

Redesigning Primary Care Practice to Incorporate Health Behavior Change

Prescription for Health Round-2 Results

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Introduction

When Prescription for Health was conceived by the Robert Wood Johnson Foundation (the Foundation), primary care practice-based research networks (PBRNs) and their community, practice, academic, and healthcare system partners began with hard-won local knowledge.¹ They worked to integrate this with a platform of basic organizational and behavioral science research to provide a foundation on which to build a program for testing practical approaches in frontline clinical practice to help people change unhealthy behaviors. This intellectual foundation included the components of the chronic care model,² the 5A's model of behavioral counseling,³ the transtheoretical model of behavior change,⁴ and models of diffusion.⁵ It was also apparent that the high prevalence and clustering of unhealthy behaviors within individuals and populations⁶ would make addressing multiple behaviors and problems—sometimes simultaneously—a pragmatic necessity in primary care settings. It was hoped that addressing multiple behaviors would result in synergy among practice systems, patients, families, and communities, and thereby position redesigned primary care practices to contribute to decreasing premature mortality, avoidable morbidity, and escalating healthcare expenditures.⁷

After decades of limited success in incorporating health behavior issues into medical practice, a key challenge was how to engage those primary care clinicians who are in small- to medium-sized primary care practices, the dominant model of primary care delivery in the healthcare system. The strategy selected was to work with the nation's PBRNs.⁸ Thirty years from their inception, approximately 100 of these networks of

primary care practices were in existence, comprising mostly full-time clinicians working in their communities, asking and answering questions important to the health of their patients. Practices in these PBRNs are known to be similar to randomly chosen primary care practices⁹ and to be relevant sites for research.¹⁰ The Foundation decided to offer funding to primary care PBRNs to test their best ideas to help their patients modify their behaviors related to tobacco use, unhealthy diet, physical inactivity, and risky alcohol use. All projects were required to develop approaches capable of addressing two or more of these behaviors in the first round of Prescription for Health and all four target behaviors in the second round.

The feasibility of working with primary care practices was shown with a first round of work by 17 PBRNs that was summarized in a supplemental issue of the *Annals of Family Medicine*.^{11,12} This early work confirmed that primary care practices were interested and willing to address health behavior issues when supported by grant funds and PBRN infrastructure. It established that health behavior counseling can be done in frontline primary care practices, and that doing so requires substantive practice redesign. It revealed the need and possibility of the explicit integration of primary care with public health and community resources. It also confirmed the utility and limitations of adapting existing models and theories into primary care, and that a co-evolutionary approach across projects created synergistic learning. This round of work was brief, focused on feasibility testing, and did not fund comprehensive trials. These successes inspired another round of work that is the basis for the papers¹³⁻²⁴ in this supplement to the *American Journal of Preventive Medicine*.

In Round 2 of Prescription for Health, ten PBRNs (five PBRNs from Round 1 and five new to the program) implemented 2-year studies that tested behavior-change counseling strategies, and again joined together with an imbedded evaluation team to learn what happened. The tested interventions included a broad mix of strategies¹⁸ and required a spectrum of evaluative methods, including surveys, interviews, focus groups, medical record reviews, site visits, and collaborative meetings. All PBRNs collected a set of common patient-oriented measures²⁵ and provided systematic reports about prac-

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tice organization and function. Each network used the Reach, Efficacy/Effectiveness, Adoption, Implementation, Maintenance (RE-AIM) framework²⁶ to aid and guide their evaluation. They shared with the evaluation team real-time experience about their implementation processes via a secure website diary system provided by the Agency for Healthcare Research and Quality, and also reported expenditure data from a subset of their practices to estimate the expenses that practices would have to incur to implement their chosen strategy.²²

The prevalence and fundamental role that these four unhealthy behaviors play as drivers of premature death and avoidable suffering continue to be confirmed,^{27,28} making the work of Prescription for Health relevant and timely. This supplement creates an anchoring point for accessing the results of Prescription for Health. It incorporates manuscripts that report overarching conclusions derived by examining practice-based experience across PBRNs^{17–22} as well as primary results from four PBRNs.^{13–16}

As Prescription for Health concludes, the concept of the medical home has emerged as a cornerstone to help achieve the key policy objectives of improved quality, reduction of disparities in health and health care, and affordability of care.^{29,30} This medical-home concept is modernized primary care with rich interfaces—still in development—between patients and the healthcare system. The medical home now enjoys widespread support from professional organizations, government agencies, and particularly purchasers of health care.^{29,30} The emerging medical home and its architects are the likely primary targets for the results from Prescription for Health and this supplement.

The process of getting from the practice of yesterday to this practice of tomorrow is underway, and it is crucial to recognize both the need and the opportunity to incorporate health behavior counseling into the core business of the medical home. The work of Prescription for Health confirms that this requires not a few minor adjustments but the substantive redesign of how highly personalized, patient-centered care is rendered. Success may depend on adaptation to local situations.¹⁷ It leans heavily on teamwork and new roles for office staff; on the routine, systematic assessment of health behaviors and the use of this information; on community linkages; and on robust clinical information systems^{13–19}—virtually all of which not only are unsupported in the current frontline clinical environment, but also often are punished. It would be difficult to overstate how hard it is to change things at the micro level of a \$2 trillion/year enterprise,³¹ and also how urgent is the need for healthcare reform to make this transformative change possible and accessible to the entire population.

