
An Introduction to Primary Care and Psychology

Susan H. McDaniel
Frank V. deGruy III

University of Rochester Medical Center
University of Colorado Denver School of Medicine

The health care system in the United States has been less effective and more expensive than it needs to be, but the organizational and political will to address these shortcomings is beginning to emerge. These changes are particularly noticeable in primary care, at the heart of an improved health care system. The value of primary care turns on its comprehensiveness, which means that behavioral health care—health behavior change, mental health care, management of psychological symptoms and psychosocial distress, and attention to substance abuse—must be woven into the fabric of primary care practice. This integration is beginning to happen as psychologists and other behavioral health clinicians are incorporated as essential team members in the patient-centered medical home and other emerging models of primary care. This article introduces psychologists to the fundamental changes taking place in primary care and to the various roles that psychologists can play in the new health care system. We describe the extensive breadth and diversity of primary care by age, sex, setting, and type of clinical problem and the implications of this variety for the psychologist's role. This description is not simply a clinical exercise: Transformation of the primary care system also has policy, educational, and research dimensions. We describe how psychologists are essential to these functions as well.

Keywords: primary care, primary care psychology, patient-centered medical home, collaborative care

Despite unprecedented spending on health care, the health status of the people who live in this nation and the quality of the health care they receive fall short of acceptable. The United States ranks 37th in the world on the most commonly measured health outcomes, behind all other developed nations (Murray & Frenk, 2010). Moreover, our per capita health care costs are not only the highest in the world but also are rising at an unsustainable rate (Bodenheimer, 2005; Davis, Schoen, & Stremikis, 2010). Economists, health care experts, and political leaders alike agree that we must do something about this—that we must improve the health of our nation's population, improve the quality of the health care that our people receive, and do these things less expensively. These three goals—better health for the population, better quality health care for individuals, at less cost—are called the Triple Aim (Berwick, Nolan, & Whittington, 2008). Achieving the Triple Aim is a daunting task for this nation, but as this special issue shows, we are beginning to see evidence of an emerging organizational and political will to do so.

The dominant model for explaining health and disease, and organizing health care, in the United States is the biomedical model. This model, derived from the germ theory of disease, has prevailed for over 100 years. This is an extremely useful model, with great explanatory power, and it deserves credit for many advances in the state of people's health. For example, it helped us understand how to eliminate infectious diseases as the leading cause of death in the United States and is considered one of the reasons life expectancy here increased from 49 years in 1901 (Glover, 1921) to 78 years in 2007 (Arias, 2011). However, this is an incomplete model with significant limitations. It is reductionistic: Its basic method for understanding complex phenomena is to take them apart and understand their simpler constituents, which are assumed to “add up” to an understanding of the whole. This method is not sufficient for understanding many aspects of complex systems, such as whole human beings, who feature emergent properties. The biomedical model may be viewed as exclusionary, judging phenomena that cannot be explained biologically as unimportant or irrelevant. In particular, this model assumes a mind–body dualism in which “mental” disorders are excluded from the primary concern of biomedicine unless they can be explained biologically (Engel, 1977). As a result, mental health has been largely “carved out” of the larger U.S. health care enterprise and managed by a different system of care using different providers and a different and limited stream of resources (Belar, 1996). Heretofore, “mental” health and “physical” health professionals have been trained separately, with few or no opportunities to train or work collaboratively.

Although George Engel proposed an integrated biosychosocial model in 1977, most of the U.S. health care system continued to embrace the biomedical model until much more recently. As the U.S. health care system con-

Editor's note. This article is one of 11 in the May–June 2014 *American Psychologist* “Primary Care and Psychology” special issue. Susan H. McDaniel, PhD, and Frank V. deGruy III, MD, MSFM, provided the scholarly lead for the special issue. The articles are the products of collaborations between psychologist and primary care physician authors.

Authors' note. Susan H. McDaniel, PhD, Institute for the Family, Department of Psychiatry, and Department of Family Medicine, University of Rochester Medical Center; Frank V. deGruy III, MD, MSFM, Department of Family Medicine, University of Colorado Denver School of Medicine.

