10-29-2018

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A Report From the INSTTEPP* Trial and Meta-LARC† Consortium

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Purpose
Patient self-management is an inevitable part of the work of being a patient, and self-management support (SMS) has become increasingly important in chronic disease management. However, the majority of SMS resources available in the Agency for Healthcare Research and Quality SMS Resource Library were developed without explicit collaboration between clinicians and patients.

Methods
Translation of SMS tools derived from the library into primary care practices occurred utilizing boot camp translation in four different practice-based research networks (PBRNs). The typical model of boot camp translation was adapted for the purpose of the Implementing Networks' Self-management Tools Through Engaging Patients and Practices (INSTTEPP) study to develop SMS tools for implementation in the participating practices. Clinicians, clinic staff members, and patients were involved throughout the translation process. Existing resources from the SMS library were reviewed and adapted by each boot camp translation group to create tools unique to the patients in each network.

Results
There was no preexisting resource within the library that was deemed suitable for implementation without modification. Each network adapted tools from the SMS library to create different products. Common themes emerged from each network’s translation process that highlighted the importance of patient engagement in the translation process. Boot camp translation, in conjunction with PBRNs, can be implemented to adapt SMS tools for implementation in member practices.

Conclusions
Boot camp translation with a combination of practices and patients can be implemented to facilitate a process of local adaptation that improves the local applicability of SMS tools in primary care clinics. (J Patient Cent Res Rev. 2018;5:276-286.)

Keywords
self-management support; practice-based research network; boot camp translation

Patient self-management is an inevitable part of the work of being a patient.¹ Self-management support (SMS) has been defined as the efforts of the health care team to promote patient engagement in behaviors that positively impact their illness.² Improved patient self-management has the potential to improve health-related outcomes and decrease the cost of chronic care.²³
The development of materials and instruments to facilitate the delivery of SMS in the primary care setting has traditionally not engaged patients in the process. Within the Agency for Healthcare Research and Quality’s (AHRQ) SMS Resource Library, the majority of resources available came from health care organizations or academic medical centers without any collaboration with patients. Engaging patients as members of a practice’s quality improvement initiatives has been shown to improve the health care delivery process and quality of care. Thus, engaging patients in the development and dissemination of SMS tools has the potential to increase relevance, uptake, and ability to effectively deliver patient SMS.

Boot camp translation (BCT) is a process that has successfully engaged community members and health care professionals in the process of translating evidence-based medical practice into messages that resonate locally. By employing principles of community-based participatory research, BCT takes evidence-based guidelines and recommendations and communicates them in a format that is accessible, understandable, meaningful, and engaging to community members and patients.

The Improving Networks’ Self-management Tools Through Engaging Patients and Practices (INSTTEPP) study sought to apply BCT to the topic of SMS to review and develop new SMS instruments for use with patients in small to medium-sized primary care clinics. The SMS library provided the evidence and guidelines for the BCT process, informing both the expert presentation and serving as a starting point for translation. This INSTTEPP paper reports on the process of using BCT to create and adapt SMS tools for subsequent implementation in primary care clinics.

METHODS

The primary methods and outcomes of the INSTTEPP trial are published elsewhere in this issue. Four practices were recruited for participation in the study from each of 4 practice-based research networks (PBRNs) in the Meta-LARC consortium (16 practices total): Oregon Rural Practice-based Research Network, Wisconsin Research and Education Network, Iowa Research Network, and State Networks of Colorado Ambulatory Practices and Partners (SNOCAP). BCT was utilized across the 4 PBRNs to translate SMS tools for implementation in the practices participating in this study. The main aims were to evaluate the effect of these translated materials on measures of patient SMS, practice staff attitudes, degree of adoption within the clinics, and measures of patient activation. The institutional review boards of all 4 PBRN institutions approved the research protocol through a ceding process to the Colorado Multiple Institutional Review Board (COMIRB), as is documented in a companion paper within this issue.

