Healthy Hearts Northwest”: A 2 x 2 Randomized Factorial Trial to Build Quality Improvement Capacity in Primary Care

April 7, 2017

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What is Healthy Hearts Northwest:

- 36-month project funded by Agency for Healthcare Research & Quality (AHRQ).
- We are one of 7 regional cooperatives across 12 states.
  - 5,000 primary care clinicians serving approximately 8 million people.
- Aligns with the DHHS efforts in the Million Hearts Campaign to improve cardiovascular health.
Regional Cooperatives

Healthy Hearts in the Heartland
(Midwest Cooperative)

Healthy Hearts NYC
(New York City Cooperative)

Heart Health Now!
(North Carolina Cooperative)

Healthy Hearts Northwest
(Northwest Cooperative)

Healthy Hearts for Oklahoma
(Oklahoma Cooperative)

Evidence Now Southwest
(Southwest Cooperative)

Heart of Virginia Healthcare
(Virginia Cooperative)
Healthy Hearts Northwest

- Healthy Hearts Northwest (H2N) is studying the impact of different implementation strategies to improve Quality Improvement (QI) capacity within smaller primary care practices, with a focus on cardiovascular risk factors.
Collaborative Partners

• Qualis Health (Washington & Idaho
  – Practice Recruitment
  – Practice Facilitators

• Oregon Rural Practice Research Network (OHSU)
  – Practice Recruitment
  – Practice Facilitators

• Oregon Health Sciences University
  – Department of Medical Informatics

• University of Washington
  – WWAMI Practice-Based Research Network
Who are the Subjects?

The “Small” Primary Care Practice (fewer than 10 providers)

“Capacity” for conducting Quality Improvement

Practice Performance:
CVD Risk Factors:
Aspirin Use
Blood Pressure
Cholesterol
Smoking
Current State of Primary Care

1/2

Of patients with major chronic illnesses receive recommended care.

Of people leave the doctor’s office without understanding what their physician said.

Of doctors perceive “people with chronic conditions usually receive adequate medical care.”
Improvement in Primary Care is Hard Work!

• “Despite the promise of QI capacity to help improve primary care delivery, the financing and structure of primary care in the United States makes it difficult for primary care practices to build QI capacity on their own. Most primary care practices do not have the time, resources, or expertise needed to focus on practice improvement.”

Background

• Little attention has been paid to quality improvement (QI) capacity within smaller primary care practices.

• Strategies for external support to build such capacity include practice facilitation (PF), shared learning opportunities and educational outreach.

• Although PF has proven effectiveness, little is known about the comparative effectiveness of combining these strategies.
What is a Practice Facilitator/Coach?

• A supportive service provided to a primary care practice by a trained individual or team of individuals.
• They use a range of organizational development, project management, QI, and practice improvement approaches.
• They build the internal capacity of a practice over time and support it in reaching incremental and transformative improvement goals.

Is Practice Facilitation effective?

- A review of 23 studies with 1,398 practices.
- Primary care practices are 2.76 times more likely to adopt evidence-based guidelines through practice facilitation.
- PF is more effective if it is tailored to the practice needs, resources, etc.
- The number intensity of PF is associated with its effectiveness.

Educational Outreach

• Also called academic detailing, involves a trained outside expert delivering one or more educational messages to a health care professional or the clinical team.
• It is considered a promising method of modifying health professional behavior, with a 5.6% average improvement in guideline concordant behavior from one large systematic review.*

Shared Learning

- Shared learning opportunities, such as the learning collaborative approach pioneered by the Institute for Healthcare Improvement, can motivate change.

What are we trying to spread?

- Build QI Capacity
  - IHI Model for Improvement
- Effective approaches to improve:
  - Aspirin
  - Blood Pressure
  - Cholesterol
  - Smoking
## Factorial Design

<table>
<thead>
<tr>
<th>Educational Outreach</th>
<th>Shared Learning Opportunities (Site Visits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
<td>Practice Facilitation (PF) alone</td>
</tr>
<tr>
<td></td>
<td>PF + Shared learning</td>
</tr>
<tr>
<td>Yes</td>
<td>PF + Educational Outreach</td>
</tr>
<tr>
<td></td>
<td>PF+ Educational Outreach + Shared Learning</td>
</tr>
</tbody>
</table>
# Sources of Data