Correspondence concerning this article should be addressed to Susan H. McDaniel, Department of Family Medicine, University of Rochester Medical Center, 777 S. Clinton Avenue, Rochester, NY 14620. E-mail: susanh2_mcdaniel@urmc.rochester.edu



Susan H. McDaniel

tinues to fall short of producing the results we desire (Centers for Medicare and Medicaid Services, 2011), it has become apparent that the biomedical model alone cannot address today's health care challenges. Most Americans die from complications of chronic diseases, the treatment of which accounts for 75% of our health care costs (Centers for Disease Control and Prevention, 2009). Successful management of chronic diseases requires considerations that fall outside the explanatory power of the biomedical model. Further, the centrality of behavior—both patient and health professional behavior—has become increasingly obvious as we face today's health care problems. For example, tobacco use, poor diet, and sedentary behavior are the leading causes of death in the United States today (Mokdad, Marks, Stroup, & Gerberding, 2004), and medical errors are ranked eighth (Institute of Medicine, 2000). These factors do not lend themselves to a germ theory explanation. In contrast, Engel's (1977) biopsychosocial approach comfortably accommodates these factors and is becoming more widely adopted as a plausible explanatory model.

Because of the increased salience of behavior as a determinative factor in health, health care in the United States is just beginning to move from provider-centered care focused on biologic aspects of disease to patient-centered care characterized by interprofessional teams addressing all of the patient's needs, physical and psychological (Johnson, 2013).

Why Is Primary Care So Important?

One of the most consistent features of successful health care systems—systems that do in fact accomplish the Triple Aim—is a strong primary care foundation (Starfield, Shi, & Macinko, 2005). This assertion has such a large and

internally consistent edifice of evidence supporting it that is has become the basis for health care reform in most nations and is becoming so in the United States. In 2008, after surveying the world's literature on this subject, the World Health Organization (2008b) issued the report *Primary Health Care: Now More Than Ever*, the press release for which stated,

When countries at the same level of economic development are compared, those where health care is organized around the tenets of primary health care produce a higher level of health for the same investment. (World Health Organization, 2008a, para. 11)

In an elegant set of analyses, Macinko, Starfield, and Shi (2007) has calculated that for every one primary care physician added to a population of 10,000, all-cause mortality decreases by 5.3%, or 49 per 100,000 per year. Conversely, for every specialist added to a population of 10,000, mortality increases by 16 per 100,000 (2% more deaths). Franks and Fiscella (1998), using national survey data, reported that among people who claimed to have a personal physician, those whose physician practiced primary care in contrast to specialty care had 33% lower health care costs, and a 19% lower mortality rate, in the subsequent five years. In order to understand these counterintuitive findings, we must understand in more detail the characteristics of primary care, the relative value of the components of primary care, and the place of primary care in a system that requires both generalists and specialists.

In 1994 the Committee on the Future of Primary Care at the Institute of Medicine offered a definition of primary care that has gained widespread acceptance (Institute of Medicine, 1994):

Primary care is the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community. (p. 15)

Each element of this definition—"integrated, accessible, services by clinicians," "large majority of health care needs," "sustained partnership," "in the context of family and community"—was included because of compelling evidence of its value to health, to health care, or to cost. That body of evidence has only been strengthened in the subsequent two decades. Add *this kind* of primary care to a nation, state, county, zip code, panel of patients, or any large group of people, and one consistently sees health improve, quality rise, and costs decline (Starfield et al., 2005). In other words, the Triple Aim can be achieved by adding a certain kind of primary care to whatever health system one is working with. But most primary care in the United States is not sufficiently comprehensive, coordinated, accessible, or continuous—it does not meet the criteria required to reach its maximum value. Because of this, primary care is undergoing drastic changes, perhaps more than any other part of the health care system—practices are being redesigned, new models of financing are being tried, and new partnerships and teams are being formed. The corrosive problems of fragmentation, a narrowed scope of practice, inadequate management of chronic diseases, and perverse incentives are yielding to a wave of primary care innovations.