BCT originated in the High Plains Research Network, a PBRN in eastern Colorado and a member of the SNOCAP consortium. The full description of the BCT process has been previously described. For the purposes of INSTTEPP, the typical timeline for the BCT was shortened. Instead of occurring over a series of 9 months with several in-person meetings, there was only 1 7-hour in-person kickoff meeting followed by 3 to 4 30-minute phone calls occurring over a period of approximately 3 months. A stepped-wedge design was implemented to allow each PBRN to sequentially initiate the BCT in its network at 2-month intervals with the order determined by random assignment. Due to their experience and history with BCT, research team members from SNOCAP traveled to each state to facilitate the kickoff meeting, after which the facilitation responsibility was transferred to local network leadership with guidance and training from SNOCAP.

Each participating practice recruited 2 patients, 1 staff member in a care manager role, and 1 clinician for participation in each network’s BCT along with the research team. The full-day BCT kickoff retreat began with introductions, followed by an expert presentation on SMS. The articles and resources in AHRQ’s SMS library served as the basis for the expert presentation. The afternoon session was devoted to brainstorming ideas for messaging and implementation, during which 1 hour and 15 minutes were devoted to reviewing the existing tools in the SMS library. The kickoff retreat ended with discussions about key messages learned throughout the day.

The SMS library (Table 1) consists of 38 resources divided into 6 categories: articles, guides, materials for patients, reports, tools, and trainings. Prior to
### Table 1. Resources* Contained in the AHRQ Self-Management Support Resource Library

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two-sided assessment and targeted messages tool</td>
<td>Article</td>
<td>Clinical Pediatrics</td>
</tr>
<tr>
<td>A 'stages of change' approach to helping patients change behavior</td>
<td>Article</td>
<td>AAFP</td>
</tr>
<tr>
<td>Have you really addressed your patient's concerns?</td>
<td>Article</td>
<td>RWJF</td>
</tr>
<tr>
<td>Helping patients take charge of their chronic illnesses</td>
<td>Article</td>
<td>AAFP</td>
</tr>
<tr>
<td>Implementing practical interventions to support chronic illness self-management</td>
<td>Article</td>
<td>Joint Commission Journal on Quality and Safety</td>
</tr>
<tr>
<td>Patient self-management of chronic disease</td>
<td>Article</td>
<td>JAMA</td>
</tr>
<tr>
<td>Self-management aspects of the improving chronic illness care breakthrough series: implementation with diabetes and heart failure teams</td>
<td>Article</td>
<td>Annals of Behavioral Medicine</td>
</tr>
<tr>
<td>Self-management education: history, definition, outcomes, and mechanisms</td>
<td>Article</td>
<td>Annals of Behavioral Medicine</td>
</tr>
<tr>
<td>Self-management education programs in chronic disease</td>
<td>Article</td>
<td>Archives of Internal Medicine</td>
</tr>
<tr>
<td>Supporting self-management in patients with chronic illness</td>
<td>Article</td>
<td>AAFP</td>
</tr>
<tr>
<td>Building peer support programs to manage chronic disease</td>
<td>Guide</td>
<td>American Medical Association</td>
</tr>
<tr>
<td>Helping patients help themselves: how to implement self-management support</td>
<td>Guide</td>
<td>CHCF</td>
</tr>
<tr>
<td>Helping patients manage their chronic conditions</td>
<td>Guide</td>
<td>CHCF</td>
</tr>
<tr>
<td>Physician resource guide to patient self-management support</td>
<td>Guide</td>
<td>American Medical Association</td>
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<tr>
<td>Sharing the care: the role of family in chronic illness</td>
<td>Guide</td>
<td>CHCF</td>
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<tr>
<td>Getting safer care (tips for consumers &amp; patients)</td>
<td>Materials</td>
<td>AHRQ</td>
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<tr>
<td>Healthy men (tips for consumers &amp; patients)</td>
<td>Materials</td>
<td>AHRQ</td>
</tr>
<tr>
<td>Questions are the answer (tips for consumers &amp; patients)</td>
<td>Materials</td>
<td>AHRQ</td>
</tr>
<tr>
<td>Staying healthy (tips for consumers &amp; patients)</td>
<td>Materials</td>
<td>AHRQ</td>
</tr>
<tr>
<td>Understanding diseases &amp; conditions (tips for consumers/patients)</td>
<td>Materials</td>
<td>AHRQ</td>
</tr>
<tr>
<td>Patient self-management support programs: an evaluation</td>
<td>Report</td>
<td>AHRQ</td>
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<tr>
<td>Promoting effective self-management approaches to improve chronic disease care</td>
<td>Report</td>
<td>CHCF</td>
</tr>
<tr>
<td>New approach to group visits: helping high-need patients make behavioral change</td>
<td>Tool</td>
<td>AAFP</td>
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<tr>
<td>Primary care resources and supports for chronic disease self-management</td>
<td>Tool</td>
<td>RWJF</td>
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<tr>
<td>Interactive shared care plan</td>
<td>Tool</td>
<td>PeaceHealth</td>
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<tr>
<td>Partnering in self-management support: a toolkit for clinicians</td>
<td>Tool</td>
<td>Institute for Healthcare Improvement</td>
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<tr>
<td>Physician tip sheet for self-management support</td>
<td>Tool</td>
<td>American Medical Association</td>
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<tr>
<td>Sample dialogues for clinician-patient conversations</td>
<td>Tool</td>
<td>American Medical Association</td>
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<td>Self-management toolkit</td>
<td>Tool</td>
<td>South West Local Health Integration Network</td>
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<tr>
<td>Improve care with patient self-management support</td>
<td>Training</td>
<td>AAFP</td>
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<tr>
<td>Motivation: behavior change counseling in chronic care</td>
<td>Training</td>
<td>RWJF</td>
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<tr>
<td>Motivating change online programs for physicians</td>
<td>Training</td>
<td>Permanente Medical Group</td>
</tr>
<tr>
<td>Motivating patients to change behavior</td>
<td>Training</td>
<td>American Medical Association</td>
</tr>
<tr>
<td>Self-management strategies for vulnerable populations</td>
<td>Training</td>
<td>American Medical Association</td>
</tr>
<tr>
<td>The planned care visit</td>
<td>Training</td>
<td>MacColl Center for Health Care Innovation</td>
</tr>
<tr>
<td>Training curriculum for health coaches</td>
<td>Training</td>
<td>UCSF Center for Excellence in Primary Care</td>
</tr>
<tr>
<td>Video on coaching patients for successful self-management</td>
<td>Training</td>
<td>CHCF</td>
</tr>
</tbody>
</table>

