Family Medicine and Community Health
ORIGINAL RESEARCH

Evaluating the process of mental health and primary care integration: The Vermont Integration Profile

Rodger Kessler

Abstract

Objective: We developed and tested a measure to identify level of primary care behavioral health integration. We produced a thirty item, six domain electronically delivered measure, and a total score.

Methods: We generated a convenience sample of 137 survey responses, including 104 primary care practices. We provided each practice a summary of their own data, and generated a data base of all submissions. We calculated descriptive statistics.

Results: The mean total score was 56/100. The Vermont Integration Profile (VIP) discriminated between types of practices in the direction hypothesized. Initial test retest reliability was good.

Conclusion: The VIP demonstrated good feasibility and construct validity, initial reliability, low provider demand and good discrimination between types of practices.

Keywords: Vermont Integration Profile; integration; implementation

CORRESPONDING AUTHOR:
Rodger Kessler
Associate Professor, University of Vermont - Family Medicine, 89 Beaumont Ave Given Courtyard 4th Floor, Burlington, Vermont 05405, USA
E-mail:rodger.kessler@med.uvm.edu

Received 13 March 2015;
Accepted 20 March 2015

Introduction

Integrated health care is a primary care, team-based approach to providing comprehensive and continuous care for health risk factor prevention, diagnosis, treatment, and management. The Patient-Centered Medical Home is the emerging model for integrated health care delivery. The model was developed to correct the fragmentation in health care services and to focus on acute care, which has resulted in an epidemic of chronic non-communicable diseases. It has been shown that integrated health care can improve clinical outcomes and quality of life, and effectively reduce hospitalizations, emergency room visits, average lengths of stay, and health expenditures [1]. It is also recognized the behavioral conditions, such as depression, anxiety, and substance abuse are highly co-morbid with chronic medical conditions. Furthermore, lifestyle behaviors, such as poor nutrition, lack of physical activity, and tobacco smoking underlie poor outcomes for chronic medical diseases and must be a key component of integrated care. If primary care is to be transformed into patient-centered care, mental health, substance abuse, and health behavior services must be integrated into the delivery of primary and specialty medical care [2]. In China, integrated behavioral health has not been widely adopted, but momentum appears to be increasing to incorporate this model in an effort to address the

Family Medicine and Community Health 2015;3(1):63–65
www.fmch-journal.org DOI 10.15212/FMCH.2015.0112

growing epidemic of chronic, non-communicable chronic diseases in China [3].

It has been established that such services are the most difficult medical sub-specialty services for primary care physicians to obtain [4]. Kathol [5] estimated that 90% of the overall need for behavioral services is in primary care, while only 10% of the workforce is involved in primary care. We have been pursuing the integration of clinicians trained in primary care behavioral health into primary care practices. We know very little about the implementation challenges, the impact of different ways of providing behavioral health services to primary care, or if a variation in the degree of integration of such services impacts improved patient experiences, improved outcomes, and the cost of care [6].

The nomenclature or descriptive language that identifies the content and process of integration efforts has not been established. Recently, the theoretical position of Peek [7, 8], the Lexicon of Collaborative Care, identified the core descriptive clauses of the paradigm case of collaborative behavioral health in primary care.

This is important work, but still leaves the need for a set of standardized measures of integrated care processes for use in practice implementation, improvement efforts, and research.

To date, measurement of care processes used in collaborative care implementation has been infrequent and non-systematic. Macchi [9] reviewed the dimensions of frequently-used collaborative care checklists and observed little commonality between the checklists, and no psychometric assessment of any of the most frequently used checklists. As a result, we do not have a theoretically-generated, validated measure of collaborative or integrated practice performance.

The VIP

The Vermont Integration Profile (VIP; [10]) is a 6-domain, 30-item, electronically-administered measure of integrated care processes derived from the Peek paradigm case of collaborative primary care practice. Peek suggested that a fully-integrated model of care would have eight dimensions. Based on multiple reviews and analyses, the VIP identifies six dimensions and a total score (workflow, clinical services workspace, shared care and integration, case identification, and patient engagement). We have tested the measure in >170 practices. Our overall goal is to assess whether or not the VIP can provide primary care practices with a brief, validated, actionable tool to rapidly generate information to support practice improvement, and conduct further research on the effects of different levels of integration on clinical, operational, and financial outcomes. Now in version 5, the VIP can be completed on paper or via a secure web portal (https://redcap.uvm.edu/redcap/surveys/?s=vEpGbwyFE6) in approximately 10 min.

At the time of data analysis for this paper, 137 surveys were completed by staff at 104 practices in 29 states. The respondents included 52 BHCs, 22 PCPs, 49 managers, and 4 student BHCs. The practices serve inner city (10), urban (38), suburban (20), rural (32), and frontier (4) communities; 35 practices are community health centers and 19 are community mental health centers, and 35 were family medicine practices, 15 were internal medicine practices, 2 were pediatric practices, 1 was an obstetrics practice, 19 were mental health practices, and the remainder were multi-specialty practices. The practices tended to be large, with 94 reporting >10 providers and only 5 practices with <6 providers.

