

FROM THE EDITOR

Patient-centered Medical Home: Does the Evidence Support the Change?

Priya Radhakrishnan, MD

A recent systematic review in *Annals* of the patient-centered medical home (PCMH)¹ has raised questions about whether this transformation is indeed improving our ability to reduce costs. As a strong supporter of the PCMH, I am not surprised by this assumption for a few reasons.

First, the PCMH transformation, which historically can be traced to the 1960s in Hawaii as a mechanism for payment reform, has only very recently been adopted in a more robust way. Many of the initial PCMHs were very broad and focused on quality outcomes, such as hemoglobin A1c and other preventative health measures. To realize these outcomes, it will take several decades and systematic longitudinal studies to assess the cost and impact.

Next, many pilots funded by insurance plans have not published their results. In the state of Arizona, one of the state Medicaid programs has developed a PCMH in partnership with practices that have a high proportion of high-cost Medicaid patients. In our health system, we have seen a 10% to 33% reduction in emergency room visits and inpatient admissions across our sites. To measure the cost impact, it is vital that pilots be studied systematically as a partnership of insurers, employers, and hospital systems.

Additionally, quality improvement in health delivery may require several cycles to “get it right” and produce generalizable information. Based on our experience in our clinic, the design and refinement is still ongoing. The biggest challenge that we have experienced is the lack of knowledge on how to review and develop action plans with raw data. For example, when we started our diabetic process improvement project, each physician in the practice received a list of 250 to 500 patients to review. Serendipitously, we found a systems analyst who created rules for reporting data, thus shrinking the list to a single page of actionable items. It is crucial for programs to partner with data analysts to ensure that the correct data are being collected and managed.

Finally, institutional culture has a big role to play in the success of the PCMH. From a culture of ordering every test for every ailment, we are now pausing to question whether the test is needed. One of the core PCMH standards requires that practices follow up on results. The simple act of forwarding an echocardiogram to the next provider will cost our health system millions of dollars when we count the millions of repeat echocardiograms performed for every congestive heart failure admission. How do we study such a change?

Before all the critics wave their flags and say “I told you so—it was too onerous, and the data do not support it,” pause and consider the measurement issues. We do not have the correct yardsticks or informa-

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SGIM Supports the Primary Care Project

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I am very pleased to announce that the Society of General Internal Medicine (SGIM) and Association of Chiefs and Leaders of General Internal Medicine (ACLGIM) are supporting Primary Care Progress¹ (PCP) in its recently launched campaign to unify nationwide efforts to revitalize the primary care workforce pipeline through the Primary Care Project.²

PCP is an organization that shares our mission to improve primary care research and practice as well as primary care training. The organization was founded in 2009 by Andrew Morris-Singer, MD, in reaction to the announcement that Harvard Medical School planned to defund its Primary Care Division. This sparked the formation of a grassroots organization of students, residents, fellows, and faculty in all disciplines participating in primary care to protect the division and promote innovation in primary care practice and training. The spark caught fire, and the effort has now spread to more than 35 institutions across the country.

In October 2013, PCP launched the Primary Care Project to connect various local initiatives to advance

primary care in academic settings and energize those working on the “front lines” of the growing primary care movement. They implemented a two-pronged approach: 1) to promote exchange of ideas, experiences, and resources to advance reforms in primary care education and training in the United States by launching a website showcasing recent promising initiatives and 2) to demonstrate strong national support for revitalizing the primary care pipeline by creating a primary care pledge, or statement of support, that can be signed online by supporters.

The primary care pledge currently has almost 2,200 signatures, with a goal of 5,000 signatures. The primary care pledge is already acting as a “conversation starter” in local academic communities, fostering the engagement of a diverse coalition of stakeholders with a vested interest in this issue. For example, the PCP chapter at the University of Nebraska organized numerous educational events around interprofessional education and health care reform during National Primary Care Week. The student-led efforts resulted in hundreds of signatures pledging support for the campaign and identified primary care supporters in the student body, administration, and faculty. Chapter members will draw upon these supporters as they further their goal of greater interprofessional collaboration at the university. Similarly, at the University of Utah, the interprofessional PCP chapter adopted a strategy that combined public events, such as a well-attended interprofessional panel and “one-on-one” meetings to introduce the pledge and encourage participants to become active in

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Building the Bridges of Generalism: A Year's Work

Eric B. Bass, MD, MPH

I'm pleased to report that by the time this column reaches you, the American College of Physicians (ACP) and Council of Subspecialty Societies will have released the products of their High-Value Care Coordination (HVCC) initiative.



Time passes much too quickly. When I wrote my first presidential column 12 months ago, I declared that my top priority was "to strengthen partnerships with organizations that are willing to work with us to advocate for a team-based approach to health care that values the roles of all health professionals in providing high-quality primary care, especially for patients with chronic and complex conditions."¹ So what does SGIM have to show after a year of work at building the bridges of generalism?

I'm pleased to report that by the time this column reaches you, the American College of Physicians (ACP) and Council of Subspecialty Societies will have released the products of their High-Value Care Coordination (HVCC) initiative. The purpose of the project was to develop recommendations and tools to facilitate more effective and efficient patient-centered referrals and referral response interactions between primary care and medical specialty practices. The tools include: a generic checklist of patient information to be included in all referrals, "pertinent clinical data sets" developed by participating specialty societies for common problems that prompt referrals, a referral implementation guide, a guide on promoting a patient-centered approach to discussing referrals with patients, and a checklist for guiding the specialist's response to referrals. SGIM had a prominent role in the project, from its beginning just one year ago, thanks to Laura Sessums and Jim Richter. Laura served on the HVCC executive team until she accepted a

position at the Centers for Medicare and Medicaid Services, and then Jim took over as SGIM's representative on the executive team. In addition to helping oversee the entire initiative, Laura and Jim led a working group (including Aziz Ansari, Manisha Bhide, Richard Gitomer, and Larissa Nekhyudov) that developed a list of pertinent clinical data that should be included in referrals to general internists for pre-operative evaluations or for management of hypertension or diabetes mellitus. I see the HVCC initiative as an outstanding example of how general internists can advocate for a team-based approach to health care by partnering with our medical specialty colleagues.

