Foundation (ABAM). In all, ABAM has accredited 27 addiction medicine training programs in the U.S.
Brain Day Showcases Clinical, Basic Research at Brown, Hospitals

Nobel Laureate Dr. Richard Axel delivers keynote on the sense of smell

PROVIDENCE — At Brown University’s second annual MindBrain Research Day held last week, more than a hundred university and hospital-affiliated researchers showcased their work at a poster exhibition in Sayles Hall. Topics spanned a wide spectrum in the 128 posters, from state-of-the-art developments in neurophysiology and adaptive devices, gene therapies, treatment of brain diseases, substance abuse, weight loss, developmental screening in children, depression and the elderly, just to name a few.

After the exhibition, Nobel Laureate DR. RICHARD AXEL of Columbia University delivered the keynote address, “Order from Disorder: Internal Representations of the Olfactory World,” in Salomon Hall.

In 2004, he and co-Nobel recipient Linda Buck were recognized for their discoveries of odorant receptors and the organization of the olfactory system. They published their findings jointly in 1991, which reported the presence of a large gene family, comprised of some 1,000 different genes (three percent of our genes) that gives rise to an equivalent number of olfactory receptor types.

Dr. Axel described how the sense of smell is perceived by these specialized receptors located on cells in the upper part of the nasal epithelium of the “peripheral olfactory organ” (aka the nose). Different receptors perceive a banana, others a ripe strawberry or a good wine. Nerves message the odor information to glomeruli in the

Poster winners

Undergraduate
1st place, Hayley Bounds
2nd place, Uday Agrawal

Graduate Students
1st place, Zeyang Yu
2nd place, Molly Boutin

Research Assistants
1st place, Daniella Amri
2nd place, Christina D’Angelo

Clinical Psychology Residents
1st place, Jessica Peters
2nd place, Marisa Sklar

Psychiatry Residents
1st place, Jorge Almeida
2nd place, Brian Theyel

Postdoc (basic science depts)
1st place, Abigail Polter
2nd place, Ernest Ho

Postdoc (clinical depts)
1st place, Jared Saletin
2nd place, Laura Hancock

Last week, a poster exhibition at Brown’s Sayles Hall showcased the work of university and hospital-affiliated researchers in celebration of the second annual MindBrain Research Day held March 25.
olfactory bulb in the brain, which is then translated by other parts of the brain, forming a pattern.

The recognition of odors is translated into an internal representation of sensory quality in the brain and, according to Dr. Axel, this leads to meaningful thoughts and behavior, allowing humans and animals to distinguish good smells from bad ones; i.e., a bad clam or a fragrant lilac or a burning building.

After the keynote address, winners of the poster competition were announced.

The event was sponsored by the Brown Institute for Brain Science; the Norman Prince Neurosciences Institute (NPNI); the Departments of Neurology; Neurosurgery; Neuroscience; Molecular Pharmacology, Physiology and Biotechnology (MPPB); and Psychiatry and Human Behavior.

Kent Hospital Receives State Approval to Perform Coronary Angioplasty

WARWICK – Care New England has received approval from the Rhode Island Department of Health to develop and implement a coronary angioplasty program at Kent Hospital in Warwick.

It is expected the elective angioplasty program will be operational after several months of clinical preparation including staff training at Brigham and Women’s Hospital in Boston. Also, the 24-hour, emergency angioplasty service would follow approximately six months later upon the completion of construction of a second cardiac catheterization lab.

“On behalf of Care New England and Kent Hospital, I would like to thank the Rhode Island Department of Health for its thorough review and approval of our application for a certificate of need to perform coronary angioplasty at Kent Hospital,” said MICHAEL DACEY, JR, MD, Kent Hospital president and COO. “This standard-of-care procedure will result in lives saved because of decreased travel time to access this critical treatment.”

Data presented to the state Department of Health during the approval process demonstrated that patients residing south of the metro Providence area (more than 300,000 Rhode Islanders) would benefit greatly from expanded access to coronary angioplasty via the new program at Kent Hospital.

Data presented during the approval process also showed that for many patients in parts of Kent County and further south it is possible that transportation to a current facility capable of providing this treatment could add upwards of 20 minutes travel beyond Kent Hospital, thereby delaying critical treatment for some 300,000 Rhode Islanders.

“For patients having a heart attack, 20 minutes and even 10 minutes, is an enormous amount of time and can be the difference between someone living or dying. Reducing this time to open a closed artery will clearly save lives starting in year one,” said CHESTER HEDGEPETH, MD, PHD, chief of cardiology at Kent and the leader of the Brigham and Women’s Cardiovascular Associates at Care New England, executive chief of cardiology at CNE.

“As the second largest hospital in Rhode Island and with nearly 70,000 emergency department visits annually, it is vitally important that we be able to provide this life-saving service to the more than 300,000 people in the immediate service area of Kent and points south. We look forward, through our clinical affiliation with Brigham and Women’s Hospital, to developing this critical program for our community,” said Dr. Dacey.

“The cardiology program across Care New England, and here at Kent, has grown tremendously over the past several years to provide access to and treatment for general and complex cardiovascular care. Today’s approval is another important step in providing the community and patients with the best possible care close to home,” said Dr. Hedgepeth.
Staying competitive in today’s changing healthcare environment can be a challenge. It may require investing in new technologies, expanding services, even merging with another practice.

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Bradley Hospital Awarded $168K in Federal Funding to Support Medical Residency Training

EAST PROVIDENCE – During a recent press conference at Bradley Hospital, Senators Sheldon Whitehouse and Jack Reed announced that the hospital will receive $168,354 from the Children’s Hospitals Graduate Medical Education (CHGME) Payment Program.

The funding was made possible by the CHGME Support Reauthorization Act of 2013, which included a provision authored by Sen. Whitehouse to expand the program to include children’s psychiatric teaching hospitals.

Bradley Hospital first sought CHGME funding in 2002 but was informed that the hospital did not qualify for the program because only children’s hospitals – not children’s psychiatric hospitals – were eligible. Whitehouse and Reed have been fighting for years to expand the eligibility of the CHGME program to include children’s psychiatric hospitals, and succeeded in changing the law last year. The funds announced were a direct result of that change.

“The mental health care is just as important as physical health care, but too often forgotten or ignored,” said Whitehouse. “This funding will support Bradley Hospital’s training program for medical residents which prepares them to treat children’s mental and behavioral health conditions. I was proud to work with Senator Reed to include children’s psychiatric teaching hospitals in the CHGME program, and I congratulate Bradley Hospital on the receipt of this much-deserved funding.”

“This is a smart investment in boosting mental health parity and helping children’s hospitals train the next generation of highly qualified pediatricians. Bradley Hospital and other children’s psychiatric teaching hospitals should have the federal support they need to train doctors equipped to treat mental illness. I am pleased we were able to finally reach an agreement to address the omission of children’s psychiatric teaching hospitals because it is essential to end discriminatory funding policies against children with mental health issues,” said Reed.

“As the number of children in need of mental health care services continues to skyrocket, the ratio of children seeking services versus the number of mental health care providers remains one of the largest disparities in the entire field of medicine,” said Daniel J. Wall, president of Bradley Hospital. “Research has proven the value of early diagnosis and treatment in mental health outcomes in children, so funding to support the training of medical students to practice in the field of psychiatry is not only important, it is essential to the health and wellbeing of our children.”

The CHGME funding will be used to support Bradley’s medical residency training program, including the 2-year Child and Adolescent Psychiatry Fellowship and its 5-year Triple Board Residency program, which leads to board eligibility in pediatrics, general psychiatry, and child and adolescent psychiatry. The Triple Board program is one of only ten such programs in the United States.

The CHGME Support Reauthorization Act of 2013 reauthorized the CHGME Payment Program for five years, and for the first time allowed children’s psychiatric teaching hospitals like Bradley Hospital to compete for funding.

Care New England’s Quin and Marran Selected to Participate In National Fellows Program

PROVIDENCE — MATTHEW QUIN, RN, MSN, vice president of patient care services at Women & Infants Hospital of Rhode Island, a Care New England Hospital, and MARY MARRAN, MS, OT, MBA, vice president of service line integration for orthopedics and brain and behavioral health services for Care New England Health System, recently were notified of their selection to participate in the 2015 America’s Essential Hospitals Fellows Program, Innovative and Adaptive Leadership: Essential in Times of Change.

Quin and Marran were among many candidates who were nominated from America’s Essential Hospitals member organizations. According to America’s Essential Hospitals Senior Vice President for Leadership and Innovation, David Engler, PhD, this program, “provides a valuable opportunity to network with colleagues who share similar missions and understand the unique challenges of the safety net.”

Quin has served as the vice president for nursing operations at Women & Infants Hospital since 2013. A graduate of Saint Anselm College in Manchester, NH, Quin earned a master of science in nursing at Simmons College. He is a member of the American Association of Critical Care (AACN) and its Greater Boston Chapter, Organization of Nurse Leaders of MA and RI (ONL), and Sigma Theta Tau International, the National Nursing Honor Society.

Quin has received numerous awards, including the AACN Circle of Excellence Award for Nurse Leadership, the AACN Gold Beacon Award and the Partners in Excellence Award from Partners Healthcare Institutions.

Marran has served as Care New England vice president of service line integration for orthopedics and brain and behavioral health services since 2013. She also serves as the executive manager for operations, planning and business development as well as the director of informatics for Butler Hospital, also a Care New England Hospital. Marran started her career with Butler Hospital as a staff occupational therapist in 1985. She received her bachelor and masters of science degrees in occupational therapy from the University of New Hampshire and her MBA at the University of Phoenix. Marran is a member of the American College of Healthcare Executives (ACHE) and a member of Leadership RI Theta II Class of 2012.

Marran is a recipient of the Irene Allard Clinical Educator of the Year Award awarded by the New England Occupational Therapy Education Council and is a former Butler Hospital Employee of the year.
Hospitals Are an Economic Engine to Rhode Island Economy

Hospital Economic Activity Generates 41,000 Jobs and $6.9 Billion

CRANSTON – The Hospital Association of Rhode Island (HARI) released its annual economic impact report recently, which detailed $6.9 billion in economic contributions. Highlights of hospitals’ economic impact in 2013 include:

- Employing 19,900 health care professionals
- Supporting 21,400 jobs with economic activity
- Paying $1.8 billion in wages
- Generating $2.8 billion for the local economy through purchasing goods and services
- Dedicating $167 million to improving facilities and upgrading technology

“Our industry is vital to the state’s economy and health,” said Michael R. Souza, HARI president. “Hospitals support one in ten jobs in Rhode Island. We’re an economic engine that is providing Rhode Islanders with well-paying jobs and supporting local business. State leaders must make the appropriate investments to secure our role in the state’s economy.”

The report was produced in collaboration with the Healthcare Association of New York State using data reported annually by hospitals to the Centers for Medicare & Medicaid Services.
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Students Celebrate Match Day

One hundred and two Alpert Medical School students celebrated Match Day on March 20th when they ripped open envelopes to find out where they will begin their residency training, 12 matched at Rhode Island hospitals.

Many students matched to specialties as varied as radiology, ophthalmology, emergency medicine, surgery, and neurology. A total of 19 matched to residences in internal medicine and 19 more matched to the primary care disciplines of family medicine or primary medicine. Another dozen will pursue pediatrics.

Nicholas Canelo
UC-San Diego Medical Center
UC-San Diego School of Medicine
Family Medicine

Yi Cao
Roger Williams Medical Center
Boston University School of Medicine
Medicine - Prelim
Beth Israel Deaconess Medical Center
Harvard Medical School
Radiology

Ivy Chang
New York Presbyterian Hospital
Columbia University College of Physicians & Surgeons
Emergency Medicine

Gina Chen
Boston University Medical Center
Boston University School of Medicine
Medicine - Primary

Daniel Cho
University of Washington Affiliated Hospitals
University of Washington School of Medicine
Plastic Surgery

Zunaira Choudhary
North Shore-Long Island Jewish Health System
Hofstra North Shore-LI School of Medicine
Medicine

Grace Chow
North Shore-Long Island Jewish Health System
Hofstra North Shore-LI School of Medicine
Obstetrics/Gynecology

Alice Chuang
Santa Clara Valley Medical Center
Stanford University School of Medicine
Medicine

Waihong Chung
Icahn School of Medicine at Mount Sinai
Medicine (Research)

Avery Clark
Boston University Medical Center
Boston University School of Medicine
Emergency Medicine

Caitlin Cohen
Massachusetts General Hospital, Harvard Medical School
Medicine - Prelim

Robert Cook
Swedish Medical Center
University of Washington School of Medicine
Family Medicine

Justine Cormier
Rhode Island Hospital, Alpert Medical School
Medicine

Robert Heinl
Emory University School of Medicine
Medicine

Ryan Heney
Memorial Hospital of Rhode Island, Alpert Medical School
Family Medicine

Ijeoma Iko
UC-Davis Medical Center, UC-Davis School of Medicine
Obstetrics/Gynecology

Deidrya Jackson
Harbor-UCLA Medical Center
David Geffen School of Medicine
Orthopaedic Surgery

Allison Kay
University of Washington Affiliated Hospitals
University of Washington School of Medicine
Obstetrics/Gynecology

Amr Khander
Mount Sinai Icahn School of Medicine
Obstetrics/Gynecology

Tendo Kironde
University of Washington Affiliated Hospitals
University of Washington School of Medicine
Pediatrics

Calvin Lambert
Howard University Hospital
Howard University College of Medicine
Obstetrics/Gynecology

Amie Leaverton
Oregon Health & Science University
OHSU School of Medicine
Obstetrics/Gynecology

Emily Li
B I Deaconess Medical Center-Brockton
Harvard Medical School
Transitional

Yale New Haven Hospital, Yale School of Medicine
Ophthalmology

Nigar Ahmedli
Einstein/Montefiore Medical Center
Albert Einstein College of Medicine
Otolaryngology

Erica Alexander
Hospital of the University of Pennsylvania
University of Pennsylvania Health System
Surgery - Prelim
Radiology

