GRIN
Great Lakes Research Into Practice Network

2014 Annual Report

PRACTICE & COMMUNITY-BASED RESEARCH

"CONNECTING IDEAS & PRACTICES"

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Michigan's Practice & Community Based Research Network

Investigating questions related to community-based issues and improving the quality of primary care through clinical and translational research.

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Letter from the Directors

In 2014, we continued our work to rebuild GRIN, focusing on one core question:

What can GRIN do that will be meaningful to advance primary health care across the state?

Over the course of the year, it became clear that we needed to think of GRIN not as a collection of clinicians and practices, but as a set of relationships - a "primary care research matchmaker." Most primary care clinicians and practices in Michigan are now part of larger health systems that may require advance review and approval of specific projects before participation can occur. Some health systems have developed their own research and evaluation capacity and are less open to projects designed by independent investigators. More importantly, in an era of widespread primary care practice transformation (the Michigan Primary Care Transformation Project and the Michigan State Innovation Model demonstration) the primary care research agenda needs to expand to engage our communities and our patients in this transformational work.

With this in mind, GRIN is working to strengthen partnerships with the Michigan-based health systems we've worked with in the past, to build a long-term community partnership in Jackson County, and to develop collaborative ties with organizations such as the Michigan Primary Care Association and Michigan Center for Clinical Systems Improvement – all while maintaining our relationships with the practices and clinicians that have worked with GRIN investigators over the past 2 decades. We have strengthened our ties with our home Departments of Family Medicine and their institutional CTSAs. And we have increased the pipeline of research projects (in-development through in-the-field) with a new generation of investigators from both community and academic settings.

There's still a lot of work to be done. The practice landscape in Michigan is not holding still for us. But we believe GRIN is now better prepared to inspire and support meaningful work that will improve primary care in Michigan, and we hope you all will join with us in this work.

Thanks for being part of this network!

Best,

Michael Klinkman, MD, MS
University of Michigan

Rebecca Malouin, PhD, MPH, MS
Michigan State University

GRIN Study Highlight:

Implementing Sustainable Diabetes Prevention and Self-Management in Primary Care

Background: Research demonstrates that implementing elements of the Chronic Care Model (CCM) can help patients with and at risk for chronic disease to improve their clinical outcomes. However, the CCM elements have often not been implemented in community primary care settings. The purpose of this study was to examine the patient clinical and health behavior results due to CCM implementation under typical care delivery settings.

The two organizing strategies for the CCM framework were:

1) Personnel
- Care manager (a new role in the practice)
- Re-tasking of existing roles
- Connection to and the utilization of community resources

2) Technology (Clinical Information Systems)
- EMR (NextGen)
- EMR upgrades for chronic care – at the point of care prompting, registry functions and QI reporting
- Care manager system

The study aims were:

1) To implement the Chronic Care Model (CCM), focusing on the implementation of clinical information systems and care management, for patients having and at-risk for diabetes, into primary care practices, and to describe qualitatively and quantitatively the barriers, facilitators, and methods used to accomplish successful integration.

2) To identify and measure financial sustainability of CCM implementation on two levels: 1) the intervention practice's capacity to generate new sources of income to cover the direct costs of the clinical information systems and care managers and 2) completing a full cost effectiveness analysis of the CCM implementation with regard to the total costs to practices, patients and the health care system versus benefits accrued by participating patients.

3) To measure outcomes of practice-level CCM implementation on patient's physiologic indicators and health behaviors. Primary measures included HbA1c, blood pressure, lipids, fasting blood sugar levels, and BMI, as compared to similar patients in comparison practices, at one year follow-up. Secondary measures included diet, physical activity, alcohol and tobacco use.