**Frank V.
deGruy III**

Principal among those innovations are attempts to broaden the scope of primary care practice by incorporating into its fabric behavioral health care. The majority of people in the United States seek and receive care for mental disorders, substance use disorders, and health behavior problems in the primary care setting. They present with the need for health behavior change for better management of their chronic diseases, with freestanding mental disorders, and with psychological symptoms and disorders comorbid with other medical illnesses. It turns out that about one third of the patients seen for care in primary care settings meet criteria for a mental disorder, and another one third, while not meeting those criteria, nevertheless have psychosocial symptoms or problems that impair their function (Kessler et al., 2005). These symptoms and disorders are much more prevalent in patients with chronic diseases (Jones et al., 2004). Yet primary care providers have up to this point been poorly equipped to address these behavioral concerns adequately—they diagnose less than one third of patients so afflicted and provide acceptable treatment for less than half of those correctly identified (Kathol, Butler, McAlpine, & Kane, 2010). Even referrals to outside mental health professionals are frequently unsuccessful (Cunningham, 2009). But now we are seeing new, comprehensive models that address the behavioral and the biomedical together, as comprehensive, integrated, whole-person primary care.

At this time, sustaining these innovative practices is a particular challenge given that the dominant system of payment—fee for service—does not support coordinated, comprehensive, team-based primary care. We can expect the Patient Protection and Affordable Care Act (2010) to help with this problem. The Affordable Care Act requires that essential health benefits now include mental health,

preventive and wellness services, and chronic disease management; it also makes care coordination a reimbursable service. Since the commercial sector follows federal reimbursement principles (i.e., commercial reimbursement rates are based on Medicare rates, and change when Medicare rates change), we can expect to see a transformation in the way services are paid for across the public and private sectors in the next five to 10 years. In fact, commercial payers are already beginning to experiment with a similar set of incentives and payment structures. Thus, we are seeing a convergence of factors that support the kind of primary care that can help us achieve the Triple Aim.

How Is Primary Care Changing?

Perhaps the most visible example of the new face of primary care is the move toward the patient-centered medical home (PCMH; Robert Graham Center, 2007). While this name may be objectionable to some because of its assertion about “physician-led teams” (some nurses, psychologists, and others believe they too can lead primary care teams), the principles behind the PCMH are consistent with those held by psychology. These principles include a transformation from a reactive practice mode best suited for acute problems to proactive, coordinated care better suited for managing chronic diseases and prevention; the use of registries to care for populations of patients; attention to the psychosocial and behavioral dimensions of health; self-management programs; better use of data to track disease outcomes and to improve the quality of practice; the presence of care coordinators; and the use of clinician teams to address this expanded scope of responsibility. These innovations result in primary care practices and systems that provide more comprehensive care.

Comprehensive care is by its very nature biopsychosocial. It recognizes the essential unity of biomedical and psychosocial health. It includes attention to acute problems, chronic problems, and preventive health care needs. It is whole-person care within family and community contexts. It also produces a higher quality of health care and better health outcomes. Two recent papers reviewed the benefits of primary care organized into PCMHs and showed improved patient satisfaction with care, higher concordance with quality guidelines for chronic diseases, fewer medical errors, fewer duplicative tests ordered, fewer medications prescribed, less use of the emergency department and the hospital, and less overall costs of the health care rendered (Solberg 2011; Schoen et al., 2011).

As beneficial as these changes may be to health outcomes, they are difficult to accomplish. Under most circumstances, increased comprehensiveness requires increased personnel—a team-based approach to care. At the heart of the new primary care team is a partnership between a primary care clinician, a behavioral health professional, and a care manager, who together work to produce comprehensive, integrated personal care for each patient and family served.

While the initial *Joint Principles of the Patient-Centered Medical Home* endorsed by all the national primary

care organizations did not include explicit attention to behavioral health (American Academy of Family Physicians, American Academy of Pediatrics, American College of Physicians, & American Osteopathic Association, 2007), in 2013 these same national primary care organizations (minus the American College of Physicians) endorsed an addendum to the Joint Principles that explicitly recognizes behavioral health as essential to the PCMH (Council of Academic Family Medicine, in press). This recognition supports the importance of a psychologist or other mental health professional as part of the primary care team. The nature of this primary care-behavioral health partnership will be different according to the preferences of the patient and family, the nature of the patient's problems, the specific skill sets of the respective clinician team members, their capacity to work together, the availability of additional services in the health care neighborhood, and the capacity of the system to incent collaborative behavior and provide adequate financial support.

In this environment of innovation, new models for care are also emerging in the community, or in the clinic as it interfaces with the community. Population-based initiatives to promote prevention are appearing. These innovations are complex and difficult yet very promising in terms of health outcomes and cost-effectiveness.

