

VHCIP Provider Sub-grant Program Final Report

White River Family Practice:

Patient health confidence leads to improved chronic disease management and decreased hospital encounters.



Title

**Patient health confidence leads to improved chronic disease management
and decreased hospital encounters.**

A study at White River Family Practice

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Executive Summary

Background:

White River Family Practice (WRFP) is an independent ambulatory care practice providing primary care to approximately 8,000 residents of Vermont and New Hampshire. We are located along the Connecticut River in eastern Vermont. (Appendix 1.) The practice is staffed with five family physicians, three family nurse practitioners (ARNP's), one Physician Assistant (PA), a support staff of fourteen. Our long-term interest is in providing both population-based and patient-centric primary care. WRFP is a teaching site for students of the Geisel School of Medicine at Dartmouth. The practice's mission is to "provide high quality, state-of-the-art primary medical care to our community of patients with compassion, professionalism, and excellent communication."

The practice has developed as a Clinical Microsystem, defined as "a small group of people who work together on a regular basis to provide care to discrete subpopulations of patients" and having "clinical and business aims, linked processes, a shared information environment, and [producing] performance outcomes." (1)

WRFP was certified as a Level III Patient Centered Medical Home (PCMH) in October of 2012 and was recertified as a Level III again this fall (2016). In 2013 WRFP received the Ambulatory HIMSS Davies Award, given for excellence in health information technology and specifically in use of their electronic health record (EHR) to successfully improve quality of care and patient safety while achieving a demonstrated return on investment. In 2014, WRFP received a State Innovation Model (SIM) grant to support continued innovation in delivery of population healthcare to patients considered "at risk."

Project interventions:

Under the SIM grant, WRFP identified a cohort of patients considered "At Risk" for potentially avoidable hospital care (admissions and/or emergency department or ED visits) or for clinical deterioration (n=59). Patients with a history of frequent hospital use at Dartmouth Hitchcock Medical Center (DHMC, the region's primary hospital) within the preceding three years were represented in the cohort as well as certain patients with poorly-controlled chronic disease including those with diabetes mellitus (DM) and coexisting depression, and asthma requiring hospital care within the preceding two years related to asthma exacerbations. A primary initiative within the SIM grant was the consideration of patients' self-reported health confidence (described below) in managing their health issues.

SIM grant funds supported five interventions within the practice to facilitate the care and management of this population of patients and the analysis of our work. These interventions included: (1) a 0.8 FTE Care Coordinator whose primary role involved focusing intensive outpatient care management on these patients; (2) a contract with the Clara Martin Center for the

provision of an on-site, part-time mental health counselor for this population; (3) formal training in Motivational Interviewing (MI) for all providers and office staff; (4) acquisition of enhanced population health analytic software capability from WRFP's EHR vendor (subsequently offered to WRFP at reduced cost, saving grant funding for care coordination and other grant-related uses); and (5) a part time consultant to manage data analysis, software training, and population health surveillance.

Coincident with the SIM grant, WRFP practitioners and staff began regularly obtaining patient-reported measures of Health Confidence (HC) from all patients presenting for annual health-maintenance visits, chronic care visits and as follow-up of hospitalizations or ER visits. Among patients of the "At-Risk" panel who were willing to engage with the practice in focused care coordination (n=32), HC was measured even more regularly and systematically.

To measure Health Confidence, patients were asked "how confident are you that you can control and manage most of your health problems?" Patients may respond using a numerical scale from 0 (not confident) to 10 (very confident) in which a score of 8 or more corresponds to being "very confident." Alternatively, responses could include "very confident," "somewhat confident," "not very confident," or "I don't have any health problems." Health confidence scores were recorded in structured data fields within the practice's electronic health record, allowing extraction of HC values with associated encounter dates for patient populations of interest. Patients' self-reported HC became one of the factors considered in assessing a particular patient as at risk for potentially avoidable clinical deterioration or hospital encounters.

Results:

During the first six months of the SIM grant funding (June, 2014 – December, 2014), WRFP developed a series of interventions involving care and management of patients in the At Risk cohort. These interventions are listed in Table 1, and were considered regularly implemented where clinically applicable by early 2015, especially focusing on patients in the At Risk cohort.