As exemplified by our involvement in the HVCC project, SGIM has a strong bridge connecting us with the ACP. One way to keep that bridge strong is to get the leaders of SGIM and ACP together on an annual basis to discuss topics of common interest. This year's leadership meeting will cover a wide range of issues, including physician payment reform, primary care workforce, performance measurement, practice satisfaction, maintenance of certification, and relationships with other professional organizations.

In October, Stewart Babbott joined me in a meeting with the Board of the Alliance for Academic Internal Medicine (AAIM). As the president of the Association of Chiefs and Leaders of General Internal Medicine (ACLGIM), Stewart was able to update the AAIM board on ACLGIM's leadership training initia-

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tives and the plans to conduct site visits for general internal medicine (GIM) divisions. The AAIM board expressed interest in collaborating on future site visits, potentially including other specialty divisions. We also discussed how SGIM has been working with the AAIM on the Internal Medicine Redesign initiative, thanks to Shobhi Chheda and Monica Lypson who serve on the advisory board for that project. We identified several other areas for collaboration, including efforts to promote trainee interest in GIM, education about high value care (Wendy Levinson leads AAIM's High Value Care initiative), education in quality improvement, and promotion of faculty involved in quality improvement and clinical innovation. Such work cuts across specialties. When we discussed health policy issues affecting all medical specialties, such as physician payment reform and graduate medical education (GME) funding, the chair of AAIM's Advocacy Committee volun-

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Health Information Technology: The Missing Milestone?

Michael Langan, MD, and Clint Allred, MD

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In February 2009, the American Recovery and Reinvestment Act (ARRA) was signed into law. One of its components included a \$19 billion stimulus program to promote the adoption and use of health information technology (HIT).^{1,2} The HIT components of the stimulus package, recognized as Health Information Technology for Economic and Clinical Health (HITECH), demonstrate the conviction among government officials and medical experts alike that electronic information systems are essential to improving the health of America.^{1,2} The importance of HIT and electronic health records (EHRs) is further emphasized by financial incentives granted to clinics and hospitals who demonstrate “Meaningful Use” (MU) of certified EHRs to improve patient care. It can be argued that the future of medicine is tightly interwoven with HIT. Considering this clear governmental emphasis placed on HIT, one wonders how the medical community is preparing for this evolving aspect of health care. From a medical education perspective, how are graduate medical education (GME) programs preparing trainees to successfully develop HIT skills? Furthermore, how are GME programs planning to *evaluate* HIT competency among their trainees?

The landscape of internal medicine residency evaluation has recently been revamped through the new Accreditation Council for Graduate Medical Education (ACGME)/American Board of Internal Medicine (ABIM) milestone project.³ This project has been intentionally designed to assess the development of the resident physician in key dimensions of the elements of physician competency.³ Further, the Alliance for Academic Internal Medicine (AAIM) Redesign Committee

has proposed 16 end-of-training entrustable professional activities (EPA) to help program directors achieve the goals of competency-based medical education.⁴ It is impossible to measure everything that is applicable to training, but upon review of the milestones and EPAs, there is no obvious mention pertaining to a trainee’s competence with respect to HIT. Should this cause pause considering the clear emphasis that has been placed on EHR implementation and HIT development? Will the residency classes of 2014 and beyond enter the workforce ill prepared, or at least suboptimally evaluated, to provide “meaningfully useful” care? Will program directors be able to confidently entrust professional HIT activity to their graduating residents?

Interestingly, the Meaningful Use criteria incentive program administered by the Centers for Medicare and Medicaid Services (CMS) also follows a sort of graduated milestone program by requiring successful completion of stages of escalating performance to receive the promised financial incentives. Meaningful Use criteria encompass such areas as communicating with patients through the EHR, strategically employing electronic patient registries, mining data for population management, addressing point or care alerts, and managing complex medication and problem lists among many other objectives.⁵ Review of such wording certainly seems to be written in a very similar language as the ACGME/ABIM milestone language.

At first glance, there is no formal sub-competency among the 22 existing ACGME/ABIM sub-competencies that truly measures a trainee’s HIT skill set. However, upon careful review of the sub-competencies, one might conclude that HIT competence is *indirectly* measured. Per-

haps it is scattered and hidden within the milestone language. Below is a list of the sub-competencies that at least resemble a measurement of competence as it may relate to HIT:

1. *Sub-competency 13: “Learns and improves via performance audit.”* One might focus here to assess a trainee’s use of the EHR to improve the quality of health care at both the individual and systems level for high-priority health conditions. This also parallels the proposed EPA #13 (“Improve the quality of health care at both the individual and systems level”).⁴
2. *Sub-competency 15: “Learns and improves at the point of care.”* This specifically outlines a trainee’s ability to “utilize information technology with sophistication” in its descriptor of an entrusted resident. Certainly “sophistication” is left open for subjective interpretation but at least aims at recognizing ability to do so within the evolving HIT climate. This can also be strategically linked to EPA #15 of “demonstrat[ing] personal habits of lifelong [perhaps evidence-based Pubmed-savvy] learning.”⁴
3. *Sub-competency 22: “Appropriate utilization and completion of health records.”* This might allow for the assessment of managing complex problem and medication lists within the EHR, which is certainly of meaningful use. In order for this to be an effective measurement of the desired competence, more specific and deliberate language may need to be employed within the sub-competency itself.

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A Nut By Any Other Name...

Kevin Smith, MD; Alfred Burger, MD; Christian Dankers, MD; Christina Lee, MD; and Dan Steinberg, MD

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A medical resident ate a turkey salad prepared by the hospital food service and developed immediate abdominal pain and urticaria. The resident had previous anaphylaxis to nuts. She recognized her symptoms and went to the hospital's emergency department where she was treated for anaphylaxis. After discussion with food services it was determined that the turkey salad contained nuts but was not labeled as such. On further investigation, it was determined that three other items on the menu also were not properly labeled as containing nuts. As the prevalence of nut and/or peanut allergies in the general population is reported as high as 1.4%, the resident and department leadership were concerned that patients with nut allergies could be at risk for anaphylaxis, creating a potential patient safety issue. A root cause analysis was undertaken to prevent future events.