Design/Setting: This was a matched-pair cluster randomization trial. Ten (10) primary care practices from one large Physician Organization (PO) in Southeast Michigan participated in the study. Five practices were randomly selected to be in the intervention arm of the study and five in the comparison arm. Patients in the intervention practices were adults (age 18 and older) who had pre-diabetes, diabetes or obesity and had at least one visit in the past 24 months. Patients in the comparison practices were adults (age 18 and older), had at least one visit in the past 24 months, and were matched on BMI categories, LDL categories, and pre-diabetic and diabetic status. Comparisons were made from care management enrollment to 12 months post.

Intervention: The CCM elements of system design, information systems, decision support and self-management support were addressed by the implementation of planed care visits with care managers. EMR modifications were made to identify eligible patients for care management, provide planned care visits, track and bill for services. Meetings/trainings occurred for providers/staff to identify and refer patients to care management. Workflow changes also occurred.

Results: The CCM intervention was implemented in the intervention practices for 16 months (March 2011 – June 2012). 706 patients enrolled in care management during this time. One year follow-ups of health behaviors and clinical data continued through June of 2013. Diabetic patients in the intervention practices improved in A1c control and LDL control over similar patients in the comparison practices. Obese, non-diabetic patients in intervention practices improved in weight loss over similar patients in comparison practices.

Assessments of patient health related costs and quality of life were distributed to patients and to a selection of care management patients (between June 2011 and October 2012). Direct revenue tracking for fee for service reimbursement of care manager visits was conducted for the intervention period (March 2011 – June 2012). Results revealed that the care manager costs were not completely compensated by the fee for service billing.

Cost data was also collected for the patients in care management at the intervention practices and a matched cohort of patients in the comparison practices for the major insurers. Results indicated that overall the direct medical costs did not differ by group.

All patients in care management were assessed for health behaviors, depression, health status and demographics at baseline, 3, 6 and 12 months (March 2011 – June 2013). Data were analyzed using intention to treat (assuming no improvement if not assessed) and adjusted for clustering by practice. Results indicate significant improvements in all areas except smoking cessation (too few subjects). There was also differential improvement by care manager.

Significance: "Real world" implementation of the chronic care model can result in clinically meaningful improvements in clinical values and health behaviors for patients. We have discovered important information that will contribute to the field of care management. Because care managers are key in the CCM implementation, we have developed new understandings of what it takes to be effective that will prove useful to organizations attempting to implement it. We have discovered new insight as to what a practice, practice organization and its members need to successfully implement CCM. Consistent with other studies, we have demonstrated patient clinical improvements.

Principal Investigator (PI) and Study Team Members:

PI – Jodi Summers Holtrop, PhD, University of Colorado Denver (formerly Michigan State University) University of Michigan: Lee A. Green, MD, MPH (now University of Alberta, Canada); William H. Herman, MD, MPH; Georges Potworowski, PhD (now University at Albany – SUNY); John Piette, PhD; Gretchen Piatt, PhD, MPH; Amy Kowalk, MA, CHES (now Spectrum Health) Michigan State University: Laurie Fitzpatrick, BS (Study Manager); Zhehui Luo, PhD

Questions:
Dr. Jodi Holtrop (PI)
University of Colorado Denver School of Medicine
jodi.holtrop@ucdenver.edu

Lessons Learned:

Patient and Practice Recruitment for a Community-Based Behavioral Intervention Trial

DATES (Decision Aid to Technologically Enhance Shared Decision Making, R01CA152413) is a 4-year National Cancer Institute funded randomized controlled trial of a web-based decision aid to increase colorectal cancer screening rates in community-based primary care practices in southeast Michigan. The study gathers data at multiple time points, including clinician surveys before the study implementation in each clinic, patient baseline surveys before randomization, patient surveys immediately following the decision aid (or control website) usage, patient/clinician visit audio-recordings, patient surveys immediately following the patient/clinician visit, and 6-month patient phone surveys and chart audits.

