



Patient-centered medical home and integrated care in the United States: An opportunity to maximize delivery of primary care

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Abstract

The reciprocal relationship between mental and physical health is well established. Undiagnosed, untreated, and poorly managed mental health conditions are associated with numerous physical health complications, poor treatment adherence, and decreased quality of life. Despite growing evidence regarding the importance of effectively addressing these conditions in primary care, the rates of identification remain low and follow-up and management by primary care providers has been criticized. The objective of this review was to demonstrate the role of Patient-Centered Medical Home (PCMH) and mental health integration in addressing comprehensive health care needs in primary care patients, and to describe common barriers and facilitators to the implementation of these types of programs.

Keywords: Patient-centered medical home; integrated primary care; health care service delivery; mental health; chronic disease management; behavioral health integration

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Introduction

Primary care clinics are the first point of health care contact for many patients in the United States (US) and throughout the world. Primary care clinics serve an important function in the prevention and management of chronic disease. Additionally, primary care providers encounter many mental health and substance abuse problems that affect health outcomes for patients with chronic diseases and comorbid mental health conditions [1, 2]. Historically, primary care services were exclusively provided by a physician with minimal ancillary support. These traditional models of primary care delivery place a significant burden upon the physician to identify and manage both physical and mental health conditions, a position which can be

problematic given the perceived lack of confidence amongst some physicians in treating psychiatric conditions [3, 4]. Nevertheless, it is widely acknowledged that patients are more likely to discuss topics, such as stress, depression, and anxiety, with their primary care physician than to seek out specialty care from a psychiatrist or therapist.

Mental health care is increasingly provided in the context of a primary care visit, yet rates of identification remain low, creating a myriad of missed opportunities and further fragmenting service delivery [2, 5–7]. Given this schism, it can be argued that integrated models should be considered as an alternative to provide more comprehensive care and lessen the burden on physicians



and other medical providers. In fact, the American Academy of Family Physicians (AAFP) has encouraged the transformation of primary care practices from traditional to more comprehensive models of care. In 2007, the AAFP partnered with the American College of Physicians (ACP), the American Academy of Pediatrics (AAP), and the American Osteopathic Association (AOA) to develop joint principles describing the features of the Patient-Centered Medical Home (PCMH). These joint principles were then used to develop the PCMH recognition program by the National Committee for Quality Assurance (NCQA), in collaboration with the aforementioned medical societies [8]. The most recent revision of the NCQA PCMH standards explicitly sets the expectation that practices must demonstrate evidence of integration and collaboration with mental health and substance abuse providers [9]. In this article we have reviewed mental health integration and how it fits with the PCMH model, barriers and facilitators to implementation of the PCMH model, and the impact these methods of service delivery may have upon patient outcomes.

Medical homes

Medical homes were first introduced by the American Academy of Pediatrics during the 1960s [10]. Since then, the concept has evolved and taken on many forms in the health care arena. The recent health care reforms in the US have placed a greater emphasis on the need to provide high-quality, cost-effective primary care services. To that end, the Affordable Care Act (ACA), also referred to as ObamaCare, promotes two approaches (PCMH and Accountable Care Organizations [ACOs]). ACA legislation recognizes the important role that medical homes and ACOs play in health care delivery [11]. For the purpose of this article, we will focus on the PCMH model.

The PCMH is an approach to primary health care delivery that functions on the principles of comprehensive, patient-centered, coordinated care [2]. It emphasizes the need for greater access with on-going quality improvement and safety efforts to promote patient satisfaction and the effective practice of population health management [12, 13]. Moreover, the PCMH acknowledges the benefits of patient-centered, comprehensive, and coordinated care involving a diverse team of care providers, including mental health and substance abuse practitioners. The focus on patient-centered care ensures

that patients are receiving the care they need, while actively participating in health care decisions. The use of technology promotes coordination among providers.

The concept of integration

In general, integration is an organized approach to coordinating comprehensive health care services, from general medical care to specialty services, such as mental health and substance abuse treatment. The theoretical underpinnings of integration are based on the inherent understanding that a person's health is affected by a number of biological, psychological, and social factors, and as such, it is vital to provide care beyond the typical medical model of disease processes [4, 7, 14]. The specific definition of integration varies widely and the degree of integration tends to fall along a spectrum. Some health care providers, for example, have a coordinated system of referral to specialty mental health services, although other health care providers may offer these services on-site using a co-location model, such as a mental health professional who works within the primary care clinic, but not necessarily sharing the same medical record system or engaging in common, regular communication regarding the totality of the patient's needs and circumstances. Although integration is not precluded by physical location, the PCMH model lends itself to a collaborative practice approach wherein general medical providers and mental health providers are working side-by-side in the provision of services.