A root cause analysis (RCA) is a tool that was originally developed in psychology and systems engineering to determine the obvious and more hidden factors that influence the occurrence of an error or a near-miss. It has been used successfully in high-reliability organizations such as the aviation industry. RCAs were brought into health care in the 1990s through the work of James Bagian at the US Department of Veterans Affairs and Rick Croteau at the Joint Commission. This tool is designed to explore three questions—what happened, why did it happen, and how to prevent it from happening again?¹ The Joint Commission requires that all organizations perform RCAs for all sentinel events. Many institutions also perform RCAs on near-misses. However, health care providers report limited actual participation in RCAs,² and

Table 1. Root Cause Analysis to Improve Food Safety Related to Nut Allergies

Proximate Cause	Contributing Factors	Action Plan
Patient with nut allergy could unknowingly ingest food containing nuts	Food not labeled properly	<ol style="list-style-type: none"> 1) Label all foods containing nuts with a clear yellow label that states "contains nuts" 2) Clearly mark foods containing nuts with an * symbol on the menu
Food not labeled properly	<ol style="list-style-type: none"> 1) No clear process to identify foods that contain nuts 2) Incomplete communication between cooks and labelers about foods that contain nuts 3) Lack of understanding among food service staff about the prevalence and severity of nut allergies 4) No process to indicate foods that contain nuts in menu printing service 	<ol style="list-style-type: none"> 1) Educate food service staff on the importance of food allergies 2) Print all recipes with nuts on yellow paper so that food containing nuts is identified early in the process 3) Select one employee per shift to communicate directly with other shifts about labeling foods with nuts immediately after preparation
Patients with nut allergies could potentially still receive food that contains nuts	<ol style="list-style-type: none"> 1) Food service software does not communicate allergy information directly with CPOE software 2) Manual entry of food allergies is needed for the food service software 3) No clear process for identifying the food service employee responsible for entering food allergy information into the system 4) Food service is very busy, which delays entry of food allergies in the software system 	<ol style="list-style-type: none"> 1) Change software system to create improved communication between systems 2) Remove all nuts from food supplied by food service

few studies have evaluated the effectiveness of RCAs in improving safety and reducing costs.³ Training medical students, residents, and faculty members in how to perform an RCA may increase the number of providers who can trigger or participate in this important safety process, and ideally promote the development of future leaders in patient safety.

RCAs can be performed in different ways to uncover factors contributing to an error. The goal of an RCA should be to address system issues that influenced the error rather

than focus on blame on individuals, as this does not lead to sustainable improvement. RCAs aim to develop recommendations for change that have a high likelihood of reducing harm, such as redesigning processes, rather than weak change agents such as reeducation. Different techniques include the "Ask Why Five Times" technique, a fishbone diagram, a causal tree, and a flow chart. Regardless of the technique, the four steps include data collection, causal factor charting, root cause

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Academic General Internal Medicine: Where a Primary Care Internist Can Still be a “Bridge” on the Inpatient Wards

Christopher J. Wong, MD

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As we head into the SGIM national meeting, the theme topic of “bridges” arises. It is worth considering that bridging inpatient and outpatient medicine can be a source of job satisfaction for primary care generalists. Recalling plenary sessions at previous SGIM national meetings, several speakers reported that others had expressed to them that primary care is so difficult that those who practice it must be depressed and discouraged. Some studies have supported this notion, showing a decrease in satisfaction among primary care physicians (PCPs) over time.¹

So why do many of us in academic general internal medicine feel so lucky in the face of these challenges? One reason is the bridging of worlds—inpatient and outpatient—that we are privileged to still be a part of. In the current era, even generalists are becoming specialists as physicians choose either a hospitalist (inpatient specialist) or primary care (outpatient specialist) career. While some communities still have internists who round on their inpatients in the morning and see their clinic patients during the day, that model is on the downswing in many regions. Yet in academic general internal medicine, many PCPs still attend on the general medicine wards. This practice provides an opportunity to maintain those inpatient and outpatient links that multiple forces seem destined to sever. Consider the following benefits:

1. *Seeing unusual cases.* Because of the acuity of presentations, and in some cases, the referral population of the hospital, we have the opportunity to see a higher percentage of unusual syndromes that we may seldom (or never) see solely in outpatient practice. Uncommon paraneoplastic syndromes, endocarditis with an unusual organism in an immunosuppressed patient, new onset Takayasu’s arteritis—these cases may appear in the clinic initially, but in the hospital we benefit from an enriched sample. As internists we can enjoy the common, but it’s often the rarities that keep us talking even after our work is done.
2. *Not forgetting the common inpatient cases.* Not only do the unusual cases provide stimulation, but without the inpatient service, our practice becomes more restricted. We would no longer evaluate and treat many of the routine conditions that we trained for as general internists—the cirrhotic patient with a GI bleed and encephalopathy, the elderly patient with community-acquired pneumonia requiring inpatient care, and the patient in acute alcohol withdrawal.
3. *Knowing our housestaff on a different level.* Working with residents in the primary care clinic is but one snapshot of how residents perform. Like it or not, not all of our residents will become generalists, and of the generalists not all will become PCPs. While residents still need to excel in continuity clinic, it is perfectly acceptable for their true passions to flourish elsewhere, and we may have the opportunity to witness that spirit on the inpatient wards. Seeing interns’ excitement teaching a medical student on rounds yields another dimension of their doctoring that may not be evident during their harried continuity clinic day. Furthermore, as residency programs consider new models of balancing ambulatory and inpatient training, when we attendings also work on the wards, we can better empathize with the challenges confronting residents on a busy inpatient service as they try to manage their continuity clinic panel.
4. *Acuity of illness.* As PCPs, we may see acutely ill patients who require hospitalization and then provide input as their PCP while the inpatient team handles the medical care. But in the hospital, as the inpatient providers, we are there for patients in the most difficult times and share with them the ups and downs as different tests come back or their conditions change. In the clinic setting, we have longer continuity of care but less often find that compressed intensity of care as experienced in the hospital.
5. *Bringing primary care into the inpatient wards.* We can look backward to how the illness unfolded prior to hospitalization and appreciate the myriad ways in which the “present” illness began from a primary care perspective. We can assess the current outpatient therapy—for example, “Why is Mrs. Lee on that expensive medication for dementia, and does she really have dementia?” And in preparing for discharge, we are

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Funding Care Coordination in Health Care Delivery Redesign

Nazhi Taj-Schaal, MD, and Gail Grever, MD

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Care delivery in primary care is changing by necessity. Health care reform, growing patient demand, and the complexity of caring for patients with multiple morbidities have forced us to reexamine how we care for patients. Team-based care is the trend and involves care provided to patients by physicians and other allied health personnel. Recently, the Centers for Medicare and Medicaid Services (CMS) have recognized the team approach and agreed to reimburse for oversight of home health care and transitional care services from hospital to home. In 2015, CMS will release CPT codes for care coordination, which has been defined as “the deliberate organization of patient care activities between two or more participants involved in a patient’s care to facilitate the appropriate delivery of health care services.”¹ Several studies have shown the benefits of care coordination. In 2010, Kruse et al. described the impact of an ambulatory case management program over five years that reduced emergency room and urgent care visits.² Since 2003, the health system at Gundersen has had a care coordination system bridging the inpatient and outpatient world that has resulted in reduced hospital stays, lower inpatient costs, and increased patient satisfaction.³ Based on these types of results, CMS believes that incentivizing care coordination services for an appropriate target population will improve quality of care, increase patient satisfaction with care, and reduce overall expenditures.