Through the Great Lakes Research Into Practice Network (GRIN), the study team initially recruited 32 practices interested in participating. However, in the three years between the initial grant application (2008), resubmissions, and time of implementation (2011), the number of practices interested dwindled to seven. Barriers for many of the formally interested practices included private practices becoming members of large hospital systems, changes in practice processes (e.g. transitioning from paper to electronic health records) and becoming wary of the divergence between the timeline of practice operations and research. Since then, eight more practices have been secured, for a total of 15 practices. These other practices were recruited by research staff and investigators networking. Ultimately, the practices initially recruited through GRIN remained at seven.

During the implementation, which ended in September 2014, other challenges included:

1) Two physician organizations that refused to participate, one due to competing agendas and the other due to refusing the data sharing agreement and insisting on only their staff handling any patient data collection

2) One clinic that initially signed up but never got on board (not counted in the final clinic numbers)

3) One clinic that started recruitment but temporarily stopped when it was discovered that the clinic never received organizational approval (it was later reinstituted)

4) One physician initially expressing interest but refusing after finding out about the audio-recording

5) Three participating physicians recording only the colorectal cancer screening portion of the visit (it was requested that the entire visit be recorded but left to the discretion of the patient or clinician to actually allow that)

6) Decrease in eligible patients (not up to date in colorectal cancer screening) due to overall improved screening rates

7) Identification of 15 ineligible patients after they had already participated in the study, despite careful protocol to identify ineligible patients at multiple points during recruitment

8) Difficulty in contacting patients for the 6-month follow-up phone survey, especially in Detroit

The process of research -- going from initial grant application to study implementation -- can be a significant barrier to retaining community-based practice participation. Of concern is the amount of time and effort spent by the investigators to recruit the practices with minimal institutional support. In addition, the participating practices, primarily small, independent practices that may not be representative of the current population of community-based primary care offices working within larger physician organizations. New methods to connect community-based practices with researchers need to be explored. One such method might be a hybrid model of practice-based research network and community based participatory research, which our recruitment model essentially became at the end.

Currently Funded, Active 2014 GRIN Studies

Title	PI I/Institution	Project Description	Funder & Amount	Comm Partners
Maximizing Care Management Effectiveness in Primary Care	Jodi Holtrop, PhD, University of Colorado – Denver (formerly MSU Family Medicine)	This study will identify the characteristics of successful care management in primary care practice. The aims of the study are to determine the components, processes, functions, and relational interactions that are associated with improved care management outcomes; and to determine if practices are involved in quality improvement activities and if those activities are associated with improvements in care management outcomes.	AHRQ; R18; $668,037; 8/1/14-2/1/17;1-R18 HS022690-01A1	16 GRIN practices in Kalamazoo and Battle Creek; 8 practices in Denver, CO
Integrating a Behavioral Health Care Manager into Primary Care Practices Utilizing the Michigan Depression Outreach and Collaborative Care Program	Michael Klinkman, MD, MS, UM Family Medicine	This project tests the feasibility, effectiveness, and scalability of a tailored depression care management support protocol and a custom-designed health IT application in selected primary care practices in rural south central Michigan.	DHHS- MDCH; 10/1/11 – 9/30/14; $458,017 direct plus community match; 894805/572950	Practices of the Jackson Health Network and Hillsdale County; LifeWays (CMH)
Implementing Sustainable Diabetes Prevention and Self-Management in Primary Care	Jodi Holtrop, PhD, University of Colorado – Denver (formerly MSU Family Medicine)	This study will implement Chronic Care Model-based diabetes prevention and self care in primary care, remove barriers to sustained care delivery (including financial sustainability), and measure the effect of this implementation on care processes, health care costs, and patient's clinical, health behavior and care satisfaction outcomes.	NIH; R18; $2.01M; 7/15/10-6/30/14; 1R18 DK082377-01A2	Practices of Integrated Health Associates
Decision Aid to Technologically Enhance Shared Decision Making (DATES)	Jimbo Masahito, MD, PhD, MPH, UM Family Medicine	This project will test a web-based tool used to make decisions relative to appropriate colorectal cancer screening.	NIH; R01; $2.4M; 4/1/11-3/31/15; 1 R01 CA152413-01A1	Practices of Oakland-Southfield Physicians Group
Enhancing Informal Caregiving to Support Diabetes Self-Management	Jim Aikens, PhD, UM Family Medicine	Patients with diabetes mellitus will undergo weekly telephone monitoring. A summary will be emailed to an in-home caregiver to assist with DM management.	NIDDK; R18; $2.5M; 8/5/2011 4/30/2016; 1R18DK08829401A1	GRIN Practices Statewide
DECIDERS	Susan Goold, MD, MHSA, MA, UM Internal Medicine	This study will develop and evaluate a mechanism to engage communities, particularly minority and underserved communities, in informed deliberations about health research spending priorities.	NIA; R01; $2.8M; 9/1/11-8/31/16; 1-R01-AG-04013801	GRIN Practices Statewide
Telemonitoring-Enhanced Support for Depression Self Management	Jim Aikens, PhD, UM Family Medicine	Patients with physician-identified depression will undergo weekly-automated telephone monitoring with tailored advice on self-management.	NIH; R01; $2.9M; 9/18/2012-6/30/2017; 1R01MH096699011	GRIN Practices Statewide
Examination of Office Visit Patient Preferences for Clinical Summary Content/Formats	Kathy Dontje, PhD, MSU College of Nursing	This study asks patients about the preferred content and format of clinical summaries provided to them as part of Meaningful Use	MDCH; $565K; 10/1/2013-09/30/2014	Practices of MSU and Sparrow Health System
Early Audiology Referral in Primary Care (EAR-PC)	Philip Zazove, MD, UM Family Medicine	Participating practices will test the feasibility of using automated electronic tools to increase the rate of diagnosis of mild to moderate hearing loss.	NIH; R21; $2.1M	GRIN Practices Statewide