While much more research and development remain before widely available, high-performance frontline practice is achieved, the situation is changing. Instead of innovation being held back by a lack of knowledge

and desire, now inappropriate primary care payment strategy is the key barrier. A classic chicken-and-egg problem exists: The change that is needed requires funding for acquisition and redesign, but the needed funding is conditional on the change already having been made.

Promising approaches to revising the payment systems that enable such redesigned frontline practice exist.^{32,33} Approaches to the progressive, continuing improvement of practice performance exist as well.^{34–36} Technology sufficient for the information and management requirements of superior frontline practice is within reach.³⁷ A workforce well-trained in nursing, medicine, pharmacy, mental health, and other fields exists, yearning to enter a new world of practice that makes big differences in the lives of millions of people.³⁸ The stunning impact of behavior on health, disease, and illness is obvious, and incorporating appropriate attention to behavior in frontline medicine is feasible and valuable, as revealed by the work of Prescription for Health. This promising set of circumstances justifies some optimism and begs for immediate further attention from government, purchasers of health care, foundations, patient-advocacy organizations, and professional societies.

The union of frontline primary care practice—the acknowledged foundation for effective health care—with the knowledge and skills from public health, decades of behavioral science research, and now practice-based research is at hand. Health behavior counseling in primary care practices is not a problem. It is a solution to some of the nation's most pressing health and healthcare problems, and it is trying to happen now.

This work was supported by an American Cancer Society Clinical Research Fellowship grant to Dr. Stange.

Our very special thanks to: American Academy of Family Physicians National Research Network (AAFP NRN); Principal Investigator—Wilson Pace, MD; Virginia Ambulatory Care Outcomes Research Network (ACORN), Virginia Commonwealth University; Principal Investigator—Steven Woolf, MD, MPH; Colorado Research Network (CaReNet), University of Colorado Denver; Principal Investigator—Perry Dickinson, MD; Center to Enhance Child Health (CECH), Dartmouth Medical School; Principal Investigator—Ardis Olson, MD; Great Lakes Research into Practice Network (GRIN), Michigan State University; Principal Investigator—Jodi Holthrop, PhD; North Carolina Family Medicine Research Network (NCFMRN), University of North Carolina at Chapel Hill; Principal Investigator—Katrina Donahue, MD, MPH; New York City Research and Improvement Networking Group (NYCRING), Albert Einstein College of Medicine; Principal Investigator—Diane McKee, MD, MS; Oklahoma Physician Resource/Research Network (OKPRN), University of Oklahoma Health Sciences Center; Principal Investigator—James Mold, MD, MPH; Practice Research Network of San Antonio (PRENSA), University of Texas Health Sciences Center at San Antonio; Principal Investigator—Robert Ferrer, MD, MPH;

Research Association of Practices (RAP), Case Western Reserve University; Principal Investigator—Susan Flocke, PhD.

No financial disclosures were reported by the authors of this paper.