Let us examine a case involving care coordination in a typical general internal medicine practice:

A 68-year-old male with history of type 2 diabetes and hypertension was admitted for hypertensive ur-

gency. During his hospitalization, the admitting physician found that the patient had not been taking his losartan and hydrochlorothiazide and restarted these blood pressure medications. Upon initiation of the prescribed doses, the patient had episodes of hypotension and was advised at discharge to take half of his prescribed losartan dose and to continue the full hydrochlorothiazide dose. At his hospital follow-up appointment five days later, the patient’s blood pressure was 168/88. He stated that he had been taking “everything you told me to” but that he did not have medication bottles with him and could not recall if there were any changes to his medications at the time of discharge. He knew that he was not cutting any pills in half. Based on the assumption that he had not changed his losartan dose, the primary care provider added low-dose nifedipine. Two days later, the patient called and said he felt lightheaded since starting the nifedipine. Presuming hypotension, the provider told him to hold the nifedipine, monitor his blood pressure, and call if his blood pressure rose above 180/100. Worried about his fluctuating blood pressures, the provider also scheduled the patient for follow-up in four days and instructed him to bring his pill bottles to that appointment. The patient did not arrive at that follow-up visit; in fact, that afternoon the provider received notice from the emergency department that the patient presented there with an acute MCA infarct, in the setting of elevated blood pressure.

With this unfavorable outcome, it is prudent to examine the ways in which the system or individuals might have failed this patient. One might question whether the internist

in this case was engaged fully in the care of this patient. In the changing era of team-based care, it is worth considering what a care coordinator could have done to improve the trajectory of this patient’s course. The general internist with a busy practice has many competing patient needs, making it nearly impossible to attend to every issue as desired. With the advent of the patient-centered medical home (PCMH) and care coordination, there is a way to provide more efficient and patient-centered care. There were several care coordination opportunities in this patient’s case:

1. *Identification of barriers to care.* A care coordinator, such as a licensed nurse, can spend time identifying barriers to care on initial assessment. This patient’s blood pressure had been uncontrolled for a prolonged period of time prior to the hospitalization, as he was only intermittently taking medication when he could afford it.
 2. *Communication of discharge instructions.* It is critical to verify that the patient understands his discharge instructions. Once home, we must confirm that the patient is actually following them. Care coordinator RNs and pharmacists can call patients shortly after discharge to do this.
 3. *Evaluation of patient understanding and health literacy.* RNs can thoroughly assess patients’ health literacy and communicate limitations to primary care providers. If gaps in understanding are identified, they can help coordinate appointments with other members of the health care team (dietitians and pharmacists) to improve the patient’s understanding of his/her
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The Story of Procera AVH

Huong Nguyen, BS

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“A new ‘natural solution’ for forgetfulness, brain fog, poor focus, mood swings, and mental fatigue brought on by aging, stress, sleep loss, and poor diet. The first brain supplement clinically tested for efficacy!”

—Procera AVH ad

LB is a 68-year-old African-American woman with a history of catheter placement, obesity, and memory loss who comes to the office for left shoulder pain. After her pain is addressed, she presents a bottle of Procera AVH, a new supplement she has recently bought to improve her memory and cognition. She asks for her physician’s blessing to use of this promising supplement and perhaps even a stamp of approval for its well-advertised efficacy.

So what is Procera AVH (cognitive enhancer)? According to the official website, the supplement contains “three miracle memory molecules,” which are Vinpocetine (VIN), Acetyl-L-carnitine (ALC) and Huperzine A. To examine this miraculous supplement, let us take a closer look at each of these ingredients.

Vinpocetine (VIN)

VIN is a synthetic ethyl ester of apovincamine, a vinca alkaloid obtained from the leaves of the Lesser Periwinkle (*Vinca minor*).¹ Since its discovery in the late 1960s, there have been several studies looking into its potential and a Cochrane systematic review on its efficacy in acute ischemic strokes. The Cochrane review by Szatmari and Whitehouse specifically looked into VIN’s role in treating cognitive impairment and dementia. In this 2003 systemic review, the two authors evaluated all human, unconfounded, double-blind, randomized trials that compared VIN with a control in patients with vascular dementia, Alzheimer’s dementia, mixed, and other dementias.¹ The outcomes they were looking for were cognitive function, global impression (a seven-point scale to assess severity and clinical

improvement after a treatment trial), quality of life, functional performance, effect on caretakers, death, safety, and adverse effects.¹ Only three studies with a total of 583 patients met the criteria set by the authors. After being independently selected and reviewed, the results of these three studies were deemed inconclusive.¹ While there were some benefits in functional performance and global improvement from the VIN treatment (30mg/day and 60mg/day) compared to placebo, the number of patients treated for six months or more was small. Adverse effects were not consistently reported, and of VIN’s effects on depression and quality of life were not adequately addressed.¹ In conclusion, the evidence to support the use of VIN on patients with vascular or degenerative dementia is insufficient to make the recommendation for its clinical use.¹

Acetyl-L-carnitine (ALC)

ALC is an acetylated form of carnitine, a molecule involved in long chain fatty acid transportation between the cytoplasm and mitochondria.² It has been proposed to induce an increase in acetylcholine release and to have a strong anti-oxidant effect on CNS neurons.² In the Cochrane review done by Hudson and Tabet, the potential cognitive benefits of ALC on patients with dementia were evaluated. Sixteen double-blind, randomized, controlled trials were included in this meta-analysis. The effect of ALC was compared to that of placebo based on clinical global impression of change, global severity of dementia, cognition, behavior, mood, activities of daily living (ADLs), institutionalization,

acceptability of treatment, safety, and mortality.² The reviewers found no serious adverse side effects of ALC. The most common side effects of ALC reported were diarrhea, nausea, and vomiting. There was some evidence of improvement in clinical impression. There were also positive effects of statistical significance reported by several earlier trials on memory and severity of dementia.² However, there was great heterogeneity among the studies reviewed in terms of durations of treatment, different doses, various age groups, and inconsistent positive effect on mini-mental state examination (MMSE) (at 24 weeks but not at 12 or 52 weeks).² All of these studies also focused solely on Alzheimer’s dementia. Due to these variations and limitations, the reviewers did not find the evidence to be strong enough to support the use of ALC in clinical practice.