Funded, Completed 2014 GRIN Studies

Title	PI/Institution	Project Description	Funder & Amount	Comm Partners
A Comparison of Provider Versus Health Plan Delivered Care Management in Michigan	Jodi Holtrop, PhD, MSU Family Medicine	This project will complete a comparative effectiveness study of provider-delivered care management versus health-plan delivered care management for BCBSM members/patients with specific chronic conditions and determine patient-specific, implementation and cost outcomes.	AHRQ; R18; $1.8M; 9/30/10-9/29/13; 1R18 HS020108-01	BCBSM PGIP Practices
Multi-method Evaluation of the Physician Group Incentive Program for PCMH Transition	Mike Fetters, MD, MPH, MA, UM Family Medicine	This project will quantify member practices' progress toward PCMH goals, and use the quantitative data to guide sampling for in-depth qualitative analysis of how practices have made or not made that progress.	AHRQ; R18; $477, 496; 7/15/2010-12/31/2012;1R18 HS019147-01	BCBSM PGIP Practices
Implementation of Clinical Reminder System By Cognitive Engineering of Organizational Routines	Lee Green, MD, MPH, UM Family Medicine	This study will demonstrate the use of cognitive engineering tools to guide successful implementation of health IT in several Federally-Qualified Health Centers, and show improved process measures of quality of care.	AHRQ; R01; $1.2M; 12/1/09-11/30/12; 1R18 HS018170-01	Michigan Primary Care Association
SEARCH I (**S**creening, **E**valuating and **A**ssessing **R**ate **CH**anges of diagnosing respiratory conditions in Primary Care): A prospective, cluster-randomized study.	William Wadland, MD, MS, MSU Family Medicine	Diagnosis and management of respiratory illnesses in primary care is not well understood. Improved diagnosis could help patients get more appropriate therapy sooner, or avoid unneeded therapy. This study will examine how respiratory illnesses are diagnosed, and will test the impact of two different screening tools on diagnosis. Information from this study will be used to shape future clinical research. There may also be an opportunity for patients with new diagnoses to participate in future studies.	Boehringer Ingelheim; $263,741; 4/30/10-9/30/11	GRIN Practices Statewide
Clinicians Concepts of Racial/Ethnic Difference in the Management of Chronic Illness (ClinCon)	Linda Hunt, PhD, MSU Anthropology	The aims of this study were to understand how genetic concepts of racial/ethnic difference are interpreted and applied by clinicians serving minority populations, and understand patients' interpretations of these concepts and in turn, of their own risk, health status and treatment responsibility.	NIH; R01; $3.3M; 8/16/08-8/15/13	GRIN Practices Statewide