*Shaded rows indicate materials utilized during the boot camp translation kickoff meeting.

AAFP, American Academy of Family Physicians; AHRQ, Agency for Healthcare Research and Quality; CHCF, California Health Care Foundation; RWJF, Robert Wood Johnson Foundation; UCSF, University of California, San Francisco.
the study start date, the entire library was reviewed to select resources for the BCT kickoff retreat. The expert presentation was created exclusively from and reviewed these resources. Specific resources from each of the 6 categories of materials were selected for the afternoon portion of the kickoff retreat. The selected tools were then divided into 5 stations, and BCT participants spent 15 minutes reviewing the resources at each station. The SMS library webpage was displayed at one station to give participants familiarity with the website navigation and to show participants all available resources. Furthermore, a complete list of the resources with links to the materials was provided to all BCT participants. A research team member was located at each station to record feedback from all BCT participants.

After the conclusion of BCT in each network (the day-long retreat and subsequent conference calls), the materials and messages developed by the translation process were implemented in the participating practices. Researchers reviewed the notes from the kickoff meeting and phone calls to understand the themes from each discussion as well as the decisions made during the translation process, including a review of the original and final SMS tools from each PBRN.

RESULTS

A total of 32 patients and 32 practice team members were engaged in the BCT process, with 45% of individuals attending all meetings and phone calls throughout the BCT process.\(^\text{10}\) Each BCT group informed the development of SMS tools for subsequent implementation in each of the participating practices. The BCT process resulted in the creation of unique tools in each network (Figures 1–4).