Huperzine A

Huperzine A is a competitive, reversible acetyl cholinesterase inhibitor derived from Chinese club moss *Huperzia serrate*.³ It has been said to have a protective effect on cholinergic neurons and is considered a promising agent to treat dementia, specifically Alzheimer’s dementia.³ These potential benefits were evaluated by a Cochrane systematic review in 2008 that looked at six double-blind, randomized, controlled trials with a total of 454 Alzheimer’s patients. The outcomes measured in these studies were changes in cognitive function, global clinical assessment, mortality, behavioral disturbance, functional performance, quality of life, caregiver

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burden, and adverse effects. The analyzed results showed that, compared to placebo, Huperzine A significantly improved cognitive function based on MMSE and ADAS-Cog (Alzheimer's disease assessment scale-cognitive subscale), global clinical impression, behavioral disturbance, and functional performance. They also reported the most common adverse events of Huperzine A to be symptoms of cholinergic side effects, such as dizziness, anorexia, constipation, nausea, insomnia, and somnolence. Despite these promising results and mild adverse effects, the reviewers cautioned against routine use of Huperzine A in patients with Alzheimer's disease because of the limitations of these six studies—all of which were published in Chinese and conducted in China where there is little racial diversity as well as an unusually high proportion of positive results in publications.³ With these limited results from six studies with small numbers of participants, the reviewers concluded that the evidence was insufficient to support the use of Huperzine A to treat Alzheimer's disease. Along the same line of thought, Rafii et al. conducted a phase II trial of Huperzine A in patients with mild and moderate Alzheimer's disease in 2011. There were 210 patients who were age 50 or older with a probable diagnosis of Alzheimer's disease in this double-blind, randomized, placebo-controlled dose escalation trial.⁴ Patients were assessed at baseline and weeks 8, 11, 16, 20, and 24 for changes in cognitive performance (ADAS-cog and MMSE), daily function, behavior, and global status.⁴ It was concluded that Huperzine A at 200 µg BID did not indicate efficacy in treating mild to moderate Alzheimer's disease.⁴ However, the 400 µg BID dose showed promising improvement in cognitive function as measured by ADAS-cog and MMSE at 16 weeks and in secondary analyses at 24 weeks.⁴ Additionally, the study reported no serious adverse effect aside from nausea. In the end, due to the limited power (11.4% of subjects unable to tolerate Huperzine A) and confounding factors (such as previous anti-cholinesterase treat-

ment), the authors suggested that further studies needed to be done to ascertain the long-term effects of Huperzine A and its efficacy.

Conclusion

While the search for research articles on Procera AVH in PubMed yields no result, the company behind this supplement provides its own evidence of efficacy from a randomized, double-blind, placebo-controlled study by Stough et al. from 2009. The researchers reported improvements on mental clarity, mental energy, memory, and mood disturbances in the Procera arm at the dose of 1,515 mg (3 pills) per day over the course of 30 days.⁵ However, the value of this study is limited by the small number of participants (74) who were healthy adults without dementia and the use of the CDR (Cognitive Drug Research) program, an automated computerized cognitive assessment system, instead of the MMSE and ADAS-cog. In addition, this article was published in the *Journal of the American Nutraceutical Association* (JANA) and was not accessible through PubMed. Therefore, combined with the insufficient evidence on the efficacy of each ingredient in Procera AVH, the research fails to support the health benefits as well as cognitive enhancing properties claimed in the advertisement. Only the promise of Procera's mild side effects seems to hold true since the above studies reported solely tolerable symptoms such as nausea, GI disturbances, and headache. In conclusion, it would be unwise to advocate for the use of Procera AVH without informing patients about its side effects and lack of conclusive evidence on its cognitive benefits.

Discussion

In addition to Procera AVH, a quick search on Google yields numerous supplements and memory pills that promise to improve cognitive function for both healthy clients and dementia patients. Some of the popular memory enhancers are vitamin E, B6, B12, folic acid, ginkgo biloba, ginseng, and omega-3 fatty acid, and each has been examined in separate Cochrane systemic reviews

in recent years. Looking only at unconfounded, double-blind, randomized trials of treatment versus placebo, the reviewers have found no convincing evidence to support the benefits of vitamin E, B6, B12, folic acid with or without B12, ginkgo biloba, ginseng, and omega-3 fatty acid on cognitive function of people with or without dementia/cognitive impairment.⁶⁻¹² Fortunately, there is one treatment that seems to have a positive effect on cognitive function, and that is physical activity. In the 2008 Cochrane review of physical activity in people without cognitive impairment, the reviewers found that aerobic exercises that improve cardiorespiratory fitness (hour-long training programs performed two to three times a week for an average of 14 weeks) showed significant positive effects on cognitive speed, motor function, and visual and auditory attention.¹³ Furthermore, a 2013 Cochrane review of exercise in dementia patients found improvement in cognitive functioning and ability to perform ADLs among the treated patients.¹⁴ But due to the heterogeneity in diagnosis/severity of dementia and exercise program duration among the studies examined, the authors recommended that more large-scale trials be done to solidify these promising early results.¹⁴ Lastly, there is also consistent evidence of effectiveness of cognitive stimulation (group activities such as discussion of events, completing word games or puzzles, listening to music, baking, or gardening) on cognitive functions, quality of life, and communication in patients with mild to moderate dementia.¹⁵ While cognitive stimulation has been demonstrated to be beneficial, similar but more directed programs such as cognitive training (guided practice with standardized tasks and stratified levels of difficulty) and cognitive rehabilitation (one-on-one intervention strategized by a therapist) have not shown sufficient evidence of positive effects and significant benefits due to the limited quality and quantity of studies.¹⁶ Hence, from the above results, the best recommen-

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Special Programming at the SGIM 37th Annual Meeting

Crystal Wiley Cené, MD, MPH, and Alisa Peet, MD

Dr. Cené is chair and Dr. Peet is co-chair of the SGIM Special Programming Committee.

