

**Evaluating the Feasibility and Acceptability of Implementing an Evidence-Based Transitional Care Tool  
in a Primary Care Setting**

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## Abstract

**Background** Despite the focus on what hospitals can do to prevent readmission after discharge, hospital readmission rates remain high. Currently, there is limited guidance on PCP driven interventions to reduce readmissions. The first, post-discharge visit (FPDV) is an opportune time for the PCP to decrease readmission risk.

**Aim** This project aimed to evaluate PCP's perceptions of the feasibility and acceptability of implementing a curated post-discharge transitional care tool in a primary care clinic.

**Methods** This project followed a three-step approach. First, PCPs were surveyed to assess what their needs surrounding the FPDV were. Subsequently, three tools were created: a toolkit containing guidance and resources from the literature, a checklist, and an electronic health record (EHR) template. Third, these tools were presented to the PCPs; followed by a post-survey to assess their perceptions of the feasibility and acceptability of implementing the tools.

**Results** Feedback was obtained from 9 survey respondents. The results identified that, largely, PCPs were the most satisfied with the EHR template and most likely to implement it into their practice. Themes in the feedback included delineating what the PCP can do vs. the RN, including resources on interventions based on LACE Index score, and including family-based prompts in the EHR template.

**Conclusion** Overall the usefulness of the three tools for the FPDV is that it has provided the groundwork for further steps. The specific feedback provided by the PCPs will enable the refinement and tailoring of these tools to be more precise to the clinic's needs.

## Problem Description

The 30 days after a hospital discharge is when patients are the most vulnerable and likely to be readmitted to the hospital (Hochman et al., 2020). In the year 2018, there were 3.8 million all-cause adult hospital readmissions in the U.S., with an estimated cost of 57.6 billion dollars (Weiss & Jiang, 2021). The mortality rate of patients in a Veterans Affairs Medical Center readmitted within 30 days of discharge was two times greater than those who were not readmitted, with this effect lasting up to two years (Shaw et al., 2020). Hochman et al. (2020) found that upwards of one fourth of readmissions to hospitals were preventable. Historically, efforts have largely focused on what hospitals can do to prevent readmissions (Maxwell et al., 2021a; Saluja et al., 2019); yet nationwide readmission rates in 2020 are no lower than they were a decade ago (Healthcare Cost and Utilization Project [HCUPnet], 2010-2020). While there has been significant focus on what hospitals can do to prevent readmissions, guidance for primary care provider (PCP) driven interventions is minuscule compared to that for hospitals (Hochman et al., 2020). This disparity in care management creates a significant gap. Without comparable efforts in primary care, the ways to effectively reduce readmissions to hospitals will still be significantly limited.

To address this gap, this project took place at an outpatient primary care, Veterans Affairs (VA) clinic in a suburban city in the Western U.S. The clinic uses an inefficient electronic health record (EHR) with limited access to outside records. It is often a challenge for the clinic to receive notifications of patients being admitted and discharged at community hospitals. The primary issue at hand is the clinic lacks a standardized guide for PCPs to use in the first, post-discharge visit (FPDV). Additionally, there is a lack of provider consistency in caring for the recently discharged patient. To address this challenging issue, the first step taken was to assess the resources utilized by PCPs at this clinic and their perception of the needs surrounding the FPDV. Subsequent steps included development of a new, standardized post-discharge tool using the PCP insight and supporting literature, and an evaluation of the PCPs'

perception of the feasibility and acceptability of the tool for their clinic. To link patient records from outside hospitals to this clinic is a challenging problem to resolve and was not addressed in this project.

### **Available Knowledge**

PCPs are being repeatedly called to the front of the lines to play an engaged role in decreasing the rates of hospital readmission (Coleman, 2010; Meyers & Brady, 2020; Saluja et al., 2019), even though “[t]he evidence-base for the primary care setting on how to reduce readmissions and improve patient safety is comparatively lacking” (Hochman et al., 2020, p. 1). In response to this gap, in 2015 the Agency for Healthcare Research and Quality (AHRQ) developed an evidence-based construct for PCPs to use in increasing patient safety after discharge (Maxwell et al., 2021a). They highlight five primary domains, reflected in other supporting literature, that should be addressed in the FPDV. Those domains include; risk evaluation, the patient’s goals and understanding, medication reconciliation, chronic disease and acute illness management, and education (Maxwell et al., 2021b). *The Post-Hospital Follow-up Visit: Physician Checklist* puts all five of these domains together in a concise, yet comprehensive, checklist to guide PCPs in their post-discharge visit (Coleman, 2010).

The first step of a post-hospital visit is risk assessment which starts before the visit and continues throughout the care process (Hochman et al., 2020). Generally, the evidence for how soon after hospital discharge a patient should be seen is mixed (Hochman et al., 2020). The evidence is clear that the protective benefit of the FPDV in reducing readmission rates begins to fade between 3 to 4 weeks after discharge (Hochman et al., 2020; Riverin et al., 2018). However, each patient’s situation is unique with the cause of an individual patient’s hospital admission being multifactorial, so this must be considered when timing the FPDV (Nall et al., 2019). Thus, it is crucial for the PCP to assess the individual patient’s risk for post-discharge complications as early as possible (Jackson et al., 2015; Maxwell et al., 2021b; Riverin et al., 2018). Among various methods to assess patients’ post-discharge risk, van Walraven et al.’s LACE index is a well-validated, commonly used tool to anticipate the risk of an unplanned death or

readmission in the 30 days after hospital discharge (van Walraven et al., 2010). At its initial conception and implementation, van Walraven et al. (2010) found it to be both “...moderately discriminative and very accurate for predicting the risk of early death or unplanned readmission after discharge from hospital to the community” (p. 6). Through a systematic review and meta-analysis, Rajaguru et al. (2022) identified that the LACE index reliably predicts risk of hospital readmission.

The second domain involves assessing the patient’s goals and their understanding of the hospital admission (Maxwell et al., 2021b). Hochman et al., (2020) identified that patients often have a challenging time deciphering what they were told at the hospital and rendering it into lifestyle changes. The Care Transitions Program and Dr. Eric Coleman developed tool to help PCPs resolve this problem. They developed both a 15-question questionnaire, Care Transitions Measure-15, and a shortened 3-question version, Care Transitions Measure-3 (CTM-3), for patients (Coleman, n.d.a; Coleman, n.d.b). The questionnaires prompt patients to reflect on their time in the hospital, leaving the hospital, follow-up appointments and medication changes. In 2016, Goldstein et al. found the CTM-3 to be variable among diverse populations, but highly predictive of readmission risk and associated with a 14% reduction in readmission risk.

