News from NIH: the patient-centered medical home

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In testimony to the House Appropriations Subcommittee, directors from the National Institutes of Health (NIH) have described a transition in medicine from a reactive, acutely focused system of *sick care* to a proactive, life-focused system of *health care* [1, 2]. The exigencies for this change stem in part from a greater, predictive understanding of disease processes, which will allow for improved opportunities to prevent or intervene early in a patient's life before damage occurs and before high-cost treatment is required. It also stems from a need to cope with the growing prevalence of noncommunicable disease [3], making it necessary to improve coordination of care in support of patient self-management. To support these changes, systems of care must evolve. As authors of the Institute of Medicine's report titled "*To Err is Human: Building a Safer Health System*" concluded, the current health system with its fragmented nature, inadequate communication channels, and a contradictory incentive system is inadequate to the task [4]. New systems must emerge that are patient-centered by design, built on continuous healing relationships, infused with a free flow of data and knowledge, supported by the twenty-first century information systems, and founded on best available scientific evidence [5].

In other words, the system of care must evolve to support a new type of relationship between the patient and the healthcare "system", one in which accountability and coordination replaces confusion and fragmentation. The Patient-Centered Medical Home (PCMH) is a healthcare delivery model that facilitates partnerships between patients, their families and the healthcare team to take into account patient preferences and needs and promote better coordination and delivery of care. The PCMH has emerged as a symbolic focal point of that new relationship [6]. According to the Commonwealth Fund, cumulative results from a 5-year demonstration project over 65 community health centers suggested that patients assigned a medical home: (a) reported fewer difficulties in getting off-hours care, (b) had better access to medical records, (c) experienced fewer medication or laboratory errors, (d) reported getting written plans for managing care at home more often, and (e) received more reminders for preventive/follow-up care than those without access to a medical home [7]. When

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patients benefitting from access to a medical home were asked which attributes they valued the most, they were consistent in singling out better care-coordination, improved access to their care providers, and better support for self-managing their own conditions as important attributes [8].

From the perspective of the NIH mission, an adequately equipped PCMH also represents at least one viable tool for translating biomedical discovery into health [9]. For example, NIH-funded studies have suggested repeatedly that a proactive intervention to help patients lose 5–7 % of their body weight through diet and exercise could prevent or delay the onset of type 2 diabetes [10]. The personal relationship and monitoring capabilities of a PCMH offers a model for more successful translation of evidence based practices. For example, the PCMH model is designed to ensure that proactive and motivational conversations are occurring to raise awareness for the importance of diet and exercise for good health, and to assign supportive services as needed. Also, once diagnosed, self-management in diabetes care is crucial. The PCMH is poised to better support a patient's own skill in glucose monitoring, controlling diet, and administering insulin injections. As Health Information Technologies improve, data for home-based monitors can be fed into patient dashboards to support better coordination between patients and their care teams in managing the condition outside of the clinical environment. Behavioral research and theory development will need to expand as these new models for patient-centered empowerment emerge [11].

In many chronic diseases, such as in cardiovascular disease and cancer, bridging the interfaces of care between primary and specialty services has often posed an insurmountable challenge to full implementation of evidence-based prevention and treatment [12]. Chart reviews of patients presenting

with late-stage cervical, breast, and colorectal cancers often reveal that lives could have been saved if only patients had received the proper support and guidance for routine screening [13]. Cancer survivors, who must confront a life of vigilance for recurrence or late-effects from treatment, have reported feeling abandoned when there is no medical home assigned after treatment is completed [14]. Errors in communication, lost records for treatment, and a sense of disengagement from patients can all lead to negative consequences [15]. A proactive PCMH could help prevent those negative consequences while offering a reliable source for survivors' questions and serving to implement the requirements of a post-treatment care plan [16].

Devising a strategy to extend the benefits of current biomedical knowledge equitably throughout the population is a societal task that must inherently involve conversations across multiple economic sectors and many legislative jurisdictions. The NIH will continue to do its part in collecting the data to inform those conversations [17]. Recent efforts to stimulate the science of primary care and support the efforts of the PCMH include two NIH funding announcements targeting practical interventions to improve patient adherence to medications (<http://grants.nih.gov/grants/guide/pa-files/PA-12-022.html> and <http://grants.nih.gov/grants/guide/pa-files/PA-12-023.html>). These announcements target interventions to enhance adherence that are developed for the practicalities of primary care implementation. Using a similar model, the NIH announcement, *Behavioral Interventions to Address Multiple Chronic Health Conditions in Primary Care* (<http://grants.nih.gov/grants/guide/pa-files/PA-12-024.html>), solicits research on interventions to address patient behavior change for multiple co-occurring behaviors within the primary care setting. These announcements, as well as the NIH support of investigator-initiated research, provide multiple opportunities for researchers to enhance our knowledge of effective practices and services within health care. In doing so, the NIH will rely on the translational efforts of its grantees to

improve the reach, effectiveness, adoption, implementation, and maintenance of solutions such as the PCMH [18].

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