Get ready, get ready, get ready! The Special Programming Committee has several exciting activities designed to illuminate this year's theme, "Building the Bridges of Generalism: Partnering to Improve Health." By partnering with non-medical disciplines and a community organization, we highlight innovative ways to advance our clinical care, teaching, and research with the ultimate goal of optimizing health and wellness in the patients we serve.

"Medicine and the Arts" will be one theme of several special programming activities. As a few medical schools have done, the University of California at Irvine Medical School has developed a curriculum connecting medicine and the arts. Their program in medical humanities and art, directed by Johanna Shapiro, PhD, offers both required courses and several electives to medical students and residents within two residency programs at the institution. By exposing students and residents to the arts, the program aims to remind learners of the humanistic side of medicine. Dr. Shapiro and her colleague, Joel Shallit, MD, will offer two unique workshops during the meeting to expose conference attendees to their program.

Dr. Shapiro will lead a workshop on the Medical Readers' Theater, a course offered to medical students during their family medicine clerkship. She will introduce the structure and goals of the class and then take the group through a session. She will also give an overview of the program at UC Irvine.

Dr. Shallit will take a group off site to experience an example of the course he runs at UC Irvine, titled "Examining the Painting/Examine the Patient." This elective, offered to first-year medical students, hopes to improve the visual skills of med-

ical students through examining art. This workshop will take the group to the San Diego Museum of Art to tour the museum and examine specific works of art.

"Partnerships with Family-focused Organizations to Enhance Clinical Care, Teaching, and Advocacy" is the second theme of this year's special programming activities. We have partnered with the Exceptional Family Resource Center (EFRC) to present a moderated poster session on Thursday evening. EFRC is an organization that has provided emotional support, information, resources, referrals, and training opportunities to families of individuals with special needs in San Diego and Imperial counties since 1990. These family-centered services are provided by Family Support Liaisons—peer mentors who have received comprehensive training in a variety of topics, including family support dynamics; communication skills; conflict resolution; systems navigation; public benefits; health and education services; and local, state, and national resources. Services are individualized based on family needs and emphasize parent choice, confidentiality, and collaboration.

This poster session will highlight five EFRC programs that support families in their caregiving and decision-making roles and provide professionals with a range of tools and strategies to encourage and nurture family involvement, including:

- **Family-centered Discharge Planning Protocol:** *A Systematic Referral for Support and Services.* The protocol features a toolkit to facilitate the referral of families to follow-up support, resources, and generic community programs and services following a hospitalization.
 - **Family Liaison Services:** *Peer Parent Support.* Incorporating best practice guidelines for training Family Support Liaisons reinforces family-centered clinical practice.
 - **Family Engagement:** *Patient-Family Advisory Councils.* Recruiting, supporting, and sustaining volunteer participation in Patient-Family Advisory Councils are critical to success.
 - **Project Leadership:** *Parent Mentors/Parent Leaders.* This interactive, 21-hour training helps participants learn the "nuts and bolts" of advocacy. Graduates identify and access forums to represent the family perspective in policy decisions impacting children with special health care needs and partner with professionals to design and implement family-centered programs and services.
- We hope that these special programs will generate new ideas that each of you can take back to your institutions and use to advance your clinical practice, teaching, research, and advocacy efforts. Our role as generalists calls for us to build bridges by working in partnership with medical and non-medical disciplines as well as community partners. Together, we can accomplish all that we need to do in health care and achieve a vision of true patient- and family-centered care! Please join us and our partners for these exciting activities.

FROM THE EDITOR

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tion to make the call just yet. In the words of Arthur Conan Doyle, author of the Sherlock Holmes books, "It is a capital mistake to theorize before one has data. Insensibly one begins to twist facts to suit theo-

ries, instead of theories to suit facts." Before we write off the PCMH as yet another fad that does not work, we need to ensure that we have given it sufficient time to flourish, study, and improve.

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PRESIDENT'S COLUMN

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teered to help coordinate future advocacy efforts with SGIM's Health Policy Committee. That connection has been made, courtesy of the energetic chair of our Health Policy Committee, Mark Schwartz. SGIM's bridge with the AAIM is as strong as it has ever been.

Thanks to SGIM's Academic Hospitalist Task Force (led by Luci Leykum and Will Southern), we have succeeded in solidifying SGIM's bridge with the Society of Hospital Medicine (SHM). The most prominent result of that collaboration is the SGIM-SHM-ACLGIM Academic Hospitalist Academy. The mission of the Academy is to provide academic hospitalists with the educational, scholarly, and professional development skills to promote academic success, personal growth, and work satisfaction. After another successful four-day meeting in 2013, plans are already underway for the Fifth Annual Academic Hospitalist Academy in Denver on October 14-17, 2014.

Now we are working to strengthen the bridge with the Association of American Medical Colleges (AAMC) through the newly formed Council on Faculty and Academic Societies (CFAS). The CFAS replaced the Council on Academic Societies in an effort to increase the contributions of faculty at both junior and senior levels. The mission of the CFAS is to identify critical issues facing faculty in academic medicine, provide a voice to the AAMC on these issues, and serve as a conduit to faculty for information relating to core functions of academic medicine. The CFAS met for the first time in November 2013. SGIM now has two representatives on the CFAS, Valerie Weber

and Mitch Wong. They will represent SGIM at the next meeting of the CFAS in March 2014. Keep an eye out for a report from them.

We also are working to strengthen SGIM's relationship with the American Academy of Family Physicians (AAFP). Although we have many interests in common with family medicine, SGIM has not been interacting with the AAFP on a regular basis. To rectify the situation, we made plans for members of the SGIM Council to meet with AAFP leaders in March. The agenda includes health policy issues related to GME funding, physician payment, primary care delivery models, quality improvement programs and their burden on primary care providers, and federal support for primary care research.