No individual tool from the SMS library was chosen for clinic use without modification. Each network selected one or more tools as starting points for the translation process. Similar themes emerged from the translation process within each PBRN. First, the subject of accountability arose in each PBRN, with emphasis on the idea that patients and practices had to share accountability for self-management. Patients expressed an interest to having practices hold them accountable for accomplishing self-management goals and advised practices to have active follow-up to achieve this accountability. Furthermore, each BCT group recognized that the burden of SMS extends beyond clinic walls, and because of this the subject of peer support groups arose in each network’s group.

Each network made substantive changes to the language included in their SMS tools for them to be more motivating and engaging for their own practice’s patient populations. With the Wisconsin Research and Education Network BCT, the patient participants preferred the word “convince” instead of “conviction” on the visual analog scale, as conviction was deemed to have negative connotations. Similarly, in the Iowa Research Network, the word “problem” was removed and focus centered on the creation of a personal action plan. The word “barriers” was felt to be insurmountable and this was replaced with “challenges.”

DISCUSSION

Even though each BCT occurred independently, similar themes emerged from the translation process in each network. The participants valued the idea of accountability from both the patients and the practices, even going so far as to suggest the term “contract” as opposed to a “shared goals/care plan” in the Oregon Rural Practice-based Research Network.

Additionally, the subject of peer support groups arose in each PBRN. The BCT groups in each state suggested language changes to reflect verbiage that is more relevant to the lived experiences and preferences of the participants. These themes highlight the importance of engaging patients, clinicians, and clinic staff in the translation process.

One limitation of this study was the relatively short timeline, as the BCTs only had one in-person meeting and up to 4 phone calls. Due to the time limitations, a professional designer was not employed to refine the instruments in each network. Furthermore, the BCT groups did not discuss the implementation of the SMS tools. Previous BCTs have informed the implementation strategy, which may serve to further increase the adoption of the materials. Lastly, the patients recruited for participation in BCT in each PBRN may represent more engaged patients, which may affect the translation process.
Figure 1. Diabetes self-management support tool created by the Oregon Rural Practice-based Research Network's boot camp translation group.

**Your Diabetes Health Guide**

**Blood Pressure**
- Last visit: _____/_____
- Today: _____/_____
- Goal: 140/90 mm Hg

**Weight Check**
- Last Visit: ______
- Today: ______

**HgA1c (Every 3 months)**
- Prior Result: ______
- Current result: ______
- Next Due: ______
- Goal: <7%

**Serum Creatinine (Yearly)**
- Current result: _____ (range 0.6-1.3 mg/dl)
- Due: yes/no

**Total Cholesterol (Yearly)**
- Due: yes/no

<table>
<thead>
<tr>
<th>Total</th>
<th>Triglycerides</th>
<th>HDL</th>
<th>LDL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Result</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guidelines</td>
<td>&lt;175</td>
<td>&lt;150</td>
<td>&gt;50/40</td>
</tr>
</tbody>
</table>

**Blood Sugar Medication**
- Metformin ______
- Glipizide ______
- Lantus/Levemir ______
- Humalog/Novolog ______

**Eye Exam (Yearly)**
- Due: yes/no

**Foot Exam (Yearly)**
- Due: yes/no

**Microalbumin/Creatinine (Yearly)**
- Current result: ______
- Due: yes/no
- Goal: Less than 30 mg/dl

**Blood Pressure Medication:**
- ACE/ARB ______
- Diuretic ______
- CCB ______
- BB ______
- Other ______

**Vaccines**
- Yearly flu vaccine? ______
- Pneumonia vaccine? ______
- Prevnar 13 ______
- Pneumovax 23 ______
- Hep B (19-59 yrs) #1 ______ #2 ______ #3 ______

**Total Triglycerides HDL LDL**

- Recommended that all people with diabetes age 40-75 years old be on a statin to reduce risk of heart attack and stroke

- Recommended weight: ______

- Name: ______

- Serum Creatinine (Yearly)
  - Current result: ______
  - Due: yes/no

- Recommended to have a serum creatinine checked yearly.

- Total Triglycerides HDL LDL
  - Recommended levels for triglycerides:
    - <175 mg/dl
    - <150 mg/dl
    - >50/40 mg/dl (women/men)
    - <70 mg/dl

- Recommended levels for HDL and LDL:
  - HDL: >40 mg/dl
  - LDL: <150 mg/dl

- Recommended to have a total cholesterol checked yearly.