PCMH and mental health integration

The Mental Health Parity and Addiction Equity Act of 2008 established the mandate that insurance carriers provide the same coverage for mental health and substance abuse services as is provided for all other medical services. Coupled with the requirements of the ACA, these laws will likely draw millions of people into the US health care system, many by way of primary care clinics [15]. This natural triaging system creates opportunities to identify complex patient needs, including the need for mental health and substance abuse services.

Approximately one-fourth of primary care patients meet the criteria for mood, anxiety, or substance use disorders [2]. In traditional primary care settings, these concerns are typically addressed vis-à-vis referral to specialty mental health or



substance abuse treatment. Unfortunately, studies have shown that 40%–50% of patients with mood, anxiety, or substance use disorders never actually follow through with a specialist appointment [1, 2]. As a result, untreated mental health conditions may further impair functioning, complicate chronic disease management, and contribute to greater health care costs. The current system of care assumes that patients are not adversely affected by having their medical and mental health care providers operating independently, when in fact this fragmentation often results in redundant, conflicting, and costly treatment.

Comprehensive mental and physical care requires more than either can readily provide alone, and the coordination of care between systems is often poor [16, 17]. The literature supports models that facilitate closer coordination, showing significant benefits of integration on psychiatric illness care initiation and provision, as well as cost effectiveness [18–24]. Areas of research focus have included depression [25–31], chronic pain management, substance use disorders [32, 33], sexual health [34], and chronic diseases [35, 36]. Integrated services are also beneficial to patients with co-occurring mental health and chronic disease needs, as conditions are often interrelated. More longitudinal studies are needed to define the depth of impact on patient outcomes and the broader range of illnesses and their comorbidities [28, 37, 38]. Furthermore, as greater integration occurs, additional evaluations of practice level interventions are needed to assess and refine the model [39].

The PCMH model with mental health integration has been implemented and shown to be an effective and efficient means to improve access, quality, outcomes, and cost effectiveness [40, 41]. Integration also addresses disparities in mental health care for underserved and vulnerable groups. Moreover, primary care is perhaps best situated to tailoring culturally-competent, patient-centered, and comorbid-inclusive approaches, and to communicate patient treatment options and self-care [18, 42, 43]. Stigmas surrounding mental health care are also reduced in the primary care setting by abridging the referral process, providing a familiar environment, and bringing behavioral modification of risk factors into routine care [44].

Mental health and substance abuse providers, such as social workers, psychologists, and counselors, are instrumental in

delivering a wide spectrum of prevention and intervention services in these medical homes. These clinicians possess the knowledge and skills needed to effectively address the socio-behavioral aspects of chronic disease management, provide mental health and substance abuse treatment, and deliver preventive services, such as screening and brief intervention for alcohol use, tobacco cessation programs, and stress management classes [6, 20, 41, 45–47]. Despite these potential benefits, many primary care practices are reluctant to change their current model.

Barriers and facilitators to implementation

There are over 425,000 primary care physicians (i.e., internal medicine, family medicine/general practice, pediatrics, and obstetrics and gynecology) in the US. Additionally, the majority of more than 200,000 nurse practitioners and physician assistants deliver primary care services. Of these, approximately 35,500 providers, representing over 7000 practices, have received NCQA PCMH recognition [48]. Although this figure does not account for practices that are recognized or accredited by programs other than NCQA or those who have chosen not to seek formal designation, the primary care system as a whole remains more aligned with the traditional model of care.

A number of barriers to implementing the PCMH model and integrated care have been identified. Among the most commonly reported are time constraints, reimbursement issues, resistance to change, difficulties with the PCMH recognition process, small practice size, and lack of specialty personnel [1, 15, 49–53]. Mental health and substance abuse providers also report that the absence of a physician champion also serves as a barrier to successful implementation [45].

Philosophically, providers seem to accept the idea that these models are beneficial to patients; however, the challenges, particularly those related to upfront costs and time commitment, have deterred many from initiating a change. In response, the NCQA and other organizations in the public and private sectors have worked collaboratively with the government to develop incentives and support programs [2, 10]. Additionally, a variety of resources are available to provide guidance to practices with respect to implementation efforts.

A growing body of literature has examined the characteristics that are needed to ensure successful implementation.