<table>
<thead>
<tr>
<th>Source</th>
<th>Description</th>
<th>Time Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice Survey</td>
<td>Practice characteristics, social network, Change Process Capacity Questionnaire</td>
<td>Baseline, end of active intervention &amp; 6-months post</td>
</tr>
<tr>
<td>Staff Member Survey</td>
<td>Adaptive Reserve, Burn-out inventory</td>
<td>Baseline, end of active intervention &amp; 6-months post</td>
</tr>
<tr>
<td>Quality Improvement Capacity Assessment</td>
<td>Measures of 7 High Leverage Changes to build capacity for QI</td>
<td>Baseline, end of active intervention &amp; 6-months post</td>
</tr>
<tr>
<td>ABCS Clinical Quality Measures</td>
<td>NQF and/or CMS defined: Aspirin Use, Blood Pressure, Cholesterol (statins), Smoking</td>
<td>Quarterly with 12-month look-back periods</td>
</tr>
<tr>
<td>Practice Facilitator visit notes and assessments</td>
<td>Major Disruptions, PDSA cycle descriptions</td>
<td>Throughout active 15 months of coaching</td>
</tr>
</tbody>
</table>
ABCS Quality Measures

Each practice must report ABCS measures to us every 90 days throughout the project:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Indicator</th>
<th>State/County baseline</th>
<th>National baseline</th>
<th>2017 National goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriate Aspirin therapy</td>
<td>Aspirin use for people at high risk</td>
<td></td>
<td>47%</td>
<td>65%</td>
</tr>
<tr>
<td>Blood pressure control</td>
<td>Blood pressure control</td>
<td></td>
<td>46%</td>
<td>65%</td>
</tr>
<tr>
<td>Cholesterol Management</td>
<td>Effective treatment of high cholesterol (LDL-C)</td>
<td></td>
<td>33%</td>
<td>65%</td>
</tr>
<tr>
<td>Smoking cessation</td>
<td>Smoking prevalence</td>
<td></td>
<td>19%</td>
<td>17%</td>
</tr>
</tbody>
</table>
Outcomes

Improved outcomes in ABCS measures

Increased QI capacity at sites

Change Concepts

Organized Evidence-based Care

Quality Improvement Strategy

Continuous Team-based Healing Relationships

Patient-centered Interactions

Care Coordination

High Leverage Changes

Embed clinical evidence on ABCS into daily work to guide care for patients

Utilize reliable, robust data to understand and improve ABCS measures

Establish a regular QI process involving cross-functional teams

Identify at-risk patients for prevention outreach

Define roles and responsibilities (tasks) across the care team to identify and manage ABCS population

Deepen patient self-management support for action planning around ABCS

Develop robust linkage to smoking cessation, CDSMP, and other evidence-based community resources

Key Activities/Steps

- Review the evidence supporting the ABCS for primary and secondary prevention of cardiovascular risk
- Review treatment guidelines for ABCS measures
- Educate staff on clinical guidelines
- Select patient ed materials for primary and secondary prevention

- Develop process to pull data from EMR
- Review data for accuracy and build confidence in data
- Develop process to support accurate data entry/collection
- Use data to identify gaps between the evidence-based guidelines and current care for all patients on panel
- Create population-based reports and visual data dashboards

- Set aside regular meeting time for cross-functional QI team
- Select a QI methodology (PDSA, MFI) to structure improvement efforts
- Train team members on QI methodology
- Practice good meeting skills
- Regularly review data on ABCS outcome and process measures to understand areas for improvement
- Invite patient(s) to participate on the QI team

- Understand current patient panel relative to ABCS
- Select actionable improvement goals based on ABCS data
- Recall patients overdue for care/outreach related to ABCS testing, education, counseling

- Use workflow mapping to examine current processes and explore other approaches
- Introduce preventive screenings and educational materials for ABCS measures into workflow
- Develop/enable point of care reminders based on ABCS guidelines
- Scrub charts daily to flag patients needing support on ABCS

- Train staff in motivational interviewing
- Develop shared care plans with patients, emphasizing goal setting led by patient values
- Follow up with patient progress toward care plan goals