- Recommended levels for total cholesterol:
  - <175 mg/dl

- Recommended to have an eye exam every year.

- Recommended to have a foot exam every year.

- Recommended to have a blood pressure checked at every visit.

- Recommended to have a HgA1c checked every 3 months.

- Recommended to have a total cholesterol checked yearly.

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**PROBLEM-SOLVING WORKSHEET**

1. Problem:

2. Achievable goal:

3. How convinced are you that this is the right goal for you?

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<td>Unsure</td>
<td>Somewhat convinced</td>
<td>Very convinced</td>
<td>Extremely convinced</td>
<td></td>
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</tr>
</tbody>
</table>

4. Solutions: Pros (+) Cons (-)

a) 

b) 

c) 

5. Choice of solution:

6. Steps to achieve solution:

a) 

b) 

c) 

Confidence ruler: How confident are you that you can reach your goal?

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<td>Somewhat convinced</td>
<td>Very convinced</td>
<td>Extremely convinced</td>
<td></td>
<td></td>
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Notes:

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**Figure 2.** Problem-solving worksheet created by the Wisconsin Research and Education Network boot camp translation group.
Figure 3. Personal action plan created by the Iowa Research Network boot camp translation group.
Take Charge of Your Health
Set a Personal Wellness Goal!

What is a goal? A goal is:
1) Something you want and think you can do
2) Something with clear steps
3) Something that makes you want to get to work and stick to it
4) Something that will make your health and quality of life better

Step 1: Set a Personal Wellness Goal Here:

My goal for better health and better quality of life is:

This goal is important to me because:

Step 2: My next step in reaching this goal is to share it with my doctor or the health care team at [the Clinic].

Figure 4 (continues on next page). The two-page self-management support tool created by the State Networks of Colorado Ambulatory Practices and Partners boot camp translation group. The first page (shown above) encouraged patients to set a personal wellness goal.
Example Goals

I will eat one more green vegetable, such as broccoli, spinach, or lettuce per day. I will share my plan with my spouse or partner, who will ask me how it is going at least once a week.

For the next two weeks, I will walk in my neighborhood for 30 minutes on Monday, Wednesday, and Friday. If the weather is too cold, then I will walk in the mall. I will share my plan with my best friend, who will join me on my walks.

I will work on reducing my stress level. I will do relaxation exercises for 20 minutes each day when I get home from work. I will share my plan with my children, who will ask me how it is going daily.

Figure 4 (continued from previous page). The two-page self-management support tool created by the State Networks of Colorado Ambulatory Practices and Partners boot camp translation group. The second page (shown above) consisted of example goals to provide a reference for patients completing the form.
CONCLUSIONS
This study illustrates the importance of the translation process, as no instrument was implemented directly from the library and each network created unique tools. SMS instruments require a process of local adaptation that serves to increase the relevance and meaning to both patients and practices. BCT is a process that can be implemented to engage these key stakeholders in the successful development of SMS tools. In turn, the delivery of SMS in primary care clinics could be improved from this process of translation. Given these findings, focus ought to shift toward enabling practices to facilitate collaboration with patients in the development of SMS tools instead of the current focus on the development of more instruments or clinical workflows.

Patient-Friendly Recap

• Patient self-management is an important part of managing chronic disease, and primary care practices are well equipped to support self-management efforts.

• Despite access to a wealth of self-management resources, the authors found no individual tool studied could be adequately implemented in clinical practice without some modification for local patients.

• Engaging patients in the creation of materials and workflows for self-management support can lead to richer materials that resonate more with patients.

Acknowledgments
Iowa Research Network: Akron Mercy Medical Clinic (Akron, IA); Red Haw Family Medical Center, P.C. (Chariton, IA); Family Medicine Clinic, University of Iowa Hospitals and Clinics (Iowa City, IA).

Author Contributions

Conflicts of Interest
None.

Funding Sources
This research was funded by Agency for Healthcare Research and Quality (AHRQ) grant 1R18HS022491-01. Infrastructure support (ie, Meta-LARC) was funded by AHRQ grant IP30HS021639-01.

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