Veronica Alexander
Tulane University School of Medicine
Triples Board

Tariq Ali
Hospital of the University of Pennsylvania
University of Pennsylvania Health System
Medicine

Andre Anderson
New York Presbyterian Hospital
Columbia University College of Physicians & Surgeons
Emergency Medicine

Ted Apstein
Maricopa Medical Center
University of Arizona College of Medicine
Emergency Medicine

Grayson Armstrong
Cambridge Health Alliance, Harvard Medical School
Transitional
Mass Eye & Ear Infirmary, Harvard Medical School
Ophthalmology

Gregory Barnett
Cambridge Health Alliance, Harvard Medical School
Psychiatry

Catherine Berger
University of Chicago Medical Center
Pritzker School of Medicine
Pediatrics

Honora Burnett
UC-San Francisco Medical Center
UCSF School of Medicine
Pediatrics

John Butler
Rhode Island Hospital, Alpert Medical School
Pediatrics

Keith Butts
University of Utah Affiliated Hospitals
University of Utah School of Medicine
Anesthesiology

Diana Escobar
Stony Brook Teaching Hospitals
Stony Brook University School of Medicine
Anesthesiology

Angela Esquivel
La Crosse-Mayo, Mayo Clinic
Family Medicine

Brendon Esquivel
Gundersen Lutheran Medical Foundation
University of Wisconsin School of Medicine and Public Health
Surgery

Justina Gamache
Olive View – UCLA Medical Center
David Geffen School of Medicine
Medicine

Rafael Gonzalez
Brigham & Women’s Hospital, Harvard Medical School
Obstetrics/Gynecology

Zachary Grable
Emory University School of Medicine
Orthopedic Surgery

Alma Guerrero
Rhode Island Hospital, Alpert Medical School
Medicine

Robert Heinl
Emory University School of Medicine
Medicine

Ryan Heney
Memorial Hospital of Rhode Island, Alpert Medical School
Family Medicine

Helen Johnson
Vidant Medical Center, East Carolina University
Surgery

Allison Kay
University of Washington Affiliated Hospitals
University of Washington School of Medicine
Obstetrics/Gynecology

Amr Khander
Mount Sinai Icahn School of Medicine
Obstetrics/Gynecology

Tendo Kironde
University of Washington Affiliated Hospitals
University of Washington School of Medicine
Pediatrics

Calvin Lambert
Howard University Hospital
Howard University College of Medicine
Obstetrics/Gynecology

Amie Leaverton
Oregon Health & Science University
OHSU School of Medicine
Obstetrics/Gynecology

Emily Li
B I Deaconess Medical Center-Brockton
Harvard Medical School
Transitional

Yale New Haven Hospital, Yale School of Medicine
Ophthalmology

April 2015
Rhode Island Medical Journal
Recognition

Cardiologist Thomas Drew, MD, Honored with Milton Hamolsky Outstanding Physician Award

PROVIDENCE – The medical staff of Rhode Island Hospital awarded cardiologist THOMAS DREW, MD, the 2014 Annual Milton Hamolsky Outstanding Physician Award. Dr. Drew was honored for his dedication to ethical practice, outstanding clinical skills and commitment to medical education. The award is the highest honor the medical staff bestows on one of its own.

“Dr. Drew is an extraordinary physician who has inspired other physicians through his dedication to excellence, unparalleled medical skills and compassionate care,” said Latha Sivaprasad, MD, chief medical officer of Rhode Island Hospital. “On behalf of all of the Rhode Island Hospital physicians, it is my distinct honor to recognize Dr. Drew for his integrity and commitment to medicine.”

“For more than four decades, Dr. Drew has been an accomplished cardiologist and educator, and has contributed enormously to the field of cardiology,” said Samuel Dudley, MD, PhD, chief of cardiology at Rhode Island and The Miriam hospitals, and director of the Cardiovascular Institute. “He has always offered his time, wisdom and support to colleagues throughout his career and inspires all to emulate his professionalism.”

“Milton Hamolsky is no longer here to present the award that was named in his honor,” said Daniel J. Levine, MD, who nominated Dr. Drew. “But if he were, we are willing to bet that he would have been delighted by this year’s choice, Milton’s own physician. Tom is an amazingly talented and energetic man who has been at the heart of medical care and cardiology care for a long time. He has done so with grace and vision. He has supported us in who we are and helped us forward with a vision of who we should be.”

Dr. Drew, of Providence, is also a clinical associate professor of medicine at The Warren Alpert Medical School of Brown University. During his career he has volunteered his time to numerous professional associations including the Bristol County Medical Society, University Cardiology Foundation (formerly Rhode Island Hospital Cardiology Foundation), and the American College of Cardiology. He is a prolific author of medical academia and a frequent presenter on cardiac medicine.

