Integrated Behavioral Health and Primary Care: Refining a Determinant Framework

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Integrated Behavioral Health and Primary Care: Refining a Determinant Framework

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For the Degree of Doctor of Philosophy in

Clinical-Community Psychology

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2021

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ACKNOWLEDGEMENTS

A huge number of people contributed to the completion of this dissertation. First, I am incredibly grateful to my committee for their guidance. Particular gratitude is extended to Dr. Mark Weist for his continuous encouragement, trust, and modeling how to balance expertise and success with humility; Dr. Abraham Wandersman for sustaining my excitement for community-based implementation and evaluation and ensuring we always keep in mind the ‘why’; Dr. Nicole Zarrett Kivita for her unending kindness and showing how to do pragmatic research that is both applied and rigorous; and Dr. Lawrence Palinkas for his inspirational mastery of conducting high quality mixed-methods implementation work, that I hope to someday emulate. Each of these committee members excel at conducting true collaborative work with important implications for improving health and wellbeing and I hope to join them as a colleague in this endeavor.

The following individuals were instrumental for helping me understand integrated care: Gigi Bastien, Giorgio Chatelain, Bryan Dovichi, Eve Fields, Stephanie Gold, Larry Green, Julie Kaprelian, Virna Little, Sharon Rachel, and Michael Schoenbaum. For their assistance in various components of this project, additional thanks are extended to Jonathan Ahuna, Ian Bennett, Andrea Bradford, Victoria Chien Scott, Wendy Chu, Sarah Doty, Morgan Fuller, Lauren Huffman Law, Tara Kenworthy, Jenny Kolodny-Goetz, Mariajósé Paton, Kristin Potterbusch, Jonathan Scaccia, Nick Szubiak, Adrienne
Williams, and Amber Watson. Special thank you to all the study participants who made this work possible.

Finally, thank you to Paul, Claudia, and my parents. For everything.
ABSTRACT

The integration of behavioral health and primary care is a best practice to improve patient outcomes and achieve health equity. However, the process of integrating is opaque, requiring organizational change and sometimes a complete system overhaul. Implementation science offers useful ideas for helping healthcare organizations to implement care. This field has identified potential environmental conditions and determinants of successful implementation; however, much is still unknown about how these factors may be relevant for organizations seeking to integrate care. To address the limited existing knowledge in this area, this dissertation gathers practice-based evidence using exploratory methods. Results are translated into an implementation support tool for integrating care. The Active Implementation Frameworks (AIF) form the theoretical basis of this work, and the R=MC² framework of organizational readiness is used for operationalizing determinants. This multiphase study explores unknown process components for integrating behavioral health and primary care, including (1) when each determinant is most important in the process, and (2) whether technical assistance could be a helpful strategy for improving determinants of integrated care implementation.

In Phase I, a participatory action approach (a systematic Delphi study) was designed and conducted to gather the lived experiences of ten knowledgeable practitioners, researchers, and technical assistance providers with proficiency in integrated care. This study interviewed and surveyed participants over four data
collection rounds, collecting qualitative and quantitative data on 11 determinants and eight contextual factors affecting implementation for primary care behavioral health integration. Results show most determinants are important over the lifespan of implementation – except the perceived Simplicity of integrating care – and that determinant strength is most critical during active implementation stages. Most relevant are Leadership, Priority, a Champion, Supportive Climate, Culture, Innovativeness, and Staff Capacities. Results also indicate technical assistance is not perceived as helpful for improving organizational strength for most determinants, except perceived Observability.

In Phase II, study results were translated into an integrated care implementation support tool using an evidence-informed template. The tool includes directions, self-assessment, and worksheets. It was designed as a supplement for existing integrated care models rather than a standalone implementation guide. A survey was administered to assess the potential utility of this tool by integrated care practitioners, administrators, and technical assistance providers (N = 33). Results showed adequate perceived acceptability and appropriateness of the tool. TA providers are the best audience for executing this tool. This tool would be strengthened by demonstrating synergy with existing logistics-driven integrated care guides and piloting the tool in practice. Proposals are made for enhancing the rigor and quality of typical TA practices. This work is a promising step towards bridging implementation science methodologies into integrated primary care behavioral health.
TABLE OF CONTENTS

ACKNOWLEDGEMENTS ........................................................................................................ iii

ABSTRACT ................................................................................................................................. v

LIST OF TABLES ......................................................................................................................... x

LIST OF FIGURES ....................................................................................................................... xi

LIST OF ABBREVIATIONS .......................................................................................................... xii

CHAPTER 1. INTRODUCTION ..................................................................................................... 1

1.1 Implementation Science ........................................................................................................ 5

1.2 Integrated Care ................................................................................................................... 15

1.3 Gaps in Literature .............................................................................................................. 26

1.4 Dissertation Overview ....................................................................................................... 28

CHAPTER 2. PHASE I METHODS ................................................................................................. 42

2.1 Participatory Action Research: The Delphi Method .......................................................... 42

2.2 Study Procedure ............................................................................................................... 47

2.3 Analytic Procedure .......................................................................................................... 56

CHAPTER 3. PHASE I RESULTS ................................................................................................. 66

3.1 Participant Information ..................................................................................................... 66

3.2 Initial Data Analysis .......................................................................................................... 67

3.3 Exploratory Data Analysis ............................................................................................... 77
CHAPTER 4. PHASE II METHODS........................................................................................................... 89
  4.1 Tool Development ............................................................................................................................... 89
  4.2 Perceived Acceptability and Appropriateness of Tool ........................................................................ 93

CHAPTER 5. PHASE II RESULTS............................................................................................................. 100
  5.1 Product: Integration Aid ...................................................................................................................... 100
  5.2 Participants......................................................................................................................................... 105
  5.3 Perceived Acceptability and Appropriateness Results ........................................................................ 106

CHAPTER 6. DISCUSSION........................................................................................................................ 120
  6.1 Primary Findings................................................................................................................................. 120
  6.2 Implementation Determinants............................................................................................................ 123
  6.3 Implementation Stages....................................................................................................................... 130
  6.4 The Limits of Technical Assistance.................................................................................................... 134
  6.5 Implications and Future Directions................................................................................................... 138
  6.6 Strengths and Limitations .................................................................................................................. 145
  6.7 Conclusion ........................................................................................................................................ 149

REFERENCES .......................................................................................................................................... 151

APPENDIX A. DISSERTATION OVERVIEW ......................................................................................... 184
  DATA COLLECTION OVERVIEW ........................................................................................................... 184
  DATA ANALYSIS OVERVIEW ............................................................................................................... 186

APPENDIX B. PHASE I ............................................................................................................................ 192
  DELPHI METHOD LITERATURE REVIEW ............................................................................................. 192
  DELPHI STUDY INTERVIEW PROTOCOL ............................................................................................ 197
  DELPHI STUDY SURVEY QUESTIONS .................................................................................................... 200
  DELPHI STUDY DEBRIEF PROTOCOL .................................................................................................. 228
DELPHI STUDY PRELIMINARY RESULTS ................................................................. 230
INITIAL ANALYSIS FRAMEWORK MATRICES .................................................. 232
APPENDIX C. PHASE II .................................................................................... 243
INTEGRATION AID FEASIBILITY SURVEY QUESTIONS ................................. 243
# LIST OF TABLES

Table 1.1 Simplified definitions of framework components ........................................... 32
Table 1.2 Implementation stages .................................................................................. 38
Table 1.3 SAMHSA-HRSA CIHR Framework ................................................................. 39
Table 2.1 Interpretive definitions for obtaining final study results ................................. 65
Table 3.1 Participant characteristics ............................................................................. 84
Table 3.2 Inter-rater correlation pairs .......................................................................... 85
Table 5.1 Acceptability and appropriateness survey quantified results .................... 113
Table 5.2 Quality improvement quantified survey results (N = 33) ......................... 115
Table A.1 Data collection overview ............................................................................. 184
Table A.2 Data analysis overview .............................................................................. 186
Table B.1 Preliminary study results ............................................................................. 230
Table B.2 Data topic: Study validity .......................................................................... 232
Table B.3 Data topic: Implications .............................................................................. 237
Table B.4 Data topic: Additional study ........................................................................ 240
LIST OF FIGURES

Figure 1.1 AIF components ......................................................................................................................... 40
Figure 1.2 Composite AIF - R=MC² framework ......................................................................................... 41
Figure 3.1 Determinant relevancy results ..................................................................................................... 88
Figure 5.1 Integration Aid steps overview .................................................................................................... 116
Figure 5.2 "Orient" stage assessment .............................................................................................................. 117
Figure 5.3 Sample "Assess" stage worksheet (Exploration stage) ................................................................. 118
Figure 5.4 Blank action plan worksheet ...................................................................................................... 119
Figure B.1 Survey 2 screenshot (part 1) ....................................................................................................... 202
Figure B.2 Survey 2 screenshot (part 2) ....................................................................................................... 203
LIST OF ABBREVIATIONS

AIF ................................................................. Active Implementation Frameworks
BHICA ............................................................ Behavioral Health Integration Capacity Assessment
CCC .................................................................. Collaborative Chronic Care
CCM .................................................................. Collaborative Care Model
CDC ................................................................. Centers for Disease Control and Prevention
CIHS ................................................................. Center for Integrated Health Solutions
HRSA ............................................................... United States Health Resources and Services Administration
IPAT ................................................................. Integrated Practice Assessment Tool
ISF ................................................................. Interactive Systems Framework
LIM .................................................................. Levels of Integration Measure
NIRN ............................................................... National Implementation Research Network
PACE ............................................................... Program of All-inclusive Care for the Elderly
PCBH ............................................................... Primary Care Behavioral Health
R=MC² ...... Readiness = Motivation x General Capacity x Innovation-specific Capacity
RIC .................................................................. Resources for Integrated Care
SAMHSA ......................................................... Substance Abuse and Mental Health Services Administration
TA .................................................................... Technical Assistance
VA ................................................................. United States Veterans Affairs
CHAPTER 1. INTRODUCTION

Behavioral health is an important issue in the United States. This includes mental illness, substance abuse, and any health disorder that can be affected by behavioral change such as obesity and chronic health conditions (Crowley & Kirschner, 2015). In 2018 there were 47.6 million (19.1% of the total adult population) adults who met criteria for a mental illness with an additional 20.3 million people aged 12 or older meeting criteria for at least one substance use disorder (Substance Abuse and Mental Health Services Administration; SAMHSA, 2019). While behavioral health researchers and practitioners often limit their conversations to mental health and substance use disorders, these commonly co-occur with other chronic diseases (Crowley & Kirschner, 2015). Despite the prevalence of these disorders, treatment access is limited. In 2018, only 37.1 million adults in the United States used any mental-health related service (regardless of diagnosis), far below the number who need such assistance (SAMHSA, 2019). Given that national statistics collect this information regardless of the actual need for treatment, it is also likely that many people already accessing services are not those in the greatest need. In fact, individuals with less severe mental health concerns account for the perceived increase in treatment utilization (Olfson, Wang, Wall, Marcus, & Blanco, 2018). The statistics are worse for those requiring substance use treatment, with 3.7 million individuals aged 12 or older securing treatment in 2018, or only 18% of those who may need it (SAMHSA, 2019). Along with stigma and a person’s motivation to seek
treatment, major systemic issues are also a common factor impeding treatment. Common barriers to accessing treatment in this population include structural barriers such as service availability, proper diagnosis, and adequate provider training to address such issues (Priester et al., 2016). Social inequities exacerbate this problem, with racial and ethnic minorities receiving fewer specialty care referrals than their white counterparts (Priester et al., 2016). This is not only a public health issue, but an economic issue due to the high cost of treating behavioral health in the United States (Crowley & Kirschner, 2015).

Those who do seek care for behavioral health issues are often treated in primary care settings. But fewer than 20% of these patients show clinical improvement (Unützer et al., 2002). Specialist care is necessary for the treatment of such disorders. However, there is a significant gap between the volume of patients recommended for specialist treatment and the number who receive it (Grembowski et al., 2002). This gap suggests referrals to external providers are insufficient to initiate treatment. A shift towards client-centered care is one potential solution (Priester et al., 2016). To accomplish this goal, there is a strong push for the integration of behavioral health and primary care services. The integration of care could improve clinical outcomes as well as limit healthcare costs (Padwa et al., 2016). The American College of Physicians called for the integration of behavioral health and primary care to be supported across levels of the healthcare system, including governments, insurance companies, and healthcare providers (Crowley & Kirschner, 2015). Unfortunately, there is a lag between acknowledging this best practice and its implementation into practice (Katzelnick & Williams, 2015). The field of implementation science, which seeks to bridge the gap between research and practice
(Eccles & Mittman, 2006), is a promising approach for aiding the integration of behavioral health and primary care (Goodwin, 2019; Katzelnick & Williams, 2015). This field provides frameworks and tools for creating organizational change, such as the administrative and workflow overhaul needed to integrate care in clinical settings.

There is little existing knowledge on how to successfully implement integrated care (Martínez-Gonzalez, Berchtold, Ullman, Busato, & Egger, 2014; Technical Assistance Collaborative/Human Services Research Institutes, 2012). Although several methods have been proposed (e.g., Cash-Gibson, Tigova, Alonso, Binkley, & Rosenmöller, 2019; Ratzliff, Philips, Sugarman, Unützer, & Wagner, 2017), most existing tools are limited because they primarily prescribe activities for clinics to complete. This is not sufficient for effective implementation. Contextual factors and degree of internal and external support affect how well a new practice is adopted and sustained, as does recognizing that these factors and types of support may be differentially important over time (Rogers, 2003). Contextual and motivational barriers are an oft mentioned, but largely ignored, issue for integrating care (Goodwin, 2019). This calls for a tool of support to help integrate care that doesn’t just prescribe activities but instead considers both stages of change for assessing and improving barriers and pertinent contextual factors, and leads users to effective improvement strategies. Support in this sense can take many forms, from internal organizational financing to external advisement by content specialists. The external advisement of technical assistance providers has been proposed as an effective method of support for quality implementation (Wandersman et al., 2012). Technical assistance (TA) is non-financial individualized assistance provided by a specialist external to the setting, usually via sharing information,
providing training, and consultation with the aim of improving the setting’s capacity and impact (Lyons, Hoag, Orfield, & Streeter, 2016; UNESCO, n.d.; Wandersman, Chien, & Katz, 2012). TA is roughly synonymous with coaching, facilitation, consultation, and knowledge brokering (Albers et al., 2021).

**Aims and Objectives**

This dissertation seeks to address gaps in research and practice by further specifying the relevant determinants of implementation success for a healthcare organization to integrate behavioral health and primary care, and the degree to which TA providers can assist in improving these determinants. This project translates the language of implementation science for the benefit of integrated care. The aims of this dissertation are to: 1) Understand when implementation determinants are most important for successful integration of behavioral health and primary care, 2) Determine the degree to which TA providers can assist in improving these determinants, 3) Incorporate results into an existing generalizable framework (the Readiness Building System) to propose a system of implementation support for integrated care.

To accomplish these aims, specific research objectives of this dissertation are:

a) Describe what is already known about the principles of implementation science and how they may assist organizations to integrate care, the evidence for integrated care and models of integration, and the practice and evidence for supporting organizations (i.e., TA) that could affect how to approach this problem.
b) Conduct a participatory action research study with integrated care practitioners, researchers, and TA providers to collect practice-based evidence about the care integration process; this data was collected from August through December 2018.

c) Analyze the study data to draw conclusions about (i) when implementation determinants are most important for successful integration of behavioral health and primary care, and (ii) the degree to which TA providers can assist in improving these determinants.

d) Translate results into an implementation support tool for integrating behavioral health and primary care.

e) Assess the perceived acceptability and appropriateness of the resultant implementation support tool, per potential users (integrated care practitioners, administrators, and TA providers); this data was collected from February through March 2021.

Resultant information can be used to inform future research and practice and to create TA guidelines for helping clinics integrate care with quality.

1.1 IMPLEMENTATION SCIENCE

Defining the field

Clinical research is slow to transfer into use, if it does at all. Only 50% of published clinical knowledge is utilized in practice (Balas & Boren, 2000). For those evidence-based clinical recommendations that are utilized, it takes an average of 17 years to translate into practice (Morris, Wooding, & Grant, 2011). This is a major health policy concern, as billions of public and private dollars are spent globally on medical research
studies that do not always benefit the public (Moses et al., 2015). The field of implementation science was developed to address this research-to-practice gap through the empirical study of the implementation process (Colditz & Emmons, 2018). Implementation science is “the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine practice, and, hence, to improve the quality and effectiveness of health services” (Eccles & Mittman, 2006). However, the field has gone further than this definition to offer a distinction between implementation practice and implementation research. The former seeks to translate evidence-based practices into routine clinical care through application of knowledge and frameworks about the process of implementation; the latter aims to generate knowledge about how best to do so (Colditz & Emmons, 2018).

Implementation is a process, not an outcome. One important aspect of implementation science is its emphasis on systems change. The adoption and sustainment of a practice into a novel setting requires understanding not only the individual-level factors affecting change, but the organizational, community, societal, political, and fiscal factors, as well as the characteristics of the innovation itself that affect each of these levels (Colditz & Emmons, 2018). Given the complexity involved in affecting a system-wide change, the field has generated dozens of frameworks to tackle implementation process improvements (Nilsen, 2015). Diffusion of Innovations Theory (Rogers, 2003) is commonly cited as the grandfather to most frameworks in implementation science (Dearing, Kee, & Peng, 2018; Nilsen, 2015). This theory defines attributes of the innovation (e.g., cost, simplicity, compatibility) that may affect adoption into practice, as well as the different stages of the process (Rogers, 2003). However, it has also been
argued that in implementation science, despite definitional differences, practical distinctions between theories, models, and frameworks are minimal (Damschroder, 2019). Because the field is based in practice, this argument states that frameworks are “loosely structured constellations of theoretical constructs” that provide definitions, guide systematic study and practice, and are the foundation for explaining the process of change (Damschroder, 2019). Further evidence of this argument is that by using one taxonomy of implementation frameworks (Nilsen, 2015), the Diffusion of Innovations Theory could be conceptualized as a hybrid process-determinant framework rather than a theory. Therefore, selecting an appropriate framework is the first critical step for conducting theoretically informed implementation science research.

Most implementation science frameworks consider the process of implementation, the determinants of implementation success, the methods by which evaluation takes place, or a hybrid of these (Nilsen, 2015). Because it is a field of systems change, most also consider the macro and micro-systemic factors affecting the setting. Many examples of popular frameworks could be described; however, this dissertation will focus on one: Active Implementation Frameworks (AIF; Metz et al., 2015). Due to the plethora of published implementation science frameworks, AIF was chosen because it was based on a systematic review and compilation of existing frameworks (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005), incorporating interdisciplinary findings of the most essential elements for implementation. It has also already been applied for implementing a new practice into primary care settings (Blanchard et al., 2017) and continues to be refined to keep pace with the field of implementation science as it evolves (Metz et al., 2015). To supplement AIF, the R=MC² framework of organizational
readiness (Scaccia et al., 2015) will be used to further specify components of AIF. Before discussing these frameworks, it is worth defining some key terms and concepts in implementation science.

**Key Issues Affecting Implementation**

The most important issues affecting implementation success include: the setting or context, determinants (also known as barriers and facilitators), mechanisms of change, strategies enacted to improve determinants or contextual factors, implementation outcomes, and service or clinical outcomes (Powell et al., 2019). The terms above have many synonyms in the literature, but there are calls for using a common lexicon to aid interdisciplinary implementation work regardless of the framework used (Powell et al., 2019; Proctor, Powell, & McMillen, 2013). Setting or context is emphasized in most implementation frameworks, often using an ecological perspective where both the inner setting (e.g., organizational or team) and outer setting (e.g., community or national policy) are important for conceptualizing the problems, needs, and likelihood of implementation success (Aarons et al., 2011). Setting characteristics are sometimes included as determinants. Determinants are things that support or hamper implementation such as turnover, engagement, and practitioners’ knowledge and skills (Lewis, Klasnja, et al., 2018). Mechanisms are the reasons change does or does not occur. These can include organizational culture and climate, practitioners’ knowledge acquisition, and increased awareness of the need for change (Lewis, Klasnja, et al., 2018). Mechanisms potentially influence determinants and can be – but are not always – mediators of the change (Williams, 2016). Mechanisms potentially influence determinants, but they are not synonymous. Understanding mechanisms and mediators of change is arguably the least
developed area in the field (Lewis, Klasnja, et al., 2018). Strategies are the specific activities that enact the mechanism which include methods or techniques that aim to improve adoption, implementation, sustainability, and/or scaling up of innovations (Proctor et al., 2013; Lewis, Klasnja, et al., 2018). Examples of strategies include trainings, TA, financial incentives, guideline creation, learning collaboratives, and planning documents, among others (Proctor et al., 2013; Powell et al., 2019). Strategies affect the determinants’ impact on implementation outcomes (Williams, 2016); here the determinants would be the mediator between strategies and implementation outcomes. Implementation outcomes are the interim organizational effects of the implementation process, which influence whether service and clinical outcomes are reached; their relevance is hypothesized to vary by implementation stage (Proctor et al., 2011). Implementation outcomes include whether the innovation is adopted, the perceived acceptability and appropriateness of the innovation, cost, feasibility, fidelity, penetration, and sustainability (Proctor et al., 2011). Service outcomes capture the quality of intervention delivery (i.e., efficiency, safety, effectiveness, equity, patient-centeredness, and timeliness) and clinical outcomes are the effects of the innovation itself on client wellbeing (i.e., satisfaction, function, and symptomatology; Proctor et al., 2011).

Thus far in the field’s history, implementation science has focused on identifying determinants and creating frameworks to address both determinants and contextual factors. Among many potential directions the field could take, implementation scientists have suggested several areas of development. Some argue for continued study of mechanisms and mediators (e.g., Lewis, Klasnja, et al., 2018), while others suggest further investigation of how to match strategies to determinants and whether strategies
impact outcomes (e.g., Proctor et al., 2013; Powell et al., 2019). Both are necessary to improve the field’s offerings for practical implementation. Although strategies are possibly most important for improving practice, determinants must first be identified to match the right strategy (Williams, 2016). Indeed, much work in the field has focused on individual-level determinants, but the organizational-level social context is an important aspect of study for linkage to implementation outcomes (Williams et al., 2019). Potentially the most useful way forward is to apply existing frameworks in practice and test the potential match between determinants and strategies. This dissertation will develop preliminary hypotheses about the efficacy of one strategy (the provision of TA) on determinants of primary care behavioral health integration, using the Active Implementation Frameworks as a conceptual guide.

**Active Implementation Frameworks**

The Active Implementation Frameworks (AIF) are a hybrid process-determinant-evaluation (Nilsen, 2015) collection of frameworks blended from implementation research and evaluation literature across disciplines (Fixsen et al., 2005). This means AIF includes potential determinants of success, but also outlines the process of implementation for practical use and evaluation of progress. Part of an ongoing literature review initiated by the National Implementation Research Network (NIRN), AIF has been applied for implementing medication management (an evidence-based practice) into primary care settings (Blanchard et al., 2017) and to improve child welfare in communities (Metz et al., 2015), among other applications.

AIF outlines the process, mechanisms, and strategies for achieving health outcomes. Critical pieces of implementation include an effective innovation (what),
effective implementation (how and by whom), and enabling contexts (where). Five components are described in the most recent AIF iteration (Figure 1.1; Metz et al., 2015): (1) A usable innovation, (2) Implementation teams, (3) Improvement cycles, (4) Implementation drivers, and (5) Implementation stages.

A usable innovation refers to the intended program, practice, or policy being well-defined with specific principles, components, theory, and function (Metz et al., 2015). This is important because the characteristics of the innovation can be a barrier or facilitator for effective implementation. Implementation teams include key individuals to develop and support the intervention (such as through protocols and accountability structures), build capacity in the site, model the change, and ensure collaboration across stakeholders. Improvement cycles reflect on data collected during the process to effectively make improvements. This is often done by the implementation team (Metz et al., 2015). A commonly used improvement process is Plan-Do-Study-Act cycles which rapidly assess and redirect implementation as it happens (Metz & Bartley, 2012).

**Implementation Drivers.** Implementation drivers are the structural components necessary to change the organization and/or system. These include competency drivers (e.g., coaching and training practitioners, assessing performance), leadership drivers (e.g., adaptive and effective leadership), and organization drivers (systems intervention, facilitation, decision-support data systems; Metz & Bartley, 2012). Although AIF calls these “drivers”, in the implementation science literature these are variably referred to as “determinants” or “mechanisms” (Lewis, Klasnja, et al., 2018). Within AIF, competency drivers are mechanisms while leadership and organization drivers are determinants.
The R=MC² framework of organizational readiness (Scaccia et al., 2015) is a list of implementation drivers. This framework was originally developed within the Interactive Systems Framework for Dissemination and Implementation (ISF; Wandersman et al., 2008). Although the review that created AIF predates ISF (Fixsen et al., 2005), the former is a composite of existing frameworks and included precursor principles underlying ISF (i.e., Wandersman, 2003) in its creation. The R=MC² framework states that organizational readiness is an amalgam of three primary domains: Motivation, Innovation-specific Capacity, and General Capacity. These domains (or components) are present in varying degrees within organizations and can change over time. Motivation refers to the “perceived incentives and disincentives that contribute to the desirability to use an innovation.” (Scaccia et al., 2015). This includes the organization’s collective beliefs about the innovation and the degree of support for making the change and is specific to whatever innovation is being implemented. Innovation-specific Capacity refers to the human, technical, and fiscal conditions for implementing a particular innovation (Flaspohler et al., 2008). This can include the knowledge and skills necessary for implementing an innovation, the climate of support for it, and whether there is an influential person signaling support for it within the organization (Scaccia et al., 2015). General Capacity is the attributes affecting overall functioning of the organization and is untethered to a specific innovation. This includes leadership strength, resource allocation, culture, and staff capacity, among other attributes (Scaccia et al., 2015). The original framework was expanded to include additional subcomponents and refine the initial labels and definitions (Wandersman Center, 2020). Within AIF, these components and subcomponents are roughly synonymous with
leadership and organization drivers (Metz et al., 2015), but also affect competency drivers and offer a more comprehensive list of determinants than the AIF currently specifies. For this dissertation, $R=MC^2$ benefits from integration with AIF because the latter includes a temporal component with its emphasis on well-defined iterative stages of implementation (discussed next).

Although the framework authors do not refer to them as such, per the implementation science literature both Motivation and Innovation-specific Capacity are determinants of implementation success, while General Capacity would be an environmental or contextual condition affecting implementation success (Fernandez et al., 2019). Overall, $R=MC^2$ would be considered a determinant framework (Nilsen, 2015). This terminology (“determinants”) will be used throughout this dissertation and extends to the subcomponents of each primary $R=MC^2$ component.