The Patient Safety Network (2019) noted that just 3 weeks after discharge, upwards of 20% of recently discharged patients had an adverse event, with most of these events related to medications (Hochman et al., 2020; Patient Safety Network, 2019). Additionally, up to 40% of recently discharged patients have aspects of their care plan that are pending or uncompleted (Patient Safety Network, 2019). This highlights the importance of the next two domains of the FPDV, medication reconciliation and acute illness and chronic disease management. Medication reconciliation involves identifying what the patient is currently taking, what they were discharged on, and any discrepancies (DeWalt et al., 2013). Maxwell et al. (2021b) identify that these domains involve the use of open-ended questions, teaching on self-management, resource distribution, and scheduling of follow-up and pending workups. The final domain

is patient education. This domain encompasses discussing with the patient how to identify if their condition is worsening, when to contact their PCP, and when to go to the hospital (Maxwell et al., 2021b; Patient Safety Network, 2019). The AHRQ (2023a) has established the importance of tailoring patient education based on health literacy. They have developed tools to aid providers in assessing the readability of education materials and they link health information websites that meet their health literacy standards (AHRQ, 2023b; AHRQ 2023a).

### **Rationale**

The Six Sigma model (Johns Hopkins Medicine, 2022) was used to direct this project. Specifically, the Six Sigma methodology of define- measure-analyze-design-verify (DMADV) was used as a guide to support in reaching the aim of this project. The root cause analysis of this case (Appendix A) identified that the primary care VA clinic had no standardized guide to aid PCPs in decision-making around the 5 most important domains, found in the literature, to address in the FPDV. In addition to standardization, the goal was to create a tool that is easy to access and ensures efficiency and thoroughness in the FPDV.

### **Specific Aim**

This project aimed to evaluate providers' perceptions regarding the feasibility and acceptability of implementing the curated post-discharge transitional care tool in their clinic.

## **Methods**

### **Context**

The Salem VA primary care clinic serves around 9800 patients of a very specific population from an area of around 2400 square miles. Due to the significant amount of the individuals served living rurally, this clinic is considered a rural site. The clinic primarily serves patients who are part of a federally funded benefit program. The clinic is part of a single-payer, VA, system. The patient population is predominantly male with about 55.8% of patients over the age of 65. The clinic is staffed with thirteen PCPs, four medical doctors (MD) and nine nurse practitioners (NP). Each provider sees 800-1000

patients on their panel. Twelve LPNs, 12 registered nurses, 12 medical assistants, 3 clinical pharmacists, 2 social workers, and 2 behavioral health specialists make up the 12 individual teams that provide direct primary care. In total, there are approximately 75 employees at this clinic that support primary care.

### **Interventions**

The first step in the development of an intervention for PCPs to use in the FPDV was preliminary data collection. Preliminary data on what resources and tools PCPs were using to guide the FPDV and their perceptions of their needs surrounding this visit was gathered via a web-based, anonymous pre-survey (Appendix C) after a live project introduction was done at a staff meeting in July 2023. The PCPs were given three and a half weeks in August 2023 to complete the pre-survey. The next step was the development of a curated toolkit, customizable EHR template, and checklist using the data obtained from the PCP surveys and the evidence the literature supplied (Appendix F). The physical tools were emailed to the providers to review prior to the oral presentation to the PCPs at a staff meeting in October, 2023. During this live, virtual session, we presented the findings obtained from the preliminary survey, as well as the tools we had developed based on that feedback and a review of the current literature. Please refer to the timeline for each activity in Appendix B.

To measure the PCPs' perceptions of the feasibility and acceptability of the tool, a post-survey (Appendix D) was administered to the PCPs in Qualtrics (Qualtrics<sup>SM</sup>, 2023). The survey included open-ended questions, satisfaction questions, and a Likert scale to evaluate the PCP's perceptions of the content of the tools, the appropriateness of the tool for their clinical practice, and any comments on how the tool's content, format, language, or delivery can be improved. The post-survey was comprised of fifteen questions, the same five questions were asked regarding each specific tool.

### **Measures**

The pre-survey elicited what tools PCPs were using and what they wanted in a tool. Additionally, any barriers PCPs faced in using tools during the FPDV. The primary outcome measures were evaluated

by the post-survey. Specifically, the PCPs' satisfaction (options include extremely dissatisfied to extremely satisfied) with the content, formatting, language, and delivery of the tool in addition to the likelihood (options include extremely unlikely to extremely likely) that they would implement this tool into their practice were assessed. Process measures include the number of PCPs who filled out the post-survey, with a target of at least 75% of the providers (9 PCPs). Potential balancing measures include; 1) what barriers the PCPs have in implementing a tool into practice and 2) any recommendations to improvements to the tool.

### **Analysis**

Both pre- and post-survey data were collected using Qualtrics software (Qualtrics<sup>XM</sup>, 2023). Quantitative analyses of the multiple-choice questions were displayed in a bar graph with the data on satisfaction and likelihood of use scales from the post-survey displayed in bar charts. Data from the text entry questions was analyzed using manual assessment, assessed for patterns and themes in responses.

### **Ethical Considerations**

Ethical considerations include ensuring anonymity of the volunteers and practicing the safe and secure handling of data. The data were obtained using an OHSU verified survey platform. It is protected by OHSU encryption, a user password, and a two-factor authentication system. This QI project received approval from the OHSU Institutional Review Board as well as the VA IRB (see Appendix H and I).

### **Results**

After the brief introduction to the project during a staff meeting, a total of 8 participants (out of 13) completed the pre-survey, resulting in a 62% response rate. Six of the eight participants (75%) were not using any resources or tools to guide their FPDV at that time. The 25% (n=2) who were using tools or resources identified that a risk assessment tool, EHR template, and checklist have been the most helpful for leading their FPDVs. Yet, these two participants were largely neither satisfied nor dissatisfied with the tools they were using. When it came to barriers faced, there were 13 answers from the 8 PCPs. Five



PCPs identified that they were unaware of available tools or resources, four identified time constraints as barriers, and two shared a lack of accessibility of resources acted as a barrier. Additionally, two PCPs wrote in the following answers as barriers; “getting d/c summaries prior to the appointment” and “the RNs use a template, the providers do not”. In the pre-survey, 62% (n=5) of providers identified they addressed goals and understanding, medication reconciliation, and patient education in their FPDV. Fifty percent (n=4) addressed chronic disease and acute illness management and 12% (n=1) addressed risk assessment and “home care needs”. Graph 1 (Appendix G) displays the specific domains of caring for recently discharged patients for which providers felt they needed additional support during their FPDV (note that multiple responses were allowed). The one write-in suggestion for tool development stated, “The pre-visit information (med changes, outside records, disease process, f/u recommendations) need to be available for providers ahead of the visit”.