Using a monthly database of WRFP patients' hospital encounters at DHMC (discussed more fully in the following section), WRFP monitored hospital encounters attributable to patients specifically in the At Risk cohort. The practice found that over the course of the SIM grant study, hospital encounters (admissions or ED visits) by patients in this cohort declined to less than half the prior frequency suggesting that intensive outpatient care coordination focused on patients at risk can beneficially affect hospital usage. (Figure 1, pg. 14)

We concluded that queries about health confidence could be easily incorporated into the flow of a busy office practice as long as patients were not queried too often. Stable patients were asked once yearly at wellness or chronic care visits. Our study population was asked more frequently. Our work also suggests that risk stratification relative to health confidence and patient-reported measures can assist in prospectively identifying those patients who are at risk of potentially avoidable deterioration in health state or hospital encounters, and that timely interventions in care coordination can beneficially affect these patients with reduction in hospital use.

In addition, WRFP found a statistically significant improvement in the absolute value of self-reported HC among patients in the At Risk cohort. (Figure 3, pg. 16)

Regarding measures of management of chronic disease among patients in the at risk cohort, the practice found a slight improvement in the average HgbA1c in the last year of the study as compared to the preceding 12 months in patients with diabetes, and a reduction by 65% in the number of hospital encounters attributable to patients with asthma.

WRFP's experience under the SIM grant demonstrates the validity of identifying "at-risk" patients at the point of care using patient-reported measures such as health confidence, and the ability to direct focused care coordination preferentially to at risk patients with a concomitant reduction in hospital use.

One of our goals was to try to identify those interventions made by the office or the Care Coordinating nurse which proved most beneficial to patients. To that end, we worked with the Dartmouth Cooperative Network to interview our patients and then form a focus group to help with these goals. We received 17 responses to the interview. It was clear that patients did notice a difference in their care and appreciated the attention of the Care Coordination nurse. Most were familiar with the concept of health confidence and reported that they were confident. Overall, medication compliance and information was discussed with patients reporting a variety of ways that they would like medications reviewed – some over the phone and some in person. Respondents appreciated the care plans, particularly the asthma action plans which are clear in content and are well-displayed. We also attempted a focus group with 6 patients. Given the small number of participants and their divergent issues, we were unable to glean information helpful to our practice in moving forward.

Discussion

Project Description and discussion of goals:

The project set forth four goals with respect to the identification and management of a cohort of patients deemed “at-risk” for potentially avoidable hospital use or clinical deterioration. These goals are briefly discussed in the following paragraphs.

Goal #1: Reduce non-emergent Emergency Department (ED) utilization and hospital readmission among WRFPP patients.

Using the monthly data file of all WRFPP patient encounters at the primary hospital in the region (DHMC), WRFPP was able to identify a cohort of patients who used the hospital ED frequently (perhaps as a substitute for primary care) or were subject to frequent hospital readmission. This cohort was examined to identify patients with four or more ED visits in a rolling 24 month interval and patients whose hospital readmission seemed potentially clinically avoidable. (The practice also queried area commercial insurance providers for their definition of “avoidable ED encounters” but received no guidance from these insurance companies.) From the resulting cohort, WRFPP providers identified patients considered to be candidates for a developing program of focused intensive outpatient care coordination. The 0.8 FTE Care Coordinator hired under the SIM grant had the primary responsibility of coordinating care for patients in this cohort. (The size of the At Risk cohort was initially constrained such that the population was manageable while both the practice and the Care Coordinator developed the program.)

Results: Among patients in the At Risk cohort, WRFPP’s project achieved a sustained and statistically significant reduction in hospital encounters (both ED visits and hospital admissions) of more than 50% (from an average of approximately eight encounters per month to less than four per month). (Figure 1, pg. 14.) For this reason alone, the project is considered a success.

Unfortunately, no change was observed in the frequency with which WRFPP patients sustained a DHMC hospital *readmission* in less than 31 days (Figure 2, pg. 15). WRFPP believes that improving this metric will require intensive coordination among all stakeholders involved in transitions of care (hospital, primary care practice, visiting nurse organizations, etc.) and neither DHMC nor WRFPP had the resources necessary to jointly develop changes in transitions of care processes to address the readmission rate.

Goal #2: Use patient self-reported measures of experience of care and health-confidence in practice redesign.

Based on work by Dr. John Wasson, WRFPP began using the patient-reported measure of health confidence in risk stratification. (2, 3) Patient-reported measures (PRMs) are actionable at the point of care, simple to obtain, and are patient-centered. In addition, PRMs are potentially more

meaningful to patients – especially those with multiple chronic diseases and / or a shorter life expectancy – than many of the biometric measures in common use in population health management (e.g., HgbA1c, lipid determinations, blood pressure control, etc.) (4)

Initially, querying patients their health confidence did not fit well within the time constraints of this busy practice. That was quickly overcome as we identified the appropriate visits and optimal intervals for asking this question. What has been more challenging is the practitioner’s use of the patient’s response. Some practitioners have used it as a “vital sign” and some have addressed low confidence and the factors that lead to it. Either way, with our motivational interviewing training, discussion and treatment plans have been more patient-centered and involved more patient-engagement. (See Goal #3 below.)