The mean of the 137 total integration scores was 56 (standard deviation=20) with a median of 58 and a range of 8–100. The median domain scores were as follows: workflow (58); clinical services (67); workspace (75); shared care and integration (50); case identification (50); and patient engagement (50). We had previously identified five practices around the country as the consensus choice of BH experts as “exemplar practices,” representing the most advanced BH integration. We also anticipated that the community mental health centers would have lower levels of integration than other practices. The average total integration scores of 44 for CMHCs, 56 for general practices, and 86 for exemplars suggest that the VIP is useful in discriminating levels of integration ($F=20.21$; $p<0.0001$ [ANOVA]). Among 10 subjects who repeated the survey an average of 45 days later, the mean change in score was 3.7, with a range from –6.5 to +20.3, providing preliminary evidence of good test-retest reliability.

In an additional test, PCPs and BHCs with IBH experience ranked four practice scenarios for degree of IBH and completed the VIP for each scenario. There was perfect agreement on the gestalt rank order of the scenarios (as intended) and a very high correlation between the rankings and the total integration scores (Spearman’s $\rho=-0.73$; $p=0.0003$).

Summary

Every system is perfectly designed to generate the outcomes achieved [11] in response to a significant medical problem, i.e., the high prevalence of mental health substance use and co-morbid chronic diseases. Enormous effort has been expended to address this within and outside of primary care. While well-intentioned, there has been no easily used measurement that describes and rates these efforts or allows comparison and identification of critical elements associated with success or failure. We have developed and tested such a measure, and in sum, the initial experience with the VIP suggests good feasibility and face validity, low-response burden, high within-subject reliability, and good discrimination.

Integrated health care is new to China, with relatively few studies compared to Western nations [12]. A recent study demonstrated that integrated care interventions for diabetes results in higher satisfaction among Chinese elderly than treatment as usual [13]. Chan et al. [14] described a model for integrated care treatment of diabetes using a physician-nurse team and a web-based portal that incorporates care protocols and risk algorithms for decision support. Given the growing focus in Chinese health care reform on prevention and disease management, it is likely that integrated behavioral health programs will increase substantially. The VIP may be an excellent tool to measure the level of integration at baseline and to use a repeated measure design to evaluate the impact of increased levels of integrated care on patient outcomes. This approach will also facilitate comparison with Chinese and Western clinics on the level of integration and patient outcomes.

Conflict of interest

The author declares no conflict of interest.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

References

1. Nielsen M, Olayiwola JN, Grundy P, Grumbach K, Shaljian M, editors. The Patient-Centered Medical Home's Impact on Cost & Quality: An Annual Update of the Evidence, 2012–2013. Patient-Centered Primary Care Collaborative; 2014.
2. Baird M, Blount A, Brungardt S, Dickinson P, Dietrich A, Epperly T, et al. Joint principles: integrating behavioral health care into the patient-centered medical home. Ann Fam Med 2014;12(2):184–5.
3. O'Donnell RR. New models for chronic disease management in the United States and China. Fam Med Community Health 2014;2:13–9.
4. Cunningham PJ. Beyond parity: primary care physicians' perspectives on access to mental health care. Health Aff 2009;28(3):w490–501.
5. Kathol R. Financing MH care through PH benefits: unifying the health system. Raleigh Durham NC: Integrating the Primary Care System; 2009.
6. Berwick DM, Nolan TW, Whittington J. The triple aim: care, health, and cost. Health Aff 2008;27(3):759–69.
7. Peek CJ. Integrated behavioral health and primary care: a common language. In: Integrated behavioral health in primary care. New York: Springer; 2013. pp. 9–31.
8. Peek CJ and the National Integration Academy Council. Lexicon for Behavioral Health and Primary Care Integration: Concepts and Definitions Developed by Expert Consensus. AHRQ Publication No.13-IP001-EF. Rockville, MD: Agency for Healthcare Research and Quality, 2013. Available from:http://integration-academy.ahrq.gov/sites/default/files/Lexicon.pdf.
9. Macchi CR, Auxier A, Mullin D, Kessler R. The Vermont Integration Profile: Conceptual framework, psychometrics and applications. Collaborative Family Health Association; 2014.
10. Kessler R, Auxier A, Mullin D, Macchi CR. The Vermont Integration Profile: Conceptual framework, psychometrics and applications. STFM Conference on Practice Improvement; 2014.
11. Batalden P, Davidoff F. Teaching quality improvement: the devil is in the details. J Am Med Assoc 2007;298(9):1059–61.
12. Sun X, Tang W, Ye T, Zhang Y, Wen B, Zhang L. Integrated care: a comprehensive bibliometric analysis and literature review. Int J Integr Care 2014;14:URN:NBN:NL:UI:10-1-114784.
13. Chao J, Xie W, Yang Y, Liu H, Jiang L, Lue P. The effects of integrated health management model on the satisfaction among Chinese elderly. Arch Gerontol Geriatr 2013;57:27–31.
14. Chan J, Ozaki R, Luk A, Kong A, Ma R, Chow F, et al. Delivery of integrated diabetes care using logistics and information technology – the Joint Asia Diabetes Evaluation (JADE) program. Diabetes Res Clin Pract 2014;10:S295–304.