Based on pre-survey results a toolkit, EHR template, and checklist were developed (See Appendix F). The toolkit was comprised of information on, and links to, tools and guidance from the literature that address the identified 5 domains of the FPDV. It took 4 weeks to develop and finalize the tools for the presentation. After these tools were developed, the data from the preliminary survey as well as an introduction to the tools were discussed during a clinic presentation on October 18<sup>th</sup>, 2023. One PCP left prior to the informational presentation. Additionally, 2 PCPs left after the tools were introduced during the clinic presentation. At the point in which the post-survey closed, the clinic had a total of ten PCPs. A total of 8 participants completed the post-survey. A 9<sup>th</sup> participant provided feedback via an email as they had technical issues with the survey and could not complete the survey. This means 80% (8/10) of PCPs on staff completed the post-survey and a total of 90% (9/10) of PCPs provided feedback on the tools. Graph 2 (Appendix G) shows the mean satisfaction with the listed aspects of the tools, with 0 being extremely dissatisfied and 5 being extremely satisfied. Overall satisfaction was calculated by taking the mean of the satisfaction values of the four categories for each

tool to create and overall score. Out of the three tools, participants were the most satisfied with the EHR template across all domains. In the pre-survey, 57% (n=4) of providers stated they were somewhat likely (4), on a Likert Scale of 1-5, to use a FPDV tool. In the post-survey, the mean likelihood of use of a FPDV tool was 3.1. Of note only 7 of the 8 PCPs who started the pre-survey provided an answer to this question. Graph 3 (Appendix G) shows the mean likelihood of use per tool, using the Likert scale, 0 being extremely unlikely and 5 being extremely likely. Among the three tools, providers indicated a higher likelihood of using the EHR template (3.4), with the toolkit next (3.1) and the checklist last (2.8). Suggestions provided by PCPs on how to improve specific domains of each tool are provided in a table (see Appendix E). Themes include delineating what the PCP can do vs. the RN, including resources on interventions based on LACE Index score, and including family in the EHR template.

Of note, 2 PCPs completed the first 5 of 15 questions of the post-survey, 1 PCP completed the first 11 of 15 questions, while the remaining completed all 15 questions. Four PCPs indicated they were unlikely to use one of the tools provided write in responses to address why. One PCP indicated the toolkit was “more related to tasks that the nurses could do versus the providers”. Another PCP suggested narrowing the scope of the toolkit to address common reasons for hospitalizations in this population. The same PCP shared that much of the information identified in the tools needs to be gathered by the nurse case manager as, “We deal with a number of hospitals not willing to share information and when they do share information is weeks later from the visit”. One PCP indicated they would likely incorporate some aspects of the EHR template into a new template but would not use the curated one. Finally, the PCP who provided feedback via email identified two barriers to implementation of the tools: (1) the length of the FPDV at this clinic is not long enough to gather all of the information and (2) the information identified in the toolkit should be gathered by the RN.

## **Discussion**

In summary, PCPs preferred the EHR template over the toolkit and checklist. On average, they were more satisfied with the content, formatting, language, and delivery model of the EHR template compared to the checklist and toolkit. Overall, the findings indicated the PCPs were more likely to implement the EHR template. Most PCPs were neither likely nor unlikely to implement the toolkit and most were somewhat unlikely to implement the checklist. Barriers to implementation identified (in the post-survey) still included limited access to discharge material, time constraints, and the belief that most of the information outlined in the tools should be delegated. These barriers could indicate why PCPs preferred the EHR template. They are limited in time and in information from tertiary hospitals, thus they need a tool that not only standardizes the FPDVs, but is efficient and directly applicable. A major strength of this project includes the feedback we obtained on the tools. While not substantial, the specific feedback provided by the PCPs will enable a future researcher to refine and tailor these tools to be more precise and applicable to their clinic.

Three limitations were identified during this study. One PCP left the clinic during the pre-survey data collection session and 2 left during the post-survey data collection period. Due to the anonymous nature of the data collection, it is impossible to know if the first PCP to leave the clinic was a participant in the pre-survey. Furthermore, it is impossible to know if the 2 PCPs who left after the informational session participated in the pre-survey or the post-survey. Secondly, 1 PCP did not complete the last question of the pre-survey and 3 PCPs did not finish the post-survey. This inconsistency in PCP responses hinders our ability to compare certain questions between pre- and post-surveys. Finally, we received limited feedback on open-ended questions. This may have been mitigated by employing additional qualitative methods, such as focus-group interviews.

## **Conclusion**

Overall, the promising results regarding the feasibility and acceptability of the three tools developed to assist PCPs during their FPDV have laid a solid foundation for future research and

advancements. The tools developed as a result of this QI project have also connected providers with resources and evidence-based recommendations that may be new to them. Implications of these study findings reiterate the barrier identified at the initiation of the project, that being this clinic struggles to receive discharge information from tertiary hospitals. While this could not be directly addressed in this project, it is one of the main issues that initiated the development of the FPDV tool. The next steps of this project may include integrating the feedback provided in the post-survey into all the tools, or just the EHR template as it was the most favored. Another future step will be narrowing the focus of the toolkit to address the most common causes for hospitalization in this clinic's patient population, as suggested by one PCP.

