SPECIAL SYMPOSIUM: Translating Geriatrics Research into Policy

Optimizing Health for Complex Adults in Primary Care: Current Challenges and a Way Forward

Hollis Day, MD, MS[1], Elizabeth Eckstrom, MD, MPH[2], Sei Lee, MD, MCR[3], Heidi Wald, MD, MPH[4], Steven Counsell, MD[5], and Eugene Rich, MD[6]

[1]Division of General Internal Medicine, University of Pittsburgh Medical Center, Pittsburgh, PA, USA; [2]Division of General Internal Medicine & Geriatrics, Oregon Health & Science University, Portland, OR, USA; [3]Division of Geriatrics, University of California San Francisco, San Francisco, CA, USA; [4]Division of Health Care Policy and Research, University of Colorado, Boulder, CO, USA; [5]Division of General Internal Medicine and Geriatrics, Indiana University School of Medicine, Indianapolis, IN, USA; [6]Mathematica Policy Research, Washington, DC, USA.

As the population ages, the quantity and complexity of comorbidities only increases in the primary care setting. Health systems strive to improve quality of care and enhance cost savings, but current administrative and payment systems do not easily support the implementation of existing evidence and best practices for multimorbid adults in most primary care offices. This perspectives piece sets forth a research agenda in the area of implementation science at the intersection of geriatrics and general internal medicine. We challenge academic medical centers, medical societies, journals, and funders to actively value and support investigation in this area as much as traditional research pathways.

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As our population ages and accumulates a mounting burden of chronic illness and functional decline, primary care clinicians (who provide most of the care for this population)[1] are faced with growing complexity and a need for increased skills in multimorbidity, prognosis, goal setting, and team-based care. Further, most guidelines address one condition and not the interaction between multiple comorbidities, so primary care clinicians find it harder to practice evidence-based medicine in an era when pay-for-performance is becoming commonplace. Moreover, with the growth of multiple chronic conditions (MCCs) in adults of all ages, expertise in cognitive impairment, functional decline, and other traditional geriatric issues expands beyond the population greater than 65 years of age. For example, adults with diabetes, compared to those without, have increased prevalence and incidence of geriatric conditions across the age spectrum ($p<0.01$ for each age group from 51–54 years old to 75–79 years old).[2] Thus, issues that have previously been the purview of geriatrics will become an even greater part of primary care practice than they are today. To help bridge the gaps in providing optimal care to multimorbid adults, we will: 1) consider the geriatrics framework for care of older adults; 2) identify geriatric team-based care models that successfully coordinate services between the healthcare system and community resources and that could be expanded throughout primary care; and 3) highlight how dissemination and implementation science is a growing field that can address the challenges of putting such models into place to the benefit of all patients with complex health problems.

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GERIATRICS FRAMEWORK FOR CARE OF OLDER COMPLEX PATIENTS

Geriatrics has long championed patient-centered care that first optimizes function and independence, paying careful attention to patient and family goals of care in a relationship-based and whole-person oriented approach,[3] a care model that is extremely important for adults with multiple comorbidities and the frail elderly. Many older people have unrecognized functional limitations, and by bringing these to light, we allow for a more patient-centered approach, setting meaningful and realistic goals for each patient and their family support structure. Good care of older adults does not stop with recognizing functional impairment: it also means determining a care plan that addresses this impairment while respecting an individual's wishes (e.g. to stay at home), and provides him/her the resources to thrive (e.g. home exercise training to improve mobility).[4] This same approach can be applied to all patients with multiple functionally limiting comorbidities. Yet, there are challenges to providing such holistic care: current physician payments do not support the extra time required to evaluate patients with cognitive impairment or physical disabilities,[5] nor do they support home visits to reach patients with mobility and access problems. Current reimbursement structures do not adequately extend to pharmacists, social workers, nurse care managers, and other team members who are critical for providing comprehensive

primary care to multimorbid adults. Further, patients' needs are not confined to the merely medical, but are often compounded by social determinants of health such as not having transportation to readily get to the office or to pay for multiple medications for each of their co-morbidities. Possibly most importantly, primary care clinicians are trained to address individual medical problems (e.g. hypertension, diabetes), and will need to adapt their practices to manage medical problems in the context of physical and cognitive impairment. Yet, even with all these barriers, moving to a whole-person model of care will ensure that frail older adults will receive optimal care within team-based primary care.