**Implementation Stages.** Implementation stages are different phases of the process where key activities may vary over time. AIF uses four stages from the National Implementation Research Network (NIRN, n.d.): Exploration, Installation, Initial Implementation, and Full Implementation. Each stage prescribes implementation activities where strategies may be enacted for smoothly transitioning the organization from existing practices to effectively sustaining an innovation. Exploration is the first stage, where the organization assesses their needs and resources to determine what kind of innovation may be helpful. Key to this is determining the fit between innovation and the setting; the degree of compatibility affects how successfully the innovation may be adopted in this stage (Bertram, Blase, & Fixsen, 2015). Installation involves preparing the necessary resources and supports for the innovation. The different implementation drivers
must be considered in this stage to create strategies for systematic improvements as the implementation process unfolds (Bertram et al., 2015). It is worth taking the time in this stage to create thoughtful implementation plans, as this will affect the degree of success in latter stages. Initial Implementation executes organizational changes necessary for the innovation to be implemented. This includes increasing organizational and staff capacities, addressing deficiencies in organizational culture, and assisting staff to adapt to change (Bertram et al., 2015). Early adopters begin to use the innovation in this stage, but it has not yet gone to scale, and resistance should be addressed through problem solving and regular use of improvement cycles. Full Implementation is reached “when most practitioners are routinely providing the new or refined program model with good fidelity” (Bertram et al., 2015). This requires functional implementation drivers that were improved/modified in earlier stages to ensure it is possible to fully scale and sustain the innovation. During this stage, the organization may begin to see improvement in population-level outcomes.

A highly simplified version is presented in Table 1.1, which highlights the key elements for each stage. Implementation stages take several years to work through and are affected by the broader system beyond the organization, e.g., the national, state, and community conditions (Bertram et al., 2015). The stages are not discrete and may overlap but are distinguished by the activities or strategies energizing implementation at each point. Although commonly included in many implementation frameworks (e.g., Aarons, Hurlburt, & Horwitz, 2011; McCreight et al., 2019), a review of the literature revealed that the relationship between implementation stages and implementation outcomes is not well understood in healthcare settings (Domlyn, 2021). It is hypothesized that
implementation stages provide the structure for proper strategy selection to improve likelihood of implementation success (Bertram et al., 2015). Details on the rationale for using AIF in this dissertation are in the Methods Overview section.

The topic for which implementation science methods will be applied is the integration of behavioral health and primary care. Existing literature applying implementation science to integrated care is limited, despite suggestions of its vast potential (Goodwin, 2019; Katzelnick & Williams, 2015). Existing examples are often limited to using implementation science tools for evaluation rather than driving the process (e.g., Beehler, Funderburk, Possemato, & Vair, 2013; Goldman et al., 2020; Padwa et al., 2015). This indicates a need to apply the lessons from this field for improving behavioral health outcomes nationally. To this end, the next section will focus on the topic of integrated behavioral health and primary care with an implementation science lens.

1.2 INTEGRATED CARE

Defining the field

Integrated care refers to a coordinated range of services where both trained and informal providers collaborate within and/or across organizations to plan, manage, and deliver healthcare to individual consumers (Minkman, Vermeulen, Ahaus, & Huijsman, 2011). This includes coordinating any kind of services affecting health and wellbeing such as chronic disease, housing, mental health, or social services. Integrated behavioral healthcare is the provision of clinical care where medical and behavioral health providers collaborate to improve patients’ biopsychosocial health (Muse, Lamson, Didericksen, & Hodgson, 2017). When done in primary care settings, this approach is person-centered
and comprehensive. Consistent with the biopsychosocial model of health (Engel, 1977), integrated care recognizes the biological, psychological, and social elements affecting wellbeing in patients (Collins, Hewson, Munger, & Wade, 2010). Primary care settings are the first point of care for most patients. Locating specialty care within a primary care clinic is beneficial for patients because it enhances access to services. Most primary care practices are closer to a patient’s home than specialty clinics, are less stigmatizing for regular visits, are more cost-effective, can link to other community services, and tend to lead to positive outcomes (Collins et al., 2010).

Primary care clinics often already provide mental health services (e.g., via prescriptions or suggested lifestyle changes) regardless of adequate staff or training to do so, which has the potential for negative outcomes among patients; even fewer provide care for substance use (Shin, Sharac, Alvarez, Rosenbaum, & Paradise, 2013). Among those that do provide these services, they are often not integrated and will generally refer patients elsewhere (Chaple et al., 2016; Padwa et al. 2016). A large randomized controlled trial of collaborative care for depression found that it was not only feasible to implement, but also resulted in a greater reduction in symptomatology, greater patient satisfaction in care, and greater quality of life (Unützer et al., 2002). A systematic review of the evidence confirmed these initial results and found that the benefits extend to those with anxiety symptoms (Archer et al., 2012). Another study indicated that collaborative care reduces patient costs (Unützer et al., 2008). While overall the evidence for the Collaborative Care Model (CCM) is promising (Camacho et al., 2016; Camacho et al., 2018; Green et al., 2014; Katon et al., 1995; Katon et al., 1996; Unützer et al., 2002; Unützer et al., 2008; Unützer et al., 2012), additional research is required to assess the
The efficacy of integrating a comprehensive behavioral health approach (including substance use) into primary care (Kwan & Nease, 2013). Although we know this integration can be efficacious, little is known about the process and mechanisms to conduct this integration. Despite this limited procedural knowledge, many organizations use the current evidence to push for the integration of behavioral health into primary care as a best practice. These organizations include the American College of Physicians (Crowley & Kirschner, 2015), the Agency for Healthcare Research and Quality (Miller, Kessler, Peek, & Kallenberg, 2011) and the Substance Abuse and Mental Health Services Administration (SAMHSA, n.d.). Early adopters of integrated care in the United States were the Veterans Health Administration (Post et al., 2010), federally qualified health centers, and health maintenance organizations like Kaiser Permanente (Collins et al., 2010). Integrated care as a whole health practice has spread as more healthcare systems recognize the benefits for patient cost, patient experience, and patient outcomes; an ambition consistent with the Institute for Healthcare Improvement’s Triple Aim approach for optimizing health system performance (Berwick, Nolan, & Whittington, 2008).

The terms “collaborative” and “integrated” care are often used interchangeably, as they both refer to coordination of medical services for patient benefit. However, there is a distinction. Collaborative care means behavioral health providers are working with primary care but remain separate services, while integrated care means the behavioral health providers are working within – and part of – the primary care service (Collins et al., 2010). Patients perceive it as one service, which aids treatment adherence because it lessens the stigma of seeking specialty care. Activities within integrated care settings range from selectively screening patients for behavioral health concerns, to diagnostics,
brief treatment, and referral (Crowley & Kirschner, 2015). In practice, the way these activities are operationalized varies because degree of integration depends on the needs of the healthcare providers and the population served (Leutz, 2005). Broadly, degrees of collaborative care fall into three categories: coordinated, co-located, and integrated (Blount, 2003). Coordinated care includes screening, referral relationships between providers, information exchange, and connecting patients to other resources. Co-located care means that both medical and behavioral health services are provided within the same facility, both formal and informal communication occurs between primary care and behavioral health providers, and there is regular consultation between providers. This maintains a referral process, where primary care recommends patients to be seen by the behavioral health team. Integrated care is generally (though not always) co-located but is distinct because there is collaboration between providers to create a single treatment plan addressing all the patient’s behavioral and medical needs. Both sets of providers work together on one team (usually with other types of providers as well, such as nurses and case managers), and all patients are routinely screened for behavioral health problems (Blount, 2003).

Many different models of collaborative care have been proposed. Some define integration in terms of the functional, organizational, or clinical differences (Minkman et al., 2011; Muse et al., 2017), others by the degree of coordination (Leutz, 2005). There are almost as many models for integrated care as there are healthcare organizations in the United States (Collins et al., 2010). These include the Patient-Centered Medical Home (PCMH; Baird et al., 2014), the Program of All-inclusive Care for the Elderly (PACE; Eng et al., 1997), and the Collaborative Chronic Care model (CCC; Wollman et al.,
2012), among others. There are differences in the strength of empirical support for different models. For example, the Primary Care Behavioral Health (PCBH) model is widely used in the VA system but lacks research support (Possemato et al., 2018), while the CCM has strong research support (Camacho et al., 2016; Camacho et al., 2018; Green et al., 2014; Katon et al., 1995; Katon et al., 1996; Unützer et al., 2002; Unützer et al., 2008; Unützer et al., 2012). However, this is primarily because the evidence base is still being developed. Importantly, in practice there are many versions of integrated care that do not adhere to one model or will hybridize models. Integrated and collaborative care are compatible rather than mutually exclusive (Vogel, Kanzler, Aikens, & Goodie, 2017).

The Substance Abuse and Mental Health Services Administration (SAMHSA), with the United States Department of Health and Human Services’ Health Resources and Services Administration (HRSA), created a Center for Integrated Health Solutions (CIHS) to promote primary care behavioral health service integration. Synthesizing the literature around integrated care, CIHS created a standard framework for conceptualizing the six levels or degrees of integrated healthcare; these map on to the three broad categories described above: coordinated, co-located, and integrated (Leutz, 2003; Heath, Wise, Romero, & Reynolds, 2013). Full explanation of each level describes the role of each set of providers, how the providers work together, how clinical services are delivered, the differences in patient experience, structural set-up of the organization, business models, and the advantages and weaknesses of each level. A simplified version of this is presented in Table 1.2 to connote key differences. This general framework provides a common way to categorize different degrees of integration across models.
Despite the plethora of models available to frame care integration, the process of transforming a practice from traditionally segmented to coordinated or integrated care is a difficult endeavor with many organizational challenges. Among the challenges are that behavioral health and primary care providers traditionally operate in silos, information sharing rarely occurs, confidentiality laws for mental health and substance abuse are stringent, and current systems are not set up to handle payment and reimbursement for integrated care (Collins et al., 2010). Many existing models for helping integration focus on breaking down these activities into actionable steps. Some also consider factors of implementation. For example, the Behavioral Health Integration Implementation Guide (Ratzliff et al., 2017) is a set of tools and resources for implementing behavioral health into a PCMH setting yet is applicable to any model of integrated care. This guide includes tools for assessing the needs and resources of the practice, overcoming resistance to change, and strategizing how to address barriers to implementation. However, this guide is limited in three ways: first, although it considers that practices may be resistant to change, guidance for overcoming resistance is limited to education. Yet there are many other elements affecting motivation to change, such as the perceived priority of the innovation or the compatibility with existing practices (Scaccia et al., 2015). The second limitation is a minimal consideration of contextual factors such as the quality of leadership, the climate of the organization, and how innovative the practice is in general. Third, the guide does not explicitly consider how these needs and resources may change over different stages of implementation. Another example framework – Project INTEGRATE – was developed in Europe and provides an assessment and planning tool for activities to be completed that does consider implementation stages.
(Cash-Gibson et al., 2019). However, it focuses primarily on process and capacities and does not consider social or contextual barriers to success, such as the organizational culture, motivation, or the presence of an influential integrated care champion within the organization. Despite evidence that integrated care capacity can be built, these organizational barriers have been noted as problematic to successful care integration (Goodwin, 2019; Gold et al., 2019; Padwa et al., 2016). Implementation science is surprisingly underappreciated in integrated care. One or several of these limitations are true for nearly every guidebook and tool for integrating or coordinating care (e.g., Chung et al., 2016; Duprey, 2016; Lewin Group, 2012; Staab et al., 2018; Stephens et al., 2020; Waxmonsky, Auxier, Wise Romero, & Heath, 2014). In describing the promise of implementation science for integrated care, Goodwin (2019) states:

“What is needed is a shift in tactic where evaluation takes a more practical and participatory form to support continuous reflective learning that is embedded within integrated care projects and which act as a tool for quality improvement. Evaluation and monitoring practices may then become built-in to the DNA of everyday working practice, valued by all participants, and so enable the complexities of integrated care in specific contexts to be resolved in real-time.”

Given what is known from implementation science, existing integrated care guides are not sufficiently comprehensive for ensuring implementation success (Goodwin, 2019). Settings are diverse. Some practices seeking to integrate care are independent practices, others are within large health systems, some are rural and others urban, and the degree of available resources varies. This requires a proactive, evaluative
perspective for integrating care. Action items are important for care integration (Cash-Gibson et al., 2019; Minkman et al., 2011; Ratzliff et al., 2017), but completing these activities alone will not suffice (Gold et al., 2019; Goodwin, 2019; Padwa et al., 2016; Serrano et al., 2018). To understand the relevance of implementation science for integrated care, two concepts need further consideration: determinants and strategies.

Determinants and Strategies of Integration

Determinants. Many barriers and facilitators for integrating care have been identified in the literature. Leadership, individual adopter characteristics, provider communication, a champion, seeing progress, provider education and knowledge, management support, innovation-values fit, culture, staff capacity/turnover, motivation, burden, socio-political climate, funding, organizational characteristics, and delivery structures have all been identified as factors affecting integration of care (Busetto, Luijkk, Calciolari, Ortiz, & Vrijhoef, 2018; Moise et al., 2018; Padwa et al., 2016). These include attributes of the inner and outer setting, as well as issues of both capacity and motivation (Scaccia et al., 2015); in terms of the AIF this includes organization and leadership drivers. Contextual factors – e.g., practice type, like a federally qualified health center versus a community mental health center – can also influence the level of coordination, co-location, or integration that can be achieved (Cohen et al., 2015).

One comprehensive list of implementation determinants and contextual factors includes all the barriers and facilitators noted above, is informed by the implementation science literature, and is generalizable for any setting or model of integrated care (R=MC²; Scaccia et al., 2015; Scott et al., 2017). However, this list of determinants is also limited because it does not consider the way these determinants may be differentially
important over time, nor how the determinants can be actionable for helping clinics to integrate. Furthermore, a list of determinants alone is not sufficient for implementation success unless they are paired with strategies that can help to achieve adoption and sustainability.

**Strategies (including Technical Assistance).** Strategies for helping clinics to integrate care include the types of support and capacity-building necessary to overcome barriers, leverage facilitators, and accomplish the action items necessary to integrate. As described in the previous section, tools such as action items and worksheets are often applied as strategies for aiding integration (Cash-Gibson et al., 2019; Ratzliff et al., 2017). Another strategy is the establishment of a learning collaborative, where clinicians, content experts, and change management experts discuss the functional and motivational issues of integration and determine steps for overcoming these (Katzelnick & Williams, 2015; Lyons et al., 2015). The use of improvement science techniques such as the Lean Process or Plan-Do-Study-Act cycles are sometimes noted as potential strategies (Roseman, Osborne-Stafnes, Amy, Boslaugh, & Slate-Miller, 2013), although others have argued these are best paired with learning collaboratives or individualized TA (Katzelnick & Williams, 2015; Kenworthy et al., 2019). Therefore, improvement science is better conceptualized as a tool or structure for support. Financial incentives are another tactic (Jones & Ku, 2015), but require sufficient funding to enact. Training is also a commonly cited strategy for integrating care (Bluestein & Cubic, 2009; Moise et al., 2018; Roseman et al., 2013; Strosahl, 2005), but it alone is insufficient for implementation success (Fixsen, Blase, Naoom, & Wallace 2009; Wandersman et al., 2012). TA, consultation, or similar ongoing support is often noted as a strategy (Chaple,
Sacks, Randell, & Kang, 2016; Jones & Ku, 2015; Post, Metzger, Dumas, & Lehmann, 2010; Roseman et al., 2013), usually in combination with training. A combination of strategies is most likely for implementation success and should be part of a comprehensive system of implementation support (Fixsen et al., 2009; Wandersman et al., 2012). TA is beneficial because it expands upon initial trainings and moves beyond knowledge transfer and into troubleshooting real-time application of tools, skills, and barriers to progress. While some evidence suggests TA alone is sufficient to improve organizational capacity when integrating care (Chaple et al., 2016), TA is also appealing because regular tailored support can help to enact any of the strategies above.

TA broadly refers to any non-financial support provided to individuals, groups, or organizations assistance (Lyons et al., 2016; UNESCO, n.d.), and generally assumes a regular relationship between TA provider(s) and the individual(s) they support (Katz, 2015). Under the umbrella of implementation supports, TA provision is virtually synonymous with coaching, consultation, facilitation, and knowledge brokering (Albers et al., 2021). Examples of TA include a content expert at a research institute contracting with a clinic to provide weekly consultation phone calls or site visits, a team of strategists from a for-profit firm conducting a needs assessment to create written recommendations for organizational improvement, or a program specialist for an implementation grant sending instructional videos to an organization based on their specific requests. This ongoing, interpersonal support is relevant given the importance of relationships for implementation success (Hajjar et al., 2020; Katz, 2015; Wandersman et al., 2012). TA is mentioned in both the integrated care and implementation science literatures as a key strategy (Chaple et al., 2016; Chung, Rostanski, Glassberg, & Pincus, 2016; Fernandez et
al., 2019; Fixsen et al., 2009; Gold et al., 2019; Post et al., 2010; Powell et al., 2015; Roderick, Burdette, Hurwitz, & Yeracaris, 2017; Roseman et al., 2013; Ritchie et al., 2020; Wandersman et al., 2012). TA is also utilized by federal agencies like the CDC and SAMHSA (CDC, 2017; SAMHSA, 2016), with hundreds of millions of dollars spent nationally per year on its provision (Mitchell, Florin, & Stevenson, 2002). Within AIF, TA providers are key strategists assisting implementation teams and affecting the drivers of implementation, particularly competency (Metz et al., 2015). Despite its prevalence and purported importance, a comprehensive literature review revealed few TA providers use systematic methods (Katz & Wandersman, 2016) despite availability of proactive approaches (Ray, Wilson, Wandersman, Meyers, & Katz, 2012), and the guides that do exist are often setting-specific (e.g., Chaple et al., 2016). Importantly, while intensive TA is more likely to achieve positive outcomes than less intensive TA (Dunst, Annas, Wilkie, & Hamby, 2019), evidence shows that intensive TA alone is not sufficient for healthcare system change. The success of intensive TA is constrained by implementation determinants such as innovation fit, complexity, perceived priority, and motivation (Gold et al., 2019). Without addressing these determinants, the likelihood of successful integration appears limited. Methods for delivering quality TA is a noted limitation in integrated care, and calls have been made for creating structured TA frameworks to address the workforce development challenges facing integrated care (Serrano, Cordes, Cubic, & Daub, 2018).

The current literature indicates the need for TA guidelines for integrating care that (i) assess and improve organizational determinants of success, (ii) are generalizable across settings, (iii) can be included within a comprehensive system of support, and (iv)
are sensitive to an organization’s changing needs across stages of implementation. These needs, along with issues identified in implementation science and integrated care, inform the work conducted for this dissertation. The purpose of this work is to translate implementation science frameworks into integrated care. This is accomplished by further specifying determinants of successful care integration in terms of their relevance across stages of implementation, as well as estimating the degree to which TA could help to improve these determinants. Use of implementation frameworks to guide qualitative research, and subsequently translate findings into guides or tools for enacting implementation processes, has been proposed as a promising use of qualitative research (Sandelowski & Leeman, 2012). This dissertation begins a body of work that can create guidelines the literature currently lacks.

1.3 GAPS IN LITERATURE

Summary

A review of the literature reveals that the integration of behavioral health and primary care is an important innovation for improving patient outcomes. However, few healthcare systems in the United States are currently structured for easy integration. Some guides and tools exist for helping clinics to integrate care, but they tend to focus on the logistics and activities for systems change rather than overcoming the organizational and systemic barriers and their differential importance over time; this can obfuscate the lengthy change process. Many conditions and determinants impact care integration, but it is unclear how to improve them in practice. In addition, some determinants may be more important than others, or only important at certain times. The process of implementation is lengthy and occurs in different stages. This is acknowledged in most implementation
frameworks, yet the relevance of an organization’s current stage of change is rarely considered in practice.

Methods from implementation science may assist organizations to integrate. This field has shown that when implementing an innovation, a healthcare system’s context is as important as the individual and organizational barriers and facilitators. The field also proposes many frameworks for facilitating organizational change, most of which acknowledge that this process occurs in different stages. Strategies for addressing potential barriers exist, but implementation scientists are still working to match these strategies with the appropriate determinants of success. TA is a promising strategy because it involves an ongoing relationship with organizations’ implementation teams and can expedite other strategies. However, there are few systematic methods for doing TA with quality.

**Proposed Solution**

One potential solution is the creation of an implementation support tool for helping organizations to integrate behavioral health and primary care. This tool could assist clinics by outlining a coaching and relationship-based approach to TA to first assess the determinants and environmental conditions affecting success as they change over time, match them to strategies, and specify the degree to which TA could help. This would elevate current methods by pairing determinants of success with a strategy to address barriers and bolster facilitators.

Such a tool does not currently exist. Nor does the prerequisite information about which determinants are most important, when they are most important, or how they could be
built up by TA or other strategies. The present study is guided by these gaps in the literature and potential solution.

1.4 DISSERTATION OVERVIEW

**Purpose**

This multiphase dissertation will focus on determinants and contextual factors for integrating behavioral health and primary care. Informed by the aforementioned gaps in literature and practice, the specific objectives are to assess when determinants of success and contextual or environmental conditions (henceforth, collectively “determinants”) are most important for successful care integration, determine whether TA can help to facilitate change in these determinants, and develop and assess an implementation support tool for integrating care. The practical implications of this work further specify these determinants, then are translated into a strategic assessment and improvement tool for assisting care integration. This tool could help organizations to integrate care efficiently and with good quality.

**Research Questions**

There are two primary research questions addressed by this dissertation, developed based on the literature and stated aims. Each have several sub-questions. Because there is little existing knowledge around this dissertation’s primary two questions, an exploratory approach is taken.

**Research Question 1** What are the most relevant implementation determinants and environmental conditions for the successful integration of behavioral health and primary care in clinical settings? They are all identified as being important,
but when in the lifespan of implementation are implementation determinants and contextual factors most important for integrated care activities?

a. Which capacity-related implementation determinants are most critical when an organization is first deciding whether to integrate care?

b. Which capacity-related implementation determinants are most critical during the process of integrating care?

c. Which motivation-related implementation determinants are most critical when an organization is first deciding whether to integrate care?

d. Which motivation-related implementation determinants are most critical during the process of integrating care?

e. Which contextual factors within an organization are most critical when first deciding whether to integrate care?

f. Which contextual factors within an organization are most critical during the process of integrating care?

Answers to this first question can identify intervention points. If the determinants are important at different times, this informs when and how to implement strategies to help integrate care. Pairing an assessment of determinant strength with an assessment of implementation stage would aid the efficient use of resources to build up weak determinants at the right time.

Research Question 2) To what degree can external support (e.g. technical assistance) potentially affect or improve the implementation determinants and contextual factors for successfully integrating behavioral health and primary care in clinical settings?
a. Can external support influence capacity-related implementation
determinants of integrated care?
b. Can external support influence motivation-related implementation
determinants of integrated care?
c. Can external support influence an organization’s contextual factors
relevant for integrating care?

This second question is important because results determine whether and how TA
providers can leverage specific determinants to help integrate care. If a determinant can
be affected by TA, then the TA provider should engage in additional support for the
organization. If not, then the TA provider can facilitate use of other strategies to improve
outcomes.

Methods Overview

Several things are needed to accomplish the aim of this dissertation. First, an
implementation framework to ground this inquiry in theory and practice. Second, a
collection of known determinants affecting integration of care. Finally, an exploratory
method to answer specific research questions about each determinant’s relevance for
successfully integrating care, particularly with the aid of TA.

Theoretical Framework. The Active Implementation Frameworks (AIF) will be
used as the backbone of this study. As described previously, AIF is a collection of
frameworks borne from a comprehensive literature review. It includes the most critical
elements of implementation success, including detailed stages of implementation and
recognition of different types of determinants. AIF refers to determinants as
“implementation drivers”, but the former language will be retained for this dissertation to
be consistent with the broader implementation science literature. AIF is a general framework meant to be applicable across innovations and settings. While AIF has been applied in implementing pharmaceutical practices into primary care (Blanchard et al., 2017), it has not yet been used for integrated behavioral healthcare research or practice. Therefore, the specific determinants used in this study will be generated from an existing framework that has already been specified for integrating behavioral health and primary care (R=MC², described next).

**Relevance.** AIF was deemed appropriate for this dissertation for multiple reasons. First, it is based on a multidisciplinary literature review and is a conglomeration of existing implementation science frameworks (Fixsen et al., 2005). This ensures it touches on all the critical aspects of implementation and is applicable across settings. Second, AIF continues to be refined based on evolving knowledge in the field (Metz et al., 2015), which means that it is amenable to revision and supplementation. This allows it to be flexible to the determinants most relevant for integrated care. Third, it has already been applied for implementing new practices into primary care settings (Blanchard et al., 2017), setting a precedent for this application. Finally, AIF is relevant for both qualitative and mixed methods designs (Barwick, Kimber, & Fearing, 2011; McCrae, Scannapieco, Leake, Potter, & Menefee, 2014), making it appropriate for studies undertaken in this dissertation.

**Determinant Framework.** Several options are available for conceptualizing the determinants of successful integrated care; however, this dissertation will use one framework deemed superior because of its degree of specificity, applicability to integrated care, and etiological roots in implementation science. The R=MC² framework
of organizational readiness was developed from a systematic review of the implementation science literature (Scaccia et al., 2015). It conceptualizes organizational readiness as a series of determinants and environmental conditions necessary for the implementation of any innovation into any setting. It has been adapted from this generalized origin and applied to integrated behavioral health and primary care (Table 1.3; Scott et al., 2017).

**Table 1.1 Simplified definitions of framework components**

<table>
<thead>
<tr>
<th>Component (Subcomponent)</th>
<th>Simplified Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td>Degree to which the organization wants to integrate care.</td>
</tr>
<tr>
<td>Relative Advantage</td>
<td>Integrated care seems better than the organization’s current practices.</td>
</tr>
<tr>
<td>Compatibility</td>
<td>Integrated care fits with how the organization operates.</td>
</tr>
<tr>
<td>Simplicity</td>
<td>Seeming simplicity of integrating care.</td>
</tr>
<tr>
<td>Ability to Pilot</td>
<td>Degree to which integrating care can be tested and experimented with.</td>
</tr>
<tr>
<td>Observability</td>
<td>Ability to see that that integrated care is leading to outcomes.</td>
</tr>
<tr>
<td>Priority</td>
<td>Importance of integrating care compared to other things the organization does.</td>
</tr>
<tr>
<td>Innovation-Specific Capacity</td>
<td>What is needed to ensure care is integrated.</td>
</tr>
<tr>
<td>Innovation-specific Knowledge &amp; Skills</td>
<td>Organization has sufficient abilities to integrate care.</td>
</tr>
<tr>
<td>Champion</td>
<td>A well-connected person who supports integrating care and models the practice.</td>
</tr>
<tr>
<td>Supportive Climate</td>
<td>Necessary supports, processes, and resources to enable integrating care.</td>
</tr>
<tr>
<td>Inter-organizational Relationships</td>
<td>Relationships between organizations that support integrating care.</td>
</tr>
<tr>
<td>Intra-organizational Relationships</td>
<td>Relationships within the organization that support integrating care.</td>
</tr>
<tr>
<td>General Capacity</td>
<td>The organization’s overall functioning.</td>
</tr>
<tr>
<td>Culture</td>
<td>Norms and values of how things are done in the organization.</td>
</tr>
<tr>
<td>Climate</td>
<td>The feeling of being part of the organization.</td>
</tr>
<tr>
<td>Innovativeness</td>
<td>Organization’s openness to change in general.</td>
</tr>
<tr>
<td>Resource Utilization</td>
<td>Organization’s ability to acquire and allocate resources including time, money, effort, and technology.</td>
</tr>
<tr>
<td>Leadership</td>
<td>Effectiveness of organization’s leaders.</td>
</tr>
</tbody>
</table>
**Internal Operations**  Effectiveness of organization at communication and teamwork.