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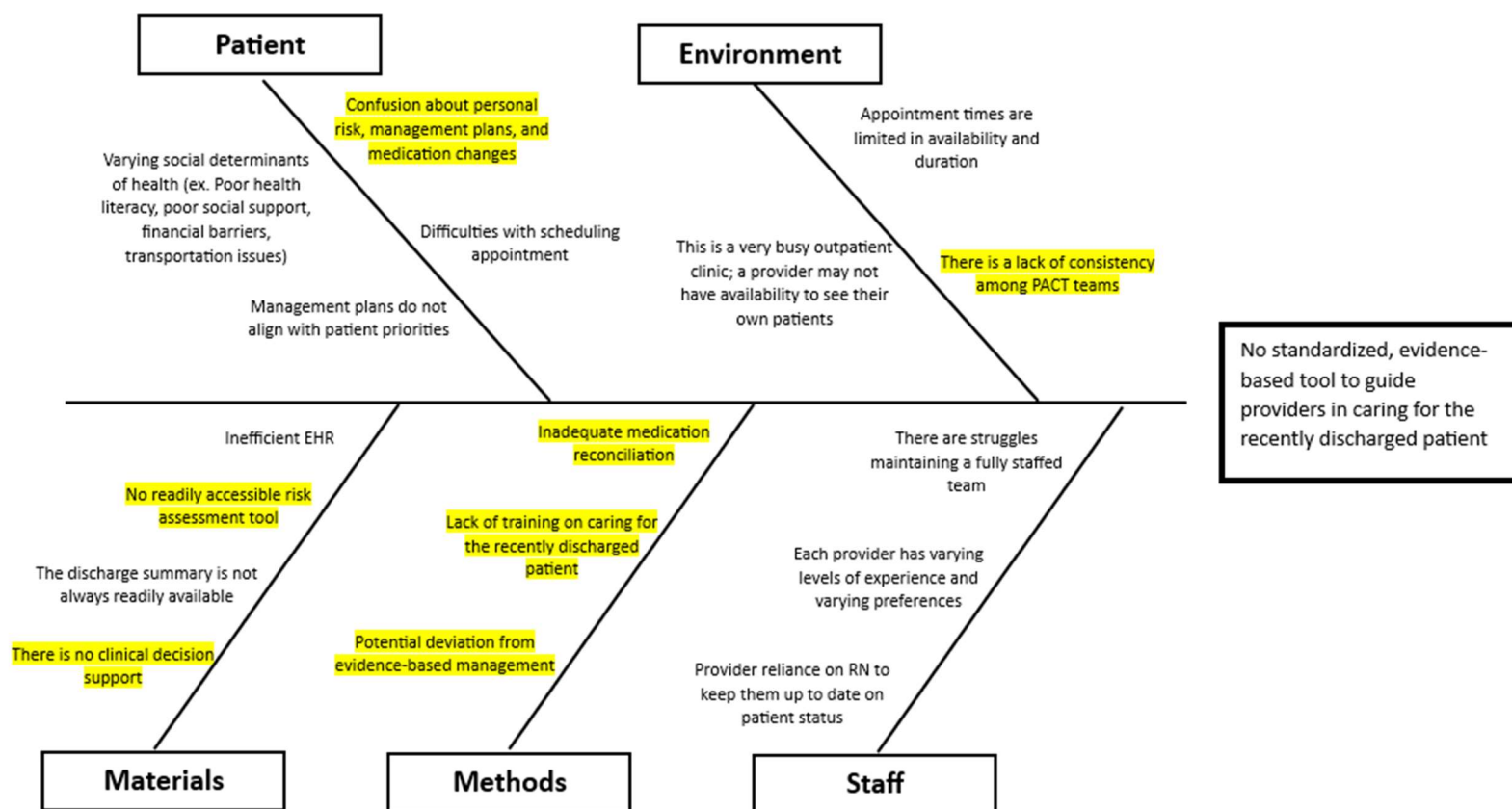
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## Appendix A

## Cause and Effect Diagram



## Appendix B

## Project Timeline

	May 2023	June 2023	July 2023	August 2023	Sept. 2023	Oct. 2023	Nov. 2023	Dec 2023 – Mar 2024
Finalize project design and approach (703A)	X							
Complete OHSU and VA IRB determination or approval (703B)		X	X					
Send out Preliminary Survey and analyze the results of the pre-survey (3.5 weeks) (703B)				X				
Development of a curated tool (703B)				X	X			
Tool Presentation to the clinic with post-survey after the presentation (703B)						X		
Final data analysis: analyze the results of the post-survey and finalize the tool (703B)						X		
Write results and discussion sections of final paper draft (703B)						X	X	
Prepare for project dissemination: work on displaying the results in graphs and figures, write the discussion section, develop the PowerPoint slides for the DNP presentation, and prepare for the presentation (703B)								X

## Appendix C

### Primary Care Provider Pre-Survey

#### Survey description

The first post-discharge visit (FPDV) refers to the initial visit led by you following a patient's recent hospital discharge. As part of our efforts to develop a curated tool for implementation in this primary care clinic, this survey aims to assess the tools and resources you currently utilize to guide your visit, as well as identify any additional features you may desire in a tool if they are currently unavailable.



Are you currently using an resources or tools to guide your first post-discharge visit?

If yes, go to question 2.

If no, go to question 4.

☐ Yes

☐ No

If so, what tools or resources have been most helpful to you?  
Please select all that apply and provide specific examples on why they have been helpful.

☐ Published guidelines

☐ Risk assessment tool

☐ EHR Template

☐ Checklist

☐ Other, please specify

How satisfied are you with the resource(s) you are currently using? Select all that apply.

	Extremely dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Extremely satisfied
Published Guidelines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Risk Assessment Tool	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EHR Template	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Checklist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other, please specify <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What are the challenges you currently face in utilizing resources, tools, or guidelines during your FPDV? Select all that apply.

☐ Time Constraints

☐ Cumbersome Tools

☐ Unaware of available tools or resources

☐ Being aware of tools or resources but lack of accessibility

☐ Other, please specify

☐ None of the above

What topics do you address in your FPDV? Select all that apply.

☐ Risk assessment

☐ Patient goals and understanding of hospitalization

☐ Medication reconciliation

☐ Chronic disease and acute illness management

☐ Patient education

☐ Other, please specify

Among the five domains mentioned above in Q5, which specific domains or aspects of caring for recently discharged patients do you think require additional support during FPDV?

☐ Risk assessment

☐ Assessment of patient goals and understanding

☐ Medication Reconciliation

☐ Chronic disease and acute illness management

☐ Patient education

☐ Other, please specify

☐ None of the above

Do you have any suggestions to help us develop a tool for PCPs to use to guide their FPDV? Please share any thoughts about specific situations or needs you may have.

How likely are you to use the FPDV tool we plan to develop in your practice? (Note. The FPDV tool is a guide intended to assist PCPs in providing standardized care to the recently discharge patient).

	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
Likelihood	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



We thank you for your time spent taking this survey.  
Your response has been recorded.



## Appendix D

### Post-Survey



Thank you for attending today's presentation. We value your input about the 3 tools we developed using feedback obtained from the pre-survey and data from the current literature. To help us further, please take a moment to answer the following questions about each tool. On each page of the survey, you will be asked the same set of questions. Each page will address one of the three tools developed. Your participation is greatly appreciated.

Please indicate your satisfaction with the following regarding the first, post-discharge visit (FPDV) toolkit:

	Extremely Dissatisfied	Somewhat Dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Extremely satisfied
Content	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Formatting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Language	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Delivery Model	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Do you have any suggestions on improving the following in the FPDV toolkit? Please specify.

☐ Formatting

☐ Language

☐ Delivery of tool

☐ No suggestions

What suggestions do you have for improving how this tool addresses the content of the following domains of the FPDV? Please specify.