GERIATRICS EVIDENCE-BASED CARE MODELS: READY FOR ROLL OUT IN PRIMARY CARE

Solutions to these problems seem challenging since they require coordination of care across multiple agencies, many of which are outside of the healthcare system. However, there are models of geriatric care that noticeably improve the health of older adults, by focusing on patients' wishes to live independently and maximize their quality of life while simultaneously addressing health systems' needs to contain cost.

One such model, the Program of All-inclusive Care of the Elderly (PACE), involves relocating the focus of primary care for certain frail older adults into community-based, greatly augmented care programs, and has shown improved outcomes and reduced cost.[6] A person must be 55 years of age or older, be eligible for care in a nursing home and live in the program's defined geographical catchment area. PACE enrollees currently have an average age of 78.2 years[7] and an average of 7.8 medical conditions, and about 28 % have four to five impairments in activities of daily living. Many enrollees (39 %) live alone in the community, and 14 % have no means of informal support. Even in the earliest days (1994–1995), PACE enrollees averaged 2,399 hospital days/1,000 persons/year, comparing favorably with the general Medicare population with an average utilization of 2,448 days/1,000 persons/year. When patients are hospitalized, the length of stay is 2.7 days less than traditional fee-for-service with a very favorable primary care to specialist physician visit rate.[6] Another model, the Geriatric Resources for Assessment and Care of Elders (GRACE) program, added home-based nurse practitioners and social workers to primary care teams within a group practice to assist in the care of low-income older patients; and showed improved social and mental health measures, decreased emergency department visits, and decreased hospitalizations for those at highest risk of hospitalization.[8] The Guided Care model studied the effect of interdisciplinary primary care teams on the use of health services by patients (in this case elderly) with multiple chronic conditions. Guided Care nurses working in partnership with primary care physicians provided comprehensive assessment, evidence-based care planning, monthly symptom monitoring and adherence, transitional care, coordination of care, help with self-management, support for family caregivers, and enhanced access to community services. While the results were mixed, there was a reduction in home health care use and nursing home admissions.[9] Models such as these are increasingly important when considering Centers for Medicare and Medicaid Services (CMS) coverage that rewards care coordination services such as the newly announced payment to physicians for transitional care services after hospitalization.

IMPLEMENTING NEW MODELS IN THE REAL WORLD: THE CASE FOR IMPLEMENTATION SCIENCE

Despite the success of these new models in controlled settings, they have not been broadly disseminated. The burgeoning field of implementation science must be utilized to embed successful care models within the context of local cultures and opportunities. The remainder of this article will focus on the role of implementation science in ensuring that patient-centered, team-based, evidence-based care can be provided to all multimorbid adults in primary care practice.

Implementation research is the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine practice to improve the quality and effectiveness of health services.[10] Implementation science and quality/patient safety research requires answering questions other people have asked (e.g. translating evidence into practice, improving patient care at the point of contact) that are important to stakeholders and not necessarily de novo research.

Currently, there are many questions in the realm of implementation science that are intrinsically important to primary care of complex patients. For example, the role of coordination of healthcare with community resources is ripe for research. The 2008 report *"Challenges and Successes in Reducing Health Disparities"* discusses in depth the link between divergent approaches to a community's health. One path, the traditional medical path, has approached such problems with a focus on single disease (not multimorbidity) and has often been led by academic medical centers with research enterprises. The other path taken frequently by community leaders is to focus on socioeconomic determinants of health and attempt to rectify health issues by community building and economic development. Multiple approaches are taken to improve disparities and decrease multimorbidity, but the efforts are often at cross purposes rather than synergistic. As a result, models such as those outlined above could be doomed to remain

local, for without widespread partnership between communities and health organizations, such efforts cannot be scalable.[11]

We must then ask the question: how do we develop the leaders to do this work? The field requires skilled consultants, training programs to develop these skilled consultants, and a new medical career trajectory that rewards improved quality, safety, and health outcomes. Training and recognizing academicians for work in implementation research *and* in implementation itself presents multiple challenges, as well as opportunities.[12]

Academic medical centers (AMCs) are frequently the resource for generating new researchers, yet embracing implementation science as an academic field has multiple barriers. Parallel work on comparative effectiveness research by Bonham and colleagues outlines adaptations that AMCs will need, including building partnerships outside of the medical school and providing interdisciplinary, team, and cross-institutional training.[13] Academically, mentorship for junior investigators will need to come from fields such as the social sciences, and AMCs and academic societies will have to expand these partnerships.