- Create list of community resources and keep in a location accessible to all staff members
- Outreach to community resources to build referral pathway
- Provide list of resources to patients
- Proactively refer patients to community resources and assist in establishing patient with the resource
Hypotheses

• Improvement in the ABCS clinical performance measures will be greater among practices assigned to one of the enhanced practice support arms of the study compared to practice facilitation alone,

• Practice capacity at baseline for QI will mediate this relationship

• External organizational support and external climate for QI will moderate the observed relationship between intervention arm and change in ABCS outcomes.
Hypotheses

• Compared to national control practices not participating in the study, CVD clinical performance measures will improve across all practices enrolled in H2N and this improvement will vary across the different combinations of practice support.
Study Timeline

- **Baseline CQM Outcome Measurement Period**: Jul 2015 - Jun 2016
- **Enhanced Practice Support**: Jun 2016 - Jan 2017
- **Follow-up CQM Outcome Measurement Period**: Jan 2017 - Dec 2017

- **Randomization**: Jul 2015

- **Initial PF Visit & Surveys**: Jan 2016 - Jul 2016

- **15 Months of PF Support**: Jul 2016 - Mar 2017

- **Final PF Visit**: Mar 2017 - Oct 2017

- **April 2017: Follow-Up Surveys**
Randomized 209 Smaller Practices
Early Findings: Recruitment

- Average of 7.1 contacts per practice before successfully enrolled
- For every clinic successfully recruited, there were approximately 6 clinics that did not enroll.
- Each enrolled practice required almost 44 hours per recruited practice.
- Total cost of recruitment was $6,029 per enrolled practice.
Early Findings: CQM Reporting

- Percent of practices who reported they were currently able to generate a CQM report was: 42.2% for aspirin, 59.9% for blood pressure, and 58.3% for smoking cessation.
- Only 63% of practices were able to generate a 12-month report for blood pressure CQM for calendar year 2015 and only 55.1% were able to provide a 12-month look back report at the end of the first quarter of 2016.
## QICA Scores and Performance

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Pearson Correlation</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>QICA</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>w/ ABCS aspirin</td>
<td>138</td>
<td>0.194</td>
<td>0.023</td>
</tr>
<tr>
<td>w/ ABCS BP</td>
<td>148</td>
<td>0.171</td>
<td>0.038</td>
</tr>
<tr>
<td>w/ ABCS smoking</td>
<td>137</td>
<td>0.100</td>
<td>0.245</td>
</tr>
<tr>
<td><strong>CPCQ</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>w/ ABCS aspirin</td>
<td>119</td>
<td>-0.016</td>
<td>0.863</td>
</tr>
<tr>
<td>w/ ABCS BP</td>
<td>128</td>
<td>0.164</td>
<td>0.064</td>
</tr>
<tr>
<td>w/ ABCS smoking</td>
<td>118</td>
<td>0.002</td>
<td>0.986</td>
</tr>
</tbody>
</table>

Absorptive/learning capacity of a primary care practice is a better predictor of current clinical performance than capability to manage change.
Practices Have Limited Bandwidth for Support

- 256 recruited
- 209 randomized
- 191 “active” as of 4/5/2017
- Participation in “enhanced support” activities:
  - EOV only:
  - Site Visit only:
  - EOV & Site Visit:
## Major Disruptions are Common

<table>
<thead>
<tr>
<th>Type of Disruption</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinician left</td>
<td>29 (16.2)</td>
</tr>
<tr>
<td>Staff turnover</td>
<td>33 (18.4)</td>
</tr>
<tr>
<td>Changed EMR</td>
<td>17 (9.5)</td>
</tr>
<tr>
<td>Physical move to new location</td>
<td>4 (2.2)</td>
</tr>
<tr>
<td>Merged into larger organization</td>
<td>6 (3.4)</td>
</tr>
<tr>
<td>New billing system</td>
<td>8 (4.5)</td>
</tr>
<tr>
<td>Other</td>
<td>5 (2.8)</td>
</tr>
<tr>
<td>Any disruption</td>
<td>65 (36.3)</td>
</tr>
</tbody>
</table>
Next Steps

- Practices are rolling out of 15 months of active practice coaching support January – September of 2017
- ABCS quarterly data collection continues through Q4 of 2017.
- Final analyses and manuscript preparation January – April of 2018
Q & A