What Does This Mean for Psychologists?

At the heart of the new primary care team is a partnership between a primary care clinician and a psychologist or other mental health professional, who work together to produce a comprehensive, integrated personal care plan for each patient that includes attention to mental and medical disorders, that addresses substance abuse issues, and that incorporates health behavior change (McDaniel & Fogarty, 2009; McDaniel, Doherty & Hepworth, 2013).

Psychologists are in the vanguard, being called on to function in new ways and in new roles during this time of transformation. It is not traditional clinical psychology they are being asked to provide; it is not even traditional health psychology. As such, it is not for everyone. But for those psychologists interested in larger system change, innovative practice, and team-based care, the changes in the field open new opportunities. Many roles are emerging with new primary care functions that are not yet prescribed or even described. For example, as a primary care practice commits to the new health care function of addressing health behavior change associated with chronic diseases, it may be the psychologist or the primary care clinician or the care manager who works with the patient between visits to track progress and to reinforce healthy behaviors in the care plan. These are emerging roles in an emerging field, and like the subject matter itself, they need better definition. But these roles are there for psychologists (and others) to claim, develop, and make useful. The following list is evocative—not prescriptive or exhaustive. Each reader can imagine the opportunities that may go with these roles in his or her own

world—beginning with more familiar roles, followed by those less familiar, emerging roles of major importance.

The psychologist as . . .

- *A member of a primary care team*—working as a clinician in a primary care setting with a panel of primary care patients and clinician colleagues.
- *A member of a specialty mental health clinic or facility*—working as a clinician with patients and health professionals in situations where the clinical needs exceed the scope of primary care clinics—but in close coordination or even with shared workflows.
- *A consultant member of a primary care team*—a behavioral health consultant to clinicians, care coordinators, pharmacists, nutritionists, or other members of a primary care team in matters of behavioral health assessment, diagnosis, or treatment planning, as a resource that goes beyond taking those patients into direct treatment but instead involves helping other team members develop the confidence and skills to extend their own scope of practice.
- *A “preventer of fragmentation”*—a psychologist whose training in “whole-person care,” “patient-centered care,” “family-oriented care,” and “systems thinking” leaves him or her in a good position to watch for how the patient is moving through the care system—not just the behavioral health treatments received but whether the patient experiences the entire care as coherent or fragmented. Designated care coordinators may help, but psychologists in any role have preparation for this kind of systemic oversight. This can be a formal or an informal role expectation.
- *A facilitator of quality improvement*—many practices are adopting Lean and other process improvement methodologies, where systems thinking and mobilizing energy for improvement are important among clinicians and staff. The psychologist may serve as a “systems thinker” in the evolving practice—a person whose training and experience prepare them to examine the practice systems, workflows, and clear roles required to better integrate care.
- *A practice facilitator or team leader*—a person whose training and experience prepares them to help facilitate change, adjust to change, lead team meetings, and help the practice members work well together—a local expert in productive conversations.
- *A meeting planner and facilitator*—a person who can plan and run great meetings in the practice, whether about clinical cases or administrative or professional concerns. Such encounters are not merely “meetings”; they are where the professional community convenes to solve problems and do work.
- *An interpreter across professional cultures*—a person helping to translate between biomedical and

mental health practice and professional cultures—or between specialists and primary care clinicians. Integrated health care is in part a cultural bridging process as well as a clinical process.

- *A practice manager, program leader, or executive*—a person who takes formal organizational responsibility for moving a practice (or a program within it, e.g., behavioral health integration) forward in the clinical, operational, and financial worlds (Peek, 2008)—in partnership with administrative leaders.
- *A member of a program evaluation or practice-based research team*—a psychologist whose knowledge of behavioral health and the functioning of the practice is an asset in dealing with the broader range of variables to be studied and evidence to be counted, whether through a practice-based research network or other evaluation structure. New approaches to research may be more accessible to practicing clinicians—such as “partnership research” (Solberg et al., 2010).

This list is offered to stimulate and invite the reader to *act*, not just absorb the contents of this special issue as knowledge or fact. The point is to make such knowledge *real* (I am prepared to act on it), not merely *true* (I believe it is the case) (Ossorio, 2006). The opportunity for psychologists in primary care transformation—and the research going on to inform it—is to prepare ourselves to act in this new and evolving field. The competencies associated with these roles are described in an article included in this special issue (McDaniel et al., 2014).