After graduating from Columbia University’s College of Physicians and Surgeons and completing his residency, Dr. Drew served a two-year stint with the United States Public Health Service Center for Disease Control. He joined the staff of Rhode Island Hospital in 1977.

The Milton W. Hamolsky Outstanding Physician Award is presented each year to a doctor who has made exceptional contributions to patient care and leadership. Milton Hamolsky, MD, who passed away in January, 2014 at age 92, was an endocrinologist who came to Rhode Island Hospital in 1963 and served as the first full-time physician-in-chief. Dr. Hamolsky served as the chief administrative officer of the Rhode Island Board of Medical Licensure and Discipline and was a noted pioneer of medical education in Rhode Island.

W&I’s Dr. Star Hampton Brings Specialty Care to Women in Rwanda

PROVIDENCE – Each year in sub-Saharan Africa, it is estimated that more than 33,000 women develop obstetric fistulae and subsequent urinary and/or fecal incontinence. Unfortunately, these women are currently not able to be adequately repaired by local physicians due to lack of training and resources.

Recently, DR. STAR HAMPTON and her senior fellow, DR. SONALI RAMAN, of the Division of Urogynecology and Reconstructive Pelvic Surgery at Women & Infants Hospital traveled to Rwanda with the International Organization for Women and Development (IOWD) as part of a fistula repair team. Dr. Hampton has been travelling to Africa each year since 2005, when she was a urogynecology fellow at NYU, and she is now the team leader and lead surgeon for the IOWD mission. Two graduates from the Women and Infants fellowship, Dr. Blair Washington and Dr. Peter Jeppson, are now attending on the surgical team after experiencing this as senior fellows with Dr. Hampton.

The team from Women & Infants Hospital worked in Kigali, Rwanda, where they served for two weeks at Kibagabaga Hospital with a team of American surgeons, anesthesiologists, and nurses. They collaborated with and trained Rwandan physicians, medical students, and nursing staff, teaching them post-surgical care for the women, as well as basic anatomy, surgical preparation, sterility concepts, evaluation, and surgical approaches. Dr. Raman also ran a fourth-degree laceration workshop that was attended by more than 60 Rwandan care providers.

During this trip, Dr. Hampton’s team evaluated more than 130 women with fistula who were waiting for them and their skilled surgical hands. The team was able to successfully operate on over 50 of these women. “Our team was able to provide basic and advanced care to the women in Africa, women whose lives were definitely improved. We worked hard to tackle difficult surgical cases and to create meaningful results for the women of Rwanda.”
Ziya Gokaslan, MD, Named Chief of Neurosurgery at RIH, Miriam Hospitals; Neurosurgery Chair at Alpert Medical School

PROVIDENCE – ZIYA L. GOKASLAN, MD, FACS, has been appointed chief of neurosurgery at Rhode Island Hospital and The Miriam Hospital, and chairman of the Department of Neurosurgery at The Warren Alpert Medical School of Brown University, effective July 1, 2015.

In this role, Dr. Gokaslan, who comes to Rhode Island from Johns Hopkins University School of Medicine, will lead all clinical, research and teaching efforts in neurosurgery across the entire Lifespan system. In addition, he will serve as the clinical director of the highly regarded Norman Prince Neurosciences Institute where he will be responsible for continuously enhancing collaboration and advancement among the institute’s neurosciences faculty and the Brown Institute for Brain Science.

“We are thrilled to welcome Dr. Gokaslan, an internationally renowned neurosurgeon, to Lifespan,” said Timothy J. Babineau, MD, president and chief executive officer of Lifespan. “Dr. Gokaslan’s remarkable achievements and expertise will further advance Lifespan’s commitment to becoming a national leader in the area of neurosurgery and neuroscience. We were fortunate to be able to attract one of the very best in the country to Lifespan and Rhode Island.”

“Dr. Gokaslan is a skilled surgeon, a talented educator and scientist, and he understands the strength of academic medicine,” said Jack A. Elias, MD, dean of medicine and biological sciences at Brown University. “His mentorship of medical students, residents and fellows is well known, and we admire his dedication to the advancement of knowledge in the neurosciences.”

Most recently, Dr. Gokaslan has served as the vice chairman of the department of neurosurgery, director of the neurosurgical spine program, director of the neurosurgical spine metastasis center and a professor of neurosurgery, oncology and orthopedic surgery at the Johns Hopkins University School of Medicine in Baltimore, Maryland. Prior to joining Johns Hopkins, Dr. Gokaslan was an associate professor of neurosurgery at the University of Texas MD Anderson Cancer Center in Houston and served as deputy chair of its department of neurosurgery.