Goal #3: Develop Team-based care initiatives for chronic disease management.

WRFPP developed and refined care pathways standardizing the function of all office staff with respect to the management of patients with asthma or diabetes such that national guideline-recommended care was offered or delivered at each interaction. Motivational interviewing was employed when clinically appropriate by any member of the care team to assist patients in development of - and adherence to - personalized Care Plans, and to improve their self-reported health confidence. Intensive pre-visit planning and care coordination were also employed as described in Table 1.

Health confidence assessments and the resulting discussions that practitioners had with these patients contributed to improved, patient-centered care plans. While process-mapping and optimization are essential components of chronic disease management and delivery of guideline-recommended care, the integration of patient-reported measures (health confidence) and motivational interviewing techniques in care delivery were equally important.

Motivation interview (MI) training for the whole practice was deemed a big success. In a pre-survey assessment of MI understanding, 5 respondents were MI-consistent, 7 were “in between” and 10 were MI inconsistent. After the training sessions, 16 staff members were MI-consistent, 3 were sometimes consistent and 3 were non-responders. Gains were in the area of more open questions, inclusion of reflection and focus on empathy and change.

Goal #4: Employ analytics software within WRFPP to further improve population healthcare management.

Population Health Analytic software was integrated into WRFPP’s electronic health record to facilitate pre-visit planning and to monitor change in health confidence over time among At Risk patients (as well as the rest of WRFPP’s patient population). This software also enabled enhanced pre-visit planning by identifying gaps in patients’ care among upcoming appointments.

The software was initially designed to enable risk stratification based on insurance claims data. However, WRFP found this function to be of no value to this small practice for several reasons. First, many insurance payers did not make claims data available to WRFP. (Claims data were available for only about a third of WRFP's patient population – and then only from the current insurance payer of record for a given patient - thereby potentially ignorant of care delivered to that patient while covered by another carrier in a prior year.) In particular, Medicare – despite insuring older patients who presumably are at increased risk for adverse health events and hospitalization - does not release claims data to small practices. (Throughout the lifetime of WRFP's SIM grant, only Blue Cross Blue Shield of Vermont (BCBSVT) and the Department of Vermont Health Access (DVHA, Vermont Medicaid) provided claims data to WRFP.) Second, no insurance payer would transmit claims data directly to WRFP's electronic records vendor; instead, both the payer and the EHR vendor required that claims data be transmitted through WRFP before being securely retransmitted to the vendor, unnecessarily complicating claims data integration. Third, insurance claims data are extraordinarily detailed, negating their usefulness at the point of care and rendering their use in population risk stratification unattainable in a small practice without its own data analytics department.

However, the greatest impediment to use of claims data in population risk stratification is that these data are inherently retrospective in nature. While the data may identify patients whose past healthcare involved high expense (and presumably therefore are at high risk), *the data do not confirm who might be at imminent risk in the future*. Nor are the data actionable at the point of care. In contrast, querying patients of their self-reported health confidence is both forward-looking and actionable, and this question became the most powerful tool to identify patients at risk for potentially avoidable hospital interactions or deterioration in health state.

For all these reasons, WRFP did not use claims data in risk stratification among their patient population, relying instead on the patient-reported measure of health confidence. We believe the inability of payers' claims data to materially support our SIM project to be ultimately of no consequence to our results – although significant resources were consumed initially in attempting to arrange regular transmission of claims data from all payers. In contrast, the integration of health confidence into the practice's analytics software was highly successful, and the practice has successfully collaborated with the EHR vendor to make this an enduring feature in their population health analytics.

WRFP found that querying patients their self-reported health confidence could change the content, direction, and resultant plans during patient visits. Several patients noted that “No one had ever asked that before,” and the resultant discussions tended to enhance patient engagement both with the practice and with any Care Plans which were developed. Implementation of Motivational Interviewing also materially assisted the development of meaningful Care Plans for patients.

WRFP practitioners believe the implementation of focused and intensive outpatient care coordination for at-risk patients improved their care and our data show a demonstrable and

significant reduction in hospital use among these patients, thereby substantially reducing the cost of care.

Challenges:

WRFP's project did encounter significant challenges. These challenges include lack of definition of avoidable emergency room encounters and lack of resources to address readmission etiologies. However, the most significant challenge was the temporary cessation of grant funding in the winter of 2015-2016 at the direction of CMS. These will be discussed in more detail below.