To reinforce the bridge we recently established with Primary Care Progress (PCP), SGIM and ACLGIM agreed to support PCP's Primary Care Project. For more information about the Primary Care Project, see the article by Brita Roy in this issue of *Forum*. PCP is a grassroots organization of students, residents, fellows, and faculty devoted to innovation in primary care practice and training.

The SGIM Annual Meeting in San Diego should provide a great opportunity to celebrate what SGIM members have accomplished in the last year. In keeping with the top priority for the year, the theme of the meeting is "Building the Bridges of Generalism: Partnering to Improve Health." The idea is to celebrate the depth and diversity of connections that inspire and empower generalist medicine.²

I would like to thank all of the members who contributed to the year's work in SGIM's committees,

task forces, work groups, and interest groups. However, none of the work would have been possible without the dedicated efforts of our phenomenal SGIM office staff. To support the ever-expanding scope of SGIM's activities, we needed to give extra attention to our own infrastructure. Accordingly, one of the other priorities for the year was to expand staff capacity and reorganize the core team. I'm delighted to report that David Karlson and Kay Ovington have succeeded in recruiting several outstanding new staff members—Donté Shannon (Manager of Volunteer Services), Brittany Benton (Committee and Initiatives Assistant), Katherin Cooper (Regional Meetings Assistant), Tracey Pierce (Regional Meetings Manager), Candace Goggans (Meetings Assistant), and Muna Futur (Member Services Assistant)—to join the team that includes Sarajane Garten (Director of Meetings), Leslie Dunne (Director of Development and Project Management), Francine Jetton (Director of Communications and Publications), Jillian Gann (Director of Membership), Julie Machulsky (Social Media Community Manager), and Bonnie Messink (Administrative Assistant). We now have a superb team that is well positioned to help us take full advantage of all the bridge work!

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SGIM

FROM THE SOCIETY

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the revitalization of primary care. Their combined efforts built the framework for a diverse coalition of supporters of primary care reform at their institution.

PCP chapters are comprised of students and faculty from all disciplines engaged in primary care. Chapters may be led by pharmacists, physician assistants, medical students, residents, and/or fellows. These interprofessional groups unite their perspectives, networks, and expertise to create fresh ideas and push the movement forward. Whether the local goal is transforming primary care delivery in academic practices, reforming education to incorporate competencies of advanced models of primary care, establishing interprofessional learning opportunities, or changing admissions policies, the organization brings together an engaged group

of diverse individuals with aligned goals.

As organizations also committed to revitalizing and promoting high-value primary care with an increased focus on interprofessional teamwork, SGIM and ACLGIM are excited to support the Primary Care Project. SGIM and ACLGIM encourage their members to visit the Primary Care Project website and consider signing the pledge. Additionally, SGIM and ACLGIM encourage members to get further involved in the campaign by sharing their work advancing primary care on the website or by contributing to efforts led by local PCP chapters (or by helping to start a new chapter!). Together, the primary care community has more power to achieve its policy, reimbursement, and educational goals when all members of the community are united and engaged,

which is why it is imperative that SGIM and ACLGIM members support this movement.

We believe this partnership with PCP will continue to build the leadership capacity within the general internal medicine community, especially among the next generation of clinicians. We can work together to recruit more budding general internists, improve training in primary care, and advance primary care models promoting high-value care. We hope you will sign the pledge, and we look forward to many of you participating in these exciting efforts to revitalize primary care moving forward.

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SIGN OF THE TIMES

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a bridge back to the outpatient world where patients spend the vast majority of their days. In recent years, there has been increasing focus on reducing readmissions and a growing interest in improving care transitions. It is difficult to do transitional care when you don't know what you're transitioning to, but PCPs on the general medicine wards can better assess whether a follow-up plan is realistic.

Is there a successful model for PCPs—academic and non-academic alike—to build those bridges and stay involved in inpatient care? The ideal mix of inpatient and outpatient practice remains uncertain and likely varies by person and institution. Surveys from early on in the hospitalist movement suggest that trying to do both inpatient and outpatient medicine may have been a source of stress and burnout for general internists.² In

one article, internal medicine physicians were less satisfied compared with subspecialists; notably they spent 20% of their time on hospital practice.³ It is possible that much of the stress was due to practicing inpatient and outpatient care concurrently rather than doing “on service” periods on the inpatient wards. Additionally, being an academic inpatient ward service attending is different from being alone as a hospitalist in a community hospital. A follow-up study is needed on assessing work-life satisfaction in the hospitalist era, both in academic and community practices.

Still, general internists should continue to consider ways to maintain these bridges. Is it uncomfortable sometimes being a PCP on the inpatient ward service? Sure. Every time I am back on the wards it seems there is a new emerging organism, a new quality measure, a new CPOE challenge. But far from being depressed and discouraged as a PCP, I not only look forward to

the patient-centered medical home and other innovations but also appreciate looking backward, to inpatient care, as part of what is rewarding about being a generalist. And besides, when I'm done on the inpatient service, I have my panel of clinic patients waiting for me, and I can appreciate them that much more.

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SGIM

MORNING REPORT

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identification, and recommendation generation and implementation.⁴ Data collection includes interviewing all members involved to obtain an accurate understanding of the event without an atmosphere of blame. The rest of the steps will be explained below.

In this case, a multidisciplinary team was comprised of the affected resident, the internal medicine residency program director, the director of food services and the director of nutrition. Two main areas of concern were identified. The first concern was that there were issues with the communication between the institution's food service software and the computerized physician order entry (CPOE) software. Rather than automatically transferring food allergy information between systems, it was discovered that food allergies must be manually entered into the food service software. This manual entry may create a delay of up to 12 hours during which time a patient with a food allergy may still receive food containing the allergen. The second issue was that items containing nuts were not labeled as such. For this case, a possible RCA is illustrated in Table 1.

Since modification of the two computer systems to allow better communication was not feasible, two possible solutions were considered: 1) consistent labeling of all foods containing nuts or 2) removal of nuts from all food served in the hospital. The latter was chosen as it was more reliable, simpler, and did not result in any loss of nutritional value. Within days, food service was able to remove all nuts from all items on the hospital menu. To date, no nut allergies to food prepared in the hospital kitchen have been reported.