**Staff Capacities**  Having enough of the right people to get things done.

**Process Capacities**  Organization’s ability to plan, implement, and evaluate.

*Adapted from Wandersman Center (2018)*

**Relevance.** The purpose of the R=MC\(^2\) framework is to provide a practical template for effective implementation and support (Scaccia et al., 2015). The framework also assumes these determinants can be affected by the quality of interactions between actors at different levels of a system: those researching best practices for an innovation, those supporting implementation, and the individuals and organizations that are enacting the program, policy, or practice (Scaccia et al., 2015). Therefore, this framework is consistent with this dissertation’s goal of refining existing knowledge of implementation determinants to create a support model for care integration.

The current literature on R=MC\(^2\) does not specify when during implementation each component and subcomponent of readiness is relevant; they may vary in relative importance and may vary by when they are most significant in the process of implementation. Thus far there is one published method for building readiness using the R=MC\(^2\) framework, which relies on the provision of TA (Domlyn et al., 2021). Additionally, literature exists around support strategies for improving specific subcomponents such as relative advantage (Carlfjord, Lindberg, Bendtsen, Nilsen, & Andersson, 2010), complexity (Diker et al., 2013), innovation-specific knowledge and skills (Donald, Dower, & Bush, 2013), culture (Pronovost et al., 2005), and leadership (Cummings et al., 2012), among others. This information has not yet been combined with the R=MC\(^2\) framework, although a research synthesis of the literature has been conducted and efforts are underway to do so (Scaccia, Cook, & Wandersman, 2018).
To build readiness, it first must be known whether those implementing an innovation perceive the components and subcomponents of the R=MC\(^2\) framework as relevant for their work and able to be modified or improved; this forms the basis for Research Questions 1 and 2. Qualitative data on perceptions of the utility for R=MC\(^2\) for integrating care (Scott et al., 2017) indicated that stakeholders desire more guidance on how to use readiness data to improve implementation efforts (Domlyn, Kenworthy, Godly-Reynolds, Scott, & Wandersman, 2017), which lends support to this dissertation’s goal. Determinants conceptualized by the R=MC\(^2\) framework will be used in this dissertation along with stages of implementation as described by the AIF. A composite model demonstrating conceptual fit between AIF and R=MC\(^2\) is displayed in Figure 1.2.

**Participatory Action Research.** Experimental methods are considered the gold standard of research, particularly in healthcare. However, achieving the intended aim of this dissertation is limited by gaps in current knowledge. More information is needed to generate hypotheses prior to designing an experimental study. Therefore, this dissertation approaches these research questions through exploration of what is already known to be true in practice. Practice-based evidence is argued to be a remedy to the fallacies of the research paradigm, which assumes that generalizable knowledge for improving practice must first come from research; yet this assumption has not been corroborated (Green, 2008). Participatory methods are proposed as an alternative. Results from this dissertation’s practice-based approach will be used to create an implementation support tool, assess the feasibility of applying this tool in practice, and generate hypotheses for future empirical study with the eventual goal of bringing results back into the realm of practice for helping to integrate care. Starting this potential portfolio of work with
practice-based evidence is proposed to ground the research in real-world knowledge and ensure the validity of its later application in practice.

**Data Collection and Analysis.** This exploratory study uses a multi-phase mixed methods design (Creswell et al., 2011) conducted in two phases. Phase I is a participatory action research approach with both sequential and simultaneous collection of qualitative and quantitative data, varying by round (further described below). Phase I results launch Phase II. In Phase II, the previous phase results and a literature review informs creation of an implementation support tool, which is evaluated using an online survey with both qualitative and quantitative components. Each phase has a unique methods and results chapter. A preview is offered below, with full details in each chapter. An overview of data collection and analysis across phases is in the Appendix.

**Phase I** gathers practice-based evidence for answering the research questions. It has five methodological components; the first two pertain to data collection, the others to analysis. At various stages in the process qualitative or quantitative data (or both) were collected or analyzed concurrently or sequentially. Overall, equal weight was given to both data types as informing the study process and results (QUAN + QUAL; Palinkas et al., 2011). **Primary data collection** was conducted via a participatory research method – a Delphi study – to generate what is currently known about the research questions by integrated care practitioners and researchers. A Delphi study is a mixed-method multi-round communication technique that systematically collects opinions and lived experiences of content experts, culminating in a collective judgement on the topic. The process was conducted in four rounds: an interview, two mixed-methods surveys, and a debrief conducted as one focus group and two interviews. Data are connected (Creswell
et al., 2011; Palinkas et al., 2011), where one round’s dataset generates the next round. Secondary data collection was a brief mixed-methods process evaluation survey conducted at the conclusion of primary data collection to verify the credibility of the study. A process analysis was conducted as part of the Delphi study. Data were analyzed qualitatively between each round to offer the experts’ anonymized comments and experiences to each other before they rendered judgment on the next round. Quantitative data analysis informed the debrief sessions. Initial data analysis included simultaneous analysis of the process evaluation survey and debrief transcriptions. This converged the datasets (Palinkas et al., 2011) to draw conclusions about a) participant’s perceived validity of the study process, b) implications of the study results, and c) additional analyses to be conducted for participants to have confidence in the results.

Adhering to the participatory process – where participants are active partners in interpreting and exploring the results – an exploratory data analysis conducted two post-hoc analyses, identified from initial data analysis results. Exploratory analytic question #1 assessed whether results vary by participant background. Answering this question necessitated analyzing quantitative survey data, then qualitative analysis of the interview and debrief transcriptions elaborated the quantitative results. Exploratory analytic question #2 conducted a different method for creating final study results than originally identified by the author. This necessitated analyzing quantitative survey data, then two coders conducted a categorization process to interpret the survey results. Exploratory analysis #2 generated final results to answer this dissertation’s research questions.

Phase II has two components. First the Phase I results and a literature review were used to create an implementation support tool. Next, this tool was assessed using a
mixed-methods survey on the perceived acceptability and appropriateness of the tool. The survey was the sole data collection for this phase. Both qualitative and quantitative data were collected in the survey; qualitative data were used to expand results of the quantitative data (qual + QUAN; Palinkas et al., 2011).
Table 1.2 Implementation stages

<table>
<thead>
<tr>
<th>Exploration</th>
<th>Identify needs, programs to meet need, determine fit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Decision made whether to adopt</td>
</tr>
<tr>
<td></td>
<td>Develop implementation plans</td>
</tr>
<tr>
<td></td>
<td>Prepare supports</td>
</tr>
<tr>
<td>Installation</td>
<td>Set up implementation infrastructure &amp; supports (“start up” costs)</td>
</tr>
<tr>
<td></td>
<td>Try out the practices, work out details, learn and improve</td>
</tr>
<tr>
<td>Initial Implementation</td>
<td>Systems in place for coaching, data measuring and reporting</td>
</tr>
<tr>
<td></td>
<td>Revision of Implementation plan as needed</td>
</tr>
<tr>
<td></td>
<td>Implementation activities are taking place</td>
</tr>
<tr>
<td>Full Implementation</td>
<td>Data used to make decisions</td>
</tr>
<tr>
<td></td>
<td>Practice becomes fully operational</td>
</tr>
<tr>
<td></td>
<td>Stakeholders have adapted to the new processes Client outcomes start to be seen</td>
</tr>
</tbody>
</table>

Adapted from the National Implementation Research Network (NIRN, n.d.)
### Table 1.3 SAMHSA-HRSA CIHR Framework

<table>
<thead>
<tr>
<th>Character</th>
<th>Coordinated</th>
<th>Co-located</th>
<th>Integrated</th>
<th>Integrated</th>
<th>Integrated</th>
<th>Integrated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Level 1</td>
<td>Level 2</td>
<td>Level 3</td>
<td>Level 4</td>
<td>Level 5</td>
<td>Level 6</td>
</tr>
<tr>
<td><strong>Facilities</strong></td>
<td>Separate</td>
<td>Separate</td>
<td>Same; no shared</td>
<td>Same; some shared</td>
<td>Same; some shared</td>
<td>Same; all space</td>
</tr>
<tr>
<td><strong>Provider</strong></td>
<td>Rare</td>
<td>Periodic</td>
<td>Regularly on shared</td>
<td>In person as needed</td>
<td>In person frequently</td>
<td>Frequent; On multiple levels</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td></td>
<td>on shared</td>
<td>patients</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Screening</strong></td>
<td>Separate</td>
<td>Separate</td>
<td>Separate; Some</td>
<td>Some agreement on</td>
<td>Consistent</td>
<td>Standard protocols</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>agreement on</td>
<td>measures &amp; response</td>
<td>agreement on</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>measures</td>
<td></td>
<td>measures &amp; response</td>
<td></td>
</tr>
<tr>
<td><strong>Provider Buy-in</strong></td>
<td>Minimal</td>
<td>Some</td>
<td>For referrals</td>
<td>Some for</td>
<td>Most for</td>
<td>All embrace</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>integration</td>
<td>integration</td>
<td>integration</td>
<td>integration</td>
</tr>
<tr>
<td><strong>Referrals &amp;</strong></td>
<td>No referral</td>
<td>Referral</td>
<td>Reliable referral</td>
<td>Internal referral;</td>
<td>Consistent internal</td>
<td>Seamless patient</td>
</tr>
<tr>
<td><strong>Treatment</strong></td>
<td>system;</td>
<td>system in</td>
<td>system, may vary</td>
<td>Some collaborative</td>
<td>referral; Frequent</td>
<td>transition; One</td>
</tr>
<tr>
<td></td>
<td>No resource</td>
<td>place;</td>
<td>by provider</td>
<td>treatment planning</td>
<td>collaborative</td>
<td>treatment plan for all patients</td>
</tr>
<tr>
<td></td>
<td>sharing</td>
<td>Records</td>
<td></td>
<td></td>
<td>treatment planning</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>sometimes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Funding &amp;</strong></td>
<td>Separate</td>
<td>Separate</td>
<td>Separate; may share</td>
<td>Separate; may share</td>
<td>Blended; shared</td>
<td>Integrated;</td>
</tr>
<tr>
<td><strong>Billing</strong></td>
<td></td>
<td></td>
<td>facility expenses</td>
<td>facility expenses</td>
<td>facility expenses</td>
<td>shared resources</td>
</tr>
</tbody>
</table>

*Standard Framework for Levels of Integrated Care, adapted from Heath et al. (2013)*
<table>
<thead>
<tr>
<th>WHAT</th>
<th>WHERE</th>
<th>WHO</th>
<th>HOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>An Innovation</td>
<td>Context</td>
<td>Teams</td>
<td>Drivers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Improvement Cycles</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Stages</td>
</tr>
</tbody>
</table>

Figure 1.1 AIF components
<table>
<thead>
<tr>
<th>WHAT</th>
<th>WHERE</th>
<th>WHO</th>
<th>HOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>An Innovation</td>
<td>Context</td>
<td>Teams</td>
<td>Drivers</td>
</tr>
<tr>
<td>General Capacity</td>
<td>Technical Assistance</td>
<td>Improvement Cycles</td>
<td>Stages</td>
</tr>
</tbody>
</table>

**Figure 1.2 Composite AIF - R=MC² framework**
CHAPTER 2. PHASE I METHODS

2.1 PARTICIPATORY ACTION RESEARCH: THE DELPHI METHOD

The Delphi method was used to explore Research Question 1 (when in the lifespan of implementation these determinants and conditions are more important for successful care integration) and Research Question 2 (the degree to which external support can potentially improve implementation determinants and contextual factors for successful care integration). As an assurance of study rigor, the protocol was designed to adhere to the best practices described in the Appendix. This study was approved by the University of South Carolina IRB (Project #00080293) on July 17, 2018 and deemed exempt from review. Recruitment took place in July and August 2018, with the study running from August through December 2018. The method will first be described in general, then the process followed for this study. Data were collected using a participatory action approach to collect both quantitative and qualitative data (QUAN + Qual; Palinkas et al., 2011) to address the research questions.

Method Background

The Delphi method is a pragmatic process of community-engaged inquiry used to gain insight into a complex problem (Brady, 2016). It is an exploratory social research technique that structures communication between experts with familiarity of the content area of interest (Landeta, 2006; Linstone & Turoff, 2011). The Delphi method systematically collects the opinions and lived experiences of experts on the selected
content area to create a collective judgement on the topic in question, often for the sake of informing policy and practice (Reid, 1988; Brady, 2016). These experts usually include both researchers and practitioners. The aim is to reach group consensus on the problem, which is accomplished through iterative rounds of inquiry and confidential feedback by the respondents (Hasson, Keeney, & McKenna, 2000). This is typically done in two-to-three rounds of data collection (Trevelyan & Robinson, 2015), starting with individual interviews and followed by surveys completed by each respondent (Hasson, Keeney, & McKenna, 2000). Although the method has been used in many different fields, it is most common in health-related research (Fletcher & Marchildon, 2014).

As a participatory action research technique, the Delphi method includes participants at every stage of the process: survey design, interaction with others, interpretation of results, and application of results (Fletcher & Marchildon, 2014; Kezar & Maxey, 2016). It must also serve the needs of not just the researcher but the participants as well, where participants generate solutions and additional action items (Fletcher & Marchildon, 2014). This includes privileging participant opinions to design the study, translate the results, and inform policy (Kezar & Maxey, 2016). Delphi results are meant to generate knowledge useful for respondents to apply within their own systems and community context (Brady, 2016). This can be accomplished by providing actionable information to participants. While the method is exploratory, the purpose is to effect change by creating resources to guide implementation of the collective wisdom identified by the group (Kezar & Maxey, 2016).
Ensuring Rigor

Quantitative studies use metrics of reliability and validity to ensure methodological rigor, however in qualitative research rigor is established by measuring the credibility, dependability, confirmability, and transferability of the results. Hasson and Keeney (2011) describe how to ensure rigor in Delphi studies by each of these metrics. Credibility is roughly congruent to internal validity and refers to the perceived believability of the results (Hasson & Keeney, 2011). Achieving credibility requires the process to be iterative, with feedback given to participants in multiple rounds, similar to qualitative member checks (Engles & Kennedy, 2007). This differs from usual methods of member checks (or, checking with participants to ensure their meaning was properly interpreted; Kornbluh, 2015) only in that it is iterative. Dependability is similar to reliability in quantitative research; it refers to the stability of the data collected (Hasson & Keeney, 2011). Ensuring dependability in the Delphi method requires including a heterogeneous sample of experts as participants (Cornick, 2006). Confirmability implies neutrality, or the ideal of objectivity in the research process and results (Hasson & Keeney, 2011). To maintain confirmability, best practices propose that researchers maintain detailed records of the Delphi study process, including data collection and analysis (Powell, 2003). Transferability refers to the generalizability (like external validity) of results to other settings or scenarios (Hasson & Keeney, 2011). This is ensured by verifying Delphi process results through independent means (Kennedy, 2004), such as repeating the process with another pool of participants or collecting data on the same research questions using a different method. Using a diverse sample of participants to represent different viewpoints on the topic is another way to maximize generalizability.
(Oostendorp et al., 2015). Details of a literature review conducted on this method are contained in the Appendix; this literature review was done by the dissertation author prior to commencing data collection in order to ensure a rigorous process.

**Method Relevance**

There are both strengths and challenges to the Delphi method. It is pragmatic, flexible, and reliable with small sample sizes (Brady, 2016). When used as a participatory action research approach, it is also useful for including community voices that often go unheard (Kezar & Maxey, 2016). However, it is not appropriate for all types of research, and is best used to inform decision-making, policy, or areas with limited existing information (Brady, 2016; Hasson & Keeney, 2011). The method also varies in its approach, as outlined above, which can be challenging for novice researchers. An additional challenge is ensuring anonymity of the participants, as this is critical for success but difficult in small communities where participants may know each other (Brady, 2016). This can be helped through tight control of the research process to ensure participants are not notified of each other’s identities until the end of the study.

The Delphi method is appropriate for this study because there is a dearth of existing literature on how determinants are differentially important over time for integrating care, and on how TA impacts implementation determinants, neither of which were located in an early 2020 search of published literature on these topics. This is consistent with the purpose of the Delphi method, which is most appropriate when there is not an abundance of existing knowledge (Fletcher & Marchildon, 2014). Identifying initial ideas regarding implementation determinants can then inform later experimental studies. Because some research has already identified existing determinants and
contextual factors affecting successful integration, a modified Delphi where the survey rounds are structured questionnaires (Watkins et al., 2013) is most appropriate. The method is also flexible to collect both qualitative and quantitative data (Brady, 2016). This study will collect perceptions on a Likert scale to quantify consensus and will also collect written and oral opinions to supplement the findings. An additional benefit is the anonymity of participants. This study included experts with different levels of name recognition in the field, from researchers who have published extensively on the topic to practitioners with on-the-ground experience. By ensuring anonymity while topics are being debated, the Delphi method allows a thoughtful dialogue to unfold while preventing groupthink or a propensity for responses to be swayed by more influential participants in the group (Fletcher & Marchildon, 2014). It is also change-oriented, which ensures both that a variety of voices are included and that research results are applied for the benefit of the problem of study (Brady, 2016; Kezar & Maxey, 2016). This study will include a range of perspectives and create actionable information. Integrating behavioral health and primary care is an evidence-based approach for improving health outcomes (Archer et al., 2012; Unützer et al., 2002; Unützer et al., 2008), thus any actionable results from this study should be thoughtfully applied to create a wide impact. This method is also promising because it has been widely used for other questions in implementation science (e.g., Gagliardi, Brouwers, & Bhattacharyya, 2014; Powell et al., 2015) and integrated care (e.g., Beehler et al., 2013; Minkman, Ahaus, Fabbricotti, Nabitz, & Huijsman, 2008; Valentijn et al., 2015).

By using a Delphi approach, this study heeds the call for greater application of participatory action research methods within implementation science (Minkler, Salvatore,
This author has previously piloted a similar Delphi study (see Domlyn & Wandersman, 2019), and used both lessons learned from that pilot, consultation with researchers familiar with the method, and a literature review on the subject to inform the study approach.

2.2 STUDY PROCEDURE

Recruitment took place in August 2018 and data were collected August to December 2018. Determination was made a priori to hold three rounds of primary data collection: individual semi-structured interviews (Round 1), and two structured online surveys (Rounds 2 and 3; each described in detail in the following pages). Consistent with the method, the procedure was iterative with each round informed by the previous. The first three rounds were conducted independently to ensure anonymity; only the researcher knew the identities of panelists. The study culminated in a debrief with all participants. During each round, panelists were reminded that their participation was voluntary and they could withdraw at any time. Recruitment materials (both flyers and an information session) invited potential participants to help co-design and/or pilot each round of the study; no one elected to do so. However, procedural suggestions made by participants during the Delphi study process did inform each round (see details of each round in following pages). This is consistent with the exploratory and participatory nature of the method.

Recruitment

Although Delphi literature often uses the term “expert” to identify group members involved in the process, the labels “participant”, “respondent”, or “panelist” will be used for the purposes of this study. This avoids presumption of a certain kind of expertise and
is consistent with evolving practices in the method (Trevelyan & Robinson, 2015). A maximum of 15 participants were sought for recruitment based on the suggestion that 8 to 15 panelists is ideal for a Delphi study (Trevelyan & Robinson, 2015). Because all participants must move through the process collectively, rolling recruitment is not possible. To leave room for attrition, it was determined that a minimum of 10 participants would be necessary to begin the study.

Recruitment procedures were designed to enhance engagement and prevent attrition based on best practices detailed in the literature review. This study used purposeful sampling (Palinkas et al., 2015). Individuals were invited to the study based on the author’s knowledge that they would meet experiential criteria (described below); additional participants were recommended by the initial pool of potential participants. Expertise worthy of inclusion on the panel was determined by peer nomination (i.e., researchers and practitioners identified by the author nominated other researchers and practitioners as potential participants), screening questions for self-reported experience, and additional inquiry on details of experience during the Round 1 interview. A study flyer was disseminated to initial nominees to be shared with those they felt could be effective contributors. Email or phone contact was initiated between the researcher and the participant to further discuss the study. Then an online information session was held to discuss the study’s inclusion criteria, timeline, burden, compensation, and purpose, as well as to answer potential participants’ questions.

Three narrow criteria were used to nominate participants, with the expectation that each participant must meet at least one: Criterion A) Staff (e.g. physicians, nurses, behavioral health specialists, administrators) currently or previously (for at least one
year) at a clinic that has integrated behavioral health and primary care where previously they did not have an integrated system; Criterion B) Consultants or TA providers for clinics integrating care, who had provided this type of support to clinics for at least one year; Criterion C) Researchers who have studied both implementation science and integrated care for at least one year. These criteria were selected to capture the three different systemic levels of influence for implementation success within the framework that provided the conceptual basis upon which the $R=MC^2$ determinants were built (Scaccia et al., 2015); in the Interactive Systems Framework (ISF; Wandersman et al., 2008) this represents actors within the delivery system (Criterion A), support system (Criterion B), and synthesis and translation system (Criterion C). Multiple criteria ensured a diversity of experience on the study panel, consistent with Delphi method best practices for dependability. The study aimed to include five panelists from each nomination criterion category, however several nominated participants met multiple criteria (see participant information).

To verify eligibility, the Round 1 interview asked participants to first describe their experience on each inclusion criterion and then self-rate their level of experience on the criterion using a 4-point scale: None, minimal, adequate, or extensive. Participants were deemed eligible to continue if they self-rated as “adequate” or “extensive” on at least one criterion and the interviewer judged this rating to be accurate based on their verbal description of experience. Inclusion criteria were: Criterion 1A) Adequate or extensive level of experience implementing organizational changes within healthcare clinics; 1B) Adequate or extensive level of experience helping healthcare clinics to implement organizational changes, such as by providing consultation or TA; 1C)
Adequate or extensive experience with research in implementation science or integrated care. Participants were invited to continue with the study if they met at least one inclusion criterion.

**Data Collection Procedure**

Qualitative and quantitative data were simultaneously collected throughout the procedure. There were two aspects of data collection and analysis: primary data collection with iterative analysis (Delphi study process) and secondary data collection (post-debrief process evaluation survey) with post-study analysis. Interim analytic processes variably prioritized qualitative then quantitative data by round, with both given equal weight for determining final study results (in mixed methods research this would be labelled QUAL + QUAN; Palinkas et al., 2011). Overall, this constituted a sequential (Creswell et al., 2011) process of development (Green et al., 1989). An overview grid describing data collection within and between phases is in the Appendix.

**Round 1.** The first round was conducted as a one-on-one phone interview. This interview served several purposes: confirm understanding of the study and provide verbal consent for participation, obtain background information on the participant and confirm their eligibility for inclusion, gather initial opinions on the determinant framework’s relevance for integrated care, weigh in on when during the process of implementing integrated care the determinants seem most relevant for success (Research Question 1) and whether each determinant seems able to be changed or improved upon via TA or additional resources (Research Question 2).

Participants were sent an information sheet one week in advance of the interview. This information sheet served to ensure all participants had equal knowledge of the
existing information on the study topic and provided a basis for discussion. The sheet contained information about the study, the R=MC² determinant framework’s components and subcomponents, and information on two existing stage frameworks. One framework was the Active Implementation Frameworks’ (AIF) four stages of implementation adapted from the National Implementation Research Network (NIRN). The other framework was the Substance Abuse and Mental Health Services Administration (SAMHSA) Center for Integrated Health Solutions six levels of integration. Information sheets sent to the first two interviewees contained only the AIF stages, which is based in the implementation science literature. However, the second interviewee suggested including the SAMHSA framework as well. True to the Delphi method’s participatory, iterative nature, this suggestion was incorporated for future interviews. All subsequent interviews (N = 8) discussed both frameworks and asked participants which they felt was more applicable for the study’s purpose. The framework most participants selected (AIF) provided the basis for Research Question 1 in subsequent rounds.

**Interim Analysis** of Round 1 data included concept codes determined a priori; this is a deductive approach where key variables provide the basis of grouping qualitative data (Miles, Huberman, & Saldaña, 2020) typically informed by a study’s conceptual framework and common in implementation research (Hamilton & Finley, 2019). Deductive coding has been proposed for use in qualitative Delphi studies (Fletcher & Marchildon, 2014). Transcriptions were grouped by participant then sections divided by participants’ experience, their thoughts on the determinants, reaction to the two potential stage frameworks, and additional questions or comments each panelist had about the study. The researcher then reviewed the compiled transcriptions by grouping to (a)
determine the stage framework most participants felt was appropriate for the study, (b) glean additional information that could inform the study approach, and (c) pull out quotes about each determinant noted by either the R=MC\(^2\) framework’s component (e.g., Motivation), subcomponent (e.g. Compatibility), or related terms (e.g., “fit”, which is roughly congruent with Compatibility) based on framework definitions and cited literature (Scaccia et al., 2015). All participants who attended the Round 1 interview met inclusion criteria, thus all data were retained for analysis.

**Round 2.** Qualitative data from Round 1 provided the basis for Round 2. Based on data from Round 1, the AIF stages were deemed most appropriate for the study. The surveys were structured into three parts by the determinant framework’s components, with specific questions for each subcomponent. For example, Part I of the survey defined the component “Motivation”, then presented each Motivation-related subcomponent (Relative Advantage, Compatibility, Simplicity, Ability to Pilot, Observability, and Priority) as separate items. Within each item, the subcomponent was defined in terms of integrating behavioral health and primary care, then a selection of panelists’ anonymized comments from Round 1 were presented. If the panelist had mentioned a specific implementation stage at which it was relevant, then this was bolded in the text to ease respondents’ reading. Not every comment from Round 1 was included in the survey; a selection was made to represent the range of opinions. This choice was made to avoid a quantification of the number of panelists that shared an opinion, which some Delphi methodologists deem poor practice (Bolger & Wright, 2011). In the survey instructions, panelists were notified that the quotes were paraphrased and selected to show a variety of
opinions. The Appendix includes the full script for this survey and a screenshot displaying participants’ view.