References

1. Flocke SA, Crabtree BF, Stange KC. Clinician reflections on promotion of healthy behaviors in primary care practice. *Health Policy* 2007;84(2-3):277-83.
2. Improving Chronic Illness Care. The chronic care model. www.improvingchroniccare.org.
3. Whitlock EP, Orleans CT, Pender N, Allan J. Evaluating primary care behavioral counseling interventions: an evidence-based approach. *Am J Prev Med* 2002;22:267-84.
4. Prochaska JO, DiClemente CC. Stages and processes of self-change of smoking: toward an integrative model of change. *J Consult Clin Psychol* 1983;51:390-5.
5. Rogers EM. A prospective and retrospective look at the diffusion model. *J Health Commun* 2004;9:13-9.
6. Fine LJ, Philogene GS, Gramling R, Coups EJ, Sinha S. Prevalence of multiple chronic disease risk factors. 2001 National Health Interview Survey. *Am J Prev Med* 2004;27(2S):18-24.
7. Goldstein MG, Whitlock EP, DePue J. Multiple behavioral risk factor interventions in primary care: summary of research evidence. *Am J Prev Med* 2004;27(2S):61-79.
8. Green LA, Hickner J. A short history of primary care practice-based research networks: from concept to essential research laboratories. *J Am Board Fam Med* 2006;19:1-10.
9. Green LA, Miller RS, Reed FM, Iverson DC, Barley GE. How representative of typical practice are practice-based research networks? A report from ASPN. *Arch Fam Med* 1993;2:939-49.
10. Nutting PA, Beasley JW, Werner JJ. Practice-based research networks answer primary care questions. *JAMA* 1999;281:686-8.
11. Green LA. Prescription for Health: Round 1 initial results. *Ann Fam Med* 2005;3(2S):S2-S3.
12. Cifuentes M, Fernald DH, Green LA, et al. Prescription for health: changing primary care practice to foster healthy behaviors. *Ann Fam Med* 2005;3(2S):S4-S12.
13. Krist AH, Woolf SH, Frazier CO, et al. An electronic linkage system for health behavior counseling: effect on delivery of the 5A's. *Am J Prev Med* 2008;35(5S):S350-S358.
14. Olson AL, Gaffney CA, Lee PW, Starr P. Changing adolescent health behaviors: the Healthy Teens counseling approach. *Am J Prev Med* 2008;35(5S):S359-S364.
15. Holtrop JS, Dosh SA, Torres T, Thum YM. The community health educator referral liaison (CHERL): a primary care practice role for promoting healthy behaviors. *Am J Prev Med* 2008;35(5S):S365-S372.
16. Aspy CB, Mold JW, Thompson DM. Integrating screening and interventions for unhealthy behaviors into primary care practices. *Am J Prev Med* 2008;35(5S):S373-S380.
17. Cohen DJ, Crabtree BF, Etz RS, et al. Fidelity versus flexibility: translating evidence-based research into practice. *Am J Prev Med* 2008;35(5S):S381-S389.
18. Etz RS, Cohen DJ, Woolf SH. Bridging primary care practices and communities to promote healthy behaviors. *Am J Prev Med* 2008;35(5S):S390-S397.
19. Hung DY, Glasgow RE, Dickinson LM, et al. The chronic care model and relationships to patient health status and health-related quality of life. *Am J Prev Med* 2008;35(5S):S398-S406.
20. Balasubramanian BA, Cohen DJ, Clark EC, et al. Practice-level approaches for behavioral counseling and patient health behaviors. *Am J Prev Med* 2008;35(5S):S407-S413.
21. Fernald DH, Froshaug DB, Miriam Dickinson LM. Common measures, better outcomes (COMBO): a field test of brief health behavior measures in primary care. *Am J Prev Med* 2008;35(5S):S414-S422.
22. Dodoo MS, Krist A, Cifuentes M, Green LA. Start-up and incremental practice expenses for behavior change interventions in primary care. *Am J Prev Med* 2008;35(5S):S423-S430.
23. Thompson RS. The Prescription for Health Initiative. Some steps on the road to success: what will it take to complete the journey? *Am J Prev Med* 2008;35(5S):S431-S433.
24. Green LW. From Alma Ata to Prescription for Health: correcting 30 years of drift in primary care prevention and behavioral interventions. *Am J Prev Med* 2008;35(5S):S434-S436.
25. Glasgow RE, Ory MG, Klesges LM, Cifuentes M, Fernald DH, Green LA. Practical and relevant self-reported measures of patient health behaviors for primary care research. *Ann Fam Med* 2005;3:73-81.
26. Glasgow RE, Vogt TM, Boles SM. Evaluating the public health impact of health promotion interventions: the RE-AIM framework. *Am J Public Health* 1999;89:1322-7.
27. Mokdad AH, Marks JS, Stroup DF, Gerberding JL. Actual causes of death in the U.S., 2000. *JAMA* 2004;291:1238-45.
28. Hughes E, McCracken M, Roberts H, et al. Surveillance for certain health behaviors among states and selected local areas—behavioral risk factor surveillance system, U.S., 2004. *MMWR Surveill Summ* 2006;55:1-124.
29. American Academy of Family Physicians, American Academy of Pediatrics, American College of Physicians, American Osteopathic Association. Joint principles of the patient-centered medical home. 2007. www.medicalhomeinfo.org/Joint%20Statement.pdf.
30. The Robert Graham Center. The patient centered medical home: history, seven core features, evidence and transformational change. 2007. www.graham-center.org/PreBuilt/PCMH.pdf.
31. Catlin A, Cowan C, Harman M, Heffler S, the National Health Expenditure Accounts Team. National spending in 2006: a year of change for prescription drugs. *Health Aff* 2008;27:14-29.
32. Spann SJ, Task Force 6 and the Executive Editorial Team. Report on financing the new model of family medicine. *Ann Fam Med* 2004;2(3S):S1-S21.
33. Goroll AH, Berenson RA, Schoenbaum SC, Gardner LB. Fundamental reform of payment for adult primary care: comprehensive payment for comprehensive care. *J Gen Intern Med* 2007;22:410-5.
34. Institute for Health Care Improvement. www.ihc.org.
35. TransforMED. Transforming medical practices. www.transformed.com/.
36. American Board of Medical Specialties. ABMS maintenance of certification. www.abms.org/Maintenance_of_Certification/ABMS_MOC.aspx.
37. AAFP's Center for Health Information Technology. Assisting office-based clinicians with health information technology. www.centerforhit.org.
38. The Robert Graham Center in collaboration with the Center for Health Professions. The physician workforce of the U.S.: a family medicine perspective. 2004. www.graham-center.org/PreBuilt/physician_workforce.pdf.