This case describes a patient safety issue that arose due to the lack of proper labeling of food containing nuts. At first glance, the most obvious solution would seem to be simply to require better food labeling. However, an RCA was able to uncover a key second issue—that two hospital software systems were not communicating adequately—and that simply improving food labeling alone would not solve the problem. An RCA is an easy tool to comprehensively study the factors that led to a near-miss or adverse event. The most important, yet difficult, goal of an RCAs is the development of appropriate solutions. With training and

experience, all physicians should be able to signal the need for or participate in an RCA. As more physicians acquire competence with RCAs, their quality and appropriate use should increase and result in improved safety for all patients.

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SGIM

IN TRAINING

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Thus, inference of HIT competence can be implied in the sub-competencies and extrapolated to EPAs. Supposing this to be the case, though, can the assumption be made that HIT is even a thought when evaluators are completing end-of-rotation assessments of trainees and when program directorates are preparing annual clinical competency statements?

Ultimately it seems that the main objective of the milestone project, EPAs, and MU incentive program is to better prepare physicians to provide high-quality, safe, and cost-effective care to society. As medical care becomes more tightly intertwined with HIT, it seems reasonable to ponder how this generation of physicians

can be successfully trained and evaluated in this novel realm and whether or not the newly adopted ACGME/ABIM milestones adequately and directly enough assess HIT competence. This is not meant to be a call for a 23rd sub-competency evaluating HIT expertise, but then again, perhaps it is.

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SGIM

NEW PERSPECTIVES: PART I

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- own chronic illnesses and facilitate better self-management.
4. *Coordination of timely follow-up.* A blood pressure medication was added, and the patient called with unclear symptoms after this change. Facilitating close follow-up with the internist likely would have identified definitively if the patient was experiencing medication side effects or worsening disease.

Care coordination is another opportunity to provide better care for our patients. CMS is now taking steps to provide reimbursement for quality care that can reduce or prevent the type of patient outcome described above. Commitment to the process and dedicated personnel are required for this type of program. Within the Division of General Internal Medicine at The Ohio State University Medical Center, we have prioritized the care coordination model in our PCMH. While the reimbursement is not expected to begin until January 2015, we have moved forward in hiring dedicated care co-

ordination nursing staff. We are currently working with physicians, managers, nurses, pharmacists, and social workers to develop workflows that align with the rules described in the federal registry regarding transitional care codes. Listed below are targeted aspects of the information released by CMS that we have used to focus our efforts.^{4,5}

1. Patients must have two or more chronic health conditions (multimorbidity).
2. Patients should have 24/7 access to address acute and chronic care needs. Providers should have 24/7 access to the electronic health record and offer electronic communication to patients.
3. Patients with successive routine appointments should have a designated provider who primarily manages their chronic health conditions and performs annual wellness visits.
4. The primary care practice should manage care transitions with trained staff who contact patients and coordinate care in order to prevent readmissions or emergency room visits.

Within the proposed care coordination model, CMS has linked financial incentives with better care for our patients. While a promising program for primary care providers, there are unanswered questions that will need to be addressed as this program unfolds. When CMS agrees to reimburse this service, there will be cost sharing for which patients will be liable. It remains to be seen if the most vulnerable patients (who might benefit most from this program) will agree to participate, knowing there are costs involved. Additionally, in this financial model, further study will be needed to evaluate the extent to which this program can provide long-term improvement in quality of care of chronic illnesses and overall cost reduction.

The proposed CMS reimbursement for care coordination services is not only a financial acknowledgment

of the need for improved care of our chronically ill patients but also a validation of the work that we are already doing as primary care providers. This affirmation is an opportunity for general internists to move forward with improved patient care. Our incentive to develop more robust care coordination programs, while perhaps rekindled by the possibility of reimbursement, resides in what we set out to do as primary care providers—to provide the best, most coordinated care possible for the patient.

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SGIM

CME and the SGIM Annual Meeting

As the annual meeting in San Diego approaches, please remember that you can only apply for CME for any SGIM meeting within 12 months of the date of the meeting. If you have not applied for CME for the Denver meeting, this is your last reminder. We have been partnering with the University of Alabama, Birmingham, for a number of years and are pleased to announce you may once again print your CME certificate from your SGIM membership record. Instructions are online at <http://www.sgim.org/meetings/apply-for-cme>

NEW PERSPECTIVES: PART II

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dition for memory supplement and enhancement for patients like LB may just be to stay physically active with daily aerobic exercises and mentally engaged in shared activities or personal hobbies.

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A Partnership That Works!

SGIM and VA have mutually benefitted from a long and active partnership over the past few decades. This is not surprising given that clinical education and research are foundational elements of the mission of both organizations. As the largest integrated health care system in the country, VA's internal medicine physicians and researchers make up almost 20% of SGIM's membership.

Over the years there has been a small group of active SGIM members who were also VA employees working informally to develop stronger connections between SGIM and VA. This group more recently evolved into the SGIMVA Task Force. One of the main undertakings of the SGIM VA Task Force is to plan and implement a number of special VA sessions at the SGIM Annual Meeting.

We invite both researchers and clinician-educators to take advantage of the important VA sessions at the SGIM 37th Annual Meeting in San Diego. See below for the topics and dates/times of the VA sessions. For registration and hotel information, go to <http://www.sgim.org/meetings/annual-meeting>

The SGIM VA Task Force is always looking for new members. If you are interested and would like to volunteer, please contact Donte Shannon at shannond@sgim.org. Help us encourage greater participation in SGIM by encouraging membership by VA primary care clinic leaders, ACOS for Education, and Primary Care Division Directors.

The VA programming at the SGIM 37th Annual Meeting is supported by the VA Health Services Research and Development Service and the VA Quality Enhancement Research Initiative (QUERI). We look forward to seeing you there!

THURSDAY, APRIL 24

8:00 – 9:00 am

IT20: VA Primary Care Interest Group

11:30 – 12:30

Lunch with VA Leadership

David Atkins, MD, MPH, Director of HSR&D

1:00 – 2:30 pm

VAA: Promoting Excellence in Patient Care, Education, and Research by Adapting the Principles of Medical Home Models to the Needs of Vulnerable Populations in VA

3:30 – 5:00 pm

VAB: Using Lessons from VA to Improve Care for Women with Mental Health and Trauma Histories

FRIDAY, APRIL 25

10:00 – 11:30 am

VAC: Issues in Designing and Conducting Pragmatic Clinical Trials for Chronic Pain in Primary Care

1:00 – 2:30 pm

VAD: Using Technology to Support the Primary-Specialty Care Interface in the VA