No readily available definition of an "avoidable emergency room encounter" was forthcoming from any insurance carrier. Because of this, WRFP ceased any effort to identify "avoidable" ED encounters, and instead analyzed *all* hospital ED encounters among the at-risk population. This change in target metric had no effect on our project.

Second, although WRFP initially intended to reduce the incidence of hospital *readmissions* among our patients, it became apparent that no area hospital could afford the resources necessary to comprehensively address causes of hospital readmissions in partnership with the practice – and indeed no resources were available to support the requisite planning at the practice level in a fee-for-service environment either. As a consequence of this, WRFP elected to measure *all hospital admissions* attributed to patients in the At Risk cohort as a metric of interest, rather than to restrict our focus to *readmissions*.

The most significant challenge to WRFP's project was the temporary cessation of all Vermont SIM Grant funding in the winter of 2015-2016 at the direction of CMS. This directly led to the resignation of our dedicated Care Coordinator who had managed the day-to-day outreach and intensive management of our at-risk panel. Her functions (amply described in Table 1) were gradually assumed to the extent possible by remaining staff, but the intensity of management of the at-risk population necessarily declined significantly such that panel patients lost their "point person" with whom to engage. In addition, the cessation of grant funding necessitated a reduction in our behavioral health capability by 50 % as WRFP could not meet its full contract obligations with the Clara Martin Center absent continuity in SIM grant funding. (Although the practice elected to self-fund its obligation under the contract with the Clara Martin Center, our dedicated counselor was by then occupied elsewhere for four months, causing a discontinuity in critical behavioral health counseling services within WRFP for our at-risk population. By the time this counselor was able to return to the practice, SIM grant money had been restored.)

Also of note, as a result of the temporary cessation in SIM funding, practice leaders understandably have become reticent to re-engage in further development of practice innovations without a stable source of financial support. It is not possible to commit to development and implementation of new care processes and hiring the requisite staff when the income stream to support those innovations is transitory and ephemeral. The authors believe the destructive effect on the

practice's willingness to engage in grant-funded innovation caused by this four month cessation cannot be under-estimated. Perhaps organizations with larger budgets can be relatively immune to a sudden loss in income streams, but expecting a small private practice to redistribute its work load and carry on its innovative care without change in work or loss of enthusiasm is sorely misguided. Inasmuch as the funding halt was ordered by CMS, it does not appear that VHCIP could have done anything to ameliorate the negative effects on our project other than to advocate more effectively on behalf of specific SIM sites.

Lessons Learned:

Effective steps in our grant work included WRFPP team meetings, ensuring good representation from all aspects of our office workforce, relying on systems already in place within WRFPP to guide change and improvement activities. Our attempts to engage patients as key stakeholders were not as successful as we had hoped. Patient interviews were somewhat helpful. Our sole focus group failed to attract enough participants to yield useful information. Both of our attempts at patient engagement came after the loss of our Care Coordinating nurse and after the project was essentially on hiatus for 4 months. Additionally, our "at risk" patients are generally not as proactive or as engaged as other patients in the practice. Were we to repeat this grant work, we should think about engaging patients with the study design.

A critically important lesson learned during our project was the value of integrating health confidence into eClinicalWorks (eCW), the vendor of our electronic health record system. While the engagement of hospital leaders and third party payers was lacking, our relationship with eCW was excellent in comparison (although requiring tremendous work on our part). Therefore, our ability to easily analyze health confidence data was a wonderful asset.

Engagement of stakeholders from every area of a practice is necessary for successful planning and execution of any innovation in healthcare delivery. In addition, organizations attempting innovations must be able to adapt both interim goals and measures while retaining sight of their ultimate goal(s) if they are to be successful. Fortunately, WRFPP has a long history of involving every segment of the organization in the design of care processes and is accustomed to rapid-cycle change in improvement its activities. For example, the practice shifted from targeting presumably "avoidable" ED encounters and hospital *re*-admissions to analyzing all hospital encounters as our measures of interest, and we discontinued analysis and consideration of payers' claims data in risk stratification.

Making available resources for intensive care coordination to patients identified as at high risk did not necessarily result in patient engagement in their plans of care. The office found that some identified patients were unwilling to engage with office personnel or to avail themselves of the extra care offered. In addition, no amount of intensive office resources or care coordination can properly address many social determinants of poor health and high risk (e.g., housing instability, food scarcity, domestic violence, lack of consistently available responsible parties, etc.) The At

Risk cohort membership also evolved over the course of the grant as some patients moved out of the area (or died) and other patients were nominated for the program by their primary care practitioners. Providing these services to *all* patients at high risk regardless of willingness to engage is a laudable goal, but in an environment of scarce resources, services were ultimately provided to those patients willing to engage.