Dr. Gokaslan’s clinical practice focuses on the radical surgical treatment of both primary and metastatic spinal tumors, sacral neoplasms and spinal cord tumors. He developed many novel approaches for resection of pancoast tumors, spinal neoplasms, as well as sacral tumors, including total sacrectomy and complex spinal and pelvic reconstruction. Dr. Gokaslan transformed the surgical treatment of spinal neoplasms and devised techniques rendering certain tumors resectable once deemed inoperable. These led to significant improvement of survival in patients with various neoplastic conditions. His basic research focuses on the development of new animal models to study the pathophysiology of neoplastic spinal cord compression and to define the roles of proteolytic enzymes in tumor invasion and to devise novel therapeutic approaches to treat spinal tumors.

He is a prolific researcher serving as principal investigator and collaborator on numerous projects regarding spinal oncology and surgery. He has authored over 300 peer-reviewed papers and presented more than 250 national and international lectures since 1996. He has authored and co-authored four book and numerous book chapters. He serves on the editorial boards of top academic journals, including the Journal of Spinal Disorders & Techniques, European Spine Journal, Nature Reviews in Neurology, the Journal of Surgical Oncology, and World Neurosurgery. He also served as co-editor of Journal of Neurosurgery-Spine from 2012 to 2013. He is a member of numerous prestigious societies, notably the Society of Neurological Surgeons, the Cervical Spine Research Society, the American Society of Clinical Oncology, the American Association of Neurological Surgeons, the Congress of Neurological Surgeons and the North American Spine Society as well as Scoliosis Research Society. He is also a past president of the American Association of Neurological Surgeons/Congress of Neurological Surgeons’ disorders of the spine and peripheral nerves section.

Dr. Gokaslan was recently awarded the Leon Wiltse Clinical Research Award by the North American Spine Society for his excellence in leadership and clinical research in spine care.

Dr. Gokaslan earned his medical degree from the University of Istanbul, Turkey. He completed an internship in general surgery, a fellowship in neurotraumatology and a residency in neurosurgery at Baylor College of Medicine in Houston, Texas. From 1993 to 1994, he was a fellow in clinical spinal surgery at New York University Medical Center.
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Appointments

Renee Eger, MD, Named Medical Director of Women’s Primary Care Center

PROVIDENCE – RENEE EG ER, MD, of Sharon, MA, has been named medical director for the Women’s Primary Care Center of Women & Infants Hospital of Rhode Island, a Care New England Hospital.

“Dr. Eger brings extensive clinical and administrative experience to the position as well as a passion for teaching and patient care. Her enthusiasm and vision for women’s health and improving health care delivery will serve our patients and community well,” said Maureen G. Phipps, MD, MPH, chief of obstetrics and gynecology at Women & Infants Hospital, executive chief of obstetrics and gynecology at Care New England, Chair and Chace-Joukowsky Professor in the Department of Obstetrics & Gynecology and assistant dean for teaching and research in women’s health at The Warren Alpert Medical School of Brown University, and professor of epidemiology at the Brown University School of Public Health.

Dr. Eger has been serving the health care needs of the women of Rhode Island and southeastern Massachusetts for more than 20 years. A graduate of Brown University and Tufts University School of Medicine, Dr. Eger completed her residency at Women & Infants Hospital and is board certified by the American Board of Obstetrics and Gynecology. In 2013, she was certified by the Center of Excellence in Minimally Invasive Gynecology.

Recognition

Kate Lally, MD, Named Inspirational Leader in Hospice and Palliative Medicine

PROVIDENCE – KATE LALLY, MD, FACP, has been named an inspirational leader in hospice and palliative medicine under the age of 40 by the American Academy of Hospice and Palliative Medicine (AAHPM). AAHPM asked its 5,000 members to nominate individuals who are the young leaders in the field. Dr. Lally is one of these physicians recognized by her peers for innovation in and dedication to the medical specialty of Hospice and Palliative Medicine and AAHPM.

Dr. Lally is the director of palliative care at Care New England, hospice medical director at the VNA of Care New England, and clinical assistant professor of medicine at the Warren Alpert Medical School of Brown University.

“All of us at Care New England are committed to providing the best possible care for our patients throughout their lives,” said Dr. Lally. “We work closely with our patients and their families to ensure we are providing care that is consistent with their wishes. To be recognized for our collective efforts around such an important topic is an honor.”

In 2012, under Dr. Lally’s leadership, Care New England became a pioneer sponsor of The Conversation Project, a public campaign co-founded by Pulitzer Prize-winner Ellen Goodman and developed in collaboration with the Institute for Healthcare Improvement. The Conversation Project is a public campaign with a simple and transformative goal: to have every person’s end-of-life wishes expressed and respected.
ALPHONSE R. CARDI, MD, 100, of Cranston, passed away on March 6, 2015 at home surrounded by his loving family. He was the beloved husband of the late Elvira M. (Ritacco) Cardi for 63 years. Dr. Cardi was a graduate of LaSalle Academy, Providence College and Georgetown University School of Medicine.

