Strategies Used by Clinical Champions to De-Implement a Low-Value Care Service

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Research

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Abstract

Background: Clinical champions are front-line clinicians who advocate for and influence practice change in their local context. The strategies they use when leading efforts to de-implement the use of a low-value service have not been well described. The purpose of this study is to identify and describe important strategies used by six clinical champions who launched a de-implementation project as part of a fellowship training experience.

Methods: Fellows participated in a two-round modified Delphi survey to identify the key strategies they used during their de-implementation project. In the second round the fellows were asked to identify one important strategy they would be willing to discuss in an interview. A 30-minute semi-structured interview was conducted with each fellow, transcribed and thematically analyzed.

Results: The six strategies were: build a coalition, conduct a local needs assessment, develop a formal implementation blueprint, conduct educational meetings, use facilitation, and develop clinical reminders. Additional common strategies that emerged across the interviews were the use of data to engage clinicians in conversations, including the patient's perspective in designing the interventions, and investing the time upfront to plan and launch the initiative because of the inherent challenges of relinquishing a service.

Conclusions: Clinical champions identified multiple strategies as important when de-implementing a low-value service. Many were used to engage in conversations with stakeholders, including leadership, providers, and patients, to increase buy-in and support, challenge beliefs, promote behavior change, and gather insights about next steps in their effort to support de-implementing their chosen low-value service. Future work is needed to better understand how prepare clinicians for this role and to understand the mechanisms through which these strategies might be effective.

Contributions To The Literature

- This study identifies and describes important strategies used by clinician champions when leading an effort to de-implement the use of a low-value or overused service across a diversity of clinical settings.
- The results provide examples of why and how the strategies were employed and common strategies used across their projects.
- For implementation scientists, these findings provide insights that may be useful in designing interventions for future studies to de-implement unnecessary, unproven, or harmful health care services.

Background

Although there is a growing body of knowledge about strategies to improve the implementation of underused, evidence-based practices (1), little is known about how to effectively de-implement or reduce the use of overused services (2–4). Also known as low-value, inappropriate or unnecessary care, these are services for which the potential for harm is greater than the benefit (5–7). Spurred by a growing body of evidence about both the volume of unnecessary health care services and the harm they inflict on patients, interest is growing in identifying effective strategies and approaches to reduce the use of these services (8–10). As described by Norton and Chambers, de-implementation may involve removing, replacing, reducing, or restricting the delivery of an inappropriate or unnecessary intervention (10). There is also a growing consensus that the process of de-implementation is qualitatively different than that of implementation (11). Norton and Chambers point out that factors affecting de-implementation are multilevel, complex and context specific, and interact in ways that are uniquely different from implementation of an evidence-based service (12). They postulate that multilevel strategies may be necessary and may need to focus more on affective considerations because of the fears and concerns of both patients and clinicians during efforts to reduce the use of a service. In addition, individual health care organizations have distinct patterns of overuse that persist over time, suggesting the need for "bottom-up" interventions that address the culture of how care is delivered (13–15).

Clinical champions are front-line clinicians who advocate for and influence practice change in their local context. They can facilitate implementation and adoption of evidence-based practice and can be effective at overcoming organizational and contextual barriers (16, 17). When implementing new practices that would prevent hospital-acquired infections, champions were more likely to be successful at implementing change within their own sphere of influence (18). In a study to implement new processes for stroke care in the acute care setting, clinical champion behaviors included educating colleagues, problem-solving, implementing new care pathways, monitoring progress, and standardizing processes across service lines (17). These behaviors are similar to clinical champion activities, education, advocacy, relationship building and boundary navigation that are used when implementing a new patient safety practice (19). In a comparative case study of the implementation of new postpartum contraceptive care, six key attributes of champions emerged: influence, ownership, physical presence at the point of change, persuasiveness, grit, and participative leadership style (20).