On the basis of our experience, medical practices seeking to decrease hospital use among their patient populations are best served by instituting the collection of patient-reported measures such as health confidence at the point of care. These measures should be recorded in structured fields within the electronic health record to allow for subsequent population analysis and risk stratification. Attending to patient-reported measures addresses all three arms of the Triple Aim, with demonstrable savings in costs of care for our target population.

An inescapable lesson learned in this project relates to the challenge of truly innovating new processes of care in a fee for service (FFS) reimbursement environment. Implementing new care processes requires teamwork, both to design the planned changes and to regularly evaluate their successes (or failures) and redesign. New care processes can involve hiring new staff and / or training existing staff in new job descriptions. These activities require management to invest their leadership time and skills – capabilities that are currently – and necessarily - directed to patient care and the practice’s economic stability in the present FFS environment. Expecting practice leaders to devote their “spare” time to innovation consigns innovation to the category of unfunded research and development, a luxury few practices can afford. Furthermore, when an innovation demonstrates improvement in quality, patient experience-of-care, and reduced total cost of care (as WRFP’s grant work accomplished), payers must support those innovations with enhanced reimbursement or payment reform. In WRFP’s experience, despite negotiations and advocacy to our major commercial insurance carrier, no increase in reimbursement has been forthcoming, despite the fact that the company in question covered about a quarter of the patients in the At Risk cohort. Absent some stable mechanism for all payers to support successful innovations in healthcare processes, it is unreasonable to expect program sustainability or even enthusiasm among practice leaders to make the investments required to change care processes.

Note that WRFP is not advocating hiring new staff to expand the workforce without concurrent change in the definition and scope of that work. WRFP was specifically targeting enhanced services to a small segment of our patient population – patients at highest risk for potentially avoidable hospital encounters or clinical deterioration. Simply expanding the workforce without changing the actual work being done is unlikely to result in substantial change in the overall outcomes.

Project Evaluation:

The process and outcome metrics of interest for WRF’s SIM grant included DHMC ED visits, DHMC in-patient utilization, DHMC readmissions within 30 days of a prior admission, and Pre and Post Patient-Reported Measures of Self-Confidence. Results are reported on these indicators in the following paragraphs. With respect to hospital utilization, emergency department encounters and hospital admissions attributed to patients in the At Risk cohort have been analyzed together to present a composite view of changing hospital use among these patients.

Hospital utilization:

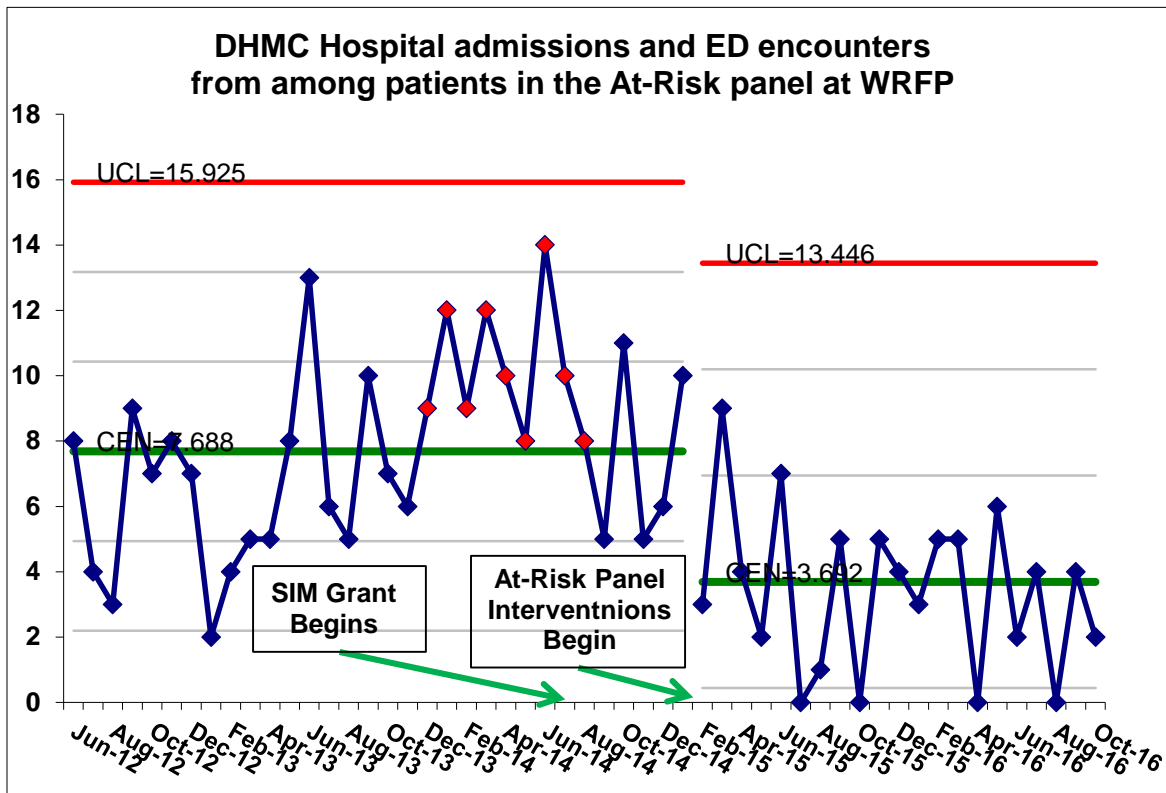


Figure 1: The number of hospital encounters (emergency department visits or admissions) occurring each month among the At-Risk WRF patients receiving intensive interventions.

Hospital encounter data relative to WRF patients is obtained monthly from DHMC, the primary treatment hospital in the White River Junction area. These data are securely transmitted to the practice under the terms of a business associate agreement (in place prior to the SIM grant). These data allow extraction of hospital encounters attributable to specific sub-groups of WRF’s patient population. Using commercially available statistical process control (SPC) software, the data are then analyzed. Figure 1 shows the average hospital encounters per month for the pre- and post SIM periods in question (the dark green lines); the software also identifies any statistically significant variation with either a red data point (as opposed to blue) or by showing data points exceeding the upper control limits (here, the thin red lines labelled “UCL.”)

Figure 1 shows an abrupt, statistically significant, and sustained decline in utilization of hospital resources coincident with the deployment of focused intensive interventions and discussion of

health confidence among this At Risk population. While the number of patients involved in our study is small, the results do suggest that the use of health confidence as a patient-reported measure is helpful in prospective, actionable risk stratification, and that direction of resources to patients deemed at risk beneficially affects subsequent hospital utilization. Analogous results have been reported elsewhere. (3) Next steps could include incorporation of additional patient-reported measures in risk stratification, as well as direct comparison of these measures to commonly accepted measures of risk (claims data or NCQA metrics) with respect to their ability to predict future hospital encounters.

Hospital Readmission within 30 days of a prior admission:

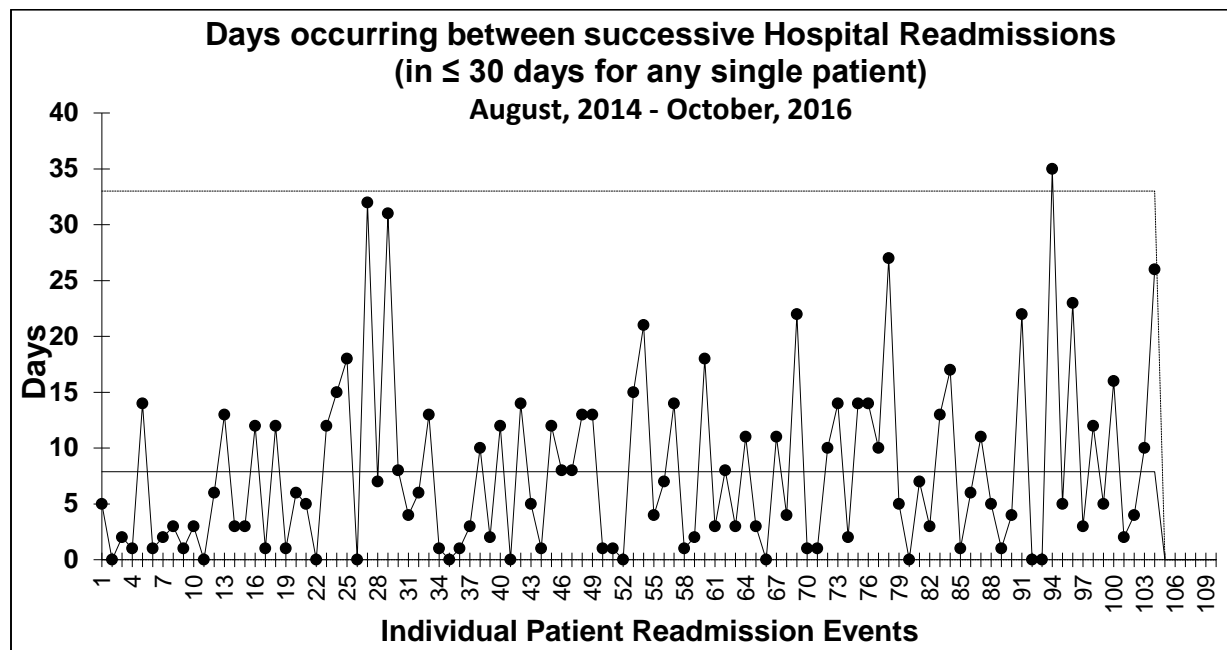


Figure 2: Hospital Readmission in ≤ 30 days for any single WRFPP patient.

Figure 2 is analyzing hospital readmissions as though they were rare events, analogous to industrial accidents. Readmission to the hospital for any single patient *should* be a rare event but unfortunately as Figure 2 shows, readmissions occur sometimes on the same day as that patient’s prior discharge. In fact, over the preceding twenty six months, readmissions occur on average every 8 days, and the upper bound of significance (~ 33 days) has been exceeded only once. (Ideally, there should be few readmission points, and many days should elapse between readmission events.) Data for this figure are obtained from the monthly hospital encounter database made available from DHMC to WRFPP via a secure pathway. Statistical process control methodology is applied to the analysis.

Pre and Post Patient-Reported Measures of Self-Confidence:

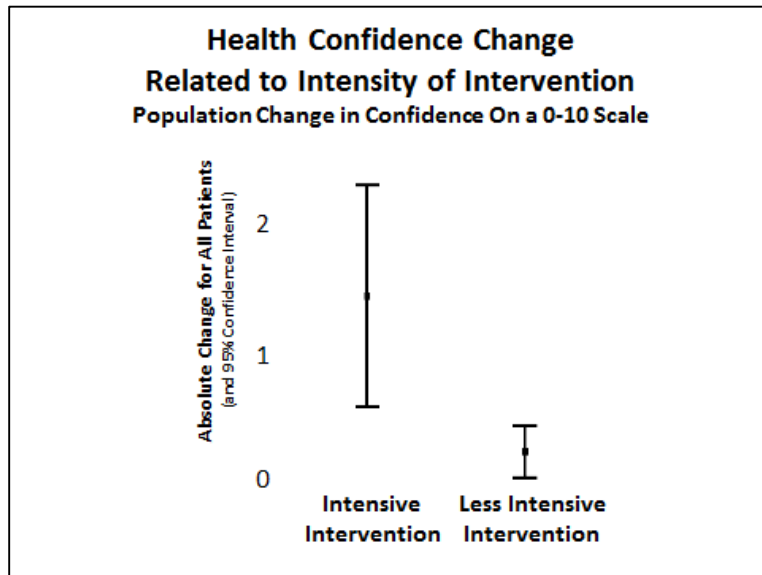


Figure 3. Change in Health Confidence by Intensity of Intervention

The practice also analyzed the change in At Risk patients' self-reported health confidence scores, using data extracted from the practice's electronic health record system. Figure 3 shows a statistically significant increase in the absolute change of patients' self-reported Health Confidence observed among patients in the At-Risk cohort, as compared to those patients receiving less intensive interventions (everyone else). As noted previously, the number of patients involved in our study is small; nevertheless, our study does suggest that health confidence can be improved with intensive interventions directed to At Risk patients.

Plans for dissemination of results:

WRFP practitioners and our Care Coordinator have disseminated results of the practice's experience orally and in writing. Oral presentations were made to senior leaders at Mt. Ascutney Hospital and DHMC. Two physicians presented our project and findings at the Dartmouth Primary Care CO-OP annual meeting in February, 2016, as well as at the eClinicalWorks National Users Conference in Orlando, FL, in October, 2016. In addition, a written summary of the project has been submitted for publication in the Family Practice Management journal of the American Academy of Family Practice. The physician consultant to WRFP's SIM project has continued his collaboration with the practice's EHR vendor to support implementation of health confidence and other patient-reported measures as regular features in their software.

Additional project impacts:

WRFP's work under this grant has emphasized the value of motivational interviewing in approaches to patient counseling and chronic disease management. The integration of patient-reported measures into risk stratification is furthering a new model for population healthcare, and research continues in this area. (5) Certainly PRMs offer a simple set of indicators that are

potentially more effective as measures of risk and quality of care than the burgeoning list of biometric markers and claims metrics currently in widespread use. PRMs are actionable at the point of care, and whereas both biometric markers and insurance claims data are retrospective in nature, PRMs are forward-looking and offer the opportunity for predictive risk management.