The primary care clinical setting is different in many ways from a traditional psychologist’s clinical practice. Modern primary care is comparatively *fast-moving*, with visit times of less than 15 minutes; *chaotic*, with many interruptions and changes of schedule to accommodate crises and urgent problems that arise in the course of a day; more concerned with *health and illness*; *complicated*, with many different health problems managed concurrently; *team-based*, which is necessary for comprehensiveness; practiced in *many settings*, such as the ambulatory clinic, hospital, home, and other settings; and *multimodal*, making use of face-to-face office visits, telephones, and computers. Perhaps the most salient feature of primary care is the sheer *range and diversity* of the people and problems it addresses.

What Can You Expect From This Special Issue on Primary Care and Psychology?

In this special issue on Primary Care and Psychology, each article is written collaboratively by at least one psychologist and one primary care physician—these are authors who write and also practice collaboratively. In order to give a sense of the diversity within primary care, practices and the patients in them are described along several axes: age, type of problem, and setting in which care is rendered. Herein are articles that describe the place of psychologist educa-

tors, evaluators, researchers, and policymakers. This special issue is designed to help psychologists learn about the fundamental changes occurring in primary care and the opportunities these changes are producing. It describes the most common emerging models of integrated primary care, the roles of psychologists within those models, and how certain important subsets of patients are cared for in primary care. The authors of these articles describe what psychologists actually do—what it is like to be a psychologist in these primary care settings. The first four articles describe integrated care by age (Stancin & Perrin, 2014; Fisher & Dickinson, 2014; Kasl-Godley, King, & Quill, 2014) and sex (Poleshuck & Woods, 2014) and illustrate some interesting and important differences. Integrated care for children is necessarily concerned with families, where the health and capacities of parents, for example, must be taken into account when caring for their children. Parents’ behavior is often the most important determinant of the health of a child, and oftentimes a child’s illness can be understood only through the narrative of a parent. Thus, psychologists working with children are inevitably working also with adults. Here also we find a particular emphasis on prevention and developmental health, two features of care that are well suited to the skills and training of psychologists. The article on women’s health (Poleshuck & Woods, 2014) emphasizes not only the unique issues associated with childbearing and reproductive health but the fact that much of the primary care rendered to women is by obstetrician-gynecologists, whose practices are different in important ways from family physicians, general internists, and pediatricians. With respect to the management of patients with chronic diseases, team-based care is emerging as of central importance and is emphasized here. Finally, there is a rich and interesting literature emerging about the value and roles of psychologists on end-of-life teams and their contributions to the palliative care of patients at the ends of their lives (Kasl-Godley, King, & Quill, 2014).

Primary care is responsible for people not only across the spectrum of age but also across the spectrum of health problems. Certain health problems require special expertise and resources, and the teams that are constituted for these patients often function in particular ways. These special populations of patients can be deeply rewarding to care for, but their differences from “routine” integrated primary care are important to understand clearly. Thus we have included an article (Pollard et al., 2014) that describes in some detail how teams are constituted and how care is rendered for several different special populations: refugees, deaf patients, children with special needs (nearly all children’s hospitals have what they call a Special Needs clinic for children born prematurely and in need of a particular array of services), and patients with chronic and severe mental disorders receiving care in community mental health centers (into which primary care services have been integrated).

Finally, care varies by setting. To illustrate this point, we have included articles on the primary care clinics that are part of the U.S. military system (Hunter, Goodie, Dobbmeyer, & Dorrance, 2014) as well as on the primary care of

veterans in the Department of Veterans Affairs (VA) health system (Kearney, Pomerantz, Post, & Zeiss, 2014). Both the Department of Defense and the VA have enormous health care systems that have paid serious attention to quality and innovation in recent years; they have developed some of the most advanced integrated primary care solutions in existence, which are constituted with the particular health care needs of soldiers and veterans in mind (Hunter, 2013). Psychologists are deeply integrated into leadership positions in their primary care systems.