Overwhelmingly, supportive leadership has been cited as a prominent facilitator [8, 10, 54, 55]. Other facilitators include the availability of coaching or facilitating services, supportive organizational culture, adequate information technology resources, financial incentives, and larger practice size [53, 54, 56, 57]. Bodenheimer and colleagues [8] developed a tiered conceptual model involving ten building blocks which they determined to be reflective of primary care practices that were successful in their transformation efforts, including engaged leadership, data-driven improvement, empanelment, and team-based care [8]. The authors asserted that these four fundamental attributes provided a solid base for incorporating other aspects of the PCMH.

In a survey of 123 PCMH practices, Kessler et al. [6] reported that over 40% of practices had a mental health clinician on site; however, they also noted that full integration has yet to be achieved. In particular, Kessler et al. [6] found variances in the way in which mental health and substance abuse care was provided when compared to general medical care. For instance, there were differences in scheduling and availability of appointments, the use of electronic health records, and the availability of evidence-based protocols [6].

Conclusion

The US health care system has undergone significant changes over the past decade. The passage of key legislation has forced health care providers, insurance companies, and advocates to consider effective means of delivering accessible, high quality, and cost-effective care. Current recommendations encourage the transformation of primary care from its traditional mono-disciplinary approach to one that seeks to involve a multitude of clinicians working in collaboration to deliver comprehensive care that meets both the physical and mental health needs of patients.

The PCMH model with mental health integration shows promise in meeting the challenges associated with health care reform (i.e., the need to respond to the increase in number of patients needing mental health and substance abuse services), yet it is imperative that existing barriers to implementation be adequately addressed to achieve sustainability. In addition to addressing the practical barriers discussed above, it is important to consider ways to promote a cultural

shift among health care providers. Moreover, innovative reimbursement models, rather than the traditional fee-for-service, are warranted to support and promote the delivery of high-value primary, behavioral, and preventive services, and reward improved health outcomes while reducing total health care costs.

Conflict of interest

The authors declare no conflict of interest.

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References

1. Kathol RG, Degruy F, Rollman BL. Value-based financially sustainable behavioral health components in patient-centered medical homes. *Ann Fam Med* 2014;12(2):172–5.
2. Katon WJ, Unutzer J. Health reform and the Affordable Care Act: the importance of mental health treatment to achieving the triple aim. *J Psychosom Res* 2013;74(6):533–7.
3. Thielke S, Vannoy S, Unutzer J. Integrating mental health and primary care. *Prim Care* 2007;34(3):571–92, vii.
4. Loeb DF, Bayliss EA, Binswanger IA, Candrian C, deGruy FV. Primary care physician perceptions on caring for complex patients with medical and mental illness. *J Gen Intern Med* 2012;27(8):945–52.
5. Enthoven AC. Integrated delivery systems: the cure for fragmentation. *Am J Manag Care* 2009;15(10 Suppl):S284–90.
6. Kessler R, Miller BF, Kelly M, Graham D, Kennedy A, Littenberg B, et al. Mental health, substance abuse, and health behavior services in patient-centered medical homes. *J Am Board Fam Med* 2014;27(5):637–44.
7. Levey SM, Miller BF, Degruy FV. Behavioral health integration: an essential element of population-based healthcare redesign. *Transl Behav Med* 2012;2(3):364–71.
8. Bodenheimer T, Ghorob A, Willard-Grace R, Grumbach K. The 10 building blocks of high-performing primary care. *Ann Fam Med* 2014;12(2):166–71.
9. National Committee for Quality Assurance. New NCQA Patient-Centered Medical Home Standards Raise the Bar. Washington, DC: NCQA; 2014.
10. Carrier E, Gourevitch MN, Shah NR. Medical homes: challenges in translating theory into practice. *Med Care* 2009;47(7):714–22.