Sustainability:

Sustainable elements developing from the SIM grant at WRFPP include use of patients' reported health confidence in personal health management as an important metric in assessing their risk for clinical deterioration or avoidable hospital use, and the emphasis on motivational interviewing in addressing patients' behaviors and their care plans. Receipt of the monthly data base of all DHMC hospital encounters (established prior to the SIM grant) appears to be sustainable. Integration of health confidence into the practice's electronic health records software has been accomplished and this appears to be a sustainable capability of this software for other users.

However, the intensive work performed by WRFPP's dedicated Care Coordinator (who had been coordinating care for patients in the At Risk panel) is likely not sustainable in a FFS reimbursement environment. Payment reform should ultimately support the use of patient-reported measures in predictive risk management to guide focused care coordination and transitional care management to patients at risk, especially considering the demonstrable improvement in patients' health states and concurrent reduction in avoidable high-cost hospital care.

Post-grant plans:

As our SIM grant concludes, WRFPP plans to continue assessing patients' health confidence and using the results of these queries to guide individual healthcare interactions. We are evolving toward using health confidence and other patient reported measures to risk-stratify our Medicare patients and to offer at-risk patients more out-of-office contact. We will continue to use our Motivational Interviewing training which has become a part of all our patient interactions.

We have explored other grant options to support even more ambitious interventions at WRFPP and put structures in place which will afford a better study design. The goal of more intensive study is to help other practices determine the cost of interventions and their usefulness and to increase engagement of third party payers. However, we have determined that grant funding is too inconsistent and risky for a small practice to depend upon for developing innovations in care delivery. Therefore, our plans to move forward will be focusing on patient care and will offer less in the way of research results to other practices.

Conclusion:

Social determinants of health are the largest contributors to the burden of chronic disease and healthcare costs. However, identifying metrics which allow intervention at the point of care and which can demonstrably alter patients' hospital use are worth pursuing. The State Innovation Model grant afforded WRFP the opportunity to implement the patient-reported measure of "health confidence" as an indicator of risk for clinical deterioration or potentially avoidable hospital encounters while simultaneously tracking hospital use among the practice's patients. WRFP demonstrated that delivery of intensive outpatient interventions can positively affect patients' health confidence in self-management; and, these efforts can produce a sustainable and statistically significant decline in hospital use among these at-risk patients.

Reducing hospital readmission rates will require the coordinated leadership from multiple parties including hospitals and outpatient practices as well as investment from payers to support program development. At the present time, these resources are not in place and there appears to be little structure to support the investments necessary to effect change, despite the clear financial benefits and the improvement of the patient experience.

Innovations in healthcare delivery necessarily involve changes in processes, new staffing or changes in job descriptions, and training, and more. A small practice is challenged to support and embrace innovation, working to improve new systems of care, while continuing to support itself in a fee-for-service reimbursement environment.

Table 1: Interventions directed especially at patients in the At Risk cohort:

Intervention	Intensity	Method
Assess Health Confidence	Low	Query patient directly and record in structured data. (See https://howsyourhealth.org/)
Label charts of “At-Risk” patients	Low	Patient-level record in EMR was flagged to identify at-risk patients as part of a cohort requiring enhanced primary care services.
Use HC < 8 score to define “At-Risk” population	Low	Identify at-risk patients in the office electronic health record, facilitating office-wide recognition of need for intensive interventions
Medication Reconciliation	Moderate	In-person or telephone reconciliation regularly and after any hospital contacts.
Medication Adherence Assessment	Moderate	Series of questions asked based on Morisky Medication Adherence Scale; answers recorded in structured data fields.
Enhanced pre-visit preparation	Moderate	Team approach (RN's, Care Coordinator, Medical Assistants, etc.) Ask patient’s goals for visit.
Office Staff engagement in focused intensive outpatient care	Moderate	Create vision: What does improving health care look like?
Standardize panel management	Moderate	Develop flow maps for office care regarding panel management
Motivational Interviewing	Moderate - High	Office-wide approach to patient interactions where appropriate. (See sidebar #1.)
Focused Transitional Care Management	High	Care Coordinator contacts all patients within 48 hours of discharge (from ED or in-patient).
In-office Care Coordinator visit	High	15 minutes prior to office visit with provider
Intensive chronic disease management	High	Asthma Action Plans, PHQ-9, patient teaching; direct referral to in-house mental-health resources as indicated.

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Appendix 1: WRFP patient distribution, Vermont and New Hampshire