Integrated care is more than a clinical proposition. While it is true that we are seeing unprecedented levels of activity in the creation of clinical teams, it is equally true that we are seeing high levels of activity in preparing the behavioral workforce for practice in these teams. This special issue contains an article describing a set of competencies that psychologists must master, having to do with the content as well as the context, in order to function well in the primary care setting (McDaniel et al., 2014). The field has made great progress recently in articulating and agreeing upon these competencies.

It is one task to set out the principles of collaborative care and quite another to actually create collaborative practices and training settings; this process of implementation is usually more difficult and complicated than establishing core principles and guidelines. It requires taking into account the setting in which a collaborative practice is embedded—the physical space, the assets at hand, the local language and customs and conventions of the potential partners, the leadership, the motivation for change, the history and trajectory of working together, and countless other variables that inevitably converge to produce unique local assets, barriers, and solutions to an integrated care program. In fact, new innovations are emerging around the need to evaluate how well the principles of integration have been accomplished, how effective care is under particular conditions, what elements of the solution are indispensable to success, the conditions and preconditions under which success can be achieved, how much it costs to do it, what elements can be used across settings and which are site-specific, and more—all described in this special issue. The field is plagued by inconsistencies in the very language used to describe collaborative care and integrated practices. We need to agree on our terms, criteria, and categories; fortunately, there exists a method for doing so. This special issue includes an article that discusses the problem of evaluation and the prospects for developing new knowledge around integrated practice, system change, and collaborative care (Peek, Cohen, & deGruy, 2014).

One might describe the creation of integrated systems of primary care as a three-stage process. The first stage involves establishing principles and guidelines. The second stage involves implementing these guidelines in a particular setting to produce an actual instance of an integrated practice. The third stage involves aligning the finances and incentives associated with this particular model of care so that it can be sustained. All of this requires rational policy. This special issue includes an article that describes health policy issues that are important to consider when working

toward sustainable integration (Miller, Petterson, Burke, Phillips, & Green, 2014).

There is a large and growing literature on integrated primary care, and much of this literature includes the role of psychologists in the field. This special Issue does not replace that literature or even summarize it. Rather, the authors describe what it is like for psychologists to work in a variety of integrated primary care settings. They describe what these settings look like, how they work, and where they are headed; the rewards and difficulties associated with the work; the unique contributions psychologists can make; and above all the extraordinary range of roles psychologists can assume—clinician, educator, coach, consultant, team leader, evaluator, researcher, and policymaker. This special issue outlines the inspiring and meaningful possibilities ahead for psychologists who choose to work with other primary care clinicians on behalf of primary care patients in a primary care setting.

REFERENCES

- American Academy of Family Physicians, American Academy of Pediatrics, American College of Physicians, & American Osteopathic Association. (2007). *Joint principles of the patient-centered medical home*. Retrieved from <http://www.medicalhomeinfo.org/downloads/pdfs/jointstatement.pdf>
- Arias, E. (2011). United States life tables, 2007. *National Vital Statistics Reports*, 59(9), 1–61. Retrieved from http://www.cdc.gov/nchs/data/nvsr/nvsr59/nvsr59_09.pdf
- Belar, C. (1996). A proposal for an expanded view of health and psychology: The integration of behavior and health. In R. J. Resnick & R. H. Rozensky (Eds.), *Health psychology through the life span: Practice and research opportunities* (pp. 77–81). Washington, DC: American Psychological Association.
- Berwick, D. M., Nolan, T. W., & Whittington, J. (2008). The triple aim: Care, health, and cost. *Health Affairs*, 27(3), 759–769. doi:10.1377/hlthaff.27.3.759
- Bodenheimer, T. (2005). High and rising health care costs. Part 1: Seeking an explanation. *Annals of Internal Medicine*, 142(10), 847–854. doi: 10.7326/0003-4819-142-10-200505170-00010
- Centers for Disease Control and Prevention. (2009). *The power of prevention: Chronic disease . . . the public health challenge of the 21st century*. Retrieved from <http://www.cdc.gov/chronicdisease/pdf/2009-power-of-prevention.pdf>
- Centers for Medicare and Medicaid Services. (2011). *National health expenditures aggregate, per capita amounts, percent distribution, and average annual percent change: Selected calendar years 1960-2010*. Retrieved from <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/downloads/tables.pdf>
- Council of Academic Family Medicine. (in press). Behavioral health addendum to the Joint Principles of the Patient-Centered Medical Home. *Annals of Family Medicine*.
- Cunningham, P. J. (2009). Beyond parity: Primary care physicians' perspectives on access to mental health care. *Health Affairs*, 28(3), w490–w501. doi:10.1377/hlthaff.28.3.w490
- Davis, K., Schoen, C., & Stremikis, K. (2010). *Mirror, mirror on the wall: How the performance of the U.S. health care system compares internationally, 2010 update*. New York, NY: The Commonwealth Fund.
- Engel, G. L. (1977). The need for a new medical model: A challenge for biomedicine. *Science*, 196, 129–136. doi:10.1126/science.847460
- Fisher, L., & Dickinson, W. P. (2014). Psychology and primary care: New collaborations for providing effective care for adults with chronic health conditions. *American Psychologist*, 69, 355–363. doi:10.1037/a0036101
- Franks, P., & Fiscella, K. (1998). Primary care physicians and specialists as personal physicians. Health care expenditures and mortality experience. *The Journal of Family Practice*, 47(2), 105–109.