Per best practices, for the structured Round 2 and Round 3 surveys a 7-point Likert scale presented closed questions in a horizontal layout with ascending options without numerical anchors (Toma & Picioreanu, 2016). Questions for each item included asking how important each subcomponent is for integrated care during each AIF implementation stage (Exploration, Installation, Initial Implementation, and Full Implementation), along with a brief definition of each stage. An optional comment box was included to describe the rationale for their choice. Response options ranged from “totally unimportant” to “very important.” Respondents were then asked how helpful additional TA or other implementation support would be to improve that subcomponent for the sake of integrating care. Response options were also a 7-point Likert scale ranging from “very unhelpful” to “very helpful.” An additional comment box requested rationale for their choice. Because the determinant framework has 19 subcomponents (11 determinants and eight contextual factors) across four stages and the TA question, the final survey (Appendix) included a total of 133 questions, with 95 quantitative and 38 qualitative. The survey was designed and administered using the online Survey Monkey platform. A link was emailed individually to each participant with instructions.

**Interim Analysis** of Round 2 gathered qualitative responses from comment boxes. Comments were anonymized by removing all identifying information from raw data prior to reviewing them. The anonymized comments were grouped by (a) perceptions on when, by implementation stage, the determinant was most important for success, and (b) whether TA or other support would be helpful; then comments were placed with the
appropriate survey item in the Round 3 survey. These categories were determined by the participant’s Likert-scale selection, and in Round 3 panelists were warned that any inconsistencies between the grouping and the comment were due to a mismatch between that participant’s qualitative and quantitative response. The Round 3 survey also noted that not all panelists provided comments for every item.

**Round 3.** The structure and wording from Round 2 were retained for Round 3, with respondents asked to answer 133 survey questions. Panelists were invited to first consider the written arguments from fellow participants, select their choice, and then use the comment box to provide justification. The feedback process used in Rounds 2 and 3 (as well as the debrief, described next) were designed to ensure the credibility of the study’s rigor (Hasson & Keeney, 2011).

**Interim Analysis** of Round 3 was a preliminary analysis of the consensus results to create a discussion document for the debrief sessions. Each online survey contained 95 Likert-scale questions; one for each of the 19 subcomponents of R=MC$^2$ across each of the four AIF implementation stages plus one question about TA (19 x (4+1) = 95). Questions were repeated over two rounds for a total of 190 Likert-scale responses. Percentages were calculated for the number of participants who marked a determinant as “important” or “very important” (6 or 7 on Likert scale) for each stage of implementation. A percentage is also calculated for the number of participants who thought TA or other support would be “helpful” or “very helpful” (6 or 7 on Likert scale) for improving that determinant. These percentages are assumed to be a proxy measure for consensus, with over 80% meaning strong consensus (Attieh et al., 2014). A table of the preliminary results is in the Appendix.
**Debrief.** The study culminated in a debrief, which served several purposes. First, the participants were provided with a preliminary results document; this transparency aids confirmability of the study’s rigor (Hasson & Keeney, 2011). The document was created using the quantified consensus results from Round 3 in two tables, along with an overview of the study purpose, process, research questions, and potential implications. Additional information was provided regarding recruitment, data collection, and analysis. Second, the debrief provided panelists a chance to discuss openly their reactions to the results and the process and discuss the potential implications. This is important to adhere to the participatory approach method inherent in a Delphi study, where panelists are both partners and potential beneficiaries of the study results (Fletcher & Marchildon, 2014; Kezar & Maxey, 2016). Third, the debrief allowed panelists to introduce themselves to each other and openly debate their opinions on the topic. Their identities, experience level, and professional affiliations had previously been kept confidential. Fourth, as part of the reflection panelists could provide suggestions on next steps for the data.

Due to scheduling challenges, three separate debriefs were held, each via Zoom online videoconferencing. Sessions were recorded with participants’ verbal consent. The preliminary results document was sent to participants in advance so they could reflect on the content. Framed as a collective sense-making session, methods for facilitating intentional group learning were used to inform the debrief design, particularly the “What? So What? Now What?” activity (Preskill, Gutierrez, & Mack, 2017). Discussion questions included: What do you notice about the results? Do any of the results surprise you (if so, why)? How do these results seem to relate to what you do? Why are these results important? What are the implications for implementation (or coaching, or
measurement)? How can we put this information into action? What next steps make sense? What other questions do you still have? The debrief conversations were recorded and transcribed. Details on debrief analysis will be provided in the Analytic Procedure section.

**Process evaluation.** As a source of secondary data, panelists were invited to complete a process evaluation survey after the debrief. This was included as an additional form of member checks to ensure trustworthiness of the results (Kornbluh, 2015). The survey asked panelists to verify whether most of their experience involved working in an integrated care setting, supporting clinics who are integrating care, or researching integrated care. It then asked the following questions, with response options on a 5-point scale from “strongly disagree” to “strongly agree”: “I understood the purpose of the panel while I was participating”, “I understand why a Delphi process was used for the panel”, “I felt I had, or could have had, a voice in shaping how this panel was conducted”, “I think the results of the panel have implications for integrating behavioral health and primary care”, and “I think the results of the panel are valid.” Details on process evaluation survey analysis will be provided in the Analytic Procedure section below.

2.3 ANALYTIC PROCEDURE

There are three components of data analysis in Phase I this multiphase study: process analysis, initial data analysis, and exploratory data analysis. The process analysis and initial data analysis methods were determined a priori by Delphi study standards. Methods of exploratory data analyses were determined post-hoc from initial data analysis findings. The qualitative data were deductively analyzed using the Framework Method as
a guide for coding and interpretation (Gale, Heath, Cameron, Rashid, & Redwood, 2013). An overview grid describing data analysis within and between phases is in the Appendix.

**Process Analysis**

The Delphi process of analysis between rounds was described as part of the data collection procedure (above), where interim analyses were conducted between rounds to launch the next. As described above, qualitative data in the first two rounds informed subsequent rounds, quantitative data informed the debrief sessions. This constituted a sequential (Creswell et al., 2011) process of development (Green et al., 1989). Data from each round were retained for conducting initial and exploratory data analyses. Process analysis procedures will not be reiterated here because they were already detailed in the study procedure section as part of conducting data collection.

**Initial Analysis**

The procedure for initial data analysis was determined a priori with the aims to:

(i) assess participant perceptions of study validity (e.g., credibility and dependability), (ii) assess participant perceptions of study implications, (iii) collate participants’ remaining questions and determine additional areas for investigation to be conducted during post-hoc exploratory analysis. The decision to pursue exploratory analyses was made based on the following criteria: the question or suggestion was feasible with the existing study datasets and pursuing the question or suggestion would be useful for launching Phase II. Findings from initial analyses are described in the exploratory data analyses section below.

The Framework Method guided coding and interpretation of the qualitative debrief data (Gale et al., 2013). The Framework Method is a systematic, matrix-based
A deductive approach appropriate for coding and interpreting transcribed data. A deductive approach – where a priori codes are determined based on the study’s conceptual framework – is commonly used in implementation science-related research (Hamilton & Finley, 2019). Results informed whether further quantitative analyses were warranted. Per the Framework Method, the lead author first read through the debrief transcripts and listened to debrief audio recordings to become familiar with the dataset. First cycle coding (Miles et al., 2020) was conducted via NVIVO with a priori deductive codes: the name of each determinant and contextual factor, TA, each stage name, validity (valid/invalid), future directions or questions, and implications. For second cycle coding (Miles et al. 2020), data sections on validity and implications were organized into framework matrices by participant (rows) and first cycle codes (columns). The lead author then employed pattern coding (Miles et al., 2020) to interpret themes in validity-related perceptions, study implications, and additional analyses suggested by participants. Pattern coding is a second-cycle coding process and is distinct from pattern matching (a qualitative method of deriving causal relationships). Additionally, for assessing validity, descriptive statistics from the process evaluation surveys were converged with qualitative data. Illustrative matrices are in the Appendix and described in full in the Results section.

**Exploratory Analysis**

Initial analyses identified seven questions from participants about the preliminary study results (see table “Data topic: Additional study” in the Appendix), consolidated into two additional areas of study. First, participants questioned if each respondent’s background and current context may have affected their answers. Participants raised three hypotheses about which roles affected answers: role as an integrated care champion
within an organization integrating care (Participant 2), role as a researcher or practitioner (Participant 5), and whether participants were thinking of a large or small organization while answering (Participant 2/Participant 8). This last one was deemed infeasible to pursue because the data do not currently exist. Second, participants noted that preliminary results were quantified only by items being rated “important” or “very important.” Participants suggested addressing this by considering the results by the distribution of scores rather than solely by percent agreement to capture whether ratings were also rated as “unimportant” (Participant 5/Participant 1). This information can also be found in Table A.4 (“Data topic: Additional study) of the Appendix.

Exploratory analysis 1 was therefore to investigate if responses varied by participants’ roles. Pursuing this analysis shows if results are skewed toward any one experience type, a bias which could have implications for who finds the resulting implementation support tool credible. This analysis was conducted by calculating intraclass correlation coefficients (ICC) and constructing an inter-rater correlation matrix. ICC was chosen because it has been suggested as a supplemental metric for determining whether a Delphi study has reached a stability of responses (Trevelyan & Robinson, 2015) and is potentially more valid measure of consistency than Pearson’s r or Spearman’s rho (von der Gracht, 2012), and because ICC is an indicator of agreement (Hallgren, 2012). Delphi studies should establish the analytic criteria a priori (Diamond et al., 2014), which here – consistent with best practices – was percent agreement. However, this post-hoc ICC analysis will be supplemental to – rather than supplanting – percent agreement.
ICC shows the overall reliability of respondents and the correlations between individual raters (Shrout & Fleiss, 1979). ICC is also a measure of inter-rater reliability and will indicate if a rater is an outlier that would increase the alpha (Hallgren, 2012). ICCs can be used for studies with multiple coders and displays a value reflecting magnitude of agreement, a method commonly applied in Delphi studies (Ferri et al., 2005; Lau, Wandersman, & Pate, 2016; Timmings et al., 2016; Weir et al., 2006). Alternative quantitative options are not viable for this data set. For example: Cohen’s Kappa is appropriate only for two raters, Fleiss’ Kappa assumes non-unique raters, and inferential statistics would be underpowered with the current sample size. ICC reflects the reliability of raters across all items (Hallgren, 2012), which is why an inter-rater correlation matrix will be visually inspected to see consistency between individual raters; investigating rater correlations within the context of ICC results allows for further elucidation of the reliability rating and unique characteristics of raters beyond reliability cutoff scores (Baer, Kaufman, & Gentile, 2004; O’Shea & Grafton, 2013).

A two-way random absolute agreement ICC reported by the average measures unit was conducted using Round 3 Delphi study data. A two-way ICC model is appropriate because this study was a “fully crossed” design, where the same participants rated all items (Hallgren, 2012). Average measures ICC is most appropriate because the goal of the Delphi is to create an average agreement (as opposed to single measures ICC, where subjects are compared to a single coder; Hallgren, 2012; Koo & Li, 2016).

Investigating the inter-rater correlations (a correlation value calculated as part of an ICC) between participants shows how much the raters’ responses correlate with each other. Generally, when calculating ICC for measure development, inter-item correlations
indicate whether items are redundant; for those purposes the ideal correlation is between .15 and .50 (Glen, 2018). Values below .15 indicate poor agreement and values above .50 indicate redundancy in scale items. For inter-rater correlations, this dissertation uses the interpretive values of Kendall’s Tau rank correlation coefficients (selected because it is appropriate for ordinal data and nonparametric analyses); the .15 indicator of poor agreement will be preserved and greater than .70 indicates high correlation. The choice of numerical indicators was made because moderate correlations are expected with people sharing similar experience levels in the content area; however, too high of correlations may indicate the sample was too homogenous for conducting a Delphi study, which requires variability in participant perspective for dependable results (Cornick, 2006).

The inter-rater Kendall’s rank correlation coefficients were analyzed for all participants’ final round item (N = 95) ratings. Rater pairs were plotted from highest to lowest correlation (a proxy of agreement), consistent with inter-rater methods using ICC to investigate rater pairings (O’Shea & Grafton, 2013). Then any outlier participant pairs (where τ < .15 or τ > .70) were juxtaposed in a contrast table to investigate whether low or high agreement may be explained by patterns in their integrated care-related background. Additionally, any pairings where p-values did not reach significance (p > .05) were plotted in the contrast table. Contrast tables are used to explore potential reasons for a study outcome based on variables expected to be explanatory of extreme or outlier cases (Miles et al., 2020). Investigating characteristics of rater pairs based on their correlation results has been argued as a method for exploring the degree of rater agreement (Baer et al., 2004). Here, potentially explanatory variables will be drawn from the roles mentioned by participants as worthy of further study: experience as a researcher,
practitioner, or within-organizational integrated care champion. In addition, related to this dissertation’s purpose in creating a TA tool, the lead author investigated whether the participant(s) had experience as a TA provider. Experience levels in each domain were drawn from attribute-coded Round 1 interview data.

**Exploratory analysis 2** considers results by distribution of scores, rather than solely by consensus percentages. Broadening the data interpretation shows strength of agreement in a different way. This indicates if respondents perceived determinants as wholly unimportant, or just less important compared to other determinants by stage.

Percent agreement is the most commonly applied metric of consensus in Delphi studies (Diamond et al., 2014), which is why it was chosen for the preliminary analyses in Phase I. However, based on the participant suggestion of considering results in different ways, the Delphi literature was revisited. In addition to consensus, agreement and internal reliability are valid metrics for assessing Delphi results (Trevelyan & Robinson, 2015). In Delphi studies, descriptive statistics and graphical displays of data are appropriate for assessing internal validity (Trevelyan & Robinson, 2015). However, levels of dispersion (e.g., inter-quartile range, standard deviation) are not appropriate for ordinal Likert scale data (Hasson et al., 2000; Trevelyan & Robinson, 2015; Sullivan & Artino, 2013) thus cannot be applied here. Variability (e.g., minimum, maximum, range), central tendency (e.g., median, mode), and frequency distributions (e.g., percentages) are alternative options for analyzing ordinal data. Therefore, final study results are gleaned from a matrix display of percent agreement on Likert scale ratings, range of ratings, and a frequency distribution (i.e., histogram).
Interpretation of descriptive statistics are not generally subject to systematic interpretive methods. However, to prevent bias and inconsistencies in translating the quantitative results into practice implications, the study employed an iterative coding process to make inferences from the matrix display (Miles et al., 2020). Two coders first collaboratively determined the method for extracting relevancy (Table 2.1) from the descriptive statistics and visual display, then independently categorized each determinant, and finally reviewed their category labels and resolved discrepancies. Relevancy was respectively defined as “how important this determinant seems at this stage” (Research Question 1) or “whether technical assistance could assist the organization in improving this determinant.” (Research Question 2). Using fuzzy set theory (specifically type 2 fuzzy sets; Zimmerman, 2001), five relevancy categories were defined (Table 2.1): highly relevant, relevant, less relevant, irrelevant, variable relevancy/more information needed. Coding benchmarks were constructed for each relevancy category. Fuzzy set theory is a concept derived from the study of mathematical uncertainties and applied in social and health sciences, particularly qualitative comparative analysis, a method which quantifies qualitative data for causal analysis (Ragin, 1999). In fuzzy sets, categories are defined where entities or data have relative degrees of membership within the category. Type 2 fuzzy set refers to ranges or uncertainties within the classification scheme (e.g., a range is provided rather than a concrete cutoff value; Zimmerman, 2001). For example, in the present study a “highly relevant” code would be obtained if there was clear consensus (75-100% of respondents rated this subcomponent a 6 or 7 on a 7-point scale), a narrow range of scores, and a normal distribution of scores. This is in contrast to crisp sets with binary logic for category membership (Ragin, 1999; Zimmerman, 2001), where for
example determinants would be either “relevant” or “not relevant” based on a 75% consensus level. To retain the integrity of participants’ perceptions rather than the coders’ perceptions, both coders were blinded to the items within the matrix and applied the relevancy category labels based solely on the coding benchmark and definition (Table 2.1). After labels were applied for all items, category labels were compared and resolved via discussion to ensure consistent interpretation across items. An example illustrating this process can be found in the Appendix.
<table>
<thead>
<tr>
<th>Category</th>
<th>Benchmark</th>
<th>Definition (Research Question 1; Research Question 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly relevant</td>
<td>Clear consensus (75-100% of participants rated 6-7 on Likert scale); narrow range; high median; left-skewed distribution.</td>
<td>Participants indicated that this determinant is very important for implementation success at this stage; Or, that this determinant could very likely be built or improved with the assistance of a technical assistance provider.</td>
</tr>
<tr>
<td>Relevant</td>
<td>More consensus (50-74% of participants rated 6-7 on Likert scale); narrow range; high median; distribution somewhat left-skewed.</td>
<td>Participants indicated that this determinant is important for implementation success at this stage; Or, that this determinant could be built or improved with the assistance of a technical assistance provider.</td>
</tr>
<tr>
<td>Less relevant</td>
<td>Less consensus (0-49% of participants rated 6-7 on Likert scale); and/or medium-wide range; and/or distribution somewhat normal.</td>
<td>Participants indicated that this determinant is less important for implementation success at this stage; Or, that this determinant is unlikely to be built or improved with the assistance of a technical assistance provider.</td>
</tr>
<tr>
<td>Irrelevant</td>
<td>Right-skewed distribution; and/or median value rated 1, 2, or 3 on a 7-pt Likert scale; narrow range</td>
<td>Participants indicated that this determinant is not important for implementation success at this stage; Or, that this determinant is highly unlikely to be built or improved with the assistance of a technical assistance provider.</td>
</tr>
<tr>
<td>Variable relevancy, more information needed</td>
<td>Unclear due to wide range, abnormal distribution, or high discrepancies between consensus percentage and other benchmarks.</td>
<td>Participants did not clearly indicate whether this determinant is important for implementation success at this stage; Or, whether this determinant could be built or improved with the assistance of a technical assistance provider. This determinant may vary by context, innovation type, or need further study.</td>
</tr>
</tbody>
</table>
CHAPTER 3. PHASE I RESULTS

3.1 PARTICIPANT INFORMATION

Ten participants consented to the study. Hailing from different states across the USA (including Colorado, Georgia, Michigan, New York, Pennsylvania, South Carolina, and Wisconsin), most participants reported multiple types of experience with integrating care. Participants were categorized by the three different experience types per both self-rating and a detailed description of their experience. Table 3.1 displays participant characteristics and study completion. Seven participants had adequate or extensive TA experience helping organizations to integrate care, five had experience as a researcher within integrated care, and seven were either behavioral health practitioners (N = 5; includes both psychiatrists and psychologists) or primary care providers (N = 2). An additional two participants were behavioral health practitioners but had not practiced within integrated settings.

Eight participants completed all study activities, including the interview (Round 1), the two online surveys (Rounds 2 and 3), and the debrief. One participant with all three experience types dropped out after the first round; attempts to establish contact to determine reason for withdrawal were unsuccessful. One participant with experience as both a practitioner and TA provider dropped out after the second round; reason given was time investment and competing demands, although they requested to rejoin after the study had concluded.
3.2 INITIAL DATA ANALYSIS

During the debrief sessions, participants reflected on the study process and preliminary results (a summary table of the latter is in the Appendix). Debrief transcripts were organized by participant and code using the Framework Method (Gale et al., 2013), then themes synthesized for validity-related perceptions, study implications, and additional analyses suggested by participants. Illustrative quotes were extracted to support themes and give voice to the diversity of participant perspectives. Where appropriate, this is supplemented by descriptive statistics from the process evaluation survey. Quantitative selections from the process evaluation survey cannot be matched to participants because the survey was anonymous. Data matrices illustrating identified themes are in the Appendix.

**Perceived Validity of Study**

Overall, debrief discussions revealed that participants confirmed they saw the study as valid; five participants explicitly stated this. For example, Participant 3 said “A lot of [the results] make sense and seem on-par with how I conceptualize these things.” This general perception was extended to particular findings, such as the importance of leadership across all stages. Participant 8 noted “I am delighted and want to celebrate [the leadership result]. I think that's exactly right. I think that's dead on and you just can't overstate how critical prepared leadership is at integrating care.”

Considering the results showing TA is not relevant for all aspects of integrated care, Participant 1 agreed by saying:

“I think that technical assistance doesn't improve everything and that you can help with some things but [not with] something like an
organization's leadership... There are so many things that are going on in the medical world right now that I think [many disparate things affect an] organization's values and norms and how the employees feel.”

Six participants (75% of those who completed the study) responded to the process evaluation survey. All (N = 6) process survey respondents either agreed or strongly agreed that they understood the purpose of the panel and why a Delphi process was used to conduct the study. Four (67%) felt respectively that they had a voice in shaping how the panel was conducted (one disagreed, one responded “neutral”). Among the participants who responded to the process evaluation survey, 67% (N = 4) felt the results were valid (two responded “neutral.”)

One participant who rated “neutral” added that:

“[My] concerns about validity and the role of [the determinants] are just that the responses are probably context-dependent. It's unclear to me how they may generalize. But I think that this study does help us move forward in gaining a better understanding!”

Debrief discussions revealed additional depth in how the study results were perceived. Prominent themes included surprising elements in the results (a solicited question), perceiving the concepts as interconnected, and a concern that some participants may have read the questions differently or been thinking of different things when responding.

**Surprising results.** Participants were asked specifically what, if anything, surprised them about the results. Five participants (Participant 3, Participant 8, Participant
Participant 5, Participant 7) noted being surprised that panelists were not in full agreement on all items. This extended to certain determinants: Innovativeness, Compatibility, Climate, Internal Operations, Relative Advantage, and Simplicity; however, these differed by participant. Participant 3 in particular registered surprise with several of these results, which is at odds with quantitative results showing he had high agreement with other participants (discussed in the exploratory data analysis section with ICC results).

Per Compatibility, Participant 3 noted:

"...it shows greatest consensus around Initial and Full Implementation. ...I think it's important in the beginning as well, [because during Exploration] if I don't think it's going to fit with what we do as an entire organization, I'm probably not going to explore it."

For Relative Advantage, Participant 8 said:

"It looks like the panel, in general, thought [perceived Relative Advantage] was of diminishing importance during the Initial to Full Implementation and that's what I disagree with. At any point in this process of redesigning practice... the new approach [could be] no longer seen to be improving the practice... It stalls and often stops."

Participant 2 agreed, noting that “I think there is at least some role [for TA providers] more than what the [results] seem to show for Relative Advantage and Priority."

For Innovativeness, Participant 7 said:
“I'm not sure if I agree that Innovativeness is not that important at Full Implementation. I remember reading through [other panelist’s] comments, and I think it makes sense. When you're doing something, or actually trying to implement something new, it's important that you're innovative. But when it's a complex innovation, like integrated care, I think you're going to need to continuously be implementing something new, or doing CQI [continuous quality improvement], and that kind of stuff. I think that takes innovativeness, too.”

Interpreting questions differently. Three participants explained that the lack of consensus may be due to panelists reading the questions differently. One participant suggested expanding the definitions to ensure panelists are “on the same page.” This concern was raised particularly for Relative Advantage and Simplicity. For Relative Advantage, Participant 3 pointed out it may not make sense “…because if integrated behavioral health and primary care are better than what we're currently doing, [it doesn’t make sense because] we're already doing it. So, I was trying to conceptualize in my mind ‘can what we're doing be better than what we're doing.’”

Per Simplicity, Participant 2 mentioned:

“I think I just had a bit of reaction to the term ‘Simplicity’ in this context. Because integrating care is not simple and I think it is important for there to be an understanding that the process is going to be a transformation for the entire practice. If it had been a slightly different wording, like ‘how feasible it seems for practices to be able to integrate,’ I think I probably would have responded differently.”
This sentiment was shared by several participants as an explanation for the low consensus on Simplicity being important. Offering an alternative interpretation of the Simplicity subcomponent, Participant 8 noted that perceived simplicity is in conflict with the complexities of integrating care, saying:

“...I think [the importance of perceived Simplicity] is underappreciated [by the panel]. ...I think all of us know that this is never simple, but ‘Simplicity’ of implementation is something that coaching and external assistance can help a practice [with] substantially at Installation, at Initial Implementation, and even when they're at the point of Full Implementation; the ability to reduce complicatedness.”

Participant 7 brought up an interesting perspective about the low consensus on whether TA could assist with any determinant. She noted the difference between what TA providers routinely do, versus what they could do with a more structured approach. She said:

“I notice that very few of these are actually seen as things that can be affected by TA.... I think it's potentially not accurate... We know there is literature out there that has change management strategies for helping with these things. We know they can be improved. I think it's probably more people's perceptions of what they have known from TA providers, and if this is something that, whatever their conceptualization of a TA provider is, if these things fit with it.

...Sometimes [when answering I thought]: “Sure, a TA provider could
do this, but I feel like it's unlikely that they would." ...In my experience, we've had the integrated care TA provider who knows a lot about integrated care, but doesn't know a lot about [implementation determinants] ... And then, we've had the [implementation determinant-savvy] TA providers who would know a lot about these subcomponents and helping people but might not know as much about the innovation-specific skills, or might not know as much about helping, in the context of integrated care, with general capacities, or something like that. So, I think a lot of these things to me were like, ‘Well, it depends,’ and ‘Who's the TA provider, and how comprehensive is their TA?’”

Expanding this with another example, Participant 7 echoed her comments about context from the process evaluation survey by stating in the debrief that:

“...some [panelist] comments were like, ‘Well, either you have it or you don't,’ like a Champion. I probably agree with that, to some extent. ...but there probably also are things that [a TA provider] could do to try to help identify and build a Champion. ...many of my answers were like, ‘Sure, and,’ or ‘Sure, but,’ because I don't know; I'm not sure who this [hypothetical] TA provider is and what they aim to do. I just think so many of these things could be just context dependent. Like, how willing is an organization to have you come in and give them advice about leadership?... [It] depends on the skills of the TA provider, it depends on what an organization is willing to work on.”
These comments are also reflected in areas of future study mentioned by participants. When identifying questions for exploratory analyses, participants mentioned thinking of different size organizations and that respondent backgrounds (e.g., champions, TA providers) could affect perceptions. This will be further addressed in the post-hoc exploratory analyses.

**Concepts as interconnected.** Two participants described difficulty in rating the determinants as if they were discrete constructs. Instead, they are seen as interconnected and the strength at one stage could affect another’s importance at a different stage. As Participant 1 noted “So many of these things are really so interconnected and they cannot be isolated in and of themselves.” She later expanded this by mentioning that Relative Advantage and Priority seemed like “…mirror images of each other… you're sort of splitting hairs to differentiate those two.” Stating a hypothesis on specific determinants influencing each other, Participant 3 said “For Internal Operations… an organization's effectiveness at communication and teamwork, I think that's influenced by Leadership, Culture, and Climate…” The idea that the determinants and contextual factors are dynamically related is important to note, given that the determinant framework presents them as if they are discrete.

**Validity Summary.** Participants were specifically prompted to critically evaluate the study process and findings. Themes are noted here. Both qualitatively and quantitatively participants indicated the overall study results conformed to their expectations; notably, not all participants completed the process evaluation survey and those who did could opt to remain anonymous. Therefore, not all responses can be matched to specific panelists. Some participants registered surprise at specific results, but
cited determinants were not consistent across participants. Participants noted two cautions about the study process: First, that participants may have been interpreting questions differently based on their past experiences or feeling that the answer would vary by context. Second, the determinants and stages were presented as discrete constructs, however it is likely that they are interconnected, therefore there are limitations to respondents rating each as if it was an independent variable.