As a consequence, academic centers must be innovative in thinking of ways to promote faculty who pursue these non-traditional methods, as well as those who actually do the implementation work. Models such as the University of California San Francisco Systems Innovation, Quality Improvement & Patient Safety Portfolio, a product akin to a clinician-educator portfolio, seek to promote individuals based on implementation science and quality improvement.[14]

Funding for any innovation or implementation is critical. Support for implementation science research is growing at both the National Institutes of Health (NIH) and the Agency for Healthcare Research and Quality. New grant proposals in this arena will require partnerships with practice-based research networks (PBRN) and patients, partnerships that have not traditionally been embraced by AMCs. There are new sources of funding, such as the Patient-Centered Outcomes Research Institute (PCORI) and the CMS Innovations Projects, with research priorities that are first and foremost patient-centered, transparent, and easily accessible.[15] Additionally, health care payment reform provides incentives for improved quality and efficiency in academic medicine. Thus, as AMCs reorganize to meet competing demands, there are multiple opportunities to provide better, more efficient, cost-effective, patient-centered care.

Payment reform and its direct consequence on practice are particularly important in the current climate, and new opportunities must be acted upon. For example, in January 2011, Medicare implemented an Annual Wellness Visit (AWV) for all beneficiaries. However, only 6 % of Medicare beneficiaries had an AWV in the first 35 weeks of the program.[16] While this benefit was designed to improve the health of beneficiaries, clearly it was not something that could be easily implemented in practice. Finding ways to overcome barriers to completion of the AWV, providing simple tools to assist clinicians in completing visit documentation, and determining appropriate methods to collect AWV data on a large scale are all fruitful areas for future research.

HOW CAN JOURNALS AND FUNDERS HELP?

High-impact journals have traditionally focused on randomized controlled trials (RCTs) rather than implementation studies that may have a more local context, believing RCTs provide broadly relevant knowledge. However, implementing evidence-based interventions in a complex healthcare environment is also critically important. Funders are increasingly focusing on patient-centered care and implementation. Prominent examples include the PCORI and the requirement that any CMS innovation project have a patient as a member of the research team. As AMCs recognize the importance of these funding streams, and more high-impact journals actively encourage submission of implementation research, department leaders will start to value implementation research as an endeavor worthy of support.

WHAT ARE CONCRETE NEXT STEPS?

At the academic institutional level, division chiefs and department chairs must advocate for promotion tracks that encourage and support implementation and dissemination science, and recognize those who are actually changing practice at the patient level. Incentives should promote interdisciplinary research teams that include multiple health professions, schools such as social sciences, and local and patient stakeholders. With the ongoing Federal budget pressures squeezing traditional research funding sources, AMCs need to identify alternative funding streams. The same budget pressures are encouraging the discovery of creative solutions to the challenge of caring for complex patients, such as enhanced partnerships with community-based primary care practices.

AMCS can do this through such mechanisms as the development of (or collaboration with) local practice-based research networks focused on the care of complex patients, or through the development of an implementation science capacity within Medicare payment-reform–motivated entities like “Accountable Care Organizations.” The need to more effectively manage the complex patients who account for substantial Medicare costs can motivate AMC clinical program leaders to obtain “real world” input into research questions, and to establish the capacity within their primary care network to evaluate the effectiveness of care improve-

ments for this population. Where the AMC is a partner rather than a leader in local delivery system reform, academic leadership can provide geriatrician and general internist scholars to enhance local skills in implementation science relevant to complex patients, as well as the principles of community-based participatory research. By linking scientists, practices, and communities in trusting relationships and utilizing culturally appropriate measurements in evaluating delivery system interventions,[17] academic geriatricians and general internists can conduct important research on the care of frail patients while helping the clinicians in their practice network provide more efficient and effective care.

At an academic society level, it is important that junior investigators are consistently informed of funding streams outside of the usual NIH structure. Academic societies can offer workshops and educational products on new methodology, as well as instructional aids to develop new business models for doing research (e.g. developing consultancy relationships). Finally, societies have the benefit of calling upon member expertise in building partnerships at the patient level so that they can not only move the research agenda forward, but, most importantly, provide high quality patient-centered care.

As the population ages and patients with multiple complex conditions consume more care, the need for implementation and dissemination of new and existing research to care for this population will grow. With evolving financial and quality incentives, and new centers/structures for funding, these exciting changes can occur now.

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Corresponding Author: *Hollis Day, MD, MS; Division of General Internal Medicine, University of Pittsburgh Medical Center, 3550 Terrace Street, M211 Scaife Hall, Pittsburgh, PA 15261, USA (e-mail: dayh@upmc.edu).*

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