- Glover, J. W. (1921). *United States life tables, 1890, 1901, 1910, and 1901-1910*. Washington, DC: U.S. Government Printing Office. Retrieved from <http://www.cdc.gov/nchs/data/lifetables/life1890-1910.pdf>
- Hunter, C. L. (2013). Department of Defense integrated behavioral health in the patient-centered medical home. In M. R. Talen & A. B. Valeras (Eds.), *The landscape of collaborative primary care: Evaluating the evidence, identifying the essentials* (pp. 189-205). New York, NY: Springer. doi:10.1007/978-1-4614-6889-9_9
- Hunter, C. L., Goodie, J. L., Dobmeyer, A. C., & Dorrance, K. A. (2014). Tipping points in the Department of Defense's experience with psychologists in primary care. *American Psychologist, 69*, 388-398. doi:10.1037/a0035806
- Institute of Medicine. (1994). *Defining primary care: An interim report*. Washington, DC: National Academy Press.
- Institute of Medicine. (2000). *To err is human: Building a safer health system*. Washington, DC: National Academy Press.
- Johnson, S. B. (2013). Increasing psychology's role in health research and health care. *American Psychologist, 68*, 311-321. doi:10.1037/a0033591
- Jones, D. R., Macias, C., Barreira, P. J., Fisher, W. H., Hargreaves, W. A., & Harding, C. M. (2004). Prevalence, severity, and co-occurrence of chronic physical problems of persons with serious mental illness. *Psychiatric Services, 55*(11), 1250-1257. doi:10.1176/appi.ps.55.11.1250
- Kasl-Godley, J. E., King, D. A., & Quill, T. E. (2014). Opportunities for psychologists in palliative care: Working with patients and families across the disease continuum. *American Psychologist, 69*, 364-376. doi:10.1037/a0036735
- Kathol, R. G., Butler, M., McAlpine, D. D., & Kane, R. L. (2010). Barriers to physical and mental condition integrated service delivery. *Psychosomatic Medicine, 72*, 511-518. doi:10.1097/PSY.0b013e3181e2c4a0
- Kearney, L. K., Post, E. P., Pomerantz, A. S., & Zeiss, A. M. (2014). Applying the interdisciplinary patient aligned care team in the Department of Veterans Affairs: Transforming primary care. *American Psychologist, 69*, 399-408. doi:10.1037/a0035909
- Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62*(6), 593-602. doi:10.1001/archpsyc.62.6.593
- Macinko, J., Starfield, B., & Shi, L. (2007). Quantifying the health benefits of primary care physician supply in the United States. *International Journal of Health Services, 37*(1), 111-126. doi:10.2190/3431-G6T7-37M8-P224
- McDaniel, S. H., Doherty, W. J., & Hepworth, J. (2013). *Medical family therapy and integrated care* (2nd ed.). Washington, DC: American Psychological Association.
- McDaniel, S. H., & Fogarty, C. T. (2009). What primary care psychology has to offer the patient-centered medical home. *Professional Psychology: Research and Practice, 40*, 483-492. doi:10.1037/a0016751
- McDaniel, S. H., Grus, C. L., Cubic, B. A., Hunter, C. L., Kearney, L. K., Schuman, C. C., . . . Johnson, S. B. (2014). Competencies for psychology practice in primary care. *American Psychologist, 69*, 409-429. doi:10.1037/a0036072
- Miller, B. F., Petterson, S., Burke, B. T., Phillips, R. L., Jr., & Green, L. A. (2014). Proximity of providers: Colocating behavioral health and primary care and the prospects for an integrated workforce. *American Psychologist, 69*, 443-451. doi:10.1037/a0036093