11. Bao Y, Casalino LP, Pincus HA. Behavioral health and health care reform models: patient-centered medical home, health home, and accountable care organization. *J Behav Health Serv Res* 2013;40(1):121–32.
12. Singh H, Graber M. Reducing diagnostic error through medical home-based primary care reform. *J Am Med Assoc* 2010;304(4):463–4.
13. DeVries A, Li CH, Sridhar G, Hummel JR, Breidbart S, Barron JJ. Impact of medical homes on quality, healthcare utilization, and costs. *Am J Manag Care* 2012;18(9):534–44.
14. Dickinson WP, Miller BF. Comprehensiveness and continuity of care and the inseparability of mental and behavioral health from the patient-centered medical home. *Fam Syst Health* 2010;28(4):348–55.
15. Barry CL, Huskamp HA. Moving beyond parity—mental health and addiction care under the ACA. *N Engl J Med* 2011;365(11):973–5.
16. Beehler GP, Wray LO. Behavioral health providers' perspectives of delivering behavioral health services in primary care: a qualitative analysis. *BMC Health Serv Res* 2012;12:337.
17. Olfson M, Blanco C, Wang S, Greenhill LL. Trends in office-based treatment of adults with stimulants in the United States. *J Clin Psychiatry* 2013;74(1):43–50.
18. World Health Organization, World Organization of Family Doctors. Integrating mental health into primary care: a global perspective. World Health Organization; 2008.
19. Bywood PT, Brown L, Oliver-Baxter J. Organisational integration: Challenges, models and mechanisms to facilitate integrated care. *Int J Integrate Care* 2013;13(6).
20. Auxier A, Runyan C, Mullin D, Mendenhall T, Young J, Kessler R. Behavioral health referrals and treatment initiation rates in integrated primary care: a Collaborative Care Research Network study. *Transl behav Med* 2012;2(3):337–44.
21. Kessler R. Mental health care treatment initiation when mental health services are incorporated into primary care practice. *J Am Board Fam Med* 2012;25(2):255–9.
22. Schöttle D, Karow A, Schimmelmann BG, Lambert M. Integrated care in patients with schizophrenia: results of trials published between 2011 and 2013 focusing on effectiveness and efficiency. *Curr Opin Psychiatry* 2013;26(4):384–408.
23. Woltmann E, Grogan-Kaylor A, Perron B, Georges H, Kilbourne AM, Bauer MS. Comparative effectiveness of collaborative chronic care models for mental health conditions across primary, specialty, and behavioral health care settings: systematic review and meta-analysis. *Am J Psychiatry* 2012;169(8):790–804.
24. Bryan CJ, Corso ML, Corso KA, Morrow CE, Kanzler KE, Ray-Sannerud B. Severity of mental health impairment and trajectories of improvement in an integrated primary care clinic. *J Consult Clin Psychol* 2012;80(3):396–403.
25. Archer J, Bower P, Gilbody S, Lovell K, Richards D, Gask L, et al. Collaborative care for depression and anxiety problems. *Cochrane Database Syst Rev* 2012;10:CD006525. DOI: 10.1002/14651858.CD006525.pub2.
26. Barkil-Oteo A. Collaborative care for depression in primary care: how psychiatry could “troubleshoot” current treatments and practices. *Yale J Biol Med* 2013;86(2):139–46.
27. Fuller JD, Perkins D, Parker S, Holdsworth L, Kelly B, Roberts R, et al. Effectiveness of service linkages in primary mental health care: a narrative review part 1. *BMC Health Serv Res* 2011;11(1):72.
28. Huang Y, Wei X, Wu T, Chen R, Guo A. Collaborative care for patients with depression and diabetes mellitus: a systematic review and meta-analysis. *BMC Psychiatry* 2013;13(1):260.
29. Interian A, Lewis-Fernández R, Dixon LB. Improving treatment engagement of underserved US racial-ethnic groups: a review of recent interventions. *Psychiatr Serv* 2013;64(3):212–22.
30. Jortberg BT, Miller BF, Gabbay RA, Sparling K, Dickinson WP. Patient-centered medical home: how it affects psychosocial outcomes for diabetes. *Curr Diab Rep* 2012;12(6):721–8.
31. Miller CJ, Grogan-Kaylor A, Perron BE, Kilbourne AM, Woltmann E, Bauer MS. Collaborative chronic care models for mental health conditions: Cumulative meta-analysis and meta-regression to guide future research and implementation. *Med Care* 2013;51(10):922–30.
32. Haibach JP, Beehler GP, Dollar KM, Finnell DS. Moving toward integrated behavioral intervention for treating multimorbidity among chronic pain, depression, and substance-use disorders in primary care. *Med Care* 2014;52(4):322–7.
33. Jonas DE, Garbutt JC, Amick HR, Brown JM, Brownley KA, Council CL, et al. Behavioral counseling after screening for alcohol misuse in primary care: a systematic review and meta-analysis for the US Preventive Services Task Force. *Ann Intern Med* 2012;157(9):645–54.
34. U.S. Preventive Services Task Force. Behavioral counseling to prevent sexually transmitted infections: US Preventive Services Task Force recommendation statement. *Ann Intern Med* 2008;149(7):491–6.
35. Pirraglia PA, Rowland E, Wu WC, Friedmann PD, O'Toole TP, Cohen LB, et al. Benefits of a primary care clinic co-located and integrated in a mental health setting for veterans with serious mental illness. *Prev Chronic Dis* 2012;9:E51.