Upon completion of his medical residency, with WW II in progress, along with many of his colleagues he entered into active military service. For three life altering years he served in the Army Medical Corps, joining the 29th Division, 115th Infantry as a battalion surgeon. He was one of the extraordinary members of the “Greatest Generation” who participated in the storming of Omaha Beach - Dog Red in Normandy on D-Day, and was recognized by the French government for his participation in the liberation of France. He subsequently served as head of a hospital in Germany following the liberation of the concentration camps. For his participation in military service he received a Purple Heart, Oak Leaf Cluster to the Purple Heart, Combat Badge, Bronze Star, Bronze Arrowhead for Invasion of Normandy and Combat Medic Badge, achieving the rank of captain.

In 1946, upon his discharge from military service, Dr. Cardi returned to Cranston and opened his medical practice retiring in 2002 at age 88. Remarkably, he maintained his medical license until his death. During his long medical career, he served as the Director of the Department of Family Practice at St. Joseph Hospital (now Fatima) for 23 years. He was a Charter fellow of the American Academy of Family Physicians and a member of numerous national and local medical associations. He was an ordinary man who accomplished extraordinary things. He was a proud patriot whose life was defined by courage and devotion to faith, family and medicine.

He was a strong advocate for education, establishing various academic scholarships most notably at Saint Mary’s School, Providence College and St. Joseph’s Hospital School of Nursing. He was the devoted father of Alphonse R. Cardi, Jr. of Cranston, Carol A. Troncoso and Vera Lee Sharoff, both of New Jersey, Elizabeth Cardi Talwar of East Greenwich, and Patricia M. Cardi [Calabrese] of New York City; loving grandfather of Christine, Alphonse, Alex, Elizabeth, Stephen, Nisha, Anand, Gia, Carrie Lynn, Jeffrey and the late Stephanie Cardi; loving great-grandfather of Bella, Bailey, Angela and Jack; dear brother of Mary Barone, Elizabeth Paolella and Dr. Erminio Cardi and the late Rev. Roland Cardi, Irene Quintavallo, Angelina Cantone, Peter, Paul and Nicholas Cardi.

Memorial donations may be made to Disabled American Veterans (DAV), 1 Capitol Hill, Providence, RI 02908.

LOUIS ANTHONY LAPERE, MD, 88, of Westerly, RI, died peacefully on March 17, 2015 at his home, surrounded by his loving family. He was the beloved husband of Mary F. (Healy) LaPere for over 31 years.

Born in Westerly on May 25, 1926, he was the son of the late Frank and Josephine (Albamonti) LaPere. Dr. LaPere attended Westerly schools, and, after serving in the Army Air Corps during World War II, attended the University of Rhode Island through his GI Bill benefit, majoring in premed. He attended medical school at the University of Bologna in Italy, and was the first specialist in the field of obstetrics and gynecology to open a practice in Westerly. He practiced medicine here in his hometown of Westerly for 30 years and delivered more than 9,000 babies.

In addition to his wife he will be sadly missed by his 7 children; Paula LaBarre [Mark] of Taftville, CT; Frank LaPere [Caroline] of Tucson, AZ; Laura White [Jeffrey] of Westerly, Maresa Pray [Scott] of Higganum, CT; Thomas, Amy, and Sarah LaPere all of Westerly. He was the loving “Poppie” to 7 grandchildren and 7 great-grandchildren. He was the brother of Barbara Genarella of Westerly and the late Bertha Morrison. He leaves many nieces and nephews. His former wife, Beverly Lariviere Hitchman, also survives him.

In lieu of flowers, donations may be made to Home and Hospice Care of Rhode Island, 1085 N Main St, Providence, RI 02904 or the Louis A. LaPere, MD, Memorial Scholarship Fund, which for the last 14 years has been awarded to a graduating senior from Westerly High School who intends to pursue a career in the medical field. Donations to the scholarship fund may be sent in care of Laura White, 3 Bellevue Ave, Westerly, RI, 02891.
New Book Explores Acceptance and Mindfulness Therapy for Psychosis
A look at applying a novel form of psychotherapy offering new hope for patients with psychosis

PROVIDENCE – In his new book, *Incorporating Acceptance and Mindfulness into the Treatment of Psychosis: Current Trends and Future Directions*, editor BRANDON GAUDIANO, PHD, a clinical psychologist at Butler Hospital and faculty member in the Department of Psychiatry & Human Behavior at Brown University, provides a comprehensive look at the history and application of mindfulness and acceptance psychotherapies in the treatment of psychotic disorders, including schizophrenia. The book, recently published by Oxford University Press, delves into the history and evolution of mindfulness and acceptance interventions for psychosis, and explores their application by reviewing current research and describing several clinical case studies.