☐ Risk Assessment

☐ Patient goals and understanding of hospitalization

☐ Medication reconciliation

☐ Chronic disease and acute illness management

☐ Patient education

How likely are you to use this tool like this in your practice?

	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
Please indicate likelihood of use.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you are unlikely to use this tool in your practice (Q4), we would like to understand the specific barriers that make it challenging for you and any suggestions you may have to help us improve it.

Please indicate your satisfaction with the following regarding the FPDV EHR Template:

	Extremely Dissatisfied	Somewhat Dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Extremely satisfied
Content	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Formatting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Language	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Delivery Model	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you have any suggestions on improving the following in the FPDV EHR template? Please specify.

☐ Formatting

☐ Language

☐ Delivery of tool

☐ No suggestions

What suggestions do you have for improving how the FPDV EHR template addresses the content of the following domains of the FPDV? Please specify.

☐ Risk Assessment

☐ Patient goals and understanding of hospitalization

☐ Medication reconciliation

☐ Chronic disease and acute illness management

☐ Patient education

☐ No suggestions

How likely are you to use the FPDV EHR template in your practice?

	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
Please indicate likelihood of use.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you are unlikely to use this tool in your practice (Q9), we would like to understand the specific barriers that make it challenging for you and any suggestions you may have to help us improve it.

Please indicate your satisfaction with the following regarding the FPDV checklist:

	Extremely Dissatisfied	Somewhat Dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Extremely satisfied
Content	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Formatting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Language	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Delivery Model	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you have any suggestions on improving the following in the FPDV checklist? Please specify.

☐ Formatting

☐ Language

☐ Delivery of tool

☐ No suggestions

---

What suggestions do you have for improving how the FPDV checklist addresses the content of the following domains of the FPDV? Please specify.

☐ Risk Assessment

☐ Patient goals and understanding of hospitalization

☐ Medication reconciliation

☐ Chronic disease and acute illness management

☐ Patient education

☐ No suggestions

How likely are you to use the FPDV checklist in your practice?

	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
Please indicate likelihood of use.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you are unlikely to use this tool in your practice (Q14), we would like to understand the specific barriers that make it challenging for you and any suggestions you may have to help us improve it.



We thank you for your time spent taking this survey.  
Your response has been recorded.

### Appendix E

	<b>Risk Assessment</b>	<b>Patient Goals and Understanding</b>	<b>Medication Reconciliation</b>	<b>Chronic Disease and Acute Illness Management</b>	<b>Patient Education</b>
<b>FPDV Toolkit</b>	<p>“Information needs to be gathered in a separate format by NCM”</p> <p>“Any information/resources on post-discharge interventions based on LACE risk?”</p>	<p>“This information is already gathered by NCM- Should also be part of a different template as it is at this time”</p> <p>“What can the nurse do vs the provider?”</p>	<p>“Information needs to be gathered streamline by NCM or LPN- My role should be- are the medications appropriate for Veteran to improve &amp; prevent hospitalizations- Remember I only have 10-15 minutes with this Veteran”</p> <p>“Usually done by nurses prior to our visit and then reviewed by PCP - include an area in there about date completed by RN or something along those lines so there is not repetition of the work done (although surely the PCP needs to double check and ensure accuracy / appropriateness)”</p> <p>How much can the nurse do vs the provider?</p>		
<b>EHR Template</b>	<p>“Any resources on interventions based on LACE index?”</p>	<p>“Include family as well”</p>	<p>“Include in template - alert PACT Pharmacist for further med rec assist or similar”</p>	<p>“Include - additional steps before consult can be placed as that's often a hiccup in our system as we wait on records and/or imaging to arrange f/u”</p>	
<b>Checklist</b>					

**\*No feedback was provided on the checklist or for the Patient Education domain for any of the tools.**

## Appendix F

### Curated Tools

# FIRST POST-HOSPITAL VISIT TOOLKIT

## RISK ASSESSMENT

**Risk assessment** is an ongoing component of patient care. Risk assessment can be used to identify patients at risk of complications and those who need closer follow-up. Generally, the evidence for how soon after hospital discharge a patient should be seen is mixed (Hochman et al., 2020). The evidence is clear that the protective benefit of the post-discharge visit in reducing readmission rates begins to fade between 3 to 4 weeks after discharge (Hochman et al., 2020; Riverin et al., 2018).

The **LACE Index for Readmission** is a well-validated, commonly used tool to anticipate the risk of an unplanned death or readmission in the 30 days after hospital discharge (van Walraven et al., 2010).

<u>LACE Index for Readmission</u> (MDCalc, n.d.a)	Value	Points
Length of Stay	1 day	+1
	2 days	+2
	3 days	+3
	4-6 days	+4
	7-13 days	+5
	>14 days	+7
Acute (emergent) admission	NO	0
	YES	+3
<u>Charlson Comorbidity Index</u> (MDCalc, n.d.b)	0 points	0
	1 point	+1
	2 points	+2
	3 points	+3
	4 points	+5
Number of ED visits in past 6 months	0 visits	0
	1 visit	+1
	2 visits	+2
	3 visits	+3
	>4 visits	+4

\*Underlined text is hyperlinked

### Interpretation: Risk of Readmission

- Low Risk: 0-4 points
  - The patient is at a low risk of readmission after hospital discharge and low risk of all-cause mortality (Heppleston et al., 2021).
- Moderate Risk: 5-9 points



- The patient has a moderate risk of readmission after hospital discharge and moderately increased risk of all-cause mortality (Heppleston et al., 2021).

#### • High Risk: >10 points

- The patient is at a very high risk of readmission after hospital discharge and very increased risk of all-cause mortality (Heppleston et al., 2021).

## GOALS AND UNDERSTANDING

Patients often have a challenging time deciphering what they were told at the hospital and rendering it into lifestyles changes that align with their priorities (Hochman et al., 2020). The Care Transitions Program and Dr. Eric Coleman developed tools that address this. Their questionnaires prompt patients to address their **goals and understanding** of their time in the hospital, leaving the hospital, their follow-up appointments and medication changes (Coleman, n.d.a; Coleman, n.d.b).

### CARE TRANSITIONS MEASURE® TOOLS

© Eric A. Coleman, MD, MPH, all rights reserved.

#### • The Care Transitions Measure – 15®

Instructions for Scoring the CTM-15®

#### • The Care Transitions Measure – 3®

Instructions for Scoring the CTM-3®

\*Underlined text is hyperlinked

## MEDICATION RECONCILIATION

In the three weeks after discharge, upwards of 20% of recently discharged patients have an adverse event, with most of these adverse events being related to medication events (Hochman et al., 2020; Patient Safety Network, 2019). It is helpful if the patient brings all of the medications they are taking to the visit.