Although others have described the potential of a clinical champion in de-implementing low-value care services (21), little or no work has focused on what strategies are used by clinical champions when leading efforts to de-implement an overused or low-value care service and how they use or combine strategies during such an initiative. Here, we describe a value champion training program and examine strategies employed by six clinical value champions to de-implement an overused or low-value service across a diversity of care settings. Three questions guided our study:

1. What do clinical champions identify as the most important strategy they used when leading an initiative to de-implement an overused service?
2. How did clinical champions employ that strategy to support de-implementation efforts in their project?

3. What activities were common across the six clinical champion initiatives?

Methods

Study Design: We conducted a cross-sectional observational study at the conclusion of a fellowship training program for clinicians who were champions of a de-implementation initiative.

Population and setting

Selection of Value Champion Fellows Six clinicians from safety net settings across the United States were recruited to participate in a fellowship training program to address overused services in their setting. We prioritized safety net settings, which serve populations that are uninsured or covered by Medicaid or other vulnerable populations because of the interest of the funder, the Robert Wood Johnson Foundation, in health equity. Announcements about the fellowship opportunity were made at national conferences, through partner organizations such as the Choosing Wisely initiative and America's Essential Hospitals, and the High Value Practice Academic Alliance. Clinicians submitted an application and were interviewed by the director and co-director of the fellowship program. Applicants were rank ordered based on a predefined set of criteria and the top six were selected to participate in the fellowship program. Descriptions of the fellows, their clinical setting and the overuse topic they selected for their project are in Table 1.

Table 1
Description of Fellows, their Projects, and Important Strategies

Fellow	Setting	Project	Important Strategy
1. Primary Care General Internist	Academic Residency Program Faculty	Overprescribing of opioids for chronic pain	Clinical Reminders
2. Emergency Department Physician	Urban/Inner City Emergency Department	Imaging for low back pain	Facilitation
3. Obstetrician/Gynecologist	Academic Health Center	Postnatal visits for hypertensive disorder of pregnancy	Building a Coalition
4. Inpatient Podiatry Physician Assistant	University Hospital	Antibiotic stewardship for diabetic foot sores	Local Needs Assessment
5. Internal Medicine Hospitalist	University Hospital	Multiple lumens peripherally inserted central catheters	Educational Meetings
6. Pediatric Advanced Nurse Practitioner	Federally Qualified Health Center	Cough/cold medicine for infants/children	Implementation Blueprint

Fellowship Training Program The training commenced with a 2.5-day in-person orientation and training led by faculty who were recognized national experts in addressing low-value care services. Following this

event, fellows and faculty met for monthly webinars that were a short didactic presentation followed by a check-in with each fellow about their progress on their overuse reduction project. In addition, each fellow was assigned a mentor from the faculty who checked in with them monthly. The fellowship program culminated with a 1.5-day virtual Capstone Meeting during which fellows presented the results of their project to an invited national audience and fellowship program leaders shared preliminary data from the fellows evaluating their experience.

Data Collection & Analysis

An overview of the steps taken to collect and analyze the data to answer the three research questions is in Fig. 1. Here we describe the specific methods used for each research question.

Research Question 1

What are the most important strategies used by the value champions?

Data Collection: We conducted a developmental evaluation of the fellowship program by collecting qualitative data from eight sources: posts on a nonpublic social media platform established for the fellowship program, interviews with individuals in each fellow's organization who worked with them on their project, a midpoint focus group with the fellows, notes from a midpoint review of data and observations by members of the Fellowship training program project team, mentor-mentee notes from monthly check-ins, notes from the monthly webinars, notes from meetings with the faculty to develop and refine the training curriculum, and notes from the Capstone Meeting when fellows presented results of their projects. We used template analysis to analyze source documents from these eight data sources employing a code list drafted by LP and iteratively refined and agreed upon by the project team (22). Five coding memos focused on central aspects of the fellows' projects and fellowship experience were developed: 1) project implementation strategies, 2) sequencing of project steps, 3) training needs and gaps, 4) lessons learned, and 5) insights into preparing new clinical value champions.