“Despite research supporting their efficacy as complimentary therapies for patients with psychosis, psychotherapeutic interventions incorporating mindfulness, acceptance, and compassion-focused strategies are not widely used as part of treatment for this patient population,” said Dr. Gaudiano, who hopes that this book will help educate other mental health providers and the public about the benefits that newer psychosocial interventions can offer patients. “The adoption of mindfulness and acceptance strategies into the treatment for psychosis is still in its infancy, but there is already incredible interest from clinicians who want to learn more about using these therapies given the limitations of current approaches.” The research into mindfulness and acceptance therapies is increasing at a rapid pace, so the book will aid readers in staying up-to-date with these cutting-edge interventions.

Mindfulness and acceptance therapies are based on the premise that excessive avoidance or struggle with psychotic symptoms such as hallucinations and delusions can make them worse over time. Instead, patients are taught exercises that help them to cope better by being more aware, open, and accepting of psychotic experiences, and to disengage from them to focus more on living a valued and meaningful life despite any ongoing symptoms. Dr. Gaudiano explains, “Mindfulness and acceptance strategies have also been found to be effective for treating anxiety, depression, chronic pain, and other common problems, but fewer people are aware that these therapies can be adapted for patients experiencing more severe symptoms such as psychosis.” Recent research on mindfulness and acceptance therapies shows that they can improve coping with psychosis and even reduce future hospitalizations better than medication treatment alone.

Compiled and edited by Dr. Gaudiano, the book also features contributions from numerous other top experts in the field. The book includes a section that focuses on six distinct treatment models that incorporate mindfulness and acceptance therapies for psychosis and a section that provides a synthesis and analysis of these approaches.

The book concludes with recommendations for moving research and practice in this area forward in a constructive and responsible way. “This volume is designed to provide a useful resource for clinicians, researchers, and students interested in gaining a deeper understanding of mindfulness- and acceptance-based approaches and newer psychosocial treatments for severe mental illness,” said Dr. Gaudiano.

For more information on *Incorporating Acceptance and Mindfulness into the Treatment of Psychosis* by Dr. Gaudiano:
global.oup.com/academic/product/incorporating-acceptance-and-mindfulness-into-the-treatment-of-psychosis-9780199997213
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100 Years Ago, First EKG Machine Arrives in RI

Dr. Frank Taylor Fulton buys it himself and installs at RIH

MARY KORR
RIMJ MANAGING EDITOR

Dr. Frank Taylor Fulton (1867–1961), who became a pioneer in electrocardiography in Rhode Island, grew up on a farm in Pennsylvania. To pay for college and medical school at Johns Hopkins, he traversed the rural roads of his home state during summer vacations selling encyclopedias and kitchen ranges to farm families.

Following his graduation from Hopkins in 1899, he did a post-graduate year at Boston City Hospital in pathology, which led to his appointment as the first fulltime pathologist at Rhode Island Hospital, in 1900.

His interests in medical specialties were wide and varied. In the early 1900s, Dr. Fulton became interested in infectious diseases and tuberculosis prevalent in factory workers in RI, and he presented at many world congress TB symposiums.

In 1912 and again in 1914, he went to England to work with two prominent cardiologists, Sir James McKenzie and Sir Thomas Lewis. The former was a pioneer in the use of polygraphs and the study of arrhythmias and the latter published the book, Clinical Electrocardiography, in 1913, the first treatise on the novel science of electrocardiography.

Dutch physiologist Willem Einthoven invented the machine, and Dr. Lewis pioneered its use in clinical settings. While working with Dr. Lewis in England in 1914, Dr. Fulton ordered an EKG machine, and purchased it at his own expense. The machine arrived in Rhode Island by ship; it was the size of an upright piano. This signaled the development of the Heart Station at RIH, which opened in 1915, with the first EKG machine in the region and the third in the country.
In 1918, Dr. Fulton served in the Army medical corps, but the majority of his 45-year career was spent in the practice of internal medicine with a special interest in cardiology and education. In 1932, Dr. Fulton established a residency training program at RIH, and the Heart Station played a vital educational role.

He also served as president of the Providence Medical Association, the Rhode Island Medical Society and the New England Heart Association. Dr. Fulton retired several years before his death, in 1961, at the age of 93. His nephew, Marshall N. Fulton, MD, in a memoriam, recalled his uncle, with whom he lived while an undergraduate at Brown, this way: “He himself would cherish no tribute more than the statement that his life and career bore witness to Osler’s teaching that hard work is the ‘master word’ of medicine.”

A teaching seminar at the Rhode Island Hospital Heart Station in 1957.

Electrocardiogram taken with Einthoven’s original string galvanometer, predecessor to his EKG machine.
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