- **Literature recommendations** (Maxwell et al., 2021)

- Identify new medications prescribed during hospitalization
- Identify medications stopped during hospitalization that need to be restarted
- Identify medications that should be discontinued
- Involve the help of a pharmacist with complex regimens
- Use The Care Transitions Measure to assess a patient's understanding of their medication regimen (Coleman, n.d.a)

## ILLNESS MANAGEMENT

Upwards of forty percent of recently discharged patients have aspects of their care plan that are pending or uncompleted (Patient Safety Network, 2019).

- **Recommendations** (Coleman, 2010)

- Modify medications and doses as needed
- Address any pending or resulted labs, imaging, or other test results
- Perform monitoring or further testing based on management needs
- Discuss advanced care planning as appropriate
- Educate on self-management
- Discuss warning signs
- Instruct the patient on how to seek emergent and non-emergent care when the clinic is closed
- Review all medication doses, frequencies, and indications
- Provide new, reconciled medication list with current date
- Coordinate home care needs
- Set up follow up appointment

## EDUCATION

The AHRQ (2023b) identifies that patient [education](#) is crucial as it aids understanding and engagement in care. Their [website](#) on patient education provides the user with a variety of tools to support education.

### For Providers

- Tools aiding providers in appraising, selecting and creating written educational materials
- Tools to support providers in patient engagement

### For Patients

- Tools aiding patients in building a list of questions for the visit
- Tools to support patients in keeping track of their medications
- A guide for leaving the hospital

### Patient Education Materials

- Patient health information websites that are supported by the AHRQ (AHRQ, 2023a):
  - Health information materials by the National Library of Medicine that follow AHRQ defined health literacy standards
    - [Easy-to-read health information](#) (National Library of Medicine, n.d.a)
    - [Health information in multiple languages](#) (National Library of Medicine, n.d.b)
  - Information on preventative services, common health conditions, and healthy lifestyle choices:
    - [My Healthfinder](#) (U.S. Department of Health and Human Services & Office of Disease Prevention and Health Promotion, 2023).
- The VA has a Veterans Health Library with educational materials:
  - [Veterans Health Library](#) (U.S. Department of Veterans Affairs, 2023)

\*Underlined text is hyperlinked

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# FIRST POST-HOSPITAL VISIT CHECKLIST

## 1. RISK ASSESSMENT (van Walraven et al., 2010)



- ☐ LACE Index for Readmission

## 2. GOALS AND UNDERSTANDING (Coleman, n.d.a)



- ☐ Identify the patient's goals for the visit
- ☐ Using the Care Transitions Measure, identify gaps in understanding

## 3. MEDICATION RECONCILIATION (Maxwell et al., 2021)



- ☐ Identify new medications prescribed during hospitalization
- ☐ Identify medications stopped during hospital admission that need to be restarted
- ☐ Identify medications that should be discontinued
- ☐ Involve the help of a pharmacist in the case of complex regimens

## 4. ILLNESS MANAGEMENT (Coleman, 2010)



- ☐ Adjust medications or doses
- ☐ Address any pending or resulted labs, imaging, or other test results

- ☐ Perform monitoring or further testing based on management needs
- ☐ Discuss advanced care planning as appropriate

## 5. EDUCATION (Coleman, 2010)



- ☐ Educate on self-management
- ☐ Inform the patient of warning signs
- ☐ Instruct the patient on how to seek emergent and non-emergent care when the clinic is closed
- ☐ Provide new, reconciled medication list with current date
- ☐ Review all medication doses, frequencies, and indications
- ☐ Coordinate home care needs

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### First Post-Discharge Visit - Template

The patient's goals for today's visit include \*\*\*

LACE Index Score \*\*\* indicates a low/moderate/high risk of hospital readmission.

#### Hospital Course:

- Date of admission:
- Admitting diagnosis:
- Other pertinent diagnosis:
- Treatment Course:
- Consults placed:
- Procedures:
- Complications:

#### Discharge:

- Condition at discharge:
  - Vitals:
  - Pertinent labs:
- New Medications at discharge:
- Medications to be discontinued:
- Patient discharge instructions:

#### Follow up:

- Labs:
- Imaging:
- Tests:
- Referrals:
- Home Services:

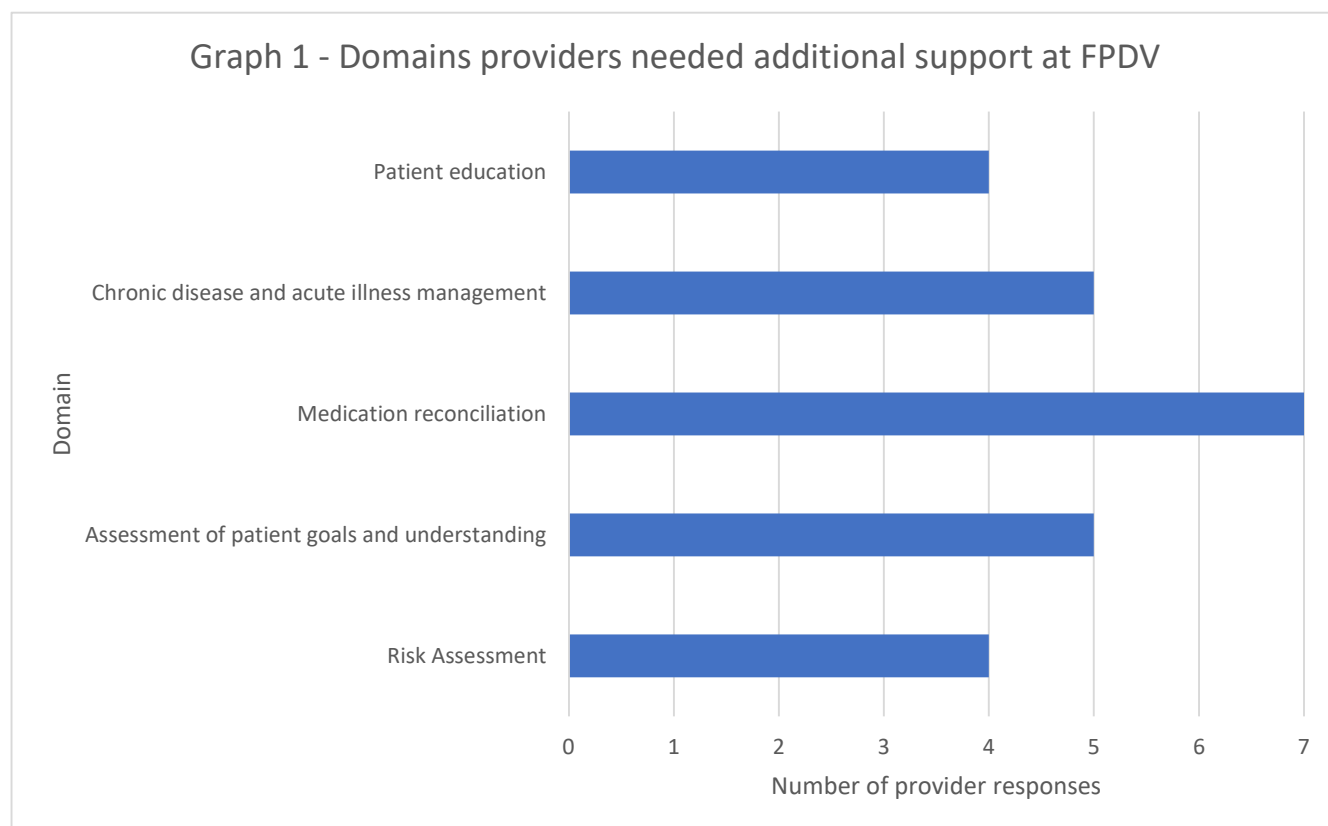
#### Education:

After reviewing the patient's Care Transitions Measure results, the patient had a lack of understanding on (their care in the hospital/discharge education/follow up appointments/medications). Subsequently, we reviewed \*\*\*.

The patient was instructed that if they experience \*\*\*, they should call 911/go to the nearest emergency room.

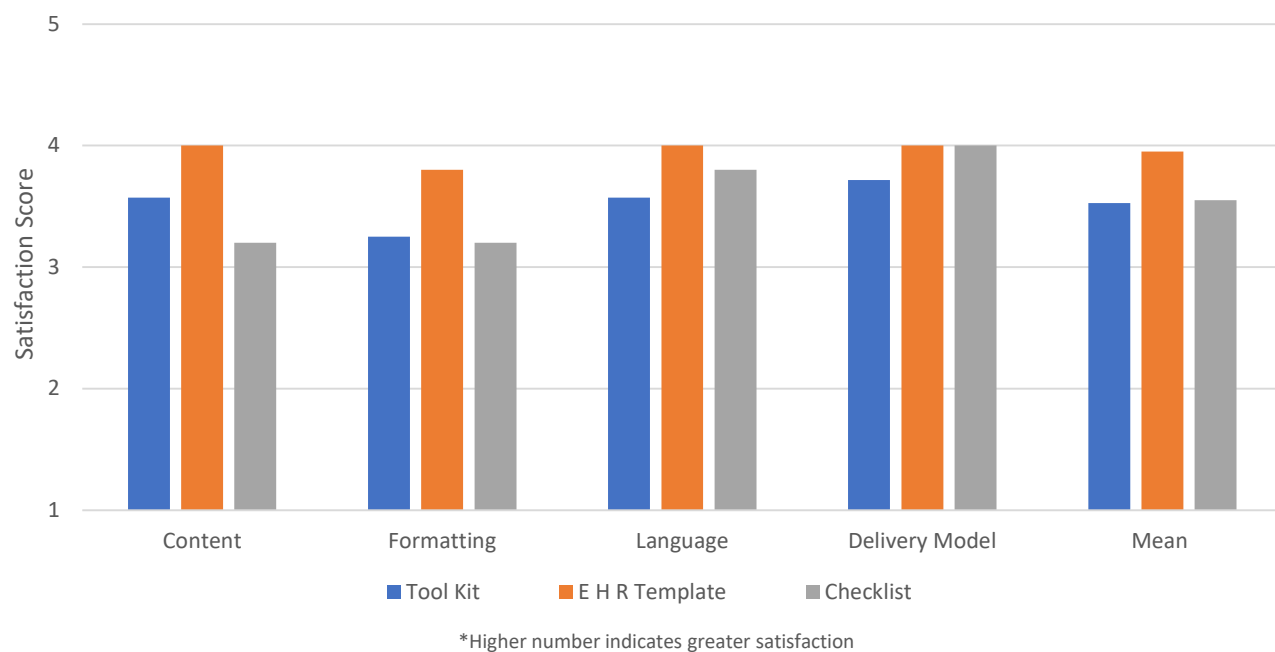
#### Advanced Care Planning:

- POLST:
- Advance Directive:
- Code Status:

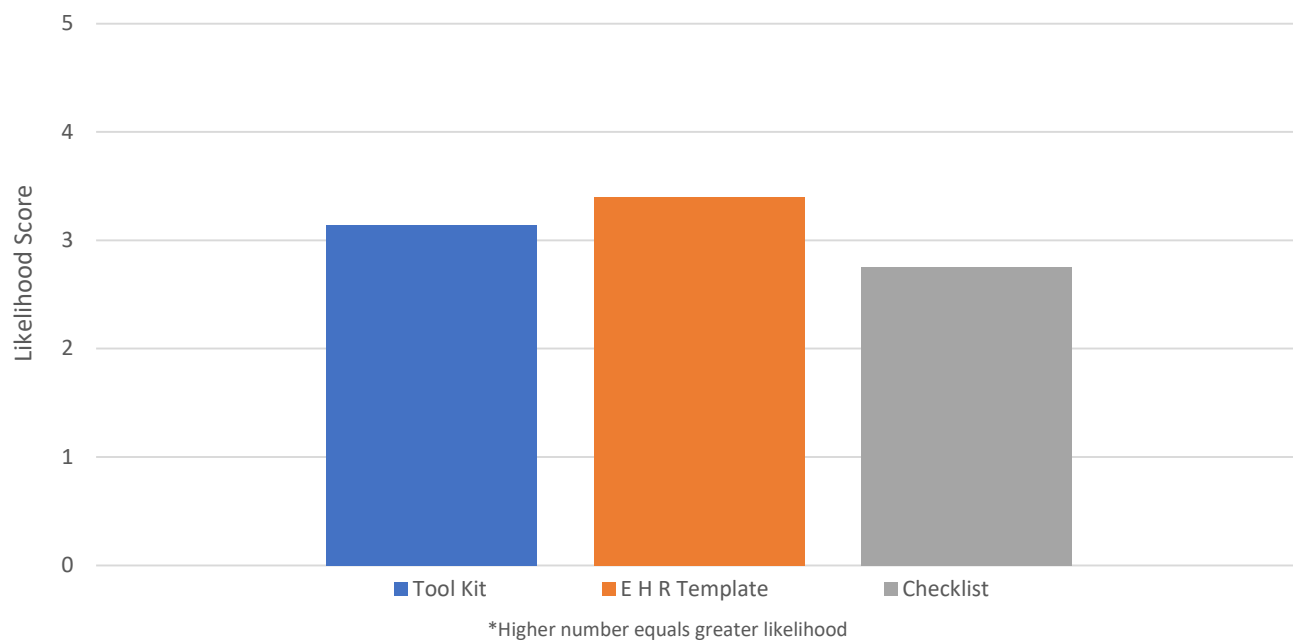
**Appendix G****Pre- Survey Graph (1)****Post – Survey Graphs (2 & 3)**