- Mokdad, A. H., Marks, J. S., Stroup, D. F., & Gerberding, J. L. (2004). Actual causes of death in the United States, 2000. *JAMA: Journal of the American Medical Association, 291*, 1238-1245.
- Murray, C. J. L., & Frenk, J. (2010). Ranking 37th—Measuring the performance of the U.S. health care system. *New England Journal of Medicine, 362*, 98-99. doi:10.1056/NEJMp0910064
- Ossorio, P. G. (2006). Conceptual-notational devices. In *The collected works of Peter G. Ossorio: Vol. V. The behavior of persons*. Ann Arbor, MI: Descriptive Psychology Press.
- Patient Protection and Affordable Care Act, Pub. L. No. 111-148, 124 Stat. 119 (2010). Retrieved from <http://www.gpo.gov/fdsys/pkg/PLAW-111publ148/pdf/PLAW-111publ148.pdf>
- Peek, C. J. (2008). Planning care in the clinical, operational, and financial worlds. In R. Kessler & D. Stafford (Eds.), *Collaborative medicine case studies: Evidence in practice* (pp. 25-38). New York, NY: Springer. doi:10.1007/978-0-387-76894-6_3
- Peek, C. J., Cohen, D. J., & deGruy, F. V., III. (2014). Research and evaluation in the transformation of primary care. *American Psychologist, 69*, 430-442. doi:10.1037/a0036223
- Poleshuck, E. L., & Woods, J. (2014). Psychologists partnering with obstetricians and gynecologists: Meeting the need for patient-centered models of women's health care delivery. *American Psychologist, 69*, 344-354. doi:10.1037/a0036044
- Pollard, R. Q., Jr., Betts, W. R., Carroll, J. K., Waxmonsky, J. A., Barnett, S., deGruy, F. V., III, . . . Kellar-Guenther, Y. (2014). Integrating primary care and behavioral health with four special populations: Children with special needs, people with serious mental illness, refugees, and deaf people. *American Psychologist, 69*, 377-387. doi:10.1037/a0036220
- Robert Graham Center. (2007). *The patient centered medical home: History, seven core features, evidence, and transformational change*. Washington, DC: Author.
- Schoen, C., Osborn, R., Squires, D., Doty, M., Pierson, R., & Applebaum, S. (2011). New 2011 survey of patients with complex care needs in eleven countries finds that care is often poorly coordinated. *Health Affairs, 30*(12), 2437-2448. doi:10.1377/hlthaff.2011.0923
- Solberg, L. I. (2011). How can we remodel practices into medical homes without a blueprint or a bank account? *Journal of Ambulatory Care Management, 34*(1), 3-9. doi:10.1097/JAC.0b013e3181ff7040
- Solberg, L. I., Glasgow, R. E., Unützer, J., Jaekels, N., Oftedahl, G., Beck, A., . . . Crain, A. L. (2010). Partnership research: A practical trial design for evaluation of a natural experiment to improve depression care. *Medical Care, 48*, 576-582. doi:10.1097/MLR.0b013e3181d8ea62
- Stancin, T., & Perrin, E. C. (2014). Psychologists and pediatricians: Opportunities for collaboration in primary care. *American Psychologist, 69*, 332-343. doi:10.1037/a0036046
- Starfield, B., Shi, L., & Macinko, J. (2005). Contribution of primary care to health systems and health. *Milbank Quarterly, 83*(3), 457-502. doi:10.1111/j.1468-0009.2005.00409.x
- World Health Organization. (2008a). *World Health Report calls for return to primary health care approach*. Retrieved from <http://www.who.int/mediacentre/news/releases/2008/pr38/en/>
- World Health Organization. (2008b). *The World Health Report 2008: Primary health care: Now more than ever*. Geneva, Switzerland: Author.