36. Whitlock EP, Williams SB. The primary prevention of heart disease in women through health behavior change promotion in primary care. *Women's Health Issues* 2003;13(4):122–41.
37. Bradford DW, Cunningham NT, Slubicki MN, McDuffie JR, Kilbourne AM, Nagi A, et al. An evidence synthesis of care models to improve general medical outcomes for individuals with serious mental illness: a systematic review. *J Clin Psychiatry* 2013;74(8):e754–64.
38. Watson LC, Amick HR, Gaynes BN, Brownley KA, Thaker S, Viswanathan M, et al. Practice-based interventions addressing concomitant depression and chronic medical conditions in the primary care setting: A systematic review and meta-analysis. *J Prim Care Community Health* 2013;4(4):294–306.
39. Peikes D, Zutshi A, Genevro JL, Parchman ML, Meyers DS. Early evaluations of the medical home: building on a promising start. *Am J Manag Care* 2012;18(2):105–16.
40. McLeigh JD, Sianko N. What should be done to promote mental health around the world? *Am J Orthopsychiatry* 2011;81(1): 83–9.
41. Croghan TW, Brown JD. Integrating mental health treatment into the patient centered medical home. Rockville, MD: Agency for Healthcare Research and Quality Rockville; 2010.
42. Bridges AJ, Andrews AR, Villalobos BT, Pastrana FA, Cavell TA, Gomez D. Does integrated behavioral health care reduce mental health disparities for Latinos? Initial findings. *J Lat Psychol* 2014;2(1):37–53.
43. Sanchez K, Chapa T, Ybarra R, Martinez ON. Eliminating health disparities through culturally and linguistically centered integrated health care: Consensus statements, recommendations, and key strategies from the field. *J Health Care Poor Underserved* 2014;25(2):469–77.
44. Sadock E, Auerbach SM, Rybarczyk B, Aggarwal A. Evaluation of integrated psychological services in a university-based primary care clinic. *J Clin Psychol Med Settings* 2014;21(1):19–32.
45. Hawk M, Ricci E, Huber G, Myers M. Opportunities for social workers in the patient centered medical home. *Soc Work Public Health* 2014;30(2):175–84.
46. Miranda J, Azocar F, Organista KC, Dwyer E, Areane P. Treatment of depression among impoverished primary care patients from ethnic minority groups. *Psychiatr Serv* 2003;54(2):219–25.
47. Babor TF, Higgins-Biddle JC, Dauser D, Burleson JA, Zarkin GA, Bray J. Brief interventions for at-risk drinking: patient outcomes and cost-effectiveness in managed care organizations. *Alcohol Alcohol* 2006;41(6):624–31.
48. Hodach R. Provider-led population health management: key strategies for healthcare in the next transformation. Bloomington: AuthorHouse; 2014.
49. Fernald DH, Deaner N, O'Neill C, Jortberg BT, de Gruy FV, Dickinson WP. Overcoming early barriers to PCMH practice improvement in family medicine residencies. *Fam Med* 2011;43(7):503–9.
50. Koshy RA, Conrad DA, Grembowski D. Lessons from Washington state's medical home payment pilot: What it will take to change American health care. *Popul Health Manag* 2015. [Epub ahead of print]
51. Alexander JA, Cohen GR, Wise CG, Green LA. The policy context of patient centered medical homes: perspectives of primary care providers. *J Gen Intern Med* 2013;28(1):147–53.
52. Bauer MS, Leader D, Un H, Lai Z, Kilbourne AM. Primary care and behavioral health practice size: the challenge for health care reform. *Med Care* 2012;50(10):843–8.
53. Friedberg MW, Safran DG, Coltin KL, Dresser M, Schneider EC. Readiness for the patient-centered medical home: structural capabilities of Massachusetts primary care practices. *J Gen Intern Med* 2009;24(2):162–9.
54. Fontaine P, Whitebird R, Solberg LI, Tillema J, Smithson A, Crabtree BF. Minnesota's early experience with medical home implementation: Viewpoints from the front lines. *J Gen Intern Med* 2014. [Epub ahead of print]
55. Hunter CL, Goodie JL. Operational and clinical components for integrated-collaborative behavioral healthcare in the patient-centered medical home. *Fam Syst Health* 2010;28(4):308–21.
56. Jaén CR, Ferrer RL, Miller WL, Palmer RF, Wood R, Davila M, et al. Patient outcomes at 26 months in the Patient-centered Medical Home National Demonstration Project. *Ann Fam Med* 2010;8(Suppl 1):S57–67; S92.
57. Nutting PA, Crabtree BF, Stewart EE, Miller WL, Palmer RF, Stange KC, et al. Effect of facilitation on practice outcomes in the National Demonstration Project Model of the Patient-Centered Medical Home. *Ann Fam Med* 2010;8(Suppl 1): S33–44; S92.