Analysis: Guided by the Expert Recommendations for Implementing Change (ERIC) compilation of intervention strategies, two team members (MP, LP) reviewed the five coding memos to identify strategies used by the fellows during their projects (1). Strategies from the coding memos that appeared to match items in the ERIC taxonomy formed an initial list that MP and LP revised and finalized through discussion. Twelve of the 73 ERIC strategies were found to be represented across the fellows' projects: audit and provide feedback, build a coalition, conduct educational meetings, conduct educational outreach visits, conduct local consensus discussions, conduct a local needs assessment, develop a formal implementation blueprint, provide facilitation, inform local opinion leaders, intervene with patients/consumers to enhance uptake and adherence, involve patients/consumers and family members, and use clinical reminders.

Next, we surveyed the six fellows, asking them to rank-order the 12 strategies by relevance for the success of the projects (with 1 = most important and 6 = least important). In addition, we asked them to indicate

which strategy they would be willing to discuss further during an interview. The survey was created and administered using the RedCap web application (23). A runoff survey resolved a tie in the rankings.

Research Questions 2 & 3

How did they employ their strategy? What strategies/approaches were common across the projects?

Data Collection: Three team members (MP, JM and JW) conducted 30-minute interviews with each fellow about the strategy they chose for their interview. Two interviewers attended each interview. All interviews were conducted using a set of common prompts: 1) Tell me about your strategy and how you used it, 2) I want to hear about your thinking as you planned to use this strategy, 3) Was this strategy used earlier or later in your project and why, 4) How did this strategy work with other strategies or pieces of your project, and 5) Did you encounter any barriers and how did you approach them. Interviews were conducted via the Microsoft Teams platform, recorded with consent, and transcribed in real-time using Team's automated function.

Analysis

Interview transcripts were cleaned, reviewed, and coded by three team members (JM, JW, MP) using Atlas.ti software. One team member checked and cleaned each transcript while a second provided quality assurance and a third coded each transcript. Transcripts were first coded using a simple/high-level process that created a code as a comment for each "unit of meaning," defined as a section of text that all fell into a common theme. Units of meaning could overlap or have multiple codes applied to them. Two individuals coded each transcript independently using this process and then met to review their codes and develop/refine a final list of codes.

Before completing a second round of coding in Atlas.ti, LP, JW and MP iteratively refined the code list, when possible aligning codes with strategy descriptions in ERIC and renaming code groups accordingly. The purpose of this step was to identify, within and across interviews, which strategies were described by the fellows and to connect them with the main strategy that was the topic of the interview. With the code list finalized, the interview transcripts were recoded. LP applied thematic analysis to the coded transcripts and drafted a coding memo collecting themes surfaced across interviews, along with illustrative quotes. The project team reviewed and refined the memo, which was shared with the fellows for feedback.

Results

The six fellows were diverse in their clinical training and in their settings and the overuse topics they chose to address in their project (Table 1). They represented inpatient and outpatient settings, rural and inner-city urban clinics, and included an advanced nurse practitioner, a physician assistant, and four physicians.

The six important strategies used by the fellows during their overuse reduction projects along with illustrative quotes are in Table 2. The strategies were: build a coalition, conduct a local needs

assessment, develop a formal implementation blueprint, conduct educational meetings, use facilitation, and develop clinical reminders.