Graph 2 - Satisfaction with Developed Tools (n=8)



Graph 3 - Likelihood of Future Use of Each Developed Tool (n=8)



**Appendix H**  
**OHSU IRB Exemption**



# IRB MEMO

Research Integrity Office

3181 SW Sam Jackson Park Road - L106RI  
Portland, OR 97239-3098  
(503)494-7887 irb@ohsu.edu

## NOT HUMAN RESEARCH

August 1, 2023

Dear Investigator:

On 8/1/2023, the IRB reviewed the following submission:

Title of Study:	Evaluating the Feasibility of Implementing an Evidence-Based Transitional Care Tool in a Primary Care Setting
Investigator:	MinKyoung Song
IRB ID:	STUDY00026117
Funding:	None

The IRB determined that the proposed activity is not research involving human subjects. IRB review and approval is not required.

Certain changes to the research plan may affect this determination. Contact the IRB Office if your project changes and you have questions regarding the need for IRB oversight.

If this project involves the collection, use, or disclosure of Protected Health Information (PHI), you must comply with all applicable requirements under HIPAA. See the [HIPAA and Research website](#) and the [Information Privacy and Security website](#) for more information.

Sincerely,

The OHSU IRB Office

## Appendix I

### VA IRB Exemption

VA Portland Health Care System (VAPORHCS)  
Institutional Review Board (IRB)  
**CHECKLIST: QUALITY ASSURANCE OR IMPROVEMENT (QA/QI) OR RESEARCH?**

*For projects that involve using/collecting data from sites other than those covered by the VAPORHCS*

1. If the project is being **conducted/coordinated** at a site other than the VAPORHCS:

**Signature of Medical Center Director:** Kerri Woelfle Clinical Practice Manager **Date:** 08/08/2023

2. If your project includes obtaining data or participation from VA sites other than those covered by the VAPORHCS you must request approval from the facility director(s) prior to initiating the project at those facilities.

**FOR VAPORHCS IRB OFFICE USE ONLY BELOW THIS LINE**

**VAPORHCS ACOS/R&D Determination:**

*Note: The VAPORHCS ACOS/R&D has been designated by the VA Portland Health Care System Director and the VISN20 Network Director to serve as the individual who will evaluate and document the determination for projects conducted at the following VISN20 facilities: Alaska, Spokane, Walla Walla, Roseburg, and White City.*

☒ **Not Research.** The ACOS/R&D has determined that based on the responses above and the proposed project description approval by an IRB or other review committee is not needed. The project is considered to be non-research VHA operations activity. If the results of this project are presented or published they cannot be presented as research, nor does it have research approval.

☐ **Research Project.** As designed this project requires review by an IRB or other appropriate review committee *prior* to initiation. Please refer to the VAPORHCS R&D [website](#) for guidance.

☐ Additional information is needed to make a determination. See comments below.

ACOS/R&D or IRB Analyst Comments:

Steven K Dobscha  
Digitally signed by Steven K  
Dobscha 377225  
Date: 2023.08.10 15:14:28 -0700

**VAPORHCS ACOS/R&D Signature:** 377225

Reference:

[VHA Handbook 1058.05](#): VHA Operations Activities That May Constitute Research

## Appendix J

## Letter of Support from Implementation Site

Letter of Support from Clinical Agency

Date: 07/27/2023

Dear Kaitlyn Fox,

This letter confirms that I, Kerri Woelfle, DNP allow Kaitlyn Fox (OHSU Doctor of Nursing Practice Student) access to complete her DNP Final Project at our clinical site. The project will take place from approximately July 2023 to December 2023.

This letter summarizes the core elements of the project proposal, already reviewed by the DNP Project Preceptor and clinical liaison (if applicable):

- **Project Site(s):** Salem VA Outpatient Clinic, 1750 McGilchrist St. SE #130, Salem, Oregon, 97302.
- **Project Plan:**
  - **Identified Clinical Problem:** Currently, the Salem VA Outpatient Clinic lacks a standardized guide for PCPs to use in decision making during the first post-discharge visit, resulting in inconsistent care for the recently discharged patients.
  - **Aim:** This project aims to evaluate provider perception of the feasibility and acceptability of implementing a curated tool in the clinic.
  - **Methods/Interventions/Measures:** The project will follow a three-step process. First, preliminary data on what resources and tools providers are currently using to guide this visit and their perceptions of their needs surrounding this visit will be gathered via an electronic, anonymous survey. This data, combined with evidence from the literature review, will inform the development of the evidence-based tool. Secondly, after the development of the tool, we will hold a clinic session and present the feedback obtained from the preliminary survey, as well as the tool we have developed based on that feedback and a review of the current literature. Lastly, a post-survey will be administered to the PCPs who attended the clinic session to measure their perceptions of the tool's feasibility and acceptability. The results will be incorporated into the final tool to be delivered to the clinic at the end of this QI project.
  - **Data Management:** Data will be collected solely at the clinic with the aid of clinic staff and will not include patient information. Both the preliminary and post-surveys will be anonymously distributed via Qualtrics, and OHSU approved survey platform ensuring the confidentiality of the data. Any data gathered for the purposes of the project will not be associated with any identifiable information and will be OHSU encrypted, password protected, and protected by a two-factor authentication system.
  - **VA Clinic Support:** The clinic liaison, Corie Charnley, DNP, has agreed to assist in QI project implementation and engage participation in surveys and discussion, and serve as a direct contact for project logistics. The site has also agreed to allow the student to present the QI project during a staff meeting at the clinic.

During the project implementation and evaluation, Kaitlyn Fox will provide regular updates and communicate any necessary changes to the DNP Project Preceptor.

Our organization looks forward to working with this student to complete their DNP project. If we have any concerns related to this project, we will contact Kaitlyn Fox and MinKyoung Song, PhD, RN, FNP, FAHA (student's DNP Project Chairperson).

Regards,

*Kerri Woelfle NP* 07/28/2023 Clinical Practice Manager/Primary Care Provider Salem VA Outpatient Clinic  
DNP Project Preceptor (Name, Job Title, Email, Phone): \_\_\_\_\_

Kerri.Woelfle@va.gov 971 304-2200