GRIN Co-Directors

Michael Klinkman, MD, MS
University of Michigan
mklinkma@med.umich.edu

734-998-7120 x 320

Dr. Klinkman is a Professor of Family Medicine at the University of Michigan Medical School. He is a Michigan native who is first and foremost a practicing family physician, with an active part-time practice in Ann Arbor where he has served his patients for over 20 years. Dr. Klinkman's first funded study in Michigan, a study of chest pain in primary care, was based in the practices of UP-RNET and MIRNET, the 'parents' of GRIN. He has led or co-led several large studies of mental health care in the primary care setting. He has been part of the University of Michigan Depression Center leadership team since its inception, and has led several of the Center's primary care initiatives over the past 10 years. His academic efforts at Michigan have been focused on health information technology, mental health care in the primary care setting, and practice-based research.

Rebecca Malouin, PhD, MPH
Michigan State University
rebecca.malouin@hc.msu.edu

517-884-0453

Dr. Malouin, is a tenure-system assistant professor, jointly appointed in the Department of Family Medicine and the Department of Pediatrics and Human Development. She is also Director of the Primary Care Research and Evaluation Program and Associate Chair for Research in the Department of Family Medicine. She received her PhD and MPH from the Johns Hopkins University, and an MS in epidemiology from Michigan State University. Dr. Malouin is a health services researcher with a strong background in mixed-methods research and extensive experience with implementation research and evaluation. She has served as an evaluator for several medical home projects and initiatives and is currently the principle investigator of an AHRQ K01 Research Mentored Scientist Award on the topic of the measurement of primary care and patient-centered medical homes. She also is the author of *Measuring Medical Homes: Tools to Evaluate the Pediatric and Patient- and Family-Centered Medical Home* and *Positioning the Family and Patient at the Center: A Guide to Family and Patient Partnership in the Medical Home*, both published by the American Academy of Pediatrics and National Center for Medical Home Implementation with funding from the Health Resources and Services Administration.

GRIN Research Staff

Molly Polverento, MSEd
Michigan State University
molly.polverento@hc.msu.edu
517-884-0434

Molly Polverento is an Outreach Specialist at MSU and is the MSU Coordinator for GRIN. Her primary responsibilities are to promote GRIN to MSU-based researchers and to coordinate the evaluation of GRIN activities and outcomes. Molly also works on activities to bridge public health and primary care practice. Molly has worked in public health program administration and policy since 2000 and holds multiple public health leadership positions.

Laurie Fitzpatrick, BS
Michigan State University
laurie.fitzpatrick@hc.msu.edu
616-234-2824

Laurie Fitzpatrick is a Research Associate in the Department of Family Medicine at Michigan State University's College of Human Medicine. Before coming to MSU, Laurie worked in local public health as a health educator in health promotion/chronic disease prevention. For the past eight years, Laurie has been involved in a variety research projects focused on health behavior change interventions in community and primary care settings. She has experience in project management and mixed methods research.

Leslie Paulson, MSW
University of Michigan
lesliebp@med.umich.edu
734-615-0390

Leslie Paulson is the newest member of the GRIN team, serving as Network Research Specialist and member of Michigan Institute for Clinical and Health Research (MICHR) Communities Engagement team. Leslie has worked primarily in community health programming and research focused within community health centers across Michigan, and most recently Chicago. She holds a graduate degree in community health and social policy and evaluation from University of Michigan.