Table 2
Most Important Strategies Used by Value Champions

Strategy	Definition	Illustrative Quote
Build a coalition	Recruit and cultivate partners in the implementation effort	“I presented this idea as research…the residents presented it so it was really the resident presenting the idea because I had already pulled the resident in to be part of the project…we talked about we are partnering with this other health system in our same state…Once you kind of present all that background, it's just hard to say no.” (Fellow #4)
Use Facilitation	A process of interactive problem solving and support that occurs in a context of a recognized need for improvement and a supportive interpersonal relationship	“To say, ‘look, let’s talk about the board test, what would the answer be?’ With the answer being very obvious. ‘Why in practice are we doing something really different?’…and then kind of debunking the myths from there and facilitating the conversation to make them realize the importance.” (Fellow #2)
Conduct a Local Needs Assessment	Collect and analyze data related to the need for the innovation	“I had to ask a lot of people for help and guidance… [because] I had a whole bunch of different project ideas…we talked about for an initial project, [they said] ‘let's make sure that you have the resources.’ ” (Fellow #4) “Essentially…we were able to just kind of crunch a few numbers and see: Is this really an issue here? Is this a local problem in our facility?” (Fellow #5) “Just getting their opinions….you know it was meeting people throughout the process and finding out where their views were on this as well.” (Fellow #4)
Develop an Implementation Blueprint	Develop a formal implementation blueprint that includes all goals and strategies. Use and update this plan to guide the implementation effort over time	“I needed to do things really systematically because this was the first overuse project that I've ever done.” (Fellow #6) “It was really a communication device…to quickly and effectively communicate what was happening… especially at meetings where I was giving a little bit of a shorter presentation on what overuse was or what I was doing.” (Fellow #6) “The biggest piece that kept me grounded was the outcome and the measurement portion of the charter… I'd refer back to that charter and be, OK, does this all align with what we're trying to measure at the end?” (Fellow #6)
Develop Clinical Reminders	Develop reminder systems to recall information and/or prompt them to use the clinical innovation	“People need a reminder, something that helps them to make their life easier.” (Fellow #1) “Each of them helped me to create their own reminder… I think that help a lot because they felt that actually they did it. “ (Fellow #1)

Strategy	Definition	Illustrative Quote
Conduct Educational Meetings	Hold meetings targeted toward different stakeholder groups to teach them about the clinical innovation	"Even doctors who claim to be data driven like to tell stories. So, I did tell a couple of stories of bad things that happen to patients that might have been avoidable." (Fellow #5) "We did have a hematology physician involved; she carried the clinical expertise to speak that this is a real problem." (Fellow #5)

Building a coalition involved recruiting supporters both outside and inside the local clinical setting to enhance buy-in and support from colleagues. For example, to decrease imaging for low back pain in the emergency department, it was important to recruit supporters in the department of radiology. To reduce use of peripherally inserted triple lumen intravenous catheters at the time of hospital discharge, engaging home health nurses was critical. The value champions commented on the need for such a coalition, which served as a support system to counter resistance to relinquishing an established medical practice, help survive leadership turnover, and overcome setbacks during the initiative.

The local needs assessment was important in both informing the selection of a low-value care service to address and identifying supportive stakeholders and resources. For example, the needs assessment often incorporated opinions of providers and patients about relinquishing a specific low-value service before committing to that low-value care service for their project. The assessment conducted prior to launching an effort to reduce the use of intravenous antibiotics for diabetic foot ulcers revealed a larger institutional antibiotic stewardship campaign with resources that were useful for the fellow's project. As a result, the needs assessment also informed the [de-]implementation blueprint developed by the fellows.

The formal [de-]implementation blueprint developed by the fellows was a quality improvement (QI) project charter (24). A QI charter is a living document that clearly states the aims of the project, provides a brief rationale for why it is important, describes expected outcomes, defines what is in scope and out of scope, specifies measures and data needs, and provides a proposed schedule of activities along with who is on the improvement team. The fellows used the QI charter to both to obtain and continuously engage leadership support in the face of competing organizational priorities and leadership turnover, and as a communication tool to improve buy-in from colleagues and key stakeholders across their organization. It was also valuable to the fellow as they managed their project and helped them keep track of next steps.

Educational meetings attended by clinicians often included a story of patient harm from the targeted overused service in their clinical setting. They occasionally invited a local opinion leader who presented published evidence to enhance buy-in and support. Fellows also focused on facilitating conversations to engage colleagues either in one-on-one discussions or in group meetings about the overuse reduction initiative, often to address their concerns about relinquishing a service and perceived barriers to doing so. These conversations were frequently unplanned and sometimes included recent provider-specific data about rates of overuse of the low-value service. Fellows also enhanced engagement across the health

care team by working with individual team members to develop reminders tailored to their role and workflow and then assisted with implementing them either as clinical reminders in the electronic health record or staff member checklists.

Common strategies mentioned across all six interviews are in Table 3 with illustrative quotes. The previously described strategies of building a coalition/team and conducting a local needs assessment were important across all of the interviews. Additional illustrative quotes for these two strategies are included in Table 3. In addition, fellows described how they used data strategically in conversations and presentations to their peers to engage them in behavior change and create a safe learning environment for further discussions about the overuse topic in the future. Fellows not only engaged in conversations with peers within their own clinical setting, they found value in connecting with other colleagues in departments across their organization to form partnerships, understand the potential impact of de-implementing the targeted service in those settings, and plan for additional de-implementation projects. Incorporating the perspective of the patient was also a common strategy. Fellows found this useful not only when addressing concerns among their clinician peers that de-implementation would not be acceptable to their patients, but also to inform the design of their interventions to include patient engagement in the de-implementation effort. Finally, fellows frequently mentioned the difficulty of changing existing behaviors and challenging an entrenched culture of overuse, compared to the effort required to implement an evidence-based service. Recognition of this difficulty motivated their efforts to form a strong coalition of partners across their organization, incorporate the patient perspective to counter resistance by providers, and include patient stories of harm during educational meetings. Fellows also commented on the impact of these difficulties and challenges on the time it took to both launch their project and to see any meaningful and measurable change.

Table 3
Common Approaches across the Six Fellowship Projects

Strategy	Illustrative Quote
Build a coalition/team	“Be careful who you choose on your team and make sure that they are passionate about this and it's not signing someone up for a project that's a checkbox because then the work will get stifled when they are no longer committed or the effort may not be put in to where everybody's hoping it will be.” (Fellow #4)
Leverage existing resources	“We did interviews with the clinical pharmacist residents and because they have to do a research project and we thought it would be great to find some more manpower.” (Fellow #4)
Strategically use evidence/data	“I think talking to people and explaining to them the value and having a little bit of data to back you up, whether it’s clear or not, it's been helpful to kind of continue conversations.” (Fellow #2) “But then everyone's like 'Well, I would never order that test.' But guess what, you ordered 7 this month. And now all of a sudden it's pertinent to you, it's personal to you.” (Fellow #2)
Use project organization/management	“Being able just take small pieces from that [project management] charter and then take them and say OK each one of these small bullet points on this two-page document is an entire process that I have to now branch out and pull out.” (Fellow #6)
Rely on internal and external relationships	“It's just having an informal conversation with my colleagues…just trying to understand their perspective…instead of telling them what to do, I need to learn what are their perspectives. How are they seeing this overall problem?” (Fellow #1) “I work inpatient and outpatient, so I have friends in the emergency department and talk to them about it.” (Fellow #4)
Listen to the patient voice	“One of the major pushbacks here was that the patients will not be satisfied with using remote monitoring that they prefer in person visits…so we just went into the rooms of all the patients who would be eligible for this and asked…you know it was almost universal that they wanted to do it.” (Fellow #3)

Discussion

Clinical champions identified multiple strategies as important in their work to de-implement a low-value service. Many, if not most of the important strategies were used to engage in conversations with stakeholders, including leadership, providers, and patients, through formal interviews or focus groups, or informal conversations with colleagues across their organization. The purpose of these conversations was to increase buy-in and support, challenge beliefs, promote behavior change, and gather insights about next steps and strategies for their work as a clinical champion. Even the implementation blueprint, which was a QI charter, was used by fellows as a communication tool when meeting with colleagues and stakeholders to discuss the de-implementation project. This multistrategy focus is consistent with

previously published de-implementation frameworks and theories of behavior change that show how conversations can influence people into relinquishing an established routine or behavior (10, 25–28).

While some reviews of de-implementation interventions have mentioned the importance of engaging providers, staff and patients in de-implementation efforts, the role of a clinical champion in such efforts is typically not discussed (29). In one of the few articles on this topic, Stammen and colleagues describe three potential mechanisms through which a clinical champion might be successful in promoting high-value care with their colleagues: 1) effective transmission of knowledge about benefits and harms, 2) facilitation of reflective practice, and 3) creation of a supportive environment (21). These mechanisms are consistent with the results of our analysis. As an example of effective knowledge transmission, one fellow mentioned the importance of a story about patient harm in their efforts to engage their colleagues in their description of educational meetings. Regarding facilitation of reflective practice, another fellow described the strategic use of data in reflective conversations with colleagues about unnecessary care in their clinical setting. Finally, implementing clinical reminders and conducting a local needs assessment to identify and leverage existing resources were examples of how fellows strove to create a supportive environment. These strategies and their descriptions by the fellows are also similar to the phases of work within the recently published Choosing Wisely De-Implementation Framework (3).

It was difficult for fellows to discuss the one strategy they thought was the most important during the interviews without mentioning other strategies they used to engage individuals across multiple levels of their organization. This finding is consistent with Norton and Chambers' suggestion that, similar to implementation, it is likely that multiple factors affect the de-implementation of low-value care and de-implementation may require multicomponent interventions across multiple levels of an organization (4, 12). Especially noteworthy was the recognition by fellows of the difficulty of asking individuals to relinquish delivery of a service and the need to address a culture of overuse within their organization (see Table 3). Based on this understanding, the value champions invested time upfront to identify existing resources, develop a strong coalition of supporters within their organization, gather data on overuse of their targeted service, and understand the perspectives of multiple stakeholders before moving forward with interventions to decrease the use of a service.

Limitations of this study include a small sample of value champions who were all providing care in safety net settings. It is unclear if our findings could be readily transferable to a larger cadre of champions in other clinical settings. In addition, the focus on a predefined list of implementation strategies in the literature is a limitation. Our attempt to narrow the list of applicable ERIC strategies to those mentioned in the eight existing data sources may have unnecessarily restricted the choices of "important" strategies for the fellows to choose from in our survey. However, the themes surfaced across all six interviews may have elicited new strategies that were not identified in the other data sources.

Conclusions

Clinical value champions deployed multiple strategies to increase buy-in and engage diverse stakeholders across their organization in including leaders, managers, as well as frontline clinician and staff in efforts to decrease the use of low-value care services. By deploying these strategies within their own clinical setting and across their organization, they were able to effectively address many of the previously documented de-implementation challenges and barriers such as competing organizational priorities, leadership turnover, and access to front-line clinicians (30). Future research is needed to identify the specific competencies needed to train clinical value champions, evaluate their effectiveness in de-implementing other low-value services across a broader diversity of clinical settings, and understand the underlying mechanisms behind their effectiveness.

Abbreviations

ERIC
Expert Recommendations for Implementing Change
QI
Quality Improvement

Declarations

Ethics statement: This was a quality improvement study and was determined to be exempt from approval by the Kaiser Permanente Washington Health Research Institute Institutional Review Board.

Consent for publication: Not applicable

Availability of data and materials: Not applicable

Competing Interests: The authors have no competing interests to declare

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Author's Contributions: MLP and LP conceived the study, developed and implemented the study design. JM and JW contributed to data collection and analysis of the data. LD, EV, GH, JM, LD and RDC participated in data interpretation and contributed to writing the results and discussion. Drs Parchman and Palazzo had full access to all of the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis.

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Figures

Figure 1

Methods

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- Appendix1.docx
- ParchmanSTROBEchecklistcrosssectional.docx