**Potential Implications**

In the anonymous and voluntary post-study process evaluation completed by only six participants, five of the six respondents (83%) agreed or strongly agreed that the results of the panel had implications for integrating behavioral health and primary care; one responded “neutral” to this question. During the debrief, participants reported perceiving study results as helpful for assessing an organization’s readiness for integrating care and as a tool for TA providers to assist an organization integrating care (See Table A.3 “Data topic: Implications” in Appendix).

Participant 8 noted that, as an assessment, it could be used by funders and policymakers to determine whether an organization is ready to innovate:

“...being ready to take the integration of primary care and behavioral health on is such a vital and useful step to formalize... [and for small and large organizations] to just recognize how important an assessment of their readiness to take this on is, [because] the practice is at a capacity at a particular point in time will be different a year from that time. ...[this is] a chance for a little policy and implementation compassion. It would be a compassionate act to say to
a practice, ‘If you use this tool... You may very well be able to identify and advance where you're going to need some help, and you may also be able to decide that this is not something for you.’ [to save them] the heartache and the challenges and the disruption that [starting something they’re not ready for] is going to bring; That's a service. That is a good thing.”

In contrast, Participant 7 offered a different perspective of assessment as a way to assure organizations that fluctuations in determinant strength are expected. She argues it would help:

“…to normalize for people where they are. ...it provides some more evidence. Like, ‘Hey, it's okay that your innovation-specific scores are lower at the Exploration phase.... No one expects you to have high scores, and it doesn't mean that you're not going to still do well at implementing integrated care.’"

Similarly, as an implementation support tool Participant 2 said “it could be used for a roadmap for… organizations and practice facilitators to lay out what components are not important at different stages.”

Combining these other participants thoughts, Participant 3 said he would like to apply these results within his organization and with his efforts to assist other organizations, particularly as an online self-assessment tool to be paired with coaching for making improvements:
“I think that **this is a model to either assess organizations as a consultant or for organizations to use as a self-assessment tool. And that's originally what I was looking for [my organization and consulting] is if there was some type of self-assessment that I could take and then it would score it. And then I'd get some coaching behind it that would help me improve in those areas so that I can improve my [organizational] readiness to the point where my implementation efforts are going to be more successful and more fruitful in the end.”

He then extended his suggestions to apply this implementation framework in other settings, for organizational change broadly.

**Implications Summary.** Participants indicated the study results are appropriate for assessing organizational strength and readiness to integrate care, outline expectations for organizational factors affecting care integration at different timepoints, and as a tool for coaching or TA. These implications, in combination with the results from the exploratory analyses (described next), were the impetus for launching Phase II.

**Additional Study**

Initial data analysis also investigated the themes in panelists’ opinions on how the preliminary study results could be interpreted and what additional analyses may be necessary to create final study results. These were investigated if they were both feasible given the existing dataset and useful for launching Phase II. Findings will not be reiterated here because they were discussed in the Phase I Methods section. This can also be found in Table A.4 (“Data topic: Additional study) of the Appendix.
3.3 EXPLORATORY DATA ANALYSIS

**Exploratory Analysis 1**

ICC estimates and their 95% confidence intervals were calculated using SPSS version 26 (IBM Corp., 2019) based on a mean-rating (k = 8), absolute agreement, 2-way mixed-effects model. This mean rating is based on the number of raters (N = 8). The average measure ICC (2,8) was .786 with a 95% confidence interval from .713 to .845 (F(94,685) = 4.994, p < 0.0001), with a Chronbach’s alpha of .80. This indicates good-to-excellent inter-rater reliability (Hallgren, 2012; Koo & Li, 2016).

Participants were plotted by correlations of highest to lowest agreement on all items (Table 3.2). Inter-item correlations should generally be between .15 and .70; In this study, inter-rater Kendall’s rank correlations ranged from 0.052 to 0.587. Two pairings fell outside of this norm: Participant 7-Participant 10 (τ = .148, p > .05) and Participant 3-Participant 10 (τ = .052, p > .05). Two additional pairings did not reach a minimum significant level (p < .05): Participant 8-Participant 10 (τ = .156, p > .05) and Participant 5-Participant 10 (τ = .196, p > .05). Participants hypothesized that types of experience may influence results, particularly those who served as TA providers, researchers, practitioners, or within-organization champions. Findings are constrained by the small sample size. However, the pairing with the highest agreement had the same combination of experience types (Participant 2-Participant 3, τ = .587, p < .001; BH Practitioner, TA Provider, and Champion). Yet, the raters with the second highest (Participant 5-Participant 1, τ = .530, p < .001) and third highest (Participant 5-Participant 9, τ = .505, p < .001) correlations for agreement did not share experience types. Each represented different facets of experience: Participant 5 is a TA provider, Participant 1 is behavioral...
health provider and within-organization integrated care champion, and Participant 9 is a primary care provider and researcher.

One individual diverged significantly from the other participants (Participant 10). This participant accounted for seven of the ten lowest inter-rater correlation pairings, including the four indicated above as falling outside the correlational norms and/or minimum significance level. Investigating the item-total statistics within the ICC results, removal of this participant would increase the Cronbach’s alpha from 0.80 to 0.81. While this is an insignificant change, in contrast removing any other participant from the analysis would decrease the Cronbach’s alpha. The unique attributes of this individual are that he had the least amount of experience in integrated care and was very familiar with the determinant framework and its applications in different sectors and settings. However, familiarity with the framework alone is not an explanation for this divergence; all participants were familiar with the framework and at least one participant (Participant 7) also had a significant degree of experience applying it in multiple settings yet diverged strongly from Participant 10’s ratings (ICC = 0.148). Therefore, unique perspective on the definitions may not explain this finding. The finding may be better accounted for by Participant 10’s lack of experience working within integrated care settings. Although he self-rated as having “extensive” experience in research, he added the caveats that “extensive does not equal expertise” and noted that his primary experience was in implementation science more than integrated care and reported that “I was involved in [a care integration] project from a distance, helping to shape what happens there. That was mostly consultation around approaches, directions to take, feedback on ideas. I gave input, but I wasn't making primary decisions.” His experience as a TA provider was
tangential and he did not provide direct support to organizations while integrating care. Notably, this participant also felt the preliminary consensus results were valid saying “…this generally conforms to what [would be] my hypothesis for how things would be sequenced.”

**ICC Results Summary.** During debrief, some participants raised the thought that respondent backgrounds may affect interpretation and results. Inter-rater reliability estimates indicate that by the final survey round participants were in agreement with their ratings. Inter-rater correlations revealed no consistent patterns of agreement by participant background types hypothesized to be pertinent. One outlier participant had less experience in integrated care settings compared to other participants.

**Exploratory Analysis 2: Final Phase I Results**

As described previously, the R=MC² framework defines 19 determinants of implementation success, categorized into three components (Motivation, Innovation-specific Capacities, and General Capacities) and AIF classifies four stages of implementation (Exploration, Installation, Initial Implementation, and Full Implementation). Using the Delphi panelists’ final survey round (N = 8) quantitative data (95 questions), two coders translated the descriptive statistics and frequency distributions for each cell into five relevancy labels. Relevancy definitions are in Table 2.1 in the Phase I methods section. Classification results for both research questions are in Figure 3.1. Cells in Figure 3.1 are color-coded to visually indicate level of relevancy. “Highly relevant” is colored green, “Relevant” is yellow, “Less relevant” is red, and “Variable relevancy” is white. None were categorized as “Irrelevant.” Each determinant is classified by its potential relevancy in each of the four implementation stages for
ensuring success integrating care, and by the relevancy of TA for helping organizations to improve that determinant.

**Research question 1: Determinants by stage.** Results (Figure 3.1; N = 8 interpreted by two coders) indicate almost all aspects of Motivation, Innovation-specific Capacities, and General Capacities are important for success at various times.

Before implementation activities begin (Exploration stage), two aspects of Motivation (perceived Relative Advantage of integrated care, and perceived Priority of integrating) are highly important, as is one aspect of Motivation (integrated care Champion) and three contextual factors that are not specific to integrating care (Leadership quality, organizational Culture, and the organization’s degree of Innovativeness). In addition, three Motivation determinants are relevant (perceived Compatibility of integrated care with the organization, and Ability to Pilot care integration activities); as are three aspects of innovation-specific capacity (a Supportive Climate for integrating care, Inter-organizational Relationships between organizations that support integrating care, and Intra-organizational Relationships within the organization that support integrating care); and two contextual factors (general Staff Capacities for staff performing their jobs well, and Process Capacities of the organization to plan, implement, and evaluate their activities and processes). Three contextual factors were cited as having variable relevancy (general organizational Climate, Resource Utilization in terms of how the organization acquires and allocates resources in general, and Internal Operations which refers to the effectiveness of the organization at communication and teamwork). Variably relevancy suggests unclear or highly inconsistent ratings for this item. It is assumed that the inconsistency may mean that the
determinant’s importance could vary by context, integrated care model, or be in need of further study. Determinants salient for Exploration are likely important to lay groundwork for making initial decisions and building support for integrating behavioral health and primary care.

There is no discernable pattern comparing determinants across stages. Overall, more determinants are relevant at Installation, Initial Implementation, and Full Implementation; nine determinants were rated as highly relevant across each of these stages (however, not the same nine in each stage), compared to six highly relevant at Exploration. However, there are some that emerge as important across all stages. Both Leadership and perceived Priority are highly relevant across all stages. Champion, Supportive Climate, Culture, Innovativeness, and Staff Capacities are highly relevant at three stages and relevant at one. Relative Advantage and Process Capacities are highly relevant at two stages and relevant at two. Compatibility and Intra-organizational Relationships are relevant at four. Only one determinant appears less relevant across stages: Simplicity, which is defined as “how simple it seems to integrate behavioral health and primary care.” Notably, during the debrief this determinant was also cited by participants as either irrelevant for integrated care, or confusing to answer. Few determinants were rated as variably relevant at any stage, but those that were appeared solely during Exploration and Installation.

**Research question 2: Relevance of TA by determinant.** Results (Figure 3.1; N = 8 interpreted by two coders) indicate low perceived relevancy of TA for improving these determinants or contextual factors to integrate care. Explaining a similar finding in
the preliminary results discussed during debrief, some participants registered surprise, but Participant 1 said makes sense particularly for large organizations:

“I would look at this as a success that there are a few positive things where technical assistance really might make a difference and help.

But... an organization is a big place with a lot of moving parts. And to think that a little bit of coaching is going to make a huge difference... I don't see that [as likely].”

Results show TA is less relevant for four aspects: Relative Advantage, Intra-organizational Relationships, Climate, and Innovativeness. TA shows variable relevancy for six aspects: Compatibility, Priority, Supportive Climate, Leadership, Resource Utilization, and Staff Capacities. TA provision is highly relevant for only one determinant: Observability, an aspect of motivation defined as “the ability to see that integrating behavioral health and primary care is leading to outcomes.” As described in the section on initial analyses, during the debrief one participant noted that this is a difference between TA providers typically provide to organizations and what they could potentially provide. Data monitoring and raising awareness of implementation activities are among common TA provider activities (Metz et al., 2020). Echoing the sentiment that proactive or systematic TA may have a different effect than what is typically expected, Participant 10 said: “There were a couple of places I could imagine there might be a larger role for TA vendors [than] reflected [in preliminary results]... for Relative Advantage and Priority [and] Supportive Climate.”

**Relevancy Summary.** There are no clear patterns in determinant importance by the R=MC² framework-designated three primary components (Motivation, Innovation-
specific Capacity, General Capacity). Only one determinant (Simplicity) appeared less important overall for success when integrating care. Several were highly important across all stages (Priority, Leadership) or most stages (Champion, Supportive Climate, Culture, Innovativeness, Staff Capacity). Strength of implementation determinants appears less important at the Exploration stage than during active implementation stages. Expectations for TA in improving these determinants appears low. TA was rated as highly relevant for only one determinant (Observability), less relevant for four determinants, and of variable relevancy for six others.
Table 3.1 Participant characteristics

<table>
<thead>
<tr>
<th>ID</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<td>PhD</td>
<td>MA</td>
<td>LCSW</td>
<td>MA, MPH</td>
<td>PhD</td>
<td>MA</td>
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<td>CO</td>
<td>CO</td>
<td>PA</td>
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<table>
<thead>
<tr>
<th>Institution Type</th>
<th>Medical Center (Hospital System)</th>
<th>Medical Center (Hospital System)</th>
<th>Community Health Center</th>
<th>Community Health Center</th>
<th>Research Institute (University), and Community Mental Health Clinic</th>
<th>Research Institute (Independent), and Community Mental Health Clinic</th>
<th>Research Institute (University affiliate d)</th>
<th>Research Institute (University) and Medical Center (Hospital System)</th>
<th>Research Institute (Independent)</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>Practitioner Experience Type</th>
<th>BH</th>
<th>BH</th>
<th>BH</th>
<th>BH</th>
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<th>*</th>
<th>PC</th>
<th>PC</th>
<th>*</th>
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<tbody>
<tr>
<td>TA</td>
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<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Researcher</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
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<table>
<thead>
<tr>
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<th>Round 2</th>
<th>Round 3</th>
<th>Debrief</th>
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<td>✓</td>
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<td>✓</td>
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BH = Behavioral Health (psychiatrist or psychologist); PC = Primary Care (MD); *Behavioral health practitioners with no experience practicing in integrated care settings
Table 3.2 Inter-rater correlation pairs

<table>
<thead>
<tr>
<th>$\tau$</th>
<th>$p$</th>
<th>Pair (Participant A-Participant B)</th>
<th>Participant A Role(s)</th>
<th>Participant B Role(s)</th>
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<tbody>
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<td>0.587**</td>
<td>&lt;0.001</td>
<td>Participant 2-Participant 3</td>
<td>Practitioner (BH)/TA Provider/Champion</td>
<td>Practitioner (BH)/TA Provider/Champion</td>
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<tr>
<td>0.530**</td>
<td>&lt;0.001</td>
<td>Participant 5-Participant 1</td>
<td>TA Provider</td>
<td>Practitioner (BH)/Champion</td>
</tr>
<tr>
<td>0.505**</td>
<td>&lt;0.001</td>
<td>Participant 5-Participant 9</td>
<td>TA Provider</td>
<td>Practitioner (PC)/Researcher</td>
</tr>
<tr>
<td>0.486**</td>
<td>&lt;0.001</td>
<td>Participant 7-Participant 8</td>
<td>TA Provider/Researcher$^+$</td>
<td>Practitioner (PC)/Researcher</td>
</tr>
<tr>
<td>0.452**</td>
<td>&lt;0.001</td>
<td>Participant 9-Participant 1</td>
<td>Practitioner (PC)/Researcher</td>
<td>Practitioner (BH)/Champion</td>
</tr>
<tr>
<td>0.448**</td>
<td>&lt;0.001</td>
<td>Participant 5-Participant 3</td>
<td>TA Provider</td>
<td>Practitioner (BH)/TA Provider/Champion</td>
</tr>
<tr>
<td>0.445**</td>
<td>&lt;0.001</td>
<td>Participant 1-Participant 3</td>
<td>Practitioner (BH)/Champion</td>
<td>Practitioner (BH)/TA Provider/Champion</td>
</tr>
<tr>
<td>0.442**</td>
<td>&lt;0.001</td>
<td>Participant 5-Participant 7</td>
<td>TA Provider</td>
<td>TA Provider/Researcher$^+$</td>
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<tr>
<td>0.435**</td>
<td>&lt;0.001</td>
<td>Participant 7-Participant 3</td>
<td>TA Provider/Researcher$^+$</td>
<td>Practitioner (BH)/TA Provider/Champion</td>
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<tr>
<td>0.406**</td>
<td>&lt;0.001</td>
<td>Participant 9-Participant 3</td>
<td>Practitioner (PC)/Researcher</td>
<td>Practitioner (BH)/TA Provider/Champion</td>
</tr>
<tr>
<td>0.365**</td>
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<td>Participant 7-Participant 1</td>
<td>TA Provider/Researcher$^+$</td>
<td>Practitioner (BH)/Champion</td>
</tr>
<tr>
<td>0.364**</td>
<td>&lt;0.001</td>
<td>Participant 7-Participant 2</td>
<td>Researcher$^+$</td>
<td>Practitioner (BH)/TA Provider/Champion</td>
</tr>
<tr>
<td>0.349**</td>
<td>0.001</td>
<td>Participant 1-Participant 8</td>
<td>Researcher$^+$</td>
<td>Practitioner (PC)/Researcher</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Participant</td>
<td>Role</td>
<td>Role</td>
</tr>
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<td>---</td>
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<td>-----------------------------------------</td>
<td>----------------------------------------</td>
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<tr>
<td>0.348**</td>
<td>0.001</td>
<td>Participant 9-Participant 7</td>
<td>Practitioner (PC)/Researcher</td>
<td>TA Provider/Researcher</td>
</tr>
<tr>
<td>0.341**</td>
<td>0.001</td>
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<td>Practitioner (BH)/TA Provider/Champion</td>
<td>Practitioner (PC)/Researcher</td>
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<td>0.33**</td>
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<td>Practitioner (BH)/Champion</td>
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<td>0.003</td>
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<td>Practitioner (PC)/Researcher</td>
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<td>0.006</td>
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<td>Practitioner (PC)/Researcher</td>
<td>Researcher</td>
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<td>0.274**</td>
<td>0.007</td>
<td>Participant 5-Participant 2</td>
<td>TA Provider</td>
<td>Practitioner (BH)/TA Provider/Champion</td>
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<tr>
<td>0.266**</td>
<td>0.009</td>
<td>Participant 1-Participant 10</td>
<td>Practitioner (BH)/Champion</td>
<td>Researcher</td>
</tr>
<tr>
<td>0.26*</td>
<td>0.011</td>
<td>Participant 9-Participant 2</td>
<td>Practitioner (PC)/Researcher</td>
<td>Practitioner (BH)/TA Provider/Champion</td>
</tr>
<tr>
<td>0.224*</td>
<td>0.029</td>
<td>Participant 2-Participant 8</td>
<td>Practitioner (BH)/TA Provider/Champion</td>
<td>Practitioner (PC)/Researcher</td>
</tr>
<tr>
<td>0.215*</td>
<td>0.036</td>
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<td>Practitioner (BH)/TA Provider/Champion</td>
<td>Researcher</td>
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<tr>
<td>0.196</td>
<td>0.057</td>
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<td>0.156</td>
<td>0.132</td>
<td>Participant 8-Participant 10</td>
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<td>0.616</td>
<td>Participant 3-Participant 10</td>
<td>Practitioner (BH)/TA Provider/Champion</td>
<td>Researcher</td>
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</table>
*Significant at $p < 0.01$; **Significant at $p < 0.001$; +Behavioral health practitioner who has not practiced in an integrated setting; Shading indicates pairings where $\tau < 0.15$
<table>
<thead>
<tr>
<th>Component</th>
<th>Subcomponent</th>
<th>Definition</th>
<th>Exploration</th>
<th>Installation</th>
<th>Initial Implementation</th>
<th>Full Implementation</th>
<th>TA Rating</th>
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</thead>
<tbody>
<tr>
<td>Motivation</td>
<td>Relative Advantage</td>
<td>Whether integrated behavioral health and primary care seem better than the organization’s current practices.</td>
<td>High relevant</td>
<td>High relevant</td>
<td>Relevant</td>
<td>Relevant</td>
<td>Less relevant</td>
</tr>
<tr>
<td>Motivation</td>
<td>Compatibility</td>
<td>Whether integrated behavioral health and primary care fits with how the organization operates.</td>
<td>Relevant</td>
<td>Relevant</td>
<td>Relevant</td>
<td>Relevant</td>
<td>Variable relevance</td>
</tr>
<tr>
<td>Motivation</td>
<td>Simplicity</td>
<td>How simple it seems to integrate behavioral health and primary care.</td>
<td>Less relevant</td>
<td>Variable relevancy</td>
<td>Less relevant</td>
<td>Less relevant</td>
<td>Relevant</td>
</tr>
<tr>
<td>Motivation</td>
<td>Ability to Pilot</td>
<td>The degree to which integrated behavioral health and primary care can be tested and experimented with.</td>
<td>Relevant</td>
<td>High relevant</td>
<td>Relevant</td>
<td>Less relevant</td>
<td>Relevant</td>
</tr>
<tr>
<td>Motivation</td>
<td>Observability</td>
<td>The ability to see that integrating behavioral health and primary care is leading to outcomes.</td>
<td>Less relevant</td>
<td>Variable relevancy</td>
<td>Relevant</td>
<td>Highly relevant</td>
<td>Highly relevant</td>
</tr>
<tr>
<td>Motivation</td>
<td>Priority</td>
<td>Importance of integrating behavioral health and primary care compared to other things the organization is doing.</td>
<td>High relevant</td>
<td>High relevant</td>
<td>Highly relevant</td>
<td>Highly relevant</td>
<td>Variable relevance</td>
</tr>
<tr>
<td>Innovation-specific Capacity</td>
<td>Knowledge &amp; Skills</td>
<td>The organization having sufficient abilities to integrate behavioral health and primary care.</td>
<td>Less relevant</td>
<td>Relevant</td>
<td>Highly relevant</td>
<td>Highly relevant</td>
<td>Relevant</td>
</tr>
<tr>
<td>Innovation-specific Capacity</td>
<td>Champion</td>
<td>A well-connected person within the organization who supports and models integrating behavioral health and primary care.</td>
<td>Highly relevant</td>
<td>Highly relevant</td>
<td>Highly relevant</td>
<td>Relevant</td>
<td>Relevant</td>
</tr>
<tr>
<td>Innovation-specific Capacity</td>
<td>Supportive Climate</td>
<td>The organization having the necessary supports, processes, and resources to enable integration of behavioral health and primary care.</td>
<td>Relevant</td>
<td>High relevant</td>
<td>Highly relevant</td>
<td>Highly relevant</td>
<td>Variable relevance</td>
</tr>
<tr>
<td>Innovation-specific Capacity</td>
<td>Inter-Organizational Relationships</td>
<td>Relationships between organizations that support integrating behavioral health and primary care.</td>
<td>Relevant</td>
<td>Relevant</td>
<td>Relevant</td>
<td>Less relevant</td>
<td>Relevant</td>
</tr>
<tr>
<td>Innovation-specific Capacity</td>
<td>Intra-Organizational Relationships</td>
<td>Relationships within the organization that support integrating behavioral health and primary care.</td>
<td>Relevant</td>
<td>Relevant</td>
<td>Relevant</td>
<td>Less relevant</td>
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<tr>
<td>General Capacity</td>
<td>Leadership</td>
<td>The effectiveness of the organization’s leaders.</td>
<td>High relevant</td>
<td>High relevant</td>
<td>Highly relevant</td>
<td>Highly relevant</td>
<td>Variable relevance</td>
</tr>
<tr>
<td>General Capacity</td>
<td>Culture</td>
<td>Norms and values of the organization.</td>
<td>High relevant</td>
<td>Relevant</td>
<td>Highly relevant</td>
<td>Highly relevant</td>
<td>Relevant</td>
</tr>
<tr>
<td>General Capacity</td>
<td>Climate</td>
<td>How employees perceive, appraise, and feel about their current working environment.</td>
<td>Variable relevancy</td>
<td>Relevant</td>
<td>Relevant</td>
<td>Relevant</td>
<td>Less relevant</td>
</tr>
<tr>
<td>General Capacity</td>
<td>Innovativeness</td>
<td>The organization’s openness to change in general.</td>
<td>High relevant</td>
<td>High relevant</td>
<td>Highly relevant</td>
<td>Relevant</td>
<td>Less relevant</td>
</tr>
<tr>
<td>General Capacity</td>
<td>Resource Utilization</td>
<td>The organization’s ability to acquire and allocate resources, including time, money, effort, and technology.</td>
<td>Variable relevancy</td>
<td>Relevant</td>
<td>Relevant</td>
<td>Relevant</td>
<td>Variable relevance</td>
</tr>
<tr>
<td>General Capacity</td>
<td>Internal Operations</td>
<td>The organization’s effectiveness at communication and teamwork.</td>
<td>Variable relevancy</td>
<td>Relevant</td>
<td>Highly relevant</td>
<td>Highly relevant</td>
<td>Relevant</td>
</tr>
<tr>
<td>General Capacity</td>
<td>Staff Capacity</td>
<td>Having enough of the right people to get things done within the organization.</td>
<td>Relevant</td>
<td>High relevant</td>
<td>Highly relevant</td>
<td>Highly relevant</td>
<td>Variable relevance</td>
</tr>
<tr>
<td>General Capacity</td>
<td>Process Capacity</td>
<td>The organization’s ability to plan, implement, and evaluate.</td>
<td>Relevant</td>
<td>Highly relevant</td>
<td>Relevant</td>
<td>Highly relevant</td>
<td>Relevant</td>
</tr>
</tbody>
</table>

**Figure 3.1 Determinant relevancy results**
CHAPTER 4. PHASE II METHODS

Phase II of this dissertation translated the Phase I results into an integrated care implementation support tool and assessed the perceived acceptability and appropriateness of the tool by its potential users. This phase aimed to evaluate the practical utility of applying study results in practice, as well as identify areas for future refinement of the tool.

4.1 TOOL DEVELOPMENT

This section first describes the translation of the Phase II results into a tool compatible with existing content-specific guides, and then describes methods for conducting quality assurance on the tool by adhering to best practices for style and layout. Contents of the tool are described in the Phase II Results section.

Final results from Phase I provide the basis of the implementation support tool. As noted in Phase I, participants’ perceived implications of the study were that results could be used as an assessment and implementation support tool. The audience for the proposed implementation support tool is TA providers and organizations wishing to integrate care. Within the Interactive Systems Framework (ISF; Wandersman et al., 2008) – which is the conceptual framework underlying the R=MC² determinants (Scaccia et al., 2015) – actors within these roles constitute the delivery system (organizational staff; e.g., administrators and clinicians) and support systems (e.g., TA providers or external consultants). Creating this tool required translating the final results from Phase I, which are the relevancy
categories of each determinant by stage and for TA provider assistance (Figure 3.1). The translation process included (i) reviewing existing integrated care guides to ensure compatibility with this dissertation’s results, (ii) selecting a framework for which to base the tool, and (iii) designing the tool.

**Guide Review**

Existing integrated care guides abound and were identified during this dissertation’s literature review (see Introduction). Phase I of this dissertation investigated the social and contextual barriers and facilitators inadequately addressed in existing guides. However, the time lapse between Phase I study conception and executing Phase II required revisiting the literature to ensure compatibility. Previously identified guides were revisited, and additional guides identified via a search of gray and white literature. Guides were reviewed if they sought to integrate behavioral health and primary care, shared a target audience of organizational staff and/or TA providers, were either developed or tested in the United States, and provided research support for the development of their guide; this last point extends beyond providing references for their content, but evidence that the guide itself was systematically developed and tested. Identified guides included Approaches to Integrating Physical Health Services into Behavioral Health Organizations (The Lewin Group, 2016) and associated tools hosted by Resources for Integrated Care (RIC), the Collaborative Care Integration Guide (CoCM; University of Washington AIMS Center, n.d.), the Continuum-Based Framework (Chung et al., 2016; Goldman et al., 2020), the Integrated Behavioral Health Cross-Model Framework (Stephens et al., 2020), and the Safety Net Medical Home Initiative (Ratzliff et al., 2017).
A review of existing guides revealed that some relied on technical assistance (e.g., The Lewin Group, 2016; CoCM; Continuum-based Framework) but lacked explicit mention of the role TA providers play, or the limitations their expertise provides. Some identified guides contained disparate elements of the R=MC^2 framework. For example, RIC hosts an infrastructure assessment of organizational culture and the CoCM steps include elements of innovation-specific capacity, champion, and leadership. However, all focused primarily on the technical aspects of integrating care (e.g., changing the medical record system, overhauling billing and coding structures). None used a comprehensive assessment of the human factors affecting an organization’s ability and willingness to change. Therefore, it was determined that the dissertation results were still a valid contribution to the field and should be supplementary to the technical aspects well-established in current guides. The author determined that the present study’s tool be kept general to ensure compatibility with existing integrated care guides and materials.

**Framework**

Creating the implementation support tool required selecting an established, generalizable framework in which to embed the Phase I results. The Readiness Building Systems (RBS) was selected because it is derived from the R=MC^2 determinant framework and has already been applied and refined in multiple settings and content areas as a TA tool, including with federal agencies (e.g., Centers for Disease Control and Prevention, United States Department of Defense), state agencies (e.g., Fact Forward), and healthcare clinics (e.g., pharmacies, FQHCs) (Domlyn et al., 2021; Wandersman Center, 2020). It is based in the literature of community change particularly principles of engagement, needs assessment, strategic planning, and program evaluation. RBS is
typically steered by a TA provider but is intended for collaborative use with organizational stakeholders (Domlyn et al., 2021). It is not specific to a content area and was designed to be applicable across sectors, organizations, and innovation types.

RBS is a three-step process of assessment, feedback and prioritization, and strategizing. During assessment, the R=MC² determinants are assessed using a diagnostic scale administered to organizational staff, sometimes in combination with perceptions of their TA provider. Past projects have adapted this scale for integrating behavioral health and primary care (Scott et al., 2017). The psychometric properties of the scale are being investigated via an R01 study; in that study the scale is being adapted via qualitative interviews, further developed in 100 FQHCs, then the structural validity will be investigated using multilevel factor analysis (Walker et al., 2020). The current scale version of the R=MC² assessment is available for use with permission (Wandersman Center, 2020). During feedback and prioritization, the assessment scores are shared with stakeholders and collectively interpreted, then weak or salient R=MC² subcomponents are selected as priority areas for improvement. Finally, to strategize, the subcomponents are matched to strategies to create a readiness building action plan. Strategy identification and matching is conducted via a review of the change management literature (Wanderman Center, 2020), although other processes such as implementation mapping (Fernandez et al., 2019) are also appropriate. Details on how the RBS was adapted to create a final product are provided in Phase II Results.

Stylizing

Translating Phase I results into a product required not only a modifiable framework, but a visually appealing style to ensure the product is user-friendly. Because most thought
processes are unconscious and framing effects decision-making (Hastie & Dawes, 2010), adhering to best practices for visual representation was assumed to heighten the probability that tool perceptions (assessed in the acceptability and appropriateness survey) will be based primarily on the content rather than a distracting format. It was financially infeasible to hire a graphic designer or web designer for this project. Instead, literature was reviewed to inform the design. This included use of visual hierarchies where important text is displayed first or in most prominent text, often accomplished via judicious used of whitespace (Graver & Jura, 2012). Other principles include using familiar (rather than novel) graphic displays (Evergreen, 2014) such as tables, isolating one idea per page (Graver & Jura, 2012), font selection such as bold contrasts and using sans serif for headings and serif for narrative text (Evergreen, 2014), and testing color palettes to be color blind-friendly (tested via Adobe Kuler). These basic graphical concepts were considered during tool creation, although some principles were imperfect in execution due to limited skillset of the author and restrictions of available software.

4.2 PERCEIVED ACCEPTABILITY AND APPROPRIATENESS OF TOOL

Method Review

As previously stated, organizational guides for integrating care exist but are primarily composed of technical activities and logistics. The present study did not aim to re-create these guides, instead offering a supplement that considers the social and contextual factors affecting change. Therefore, the literature review examined the development process for existing guides to ensure methods chosen to develop and assess the present tool are consistent with standards in the field. The most commonly cited method for creating existing integrated care guidebooks is via Delphi study (Cash-Gibson
et al., 2019; Grooten et al., 2019; Valentijn et al., 2015). It is also the most recommended method of conducting expert panels in general (Coulter et al., 2016). Given that – consistent with the field – Phase I already employed this method, additional methods for guide development, refinement, and validation were investigated.

Three recently created integrated care guides were identified: the Continuum-Based Framework (Chung et al., 2016; Goldman et al., 2020), the Behavioral Health Integration Implementation Guide (Ratzliff et al., 2017), and the Integrated Behavioral Health Cross-Model Framework (Stephens et al., 2020). While the number of development steps varied by guide, each can be categorized into three stages: creation, refinement, and validation.

Examples of Creation. In the creation stage, authors of the Continuum-Based Framework conducted a literature review to draft the guide (Chung et al., 2016). For the other two guides, authors formed a panel of 9-12 experts to draft initial guidelines (Ratzliff et al., 2017; Stephens et al., 2020).

Examples of Refinement. In each identified instance, the refinement stage consisted of an additional expert review. This varied from written feedback provided by a second panel of 16 experts (Ratzliff et al., 2017), semi-structured interviews with 12 practitioners, payers, and policymakers (Chung et al., 2016), or an online 68-item feasibility survey administered to 29 domain experts, policymakers, and “patient and caregiver stakeholders” identified by study staff (Stephens et al., 2020).

Examples of Validation. During validation, authors of the Behavioral Health Integration Implementation Guide conducted 11 interviews in primary care sites to develop case examples illustrating the guide (Ratzliff et al., 2017), authors of the
Integrated Behavioral Health Cross-Model Framework conducted a real-world usability test with 15 organizations by disseminating the guide and asking sites to report back on their experience (Stephens et al., 2020), and authors of the Continuum-Based Framework piloted the guide in 11 primary care sites and collected practitioner perceptions via surveys and interviews (Goldman et al., 2020).

**Present Work.** Phase I of this dissertation already conducted the creation stage. Therefore, Phase II employs *refinement* methods. Seeking to gather perspectives from professionals offering a broad representation of experience types in integrated care, geographic locations, and organizational affiliations, the author chose to conduct an acceptability and appropriateness survey with professionals across the United States known to have content expertise in integrated care. This choice is consistent with refinement of the Integrated Behavioral Health Cross-Model Framework (Stephens et al., 2020).

**Acceptability and Appropriateness Survey**

**Constructs.** When assessing the *feasibility* of an innovation, researchers are often referring to the perception of fit; this is the case for identified integrated care guides (e.g., Stephens et al., 2020). In implementation science, feasibility refers to the actual fit of an innovation in practice, therefore perceived feasibility is better defined as *appropriateness*: “The perceived fit, relevance, or compatibility of the innovation or evidence-based practice for a given practice setting, provider, or consumer; and/or perceived fit of the innovation to address a particular issue or problem.” (Proctor et al., 2011). Similarly, an innovation’s *acceptability* is defined as “the perception among implementation stakeholders that a given treatment, service, practice, or innovation is
agreeable, palatable, or satisfactory. One aspect of this is the extent to which the targeted innovation differs from other innovations in the organization.” (Proctor et al., 2011). While the generalized term *feasibility survey* is appropriate colloquially, and for remaining consistent with other researchers, the constructs assessed in Phase II are the *acceptability* and *appropriateness* of the tool for assisting organizations to integrate behavioral health and primary care.

**Development.** Existing measures of acceptability and appropriateness were identified via the Society for Implementation Research and Collaboration’s Instrument Review Project (Lewis, Mettert, et al., 2018). This project culled existing measures from the literature and classified them according to Proctor and colleagues’ (2011) implementation outcome constructs. Psychometric properties for identified acceptability and appropriateness scales were either poor or unreported, therefore an existing measure could not be adapted for use here. Instead, easily generalizable questionnaires for acceptability (Paiva et al., 2014) and appropriateness (Yetter, 2010) were used to assist in defining the constructs into discrete items. Best practices for survey design were considered, including avoiding double-barreled questions, using five response options, maintaining a consistent visual layout, placing important items early and sensitive items later in the questionnaire (Gehlbach & Artino Jr., 2018; Krosnick & Presser, 2010).

Three pilot testers, previously unfamiliar with the study, completed the tool and survey and provided quality improvement feedback. Solicited feedback included perceptions on the style, layout, consistency, accuracy, and feasibility of completing the materials. They also tracked time for completing the task. The target respondents for this survey were busy professionals (i.e., healthcare workers, administrators, and technical
assistance providers) whose time was assumed to be in high demand during the COVID-19 pandemic. Therefore, the study was designed to take less than 20 minutes to complete: a maximum of 12 minutes to review the tool and eight minutes to complete the survey. The tool and survey were revised based on pilot tester feedback.

The final survey (full text located in the Appendix) contained Likert-scale items (5-point scale from “strongly disagree” to “strongly agree”) and open-ended questions to assess the appropriateness and acceptability of the tool and gather insights for quality improvement. There were six items to assess appropriateness (e.g., “The tool is useful to help organizations integrate care”), five items for acceptability (e.g., “The tool seems easy to use”), and 23 items for quality improvement (e.g., “I think the following part(s) are useful…” with options to select different components of the tool). Of the quality improvement items, 13 were designed to improve perceived appropriateness (e.g., identifying barriers to use and supplements that would aid use) and 10 were designed to gather general improvements (e.g., “What would make this tool more useful?”).

Additional items confirmed eligibility and gathered demographic information.

The survey and tool were hosted on Qualtrics. Potential participants were provided an overview of the study and consented to participate. Participants’ tasks were to review a PDF of the tool and respond to the survey questions about their perceptions. Upon completion, participants could opt into a raffle for a $50 gift card. The study was confirmed exempt by the University of South Carolina Institutional Review Board (Project #00105615).

**Recruitment.** Recruitment took place from February 9 to March 16, 2021. This six-week timespan was established with a goal minimum recruitment of 30 participants.
(selected to be consistent with sample size in refining integrated care guides, e.g., Stephens et al., 2020). Purposeful sampling identified professionals with expertise in integrated care based on author knowledge, combing through relevant publication author lists (e.g., Chung et al., 2014; Goldman et al., 2020; Ratzliff et al., 2017), researching membership in relevant societies (e.g., Collaborative Family Healthcare Association, National Council for Behavioral Health, Society for Health Psychology) or employment in relevant organizations (e.g., Primary Care Development Corporation, Center for Practice Innovations, Center for Integrated Primary Care, Integrated Care Strategists, University of Washington AIMS Center), and by referral from eligible professionals. Potential participants were contacted via email with an overview of the study. Eligibility criteria were based on presumed audience of the implementation support tool. Audience was based on ISF delivery and support system levels (Wandersman et al., 2008) and the relevant stakeholders specified by the RBS (Domlyn et al., 2021). Participants must have met one or more of the following criteria: 1) Past or present experience as a healthcare practitioner (e.g., physician, nurse, therapist, social worker) within an organization with integrated behavioral health and primary care medical services, 2) Past or present experience as an administrator or technical support (e.g., director, front desk staff, billing staff, IT staff) within an organization with integrated behavioral health and primary care medical services, 3) Past or present experience as an external implementation support practitioner (e.g., consultant, technical assistance provider, coach) for an organization specifically to assist with the integration of behavioral health and primary care medical services. Eligibility was confirmed through
participant self-report. Thirty-three participants completed the study; participant details will be provided in the Phase II Results section.

**Analyses.** Quantitative survey data were descriptively analyzed. Demographic variables such as gender, race/ethnicity, and role(s) in integrated care settings are reported to provide background and context on the study sample. Descriptive statistics were analyzed for each item to summarize perceived acceptability and appropriateness of the tool; this is reported as median, mode, and range of values since means and standard deviations are inappropriate for ordinal Likert scale data (Hasson et al., 2000; Trevelyan & Robinson, 2015; Sullivan & Artino, 2013). Written survey comments help to explain the descriptive statistics (i.e., qualitative data serves as an expansion of quantitative results; Green et al., 1989; Palinkas et al., 2011). Written responses were organized in a matrix display by question prompt and participant, then perspectives and suggestions extracted. First cycle coding involved reviewing written responses to summarize comments and inductively generate initial concept codes with thematic phrasing (Miles et al., 2020). This was an iterative process, as the author reviewed written responses several times to consolidate or broaden codes. First cycle coding generated 31 codes. In the second cycle, pattern coding was employed (Miles et al., 2020) to condense these 31 codes into three parent themes: integrated care-specific content, staff readiness, and quality improvement (QI). The latter parent code specified three aspects of QI: general, barriers to use, and supports needed for use. Collectively, survey results serve as quality improvement and a prompt for utility of future research and application of the tool.
CHAPTER 5. PHASE II RESULTS

5.1 PRODUCT: INTEGRATION AID

Adapting the RBS Framework

In order to combine Phase I study results with the RBS, the RBS three-step processes needed to be expanded. The primary changes occurred in the RBS assessment step: First, the full assessment scale (Scott et al., 2017) is available only upon permission from the Wandersman Center, which may be feasible in a large-scale study or applied project but would detract from the present dissertation findings. Therefore, rather than a full R=MC² measure, a simplified assessment called the Readiness Thinking Tool (Wandersman Center, 2020) was adapted for the assessment step. This brief adapted version – freely available for us on the Wandersman Center website – changed wording to be specific to integrating behavioral health and primary care. Second, evaluating determinant strength across the four AIF stages necessitated creating four different versions of the Readiness Thinking assessment. An adapted AIF-derived checklist (NIRN, 2020) was also added to determine the organization’s current implementation stage.

Other adaptations from the RBS included adding preliminary steps of defining the innovation and implementation team, noting methods for continuous quality improvement, and adding details about the cycle for revisiting earlier RBS steps. These changes were made because TA providers trained in RBS typically apply these methods,
but it is not explicit in the framework. These additional steps are inherent in methods of empowerment evaluation that employ TA (e.g., Chinman et al., 2004).

**Integration Aid**

The integrated care implementation support tool is entitled “Integration Aid: A supplemental tool for integrating behavioral health and primary care.” It was drafted as a 36-page (inclusive of title page, selected bibliography, and appendices) PDF document. Wording was purposefully kept simple and informal, and within-text links used for easy navigation. Integration Aid described four steps, each with multiple components: 1) Get started (define and orient), 2) Think it through (assess, prioritize, and strategize), 3) Get to work (plan and implement), and 4) Cycle through (revisit and re-orient). Both graphics and written directions were provided for each step. An overview graphic is shown in Figure 5.1.

An overview of the conceptual basis for the tool is provided, as are prerequisite steps to be taken prior to using Integration Aid. The primary prerequisite is to identify a technical integrated care manual for determining the innovation needing to be implemented; a list of guides is given. Recommendations are also included for identifying stakeholders to be involved in each step. The tool contains multiple “worksheets,” which are a combination of assessment and planning documents.

**Step 1: Get started (define and orient).** In the first step, users fill out a worksheet to define the integrated care-related innovation to be implemented and the key players – the staff that will implement the innovation in daily practice and the implementation team that will be supporting them. A self-administered questionnaire helps to orient the organization to the current stage of implementation (Figure 5.2). This
questionnaire was simplified from an established assessment of implementation stages (NIRN, 2020). Users are educated that there are different stages of implementation, from first exploring a new idea to fully sustaining the practice, and that implementation factors vary in importance by stages. It is also noted that stages are not linear nor tied to a specific amount of time (Metz et al., 2015). If the current stage is unclear, users are advised to use a comprehensive AIF stage assessment (NIRN, 2020).

**Step 2: Think it through (assess, prioritize, and strategize).** Based on the *orient* assessment, users are directed to the appropriate AIF stage to complete additional self-assessment. In the second step users assess, prioritize, and strategize within one worksheet. With their implementation and support team, users evaluate the organization’s motivation and capacity for change within that stage. After barriers are identified, they prioritize factors to improve. To strategize, the worksheet indicates whether each factor might benefit from hiring an outside consultant and prompt users to brainstorm other strategies.

First, users complete the appropriate stage worksheet to *assess* the organization on current strengths and barriers to implementing an integrated care-relevant innovation. Based on a modified Readiness Thinking Tool (Wandersman Center, 2020), users assess each determinant on whether it is a perceived “strength,” “neutral,” “challenge,” or they are “unsure” (which, if selected, is noted in instructions as needing to gather more information or involve additional stakeholders). Simplified determinant definitions are provided along with an appendix of full definitions for each and related research literature based on the work of Scaccia (2015) and Scott and colleagues (2017). The list of determinants varies by stage and is based on the Phase I results (Figure 3.1) for this
dissertation’s first research question. For example, the Exploration stage (Figure 5.3; note that an instruction page is separate and not pictured here) prompts users to assess five determinants categorized as “highly relevant at this stage,” seven determinants deemed “relevant at this stage,” and three determinants deemed “maybe relevant at this stage.” This corresponds to the relevancy definitions in Phase I. In contrast, the Full Implementation stage assessment (not included as a figure here) includes nine “highly relevant” determinants, seven “relevant” determinants, and none deemed “maybe relevant.”

To prioritize, using the sample worksheet users are instructed to select one-to-three priority areas for improvement. Prompts are provided for considering which area is a priority. These prompts are based on prioritization worksheets from the RBS (Domlyn et al., 2021; Wandersman Center, 2020). For each determinant marked a “challenge”, users are asked to consider “How likely is it this will have a significant negative impact on implementing the innovation?” For each determinant marked “unsure,” users are asked to consider “What more information is needed to properly assess this? Is it feasible to do so? Would this area have a significant negative impact on implementation?” For each determinant marked a “strength,” users are asked “Can this be leveraged to improve a ‘challenge’ area or further assess an ‘unsure’ area?” Additional prompts are: “Are there enough resources (time and budget) to address this issue?” and “Does it make sense to address this issue now, given other priorities?”

Once the priority areas are noted, users are invited to strategize using the same worksheet. First, they are asked to consider whether priority areas could be helped by an implementation support practitioner (i.e., TA provider; Metz et al., 2020). Suggestions
for answering this are provided in the worksheet based on the Phase I results (Figure 3.1) for this dissertation’s second research question. These suggestions are “Yes,” “Likely,” “Maybe,” or “Unlikely.” If support for a priority determinant is marked either “Yes” or “Likely,” users are advised to consider hiring a TA provider. A compilation of TA practitioners and additional resources (e.g., training programs, integrated care guides) is provided in an appendix to Integration Aid. If support for a priority determinant is marked “Maybe,” then users are advised that research has found TA support is inconclusive and more information should be collected to determine whether a TA provider could effectively support their organization in the specified area. If support for a priority determinant is marked “Unlikely,” then users are referred to a compilation of implementation strategies (Powell et al., 2015) for other ideas or advised to undergo a process of implementation mapping (Fernandez et al., 2019); links to each are given. Worksheet space is provided to jot down strategy ideas, whether it includes hiring a TA provider or other options.

**Step 3: Get to work (plan and implement).** In the third step, **planning** suggests users complete a provided action planning worksheet (Figure 5.4) to first list the strategies for improving weak factors, then break up this strategy into discrete tasks. This worksheet is based on readiness-building action plans from the RBS (Domlyn et al., 2021; Wandersman Center, 2020). For accountability, users are prompted to list the person responsible for each task and a goal completion date. Instructions suggest completing one action plan worksheet per priority determinant. First, users note the strategy (or strategies) identified to improve or address that determinant. Then, they are advised to break the strategy down into action steps, assign a person responsible, and
determine a target completion date. To implement, they are advised to start working through the tasks.

**Step 4: Cycle through (revisit and re-orient).** In the final step, users are advised to revisit the action plan worksheet each week, consider progress or stuck points, update sections and make notes, and revise the plan as needed. They are referred to information about improvement cycles to understand principles of continuous quality improvement. It is also suggested users re-assess the organization each month by going back to the orient worksheet from Step 1. When doing so, users are advised to re-orient and re-assess the current implementation stage. Then, if another stage has been reached, to continue through the rest of the Integration Aid steps. However, if the final stage is reached, users are advised to return to their selected integrated care guidebook to determine the next innovation needed to integrate care, then to return to the define part of Step 1.

5.2 PARTICIPANTS

208 potentially eligible professionals were identified. Contact information could not be located for 29 potentially eligible participants, therefore 179 were contacted via email. In addition, eight professional organizations were contacted requesting they disseminate the study information to members. Although 54 people consented to the study, not all consented participants completed the survey questions. The final sample consisted of 33 respondents.

Participants provided gender, race, and ethnicity as open-ended prompts. There were 21 females, 10 males, and two did not specify. Respondents included 22 White/Caucasian, one African American, one multiracial, three Hispanic/Latinx, one White Latina, and five did not specify their race nor ethnicity.
Respondents self-reported their professional experience in integrated care settings. Specifying past and/or current professional experiences (where multiple profession types could be selected), 27 respondents reported experience as a mental health practitioner (e.g., psychiatrist, counselor, social worker; N = 8 past only; N = 19 current), two respondents reported experience as a medical practitioner (e.g., primary care physician, physician assistant, nurse; N = 1 past only; N = 1 current), 11 reported experience as an administrator (e.g., director, front desk, billing, IT; N = 4 past only; N = 7 current), and 27 reported experience as an implementation support practitioner (e.g., content expert, consultant, technical assistance provider; all current). Identifying their current primary professional role, respondents included administrators (N = 4), implementation support practitioners (N = 16), medical practitioners (N = 2), and mental health practitioners (N = 9), while two did not specify their primary role. Asked to identify how many different organizations participants had worked with that have integrated behavioral health and primary care, ranges were provided: one organization (N = 4), two-to-three different organizations (N = 8), and more than three different organizations (N = 20), while one respondent did not specify.

5.3 PERCEIVED ACCEPTABILITY AND APPROPRIATENESS RESULTS

Per the methods noted previously, quantitative data were analyzed and summarized, and qualitative data (survey comments) coded as a supplement. Participant suggestions did not clearly follow question prompts, therefore all qualitative comments were coded and grouped by theme across prompts. Three primary themes emerged (integrated care-specific content, staff readiness, and tool improvement) each with multiple sub-themes. Almost all comments could be presented as quality improvement suggestions, but several
themes related to acceptability and appropriateness are presented below in relevant sections.

**Perceived Acceptability**

Survey results show moderately positive perceptions of Integration Aid’s acceptability (perceived palatability or satisfaction of the tool among stakeholders; Proctor et al., 2011) with most items achieving median and modal scores of 4 (“Agree”) on a 5-point Likert scale (Table 5.1). There was a comparatively weaker perception of whether the tool is valuable compared to other integration support tools (Mdn = 3; Range 2-5). A wide range of scores were achieved for all items, with minimum ratings of 1 (for ease of use and ease of navigation) or 2 (for differentiation, value, and complementarity); all items had a maximum rating of 5.

Very few differences were apparent across different role types. Administrators rated the tool’s ease of use (Mdn = 3.5; Range = 1-4) and complementarity with existing tools (Mdn = 3.5; Range = 2-5) as slightly lower compared to the overall perception (Mdn = 4 for each). Mental health practitioners (N = 9) and TA providers (N = 16) were more likely to use the full Likert scale range, reflecting a diversity of opinion likely due to the greater number of participants in those roles, compared to few respondents that identified primarily as administrators (N = 4) or medical practitioners (N = 2).

**Integrated care-specific content.** Among the written responses there were 18 comments suggesting the need for adding more content specific to integrated care. Respondents noted the generalizability of Integration Aid could be a benefit to its transferability to different models, but some lamented that it wasn’t connected to a specific model of integration (e.g., PCMH; CCM). A medical practitioner was concerned
that, as a result, “…people will wonder what to use it for as it is alone – [it] needs to be part of a plan for a specific integrated behavioral health approach.” While several respondents noted that adding examples – such as completed sample worksheets – could accomplish the goal of adding more integrated care content, two respondents recommended connecting the tool to a specific integrated care model, and three others suggested explicitly matching the tool to an existing integrated care guidebook. In contrast, an implementation support professional suggested “I think you have the basics here, unless folks really don't yet know what form of integration they want to do.” Their comment bridges to another theme, where respondents felt that organizational staff required preliminary knowledge prior to using Integration Aid. Twelve comments were made on this, including suggestions for additional training, education, and consultation. One respondent (role not disclosed) noted: “This is a great tool. It is a QI practitioner in toolkit. I like that it indicates it does not replace for the need for a QI practitioner, an integration expert…” Yet one administrator worried organizations would use it without context, noting:

“The difficulty is that integration is a HUGE undertak[ing]... Thus, while I appreciate the intentionality of the form, my worry is that someone may think, ‘oh, if I do this form, I am good now.’...Thus, reading should be suggested on what primary care is, the goals of primary care, or whatever setting they are integrated in. This is stated up front, but perhaps not prominent[ly] enough.”
**Perceived Appropriateness**

Respondents reported generally favorable perceptions of the tool’s appropriateness (perceived fit, relevance, or compatibility of the tool with the setting, or fit for the tool addressing a specific problem; Proctor et al., 2011) with most items’ median and modal scores of 4 (“Agree”) on a 5-point Likert scale (Table 5.2). Overall, participants felt the tool could be useful to help organizations integrate care (Mdn = 4; Range 2-5) and would recommend others to use this tool (Mdn = 4; Range 2-5). However, administrators were slightly less likely to recommend the tool (Mdn = 3.5; Range 2-4) compared to other roles. There was a comparatively weaker perspective on whether healthcare administrators would be motivated to use this tool (Mdn = 3; Range 1-5), which was a consistent perception across roles. Notably, there was a slightly more positive perception on whether healthcare administrators could use this tool (Mdn = 4; Range = 1-5), with administrators feeling more positively about their ability to use the tool (Mdn = 4.5; Range = 1-5) compared to overall perceptions. Similarly, respondents perceived that TA providers could use this tool (Mdn = 4; Range 3-5) and may be similarly motivated to do so (Mdn = 4; Range 2-5). TA providers in particular rated their motivation to use this tool highly (Mdn = 5; Range 2-5).

**Staff readiness.** Respondents noted several concerns about organizational staff’s motivation and capacity to use this tool or undertake care integration; seven comments were made to this effect. One administrator noted needing to consider the “emotional readiness” of staff who are about to undertake this journey (but did not further elaborate). Specific concerns were mentioned regarding time, motivation, buy-in, staff skill, staff turnover, and staff availability for using this tool. Interestingly, most of these comments
are synonymous with the definitions of organizational readiness used in the R=MC² determinant model. For example, one implementation support practitioner mentioned “clinician and staff resistance to using templates for their organization,” which per Scaccia and colleagues (2015) is an issue of perceived Priority. Another implementation support practitioner mentioned “not having the right people available to ‘drive’ the use of the tool,” which is related to program Champion and Staff Capacity.

Quality Improvement

Per survey responses, no one component emerged as less useful; however, the page providing integrated care resources had a slightly higher modal value compared to other components (5 on a 5-point Likert scale). Barriers to use may include the structure or layout of Integration Aid (Mdn = 3) and the level of complication (Mdn = 3). In written responses, two participants noted that barriers will likely vary by context. For example, one implementation support practitioner stated: “Organizational leaders or consultants may want more detail and project management steps, yet the tool is valuable as is because it’s not cumbersome.” However, several respondents did note specific barriers to use. In addition to concerns about staff motivation and capacity noted in the section on Appropriateness, eight respondents suggested the length and/or complexity of Integration Aid may be a barrier. Professionals in all roles noted that the overview section was too long and wordy, and several also noted that the language was too “high-level” or “academic” and should be simplified to an eighth grade reading level. Supporting their concern, an implementation support practitioner stated that if the tool isn’t simplified, “I fear organizations won't make the effort to use the tool.” In contrast, some respondents
felt the tool was too simple, particularly in relation to the lack of integrated care-specific content as noted in the section on Acceptability.

Among recommended supplements to ease use, in the survey participants suggested that a facilitated training (Mdn = 4), instructional videos (Mdn = 4), live demonstration (Mdn = 4), and a person to contact for support (Mdn = 4) are all valuable. These suggestions were reiterated in written responses, with individuals suggesting a training on specific primary care philosophies and goals, a video explanation for visual learners, and an FAQ sheet. Five respondents mentioned the need for a consultant to train organizational staff and guide the process. One medical practitioner noted a supplement should be: “A coaching approach to helping [sic] people get started with the approach… to be sure the facilitators and team are using the model well.”

Additional quality improvement suggestions included visual improvements (two people specifically suggested font colors should be higher contrast), and three participants recommended translating the tool into a website to aid navigation. Two final suggestions were made to reconsider the tool’s conceptual grounding and/or evidence base. One implementation support practitioner suggested embedding the implementation support tool in a different framework from implementation science than AIF, specifically EPIS (Aarons et al., 2011) or RE-AIM (Glasgow, Vogt, & Boles, 1999). Another implementation support practitioner suggested piloting the process with three agencies in order to refine it. They noted:

“…it seems very friendly [to] use, [but] I am concern[ed] once you put it out into practice a different story might [emerge]. A lot of the times agencies don’t have a clear understanding of what they want to
implement or change and I am curious to know if this tool will facilitate
them to recognize what is the need for change in their organization.”

This final suggestion is consistent with methodologies used in the validation of integrated care guides, a step that follows the refinement process described in Phase II.
Table 5.1 Acceptability and appropriateness survey quantified results

<table>
<thead>
<tr>
<th></th>
<th>Overall (N = 33)</th>
<th>Administrators (N = 4)</th>
<th>Mental Health Practitioners (N = 9)</th>
<th>Medical Practitioners (N = 2)</th>
<th>TA Providers (N = 16)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acceptability</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The tool seems easy to use.</td>
<td>Median 4</td>
<td>3.5</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Mode 4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Range 1-5</td>
<td>1-4</td>
<td>1-5</td>
<td>3-5</td>
<td>1-5</td>
</tr>
<tr>
<td>The tool is easy to navigate.</td>
<td>Median 4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Mode 4</td>
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<tr>
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<td>1-4</td>
<td>1-5</td>
<td>3-5</td>
<td>1-5</td>
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<tr>
<td>This tool is different from</td>
<td>Median 4</td>
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<td>3</td>
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<td>3</td>
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<tr>
<td>other integration support tools.</td>
<td>Mode 4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
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<tr>
<td></td>
<td>Range 2-5</td>
<td>3-4</td>
<td>2-5</td>
<td>3-4</td>
<td>2-5</td>
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<tr>
<td>This tool is valuable compared</td>
<td>Median 4</td>
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<tr>
<td>to other integration support</td>
<td>Mode 4</td>
<td>4</td>
<td>4</td>
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<td>4</td>
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<tr>
<td>tools</td>
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<td>2-5</td>
<td>3-4</td>
<td>2-5</td>
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<tr>
<td>This tool is complementary</td>
<td>Median 4</td>
<td>3.5</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>with existing integration</td>
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<td>4</td>
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<td>2-5</td>
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<tr>
<td><strong>Appropriateness</strong></td>
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<td></td>
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<tr>
<td>The tool is useful to help</td>
<td>Median 4</td>
<td>4</td>
<td>4</td>
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<td>organizations integrate care.</td>
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<td>4</td>
<td>4</td>
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<tr>
<td></td>
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<td>2-5</td>
<td>2-5</td>
<td>3-5</td>
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<tr>
<td>I would recommend this tool</td>
<td>Median 4</td>
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<td>4</td>
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<tr>
<td>to others seeking assistance</td>
<td>Mode 4</td>
<td>4</td>
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<tr>
<td>integrating care.</td>
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<td>2-5</td>
<td>2-5</td>
<td>3-5</td>
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<tr>
<td>Healthcare administrators</td>
<td>Median 4</td>
<td>4.5</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>could use this tool.</td>
<td>Mode 4</td>
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<td>4</td>
<td>4</td>
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</tr>
<tr>
<td></td>
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<td>1-5</td>
<td>3-4</td>
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<td>Role</td>
<td>Median</td>
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<td>3</td>
<td>3</td>
<td>3</td>
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<tr>
<td>----------------------------------------------------------------------</td>
<td>--------</td>
<td>---</td>
<td>---</td>
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<td>---</td>
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<tr>
<td>Healthcare administrators would be motivated to use this tool.</td>
<td>Mode</td>
<td>3</td>
<td>N/A</td>
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</tr>
<tr>
<td>Range</td>
<td></td>
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<td>1-5</td>
<td>1-5</td>
<td>1-5</td>
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<tr>
<td>Implementation support practitioners (e.g., consultants, technical assistance providers) could use this tool.</td>
<td>Median</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Mode</td>
<td></td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Range</td>
<td></td>
<td>3-5</td>
<td>3-5</td>
<td>3-5</td>
<td>3-5</td>
</tr>
<tr>
<td>Implementation support practitioners (e.g., consultants, technical assistance providers) would be motivated to use this tool.</td>
<td>Median</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Mode</td>
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<td>5</td>
<td>3</td>
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<tr>
<td>Range</td>
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<td>2-5</td>
<td>2-5</td>
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</tr>
</tbody>
</table>

*Note: Two participants did not specify primary role.*
### Table 5.2 Quality improvement quantified survey results (N = 33)

<table>
<thead>
<tr>
<th>Useful components:</th>
<th>Median</th>
<th>Mode</th>
<th>Range</th>
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<tbody>
<tr>
<td>Steps Overview</td>
<td>4</td>
<td>4</td>
<td>2-5</td>
</tr>
<tr>
<td>Step 1 &quot;Define&quot; Worksheet</td>
<td>4</td>
<td>4</td>
<td>2-5</td>
</tr>
<tr>
<td>Step 1 &quot;Orient&quot; Questionnaire</td>
<td>4</td>
<td>4</td>
<td>2-5</td>
</tr>
<tr>
<td>Step 2 &quot;Assess, Prioritize, Strategize&quot;</td>
<td>4</td>
<td>4</td>
<td>2-5</td>
</tr>
<tr>
<td>worksheets in four stages</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 3 &quot;Action Plan&quot; Worksheet</td>
<td>4</td>
<td>4</td>
<td>2-5</td>
</tr>
<tr>
<td>Factor Descriptions</td>
<td>4</td>
<td>4</td>
<td>3-5</td>
</tr>
<tr>
<td>Integrated Care Resources</td>
<td>4</td>
<td>5</td>
<td>2-5</td>
</tr>
<tr>
<td><strong>Barriers to use:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>4</td>
<td>4</td>
<td>1-5</td>
</tr>
<tr>
<td>Interest</td>
<td>4</td>
<td>4</td>
<td>2-5</td>
</tr>
<tr>
<td>Structure/layout</td>
<td>3</td>
<td>2</td>
<td>2-5</td>
</tr>
<tr>
<td>Level of complication</td>
<td>3</td>
<td>2</td>
<td>2-5</td>
</tr>
<tr>
<td><strong>Supplements helpful to aid use:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>More detailed instructions</td>
<td>2</td>
<td>2</td>
<td>1-5</td>
</tr>
<tr>
<td>Details on the underlying research</td>
<td>2</td>
<td>2</td>
<td>1-5</td>
</tr>
<tr>
<td>Facilitated training</td>
<td>4</td>
<td>4</td>
<td>2-5</td>
</tr>
<tr>
<td>Instructional videos</td>
<td>4</td>
<td>4</td>
<td>2-5</td>
</tr>
<tr>
<td>Live demonstration</td>
<td>4</td>
<td>4</td>
<td>2-5</td>
</tr>
<tr>
<td>A person to contact for support</td>
<td>4</td>
<td>4</td>
<td>3-5</td>
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</table>
Figure 5.1 Integration Aid steps overview
<table>
<thead>
<tr>
<th>Stage</th>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
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<tbody>
<tr>
<td>Exploration</td>
<td>Have first meetings been held to discuss the use of the innovation?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Did the organization agreed to adopt the innovation?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Has the feasibility and fit of this innovation been considered?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Installation</td>
<td>Is the necessary infrastructure (e.g., implementation plan, protocols) in place?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Are necessary supports (e.g., training, funds) for this innovation set up?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Have practitioners/staff started testing out the innovation?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Implementation</td>
<td>Are implementation activities starting to happen in practice?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Are systems (e.g., data collection, reporting) in place for evaluating the innovation?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Is the implementation plan being revised as needed?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full Implementation</td>
<td>Are at least 50% of target staff actively using the innovation?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Is data being used to make decisions about innovation utility?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Are target outcomes starting to be seen?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*If all three marked “yes,” continue to questions below. Otherwise, go to Exploration Stage.*

*If all three marked “yes,” continue to questions below. Otherwise, go to Installation Stage.*

*If all three marked “yes,” continue to questions below. Otherwise, go to Initial Implementation Stage.*

*If all three marked “yes,” innovation has been implemented and sustainability plans should be considered. Otherwise, go to Full Implementation Stage.*

**Figure 5.2 "Orient" stage assessment**
**Figure 5.3 Sample "Assess" stage worksheet (Exploration stage)**

<table>
<thead>
<tr>
<th>Factor Definition/Label</th>
<th>Consideration</th>
<th>How strongly do you agree?</th>
<th>HIGHLY RELEVANT AT THIS STAGE</th>
<th>RELEVANT AT THIS STAGE</th>
<th>MAYBE RELEVANT AT THIS STAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Strength</td>
<td>Neutral</td>
<td>Challenge</td>
<td>Unsure</td>
</tr>
<tr>
<td>Changes</td>
<td>A well-connected person who supports and models this innovation.</td>
<td>Likely</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Culture</td>
<td>Norms and values of the organization.</td>
<td>Likely</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative Advantage</td>
<td>This innovation seems better than what we currently do.</td>
<td>Unlikely</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovativeness</td>
<td>Openness to change in general.</td>
<td>Unlikely</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diversity</td>
<td>Importance of this innovation compared to other things we do.</td>
<td>Maybe</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leadership</td>
<td>Effectiveness of our leaders.</td>
<td>Maybe</td>
<td></td>
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**Figure 5.4 Blank action plan worksheet**

<table>
<thead>
<tr>
<th>Target factor:</th>
<th>Action Steps</th>
<th>Person(s) responsible</th>
<th>Target</th>
<th>Date completed</th>
<th>Date(s) updated</th>
<th>Notes</th>
</tr>
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<tr>
<td>1.</td>
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<tr>
<td>2.</td>
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<td>3.</td>
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<tr>
<td>1.</td>
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<td>2.</td>
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<td>3.</td>
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<td>4.</td>
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</table>
CHAPTER 6. DISCUSSION

In this dissertation, a literature review identified that social and organizational context is important for enacting systems-level change, yet this is underdeveloped for integrating behavioral health into primary care (Busetto et al., 2018; Kirst et al., 2017; Padwa et al., 2016; Sheaff et al., 2018). An amalgam implementation science framework (AIF; particularly its four implementation stages) was merged with a framework of 19 implementation determinants (R=MC^2) for studying the implementation of integrating care (Figure 1.2). A participatory research study leveraged content-expert experience to specify the relevance of implementation determinants over stages of implementation (Research Question 1) and the degree to which an external support strategy (i.e., technical assistance) could affect each implementation determinant (Research Question 2). Per recommendations on how such findings could be used (Sandelowski & Leeman, 2012), results were translated into a tool for supporting the integration of behavioral health and primary care; the tool was designed to be compatible with existing integrated care models and guides. This tool – Integration Aid – was assessed for usability by surveying additional content experts across the United States to determine the perceived acceptability and appropriateness of application in practice.

6.1 PRIMARY FINDINGS

Study results were calculated by both Delphi study best practices (which prioritize percent agreement and descriptive statistics; Diamond et al., 2014), and participant input to consider distribution frequencies; the latter is also recommended in Delphi studies
These values and graphical displays were translated by two coders to answer each research question. In Research Question 1, findings revealed that almost all aspects of Motivation, Innovation-specific Capacities, and General Capacities are important at various times. Across the four AIF-designated stages (Figure 1.1; Metz et al., 2015), more determinants are relevant at Installation, Initial Implementation, and Full Implementation. For specific determinants: both Leadership and perceived Priority are highly relevant across all stages, while Champion, Supportive Climate, Culture, Innovativeness, and Staff Capacities are highly relevant across most stages. Only one determinant appears less relevant across stages: Simplicity, which was noted by participants as confusing for integrated care, which is inherently complex. Participants also noted that determinants are likely connected and interdependent rather than discrete constructs. Per Research Question 2, results showed TA may not be an effective strategy for improving most determinants or contextual factors to integrate care in healthcare organizations. TA is highly relevant for only one determinant: Observability, or the ability to see that integrating care is leading to outcomes. TA is less relevant for four aspects: Relative Advantage, Intra-organizational Relationships, Climate, and Innovativeness. Participants suggested findings could vary by organization size or methods of TA delivery. Additional investigations requested by study participants revealed good reliability of participant responses with no distinct response pattern within participant experience types (i.e., integrated care champion, researcher, practitioner, TA provider). Participants suggested these results had implications for developing assessments, making policy and funding decisions, and creating implementation guidelines.
After translating primary findings into a tool called Integration Aid, a survey of integrated care content experts showed moderately positive perceptions of the tool’s acceptability (e.g., palatability) and appropriateness (e.g., fit) for application as an organizational implementation support tool to integrate care. Few differences in the data were noted by participants’ experience types in integrated care (i.e., administrators, mental health practitioners, medical practitioners, TA providers), although there may be slightly higher motivation for TA providers to use Integration Aid, particularly compared to healthcare administrators. Participants recommended improvements to Integration Aid, including adding more content specific to integrated care or merging with an existing model or guide, improving visualizations, and refining the intended audience. Suggestions were also made to add support resources to ensure proper use of the tool, such as trainings, examples, videos, or translating the tool into an interactive website.

Specific findings are reviewed in the remainder of this chapter. First, the determinants with high relevance across all stages and low relevance across all stages are discussed in contrast to what is currently known in the literature about these determinants. Second, the implications for the AIF stage framework are discussed, specifically whether the present study findings are potentially generalizable to non-integrated care contexts. Third, the implications for TA are described in terms of both the science and practice of providing implementation support. Finally, broad implications are noted for this dissertation’s contribution to the fields of implementation science, integrated care, and TA. Next steps are prescribed for Integration Aid to be revised for further research. This chapter concludes with statements on the study strengths and limitations.
6.2 IMPLEMENTATION DETERMINANTS

Each of the 19 determinants in the R=MC\textsuperscript{2} framework was derived from a vast literature spanning many sectors and disciplines (Scaccia, 2014). Here the author will briefly contrast the findings of salient determinants by what is currently known about each determinant’s definition, related R=MC\textsuperscript{2} determinants, relevance for integrated care, and (if available in the literature) hypothesized importance across implementation stages. The discussion of related determinants is particularly important, given the present study’s suggestion that a challenge to studying the R=MC\textsuperscript{2} framework is the potential mediating or moderating effects between constructs. First determinants with high relevance across stages are discussed, then the one determinant with low relevance across stages. Here – as was done throughout this dissertation – a capitalized construct (e.g., Leadership) refers to the determinant as defined by R=MC\textsuperscript{2} (Scaccia et al., 2015; Scott et al., 2017), whereas a lowercase construct (e.g., leadership) refers to a concept broadly or by other definitions.

**High Relevance Determinants**

**Highest Relevance.** Present study findings show that strong Leadership and the perceived Priority of integrated care are consistently important for integrating behavioral health and primary care across all stages.

**Leadership** is widely studied in organizational science and is commonly cited as a facilitator of integrating care (Padwa et al., 2016; Busetto et al., 2018; Kirst et al., 2017). Yet, leadership development has been posited as a “neglected topic” in integrated care (Amelung, Chase, & Reichert, 2017), perhaps because there are different types of leadership. Different managerial roles may organize personnel, craft vision statements, and manage resources (Amunarriz & Alcalde-Heras, 2020). Per the R=MC\textsuperscript{2} framework
(Scaccia et al., 2015), these management types respectively relate to Staff Capacity and Internal Operations, Culture, and Resource Utilization; the present study found these determinants were also highly important across most stages (with the exception of Resource Utilization). In implementation broadly, systems leaders are suggested to be most involved in pre-implementation stages (Chamberlain, Brown, & Saldana, 2011), yet their public demonstration of support is most important during Initial Implementation (NIRN, 2020). In integrated care settings there are strong connections between leadership and organizational culture (Suter et al., 2009). This supports the notion that, when integrating care, different types of leadership are important at different times (Amunarriz & Alcalde-Heras, 2020), and those leadership types respectively affect other determinants. For example, it may be that vision-based leadership (affecting Culture) is more important early in implementation when cohesive organizational identity and goals are salient, while leadership focused on resource allocation (affecting Internal Operations and Staff Capacity) is more important mid-implementation when staff need training and time to adjust to the innovation. The hypothesis of different leadership types also lends credence to the Phase I participants’ suggestion that these determinants are interconnected. In this context, study results are consistent with the broader literature on the importance of leadership for integrating care (Padwa et al., 2016; Busetto et al., 2018; Kirst et al., 2017), but also indicate that leadership may be so important because it affects the salience of other determinants (Amunarriz & Alcalde-Heras, 2020; Suter, 1999).

Priority refers to the perceived importance of the innovation and organizational commitment to its enactment (Scaccia, 2014). This can be communicated via leadership’s pledged support of the innovation (Donald et al., 2013), confirming again that these
constructs are related. Priority in integrated care settings also refers to pressure or competition of other commitments competing for organizational staff’s time (Kirst et al., 2017), or the perceived burden of integrating care (Busetto et al., 2018). Commitment to enacting an innovation is classified as an activity for transitioning from the Exploration stage to Installation (NIRN, 2020), yet perceived Priority can also be affected by the status of the innovation within the organization (Bohanon et al., 2006; Richardson et al., 2012; Stenger et al., 2007; Thomas & Galla, 2012). When priorities compete, the priority status of integrated care changes. When the perceived priority of an innovation drops, the innovation may slow down or halt its progress towards being adopted and scaled. Therefore, it makes sense that keeping care integration as a high priority would be perceived as continuously relevant. Priority is also affected by the level of support expressed by leadership (Donald et al., 2013), a notion supported by a systematic review of determinants in integrated care that found leadership support is a strong facilitator (Muse et al., 2017). What is surprising is that leadership support is variably conceptualized as most important during pre-implementation (Vax, Gidugu, Farkas, & Drainoni, 2021) or during Initial Implementation (NIRN, 2020). Since Priority was deemed relevant across all stages, there are likely other related factors that affect its salience.

**High Relevance.** Study findings revealed that Culture, Innovativeness, and Staff Capacity, a Champion, and Supportive Climate are generally important as well. Like Leadership, an organization’s Culture, Innovativeness, and Staff Capacity are constructs hypothesized to influence an organization’s General Capacity (Scaccia et al., 2015), or its overall functioning independent of integrating care. An innovation Champion and
Supportive Climate are both hypothesized to affect an organization’s Innovation-specific Capacity (Scaccia et al., 2015), or its ability to integrate care.

**Culture** is the organizational values, beliefs, goals, mission, vision, policies, and expectations (Scaccia et al., 2015). It is rarely mentioned in measures of implementation stages (e.g., Chamberlain et al., 2011; NIRN, 2020), except in relation to initiative planning (Vax et al., 2021), which is likely because it is a general organizational construct, rather than an innovation-related component. In integrated care, organizational culture is commonly cited as a relevant domain (Busetto et al., 2018; Kirst et al., 2017; Sheaff et al., 2018; Staab et al., 2018; Suter et al., 2009), yet few existing integrated care tools seek to address organizational culture (Suter et al., 2009). This is surprising, given that studies have demonstrated efficacy for quality assurance and quality improvement activities to improve organizational culture (Chin, Pun, Ho, & Lau, 2002; Sables-Baus & Zuk, 2012). Per ties to other determinants, as previously noted culture is strongly tied to leadership (Suter et al., 2009), whose managerial actions likely affect changes in practice and cooperation (Amunarriz & Alcalde-Heras, 2020). Despite its conceptualization within General Capacity, a component proposed to be relatively stable, studies have demonstrated that organizational culture can be effectively improved via intervention, albeit it may take several years for outcomes to be evident (Williams & Glisson, 2020).

**Innovativeness** is the organizational norms around change, the degree of risk tolerated, and attitudes towards continuous learning (Scaccia et al., 2015). Although there is a dearth of literature on this specific construct (Scaccia, 2014), Innovativeness is demonstrated to be affected by three other determinants: Observability, Climate, and Leadership (Cramm, Strating, Bal, & Nieboer, 2013; Scaccia, 2014). There are no clear
correlates of general innovativeness in integrated care tools, however innovation-specific flexibility is a hypothesized barrier to successful care integration (Kirst et al., 2017). General innovativeness may be a prerequisite quality necessary to both conceptualize a transformative change such as integrated care, and to enact the long, resource-intensive process of its realization.

**Staff Capacity** refers broadly to the general skills and capabilities of organizational staff to conduct the activities inherent in their roles (Scaccia et al., 2015). Training and quality improvement are effective strategies for building overall staff capacity (Ramos & Ferreira-Pinto, 2009; Scaccia, 2014; Watson-Thompson, Woods, Schober, & Schultz, 2013). However, there is little mention of this in the integrated care literature because (similar to Innovativeness) it is a construct beyond the scope of a specific innovation. For example, one study suggests recognition of staff skills is important during early implementation but only as those skills relate to the specific practice being implemented (Vax et al., 2021).

**Champions** are generally influential or notable individuals who either lead implementation projects or model the innovation (Beeri, Dayan, Vigoda-Gadot, & Werner, 2013; Donald et al., 2013; Scaccia et al., 2015; Yancey et al., 2006). Presence of a champion is unsurprisingly noted as a facilitator for integrating care (Busetto et al., 2018). In contrast to findings that Champions are important throughout integrating care, in the literature these individuals are often noted as necessary early in implementation (Albers et al., 2021; Mayer et al., 2011; Vax et al., 2021) or to lead the process (Donald et al., 2013; Metz & Bartley, 2012). An existing integrated care tool recommends identifying a champion early in the process of integration and ensuring that they have
leadership support and are able to implement best practices (UW AIMS, n.d.). Therefore, the published literature may be suggesting that selecting a champion is important early, not necessarily implying that their role is only important in early stages. Per other determinants, one study found that presence of a Champion may improve Supportive Climate and overall Climate (Beeri et al., 2013; Scaccia, 2014).

**Supportive Climate** is a broad construct capturing the general organizational climate for the specific innovation (Scaccia et al., 2015). This includes dedicating resources for the innovation (Mayer et al., 2011), leadership support (Donald et al., 2013; Yancey et al., 2006), and other processes and staff allocated to implementation (Scaccia, 2014). In a non-integrated care healthcare intervention, this determinant was noted as essential for implementation success across the lifespan (Yancey et al., 2006), which is supported by the present study. Supportive Climate is dynamic and may affect not only implementation, but sustainment of an intervention (Sables-Baus & Zuk, 2012). This aspect of support – particularly the tangible resources and processes – is the focus of most integrated care tools. For example, the UW AIMS tools cover the administrative practices in place for supporting care integration (UW AIMS, n.d.), Project INTEGRATE specifies needs for resources, facilities, and information management (Cash-Gibson et al., 2019), and the Continuum-Based Framework identifies needs for provider information exchange and workforce development of multi-disciplinary teams (Chung et al., 2019). This construct is well-established in the integrated care literature, therefore its presence as a significant factor is unsurprising.

**Summary.** Across all the determinants deemed relevant throughout implementation, there is one common factor: none are isolated constructs. Each may
endure as salient for integrating care because they affect multiple other determinants. It is possible that they act as moderators or connectors for most other determinants in the \( R=MC^2 \) framework.

**Less Relevant**

Only one determinant was deemed to have low relevance overall: Simplicity. This construct is also conceptualized as the perceived “complexity” of an innovation, consisting of the number of components within an intervention and the degree of actions required from staff (Scaccia et al., 2015). A literature review of barriers to integrated care cited complexity as a challenge for effective workforce changes to integrate care (Busetto et al., 2018). However, some evidence suggests that perceived complexity can be affected prior to implementation (Diker et al., 2013; Ganz, Yano, Saliba, & Shekelle, 2009; Kirsh, Schaub, & Aron, 2009; Lyon, Charlesworth-Attie, Vander Stoep, & McCauley, 2011), ostensibly before the Exploration stage. There is limited evidence that perceived Simplicity can be quantified, and its conceptualization stemmed from qualitative studies (Scaccia, 2014). This indicates an important limitation to this construct. Study results show that Simplicity was deemed less relevant because integrated care is inherently complicated and transformative for an organization. Results conform to the way integrated care is discussed in the literature, as a highly complex, dynamic process (Goodwin, 2019; Grooten et al., 2019; Thomson, 2018; van der Vleger-Brouwer et al., 2020). There is some qualitative evidence supporting this; one case study demonstrated that when a large FQHC made efforts to improve their low Simplicity score (assessed via RICQ; Scott et al., 2017) with facilitated discussion and training, their efforts were not effective (Domlyn et al., 2020). One important caveat to the present study findings: A
categorization of “less relevant” does not inherently mean a determinant is irrelevant. It simply means that Delphi study content experts perceived the determinant as less relevant compared to others.

6.3 IMPLEMENTATION STAGES

The AIF implementation stages differ dramatically from established levels of integrated care, which generally imply a progression from minimal collaboration to colocated care to fully transformed collaborative care (e.g., Heath et al., 2013). The problem with this is the implication that integration is an end to itself. This is a misguided assumption, given the dearth of evidence that higher levels of care integration achieve better patient outcomes, equity, or cost outcomes (M. Schoenbaum, personal communication, March 1, 2021). Use of integrated care stages (e.g., Table 1.2) is reductive. Stages of change are a useful heuristic, yet in practice implies an idealized status for all healthcare clinics that may not be feasible nor necessary for the specific context. For example, in the SAMHSA-HSRA CIHR levels (Table 1.2), a level 6 is presented as the idealized state where there is full collaboration in an integrated practice, seamless patient transition, shared resources, a single treatment plan, and full provider buy-in. Yet, this may not be feasible for all practices where separate resources or treatment plans may work better. While there is evidence that integrated care improves patient outcomes and cost, there is no research evidence underlying the assumption that a level 6 integrated care practice is superior to other levels. As such, in Phase I participants were given the option between AIF stages (Metz & Bartley, 2012) and the SAMHSA-HSRA CIHR levels (Heath et al., 2013) for conceptualizing the study, and overall chose the AIF stages as the best option.
The present study is the first known application of AIF for integrating behavioral health and primary care. Due to the ubiquity of the SAMHSA-HRSA CIHR framework in integrated care, existing stage-based tools suffer the same limitation. For example, the Integrated Practice Assessment Tool (IPAT; Waxmonsky et al., 2014) is a user-friendly flowchart to assess an organization’s current level of integration but does not offer instructions for quality improvement to achieve the next level. Similarly, the Behavioral Health Integration Capacity Assessment (BHICA; Lewin Group, 2012) presents a comprehensive guidebook for assessing current infrastructure and taking steps to achieve an aspirational fully integrated practice, but the BHICA assumes the same components and activities for care integration are regardless of context. The Levels of Integration Measure (LIM; Staab et al., 2018) preceded the present study by proposing a staged framework of quality improvement to integrate care but exhibits two limitations. First, LIM proposes specific activities to be achieved (e.g., “BMED specialists take part in PC clinic meetings”) without acknowledging the social and contextual organizational factors affecting integration. Second, LIM is based on the Primary Care Behavioral Health (PCBH) model, which currently lacks evidence of effectiveness in randomized controlled trials (Possemato et al., 2018).

In contrast, the AIF conceptualization of stages posed here describes a generalizable process of quality improvement and implementation broadly. The feasibility assessment of Integration Aid revealed that while some participants felt the tool’s lack of specificity was a weakness, others appreciated its generalizability. By remaining untethered to a specific model, Integration Aid offers an alternative to the
contentious assumptions that integration is an end in itself and that the same components are applicable to all organizational contexts.

Study findings revealed more determinants are relevant at Installation and Initial Implementation compared to the other stages. This is logical because the most intensive implementation activities take place at these stages. Specifically, Installation requires building infrastructure and establishing supports and Initial Implementation begins the service delivery and quality improvement activities (Metz & Bartley, 2012). Given that the AIF stages are meant to be broadly applicable across innovations and contexts, it leaves the question of whether the present results are specific to integrated care settings or may be generalizable to other innovations and contexts.

One published study to date has applied both the AIF implementation stages and R=MC² determinants in another context. A methodological pilot test for the present study, Domlyn and Wandersman (2019) conducted a Delphi study with eleven participants in a nationwide community coalition transformation program. Similar to integrated care, coalition transformation is a multi-faceted, complex process. Comparing the present results to this 2019 study, few similarities emerge. Leadership, Staff Capacity, Process Capacity, and Champion are consistently important across stages in both contexts. However, the present study concludes Priority and Culture are highly salient in integrated care, whereas these reached weaker consensus among community coalitions. Additionally, perceived Simplicity (previously labelled Complexity) did achieve relevance across several stages among community coalition transformation (Domlyn & Wandersman, 2019), unlike in the present study. This previous study diverges from the present investigation in several important ways: First, the 2019 study did not adhere to
the same rigor of participatory methods shown here, where participants were partners in study design and interpretation. As a result, the coalition study used only percent consensus to determine determinant relevance, compared to this dissertation’s analysis of multiple metrics interpreted by multiple coders. Second, the 2019 study’s data analysis was purely quantitative, therefore it lacks the richness of interpretation provided here. Third, the coalition study did not publish on the utility of TA for these determinants, therefore comparisons cannot be made in that respect.

Another previous study assessed perceived determinants across implementation stages in youth-serving organizations using different frameworks for both the determinants and stages (Palinkas, Campbell, & Saldana, 2018). This 2018 study found far more determinants relevant during pre-implementation (roughly congruent with Exploration) than with the present study. There were several distinct deviations. For example, the fit between practice and organizational mission is roughly equivalent to the \( R=MC^2 \) determinant Compatibility. The 2018 study showed agency leadership were most concerned about this during pre-implementation and sustainment (roughly congruent with Full Implementation), but not during active implementation (roughly congruent with Installation and Initial Implementation). In contrast, the present study found Compatibility relevant across all stages. As another example, support for sources external to the agency (in \( R=MC^2 \), this is Inter-organizational Relationships) were also noted in pre-implementation and sustainment, but not during active implementation (Palinkas et al., 2018). The present study found Inter-organizational Relationships are relevant in Exploration, Installation, and Initial Implementation, but less relevant during Full Implementation. While multiple methodological differences are apparent between this
The present study is unique within the integrated care field for its conceptualization of implementation stages as a general progression of innovation, rather than a series of discrete integrated care tasks to be completed. Rather than a checklist of activities, Integration Aid offers a method of assessing organizational barriers and facilitators that could inhibit or aid the completion of activities, untethered to a specific integrated care model. However, the results do appear specific to integrated care, or at least healthcare service, settings.

6.4 THE LIMITS OF TECHNICAL ASSISTANCE

Typical Technical Assistance

The present study found TA is highly relevant for one determinant: Observability. Observability is the ability to see outcomes as a result of the innovation (Scaccia et al., 2015), which includes data reporting, visibility, and effective use of outcome measurement (Scaccia, 2014). Firmly in the realm of evaluation, affecting Observability is clearly in the typical repertoire of TA providers. This finding is unsurprising, as reviews on typical TA provision found that evaluation activities such as auditing, feedback, and needs assessment are among the most commonly used strategies (Albers et al., 2021; Dunst et al., 2019).

On the surface, it seems logical that TA would also be less relevant for contextual factors like Climate, Innovativeness, Leadership, Resource Utilization, and Staff Capacity because these are broader organizational issues beyond the scope of a specific
care integration innovation. However, there is evidence that the social context of an organization – specifically culture and climate – can both be effectively improved via strategic intervention (Williams & Glisson, 2020). Similarly, leadership development itself is an entire research field (Day, 2000; Hernez-Broome & Hughes, 2004). This supports a Phase I participant’s suggestion that the study findings are limited to what TA providers typically do versus what they could do with systematic methods and strategy menus.

What do TA providers typically do? The “core elements” of TA span implementation stages and include preparation activities (e.g., needs assessment, visioning), planning (e.g., drafting goals, assessing fit, determining staff roles), implementation (e.g., training, consultation), evaluation (e.g., outcome, fidelity assessment), and sustainability (e.g., continuous quality improvement, ongoing support; Dunst et al., 2019). One literature review found that, of 25 identified “core” TA elements, only eight were regularly executed by TA providers and reported in the literature (Dunst et al., 2019). Similarly, another review of randomized controlled trials showed TA providers executed, on average, only 4.5 implementation strategies out of 37 options commonly available for TA providers (Albers et al., 2021). These reviews indicate that the provision of TA has not significantly changed since a 2015 review found that TA providers rarely use organized, systematic methods in practice (Katz, 2015).

Given the evidence described above, study results must be interpreted with caution. The finding on TA providers’ limitations likely reflects the paltry state of TA in practice, not the promise of what TA providers could do if they utilized systematic, proactive methods. This point will be revisited in the Implications section.
Developing the science of TA is complicated by the space TA occupies in implementation research: it is both a role and a process (Albers et al., 2021), alternately described as a capacity-building strategy in itself (Katz & Wandersman, 2016; Metz et al., 2021; Powell et al., 2015), a category of strategies (Waltz et al., 2015), and a method for selecting and tailoring strategies (Albers et al., 2021; Dunst et al., 2019). This presents a challenge for developing common definitions of implementation terms, as has been proposed (Lewis, Klasnja, et al., 2018).

**Selecting Implementation Strategies**

As noted above, study results may show the gap between TA provision’s potential and its reality. Or results may reveal the limitations of implementation support. Despite some authors describing TA as a strategy, the presence of a TA provider alone is not a strategy. Rather, TA powers the engine of implementation by selecting and tailoring other strategies.

Ensuring successful TA means ensuring the providers can effectively select the right strategies at the right time. The matching of determinants to strategies is a critical step to advance implementation science (Leeman et al., 2017; Lewis, Klasnja, et al., 2018; Powell et al., 2015; Powell et al., 2019; Williams, 2016; Williams & Glisson, 2020) and TA research (Metz et al., 2020). Some efforts have been made in this direction (Livet et al., 2020; Vax et al., 2021), however it is likely that the efficacy of strategies will vary by context (Metz et al., 2021).

A systematic review found that tailored intervention strategies are more effective at improving implementation outcomes compared to non-tailored strategies (Baker et al., 2015). The same review found little evidence on *how* to select appropriate strategies for
specific determinants. Proposed rigorous methods fall into roughly two categories: qualitative interviews with stakeholders (e.g., Motamedi et al., 2021; Vax et al., 2021) and participatory methods. Participatory methods include either soliciting then rating stakeholder ideas (e.g., Stewart et al., 2020; Williams et al., 2021) or constructing systems models such as through concept mapping or ground model building (Powell et al., 2017). A third published method of strategizing – selection via expert knowledge of research literature – has been described in only vague terms and usually as part of an overarching evaluation and implementation process (e.g., Domlyn et al., 2021; Fernandez et al., 2019). This third method is part of typical TA practice and was included within the strategizing step of Integration Aid. Feedback from the potential audience of Integration Aid revealed few concerns about the tool’s ease of use or potential utility in practice. Additionally, TA providers highly rated their ability and motivation to use this tool. Yet, for implementation scientists, a vague notion of “expert knowledge” for strategy selection lacks rigor (Albers et al., 2021).

The practical issue is that more rigorous methods of strategy selection are labor intensive, for example relying on significant time from clinicians to participate in multi-phased tournaments (Stewart et al., 2020) or expert researchers to calculate hierarchical estimates (Williams et al., 2021) or facilitate concept mapping (Powell et al., 2017) or analyze transcripts (Vax et al., 2021). TA providers may be able to bridge this gap. With the push to develop support system capacity (Albers et al., 2021; Kenworthy et al., 2021; Metz et al., 2020), TA providers could instead be trained to undertake strategy selection. However, it is unclear how TA providers could implement these labor-intensive methods of strategy selection without substantial funding and/or strain on organizational staff. TA
providers may also be hesitant to push against the status quo, preferring to select methods that do not challenge existing system structures (Albers et al., 2021). Understanding the role of implementation support for strategy selection requires future development on the science and practice of TA. To answer these questions, Albers and colleagues (2021) posed three research questions: (1) What rationale do TA providers use when selecting strategies, (2) How does strategy use vary by role, for example when TA providers are internal versus external to the organization, and (3) What factors account for failed supports strategies? Answering these questions is challenging due to the breadth of roles TA providers occupy yet is necessary to further understand the science of TA and strategy selection.

6.5 IMPLICATIONS AND FUTURE DIRECTIONS

Translating Implementation Science to Integrated Care

In describing the complexities of integrated care, Goodwin (2019) makes the point that evaluations of what works for improving integrated care espouse “the usual suspects”: teamwork, effective leadership, culture, and context; but no studies offer solutions to solve deficits in these areas. Further, Goodwin (2019) argues that despite these barriers being nested firmly in the purview of implementation science techniques from implementation science are underappreciated in integrated care. This echoes a similar sentiment made four years prior by Katzelnick and Williams (2015). There is evidence they are correct: there are very few published examples applying implementation science frameworks in integrated care. An exception are projects using implementation science frameworks to understand capacity barriers for integration (Beehler et al., 2013; Domlyn et al., 2020; Goldman et al., 2020; Padwa et al., 2016;
Ramanuj, Talley, Breslau, Wang, & Pincus, 2018; Scott et al., 2017); however, only one of these projects used the framework as an implementation tool, the others applied frameworks as either evaluation or to guide data analysis. Another exception is three reports on the same project integrating a family program into pediatric care (Polaha, Schetzina, Baker, & Morelin, 2018; Smith et al., 2018; Smith & Polaha, 2017), which did use an implementation framework to guide the process.

Implementation science is underutilized in integrated care but could benefit practices’ implementation and quality improvement. Integrated care initiatives are complex and demanding and require reflexive inquiry to understand the dynamic processes affecting organizational outcomes when integrating care (Goodwin, 2019). Implementation science offers the perspective improvement is non-linear and requires continuous improvement (Goodwin et al., 2019; Smith & Polaha, 2017). The field recognizes that contexts change over time and there is a need for formative evaluation and an appreciation for the contextual, structural, and motivational barriers that affect progress. These ideas are supported by the few authors who have applied implementation science frameworks to integrated care (Padwa et al., 2016; Ramanuj et al., 2018; Smith & Polaha, 2017).

This dissertation contributes to bridging these fields. After translating implementation science frameworks into integrated care (Phase I), an integrated care support tool was created (Phase II) to assess the intangible facets of motivation and capacity – the “usual suspects” (Goodwin, 2019) – otherwise neglected by existing integration tools. The assessment of the tool further measured outcomes known in implementation science to affect success: acceptability and appropriateness (Proctor et
al., 2011). This dissertation also heeds the call for developing systematic TA methods in integrated care that are sensitive to organizational barriers (Gold et al., 2019; Serrano et al., 2018). Operationalizing the results into four stages of change, each hypothesized to operate differently by innovation, buttressed the creation of quality improvement worksheets and strategies in Integration Aid. Integration Aid is grounded in the evaluative and improvement cycles of AIF (Metz & Bartley, 2012) and the Readiness Building System (RBS; Domlyn et al., 2021; Wandersman Center, 2020) and leverages the content expertise of integrated care experts. The overall process described in Integration Aid begins to connect the fields of implementation science and integrated care.

**Implications for Funders**

The gap between what is possible for TA providers to do, and what they do in practice, should be of significant concern to TA providers and the organizations who hire them. TA is ubiquitous in integrated care; it is often cited as a critical support and facilitation strategy for effective care integration (Chaple et al., 2016; Chung et al., 2016; Jones & Ku, 2015; Post et al., 2010; Roderick et al., 2017; Roseman et al., 2013; Ritchie et al., 2020). Many organizations and consultants provide TA for care integration, such as the National Council for Behavioral Health, Integrated Care Strategists, the Collaborative Family Healthcare Association, Center of Excellence for Integrated Care, Concert Health, NSI Strategies, Primary Care Development Corporation, and the University of Washington AIMS Center. Yet the science of TA is underdeveloped (Dunst et al., 2019), and most TA providers operate independently, presenting challenges for assessing quality and best practices.
The cost of TA for integrating behavioral health and primary care is significant. One estimate reported that within 28 months, an external TA provider logged 263 hours for eight clinics, to the cost of over $250,000, while organizational staff devoted over 1000 hours (Ritchie et al., 2019). Although internal TA providers are not significantly cheaper (Ritchie et al., 2019) nor more effective (Chung et al., 2014), the perceived cost of external TA for integrating care is a barrier to organizational buy-in (West, Clapp, Averill, & Cates, 2012). Given the cost, funders must be sure that TA will be effective.

More intensive TA is associated with more positive organizational outcomes than less intensive TA (Dunst et al., 2019). However, intensive TA alone may not be sufficient for achieving outcomes. Adaptability and sensitivity to organizational barriers are critical factors affecting success of intensive TA in health centers (Gold et al., 2019). Additionally, fidelity to systematic TA practices is a predictor of positive implementation outcomes (Dunst et al., 2019), indicating that organizations would benefit most from structured, systematic TA. However, few TA providers use specific models or frameworks to inform their work (Katz & Wandersman, 2016).

Proactive TA, where providers anticipate organizational needs rather than reacting to concerns as they come up, is a promising strategy for providing strengths-based capacity building and implementation support (Olson et al., 2020; Ray et al., 2012; Wandersman et al., 2012). Prioritizing needs may additionally reduce the cost of TA provision (West et al., 2012). The RBS used in this dissertation is proposed as one method of proactive TA (Domlyn et al., 2021; Wandersman Center, 2020).

There is a cost/benefit trade-off to TA: in the short-term it is expensive and time-consuming, yet intensive and systematic implementation support is proven more effective
for achieving outcomes. The vast supply of training and TA resources in the United States indicates that healthcare organizations are already hiring TA practitioners, attending trainings, and seeking methods to integrate care with quality. Integration Aid, in combination with an integrated care model and guidebook, may prevent wasted resources by structuring a proactive TA process. Study results showed good acceptability and appropriateness by potential users, with TA providers particularly motivated to use the tool. The feasibility of using this tool is promising.

**Next Steps for Integration Aid**

Study results indicate Integration Aid is a promising approach for assisting organizations to integrate care. The best audience for Integration Aid is TA providers, who have content expertise, can select an appropriate integrated care model, and are able to advise and train organizational staff. However, this study identified areas where Integration Aid would benefit from additional research. Existing integrated care guides were developed in phases: creation, refinement, and validation (which were described previously). Integration Aid was created via a participatory study in Phase I, can be refined using feedback from content experts in Phase II, and should subsequently be validated via piloting in healthcare organizations.

For refinement, Integration Aid must demonstrate compatibility with existing integrated care models and guides and be translated into a user-friendly website. As previously stated, most integrated care guides and tools are technical in nature, delineating the logistical components of care such as service delivery, use of screening tools, and frequency of collaborative care meetings. Integration Aid fills a gap by providing a template to assess organizational staff capacity and motivation, select areas
for quality improvement, and enact strategies at the right times. While its generalizability is a strength – as a pragmatic supplement, hypothesized to be applicable across integrated care models – for future validation it will be necessary to pair Integration Aid with an established guidebook.

To select a compatible integrated care guide for Integration Aid, there are three important considerations: an evidence-based integrated care model, a rigorous approach for developing the guide, and evidence for the guide’s efficacy. Choosing a guide with demonstrated efficacy ensures that future study of Integration Aid measures the effect of the tool as a supplement rather than the effect of the original guide.

**Continuum-Based Framework.** One excellent option is the Continuum-Based Framework (Chung et al., 2016). It was developed to implement the Collaborative Care Model, an extensively studied model of integrated behavioral health and primary care that has strong evidence of its efficacy for improving both clinical outcomes and healthcare costs (Camacho et al., 2016; Camacho et al., 2018; Green et al., 2014; Katon et al., 1995; Katon et al., 1996; Unützer et al., 2002; Unützer et al., 2008; Unützer et al., 2012). However, the authors also incorporated principles from other evidence-based integrated care models (Fortney et al., 2013; Krahn et al., 2006). The model and accompanying guide were developed via a literature review, semi-structured stakeholder interviews (N=12), then revised using feedback from an advisory meeting (Chung et al., 2016). The model was then piloted with 11 primary care sites in New York State and evaluated using provider survey and interview data (Goldman et al., 2020). Results from this pilot application showed that over 12 months all sites implemented a behavioral health innovation, moved forward with at least critical component of care integration, and
found the framework to be a useful guide (Goldman et al., 2020). The authors also conclude that technical assistance provided a critical component for assisting these practices with integration.

**Synergy with Integration Aid.** The Continuum-Based Framework consists of eight components of primary care behavioral health integration: case finding, screening, and referral to care, multi-disciplinary teams used to provide care, ongoing care management, systematic quality improvement, decision support for measurement-based stepped care, self-management that is culturally adapted, information tracking and exchange among providers, and linkages with community/social services. The potential synergy with Integration Aid is in the seven steps described by the authors as a “Checklist for Implementing Behavioral Health Integration.” This checklist includes assembling a team for assessment, performing a self-assessment, performing an environmental scan for resources and facilitators, prioritizing domains for change, setting measurable and achievable goals, assessing existing and necessary resources for achieving integration goals, and determining attainability of goals (Chung et al. 2016). The only tool provided for conducting these seven steps is a self-assessment for the logistical components (e.g., “Does your site have a process for identification and referral to care for patients with BH issues?”). The remaining steps do not currently have tools to assist in their execution (per Chung et al., 2016). Integration Aid would provide a structure to assist the environmental scan of resources and facilitators, the prioritization of domains for change, and assessing attainability of goals. These areas are built into the Integration Aid stage-based determinant assessment worksheets, prioritization tool, and action plan template.
The conceptual grounding of the Continuum-Based Framework is also compatible with Integration Aid. The authors state that each healthcare practice will vary in its goals and there is no one idealized status of care integration for every organization (Chung et al., 2016). This respects the needs and structures of individual contexts. The framework is also driven by monthly TA sessions. Additionally, the study team investigating the Continuum-Based Framework mentioned an appreciation for the contextual and structural barriers that affect integration, and briefly recognized of the promise implementation science can offer integrated care (Ramanuj et al., 2018).

Refinement and Validation. The Continuum-Based Framework authors noted it is a “work in progress,” with specific needs to incentivize motivation for integration (Chung et al., 2016). The creators are actively developing and refining this guide (Goldman et al., 2020), indicating the potential that Integration Aid could be supplemental for future study. To effectively test Integration Aid with the Continuum-Based Framework, the next steps would be to identify experts in the latter framework, collaboratively conduct content comparisons, and determine a structure for embedding Integration Aid into the guide (or vice versa). Once these preliminary activities are complete, a trial could compare primary care behavioral health integration in healthcare clinics using solely the Continuum-Based Framework versus the Continuum-Based Framework plus Integration Aid.

6.6 STRENGTHS AND LIMITATIONS

Study Strengths

Several strengths of the present study are evident. Phase I executed a rigorous, participatory approach to collect data. While Delphi studies are commonly employed,
they differ drastically in their execution. A comprehensive literature review was conducted to ensure that methods utilized best practices for ensuring credibility, dependability, and confirmability. This was accomplished by (respectively) using a heterogenous sample representing different stakeholder roles, conducting iterative member checks through feedback rounds, and maintaining detailed records of the process for data collection and analysis. Additionally, participants reported finding the results valid. Not all Delphi studies are conducted using true participatory methods. Although such exploratory methods are non-linear, the Phase I results’ credibility is enhanced because participant voices and preferences were included in the study design, interpretation, and analytic choices. For example, the calculation of ICC values is not standard – though not uncommon – in Delphi studies, nor was it part of the original study plan. However, conducting this post-hoc analysis and investigating the inter-rater correlations answered participants’ questions on differences by role using existing data. The ICCs also verified there was good reliability among the participants.

Another strength is the use of systematic methodologies for the creation and translation of results. To create the final Phase I study results, participants requested additional metrics be considered beyond percent consensus. There are rarely guidelines published for interpreting descriptive statistics because they are, by definition, not meant to be inferential. However, descriptive statistics and visual data displays are the standard for interpreting Delphi studies. No papers were identified that described how to interpret the descriptive statistics in Delphi studies. Therefore, principles of fuzzy set theory – a branch of mathematics applied in qualitative comparative analysis (Ragin, 1999) – were used in combination with traditional qualitative coding methods. Interpreting the results
using conceptually sound logic and multiple coders ensured that the results were not based solely on the lead author’s subjective perception. This is not drastically different from the artistry of interpreting inferential statistics where statisticians sharply contest the standard practice of interpreting p-values and confidence intervals (Goodman, 2008; Halsey, Curran-Everett, Vowler, Drummond, 2015; Sainani, Lohse, Jones, & Vickers, 2019), even suggesting that null-hypothesis significance testing be replaced with visual interpretation of plotted data (Allen, Poggiali, Whitaker, Marshall, & Kievit, 2019; Ho, Tumkaya, Aryal, Choi, & Claridge-Chang, 2019).

Systematic methods were also employed for translating the Phase I results into Integration Aid. Rarely do researchers describe the process used for creating implementation playbooks or guidelines. Here, the dissertation author ensured the tool was based on a previously established process for implementation support and adhered to visualization best practices (within capacity limits) for ease and accessibility. For testing tool feasibility, a survey was drafted not solely to capture impressions of the tool, but perceptions impacting implementation outcomes for (eventually) applying the tool in practice.

Finally, the participant pools for both phases included a range of professionals. Multiple stakeholder groups were represented: mental health practitioners, medical practitioners, implementation support practitioners, healthcare administrators, and researchers. Additionally, participants hailed from locations around the United States and were employed in many different organization types. This enhances the potential generalizability of study results for different healthcare settings.
Study Limitations

Multiple study limitations are notable. First, in Phase I surveys the participants may have interpreted questions differently. This is a risk in all self-reported data collection methods. Their perceptions on each determinant could vary by personal experiences, potentially thinking of different organization types or sizes. Determinant definitions were brief and lacked examples; this choice was made to lessen the burden of answering 133 questions each round. Interpretation issues could be mitigated in future studies by requiring participants to provide examples justifying their ratings; comparisons could then be made on whether participants cited similar settings or issues in their examples. Another data collection limitation is that the determinants were presented as discrete constructs, when they are likely connected and interdependent. This choice was made to adhere to the foundational framework. Across the 95 relevancy results (Figure 3.1), 11 did not reach consensus (at one time point or for TA) for unclear reasons; this could be due to natural variability of the determinants’ importance by context, or methodological issues related to interpreting that determinant. Similarly, in an integrated care context, participants concluded the determinants Simplicity and Relative Advantage are confusing.

A conceptual limitation is that, despite the ubiquity of staged frameworks in implementation science, it is unclear whether measuring and adhering to implementation stages has pragmatic utility for improving implementation processes. The lack of evidence is not due to poor conceptual grounding, but because there are few studies that both apply implementation stages and measure the resultant outcomes in healthcare settings (Domlyn, 2021). To address this gap, use of implementation stages in practice
should be paired with measurement of stage transition (Chamberlain et al., 2011) and implementation outcomes (Proctor et al., 2011) to determine utility.

Finally, there may be bias in data collection and analysis. Looking at the distribution of survey scores for both phases, few people rated items on the low end of each Likert scale. For Phase I, the problem could also be the wording “unimportant” since every determinant is hypothesized to be interconnected and important in some way. This could also be due to sample self-selection bias in both phases. Participants who agreed to participate may already feel the frameworks, research questions, or tool are worth consideration. In analysis, there was only one coder for transcripts and written comments, which presents a reliability issue. This was mitigated by using theory-driven codes derived from published definitions of each framework and concept used for this study, and recruiting one additional coder for creating final Phase I results, but these efforts do not wholly preclude biases in coding and interpretation.

6.7 CONCLUSION

Integrating behavioral health and primary care is critical for achieving public health goals for the 21st century, ensuring people obtain necessary mental health interventions, and maximizing service outcomes. To aid care integration, the information gleaned from this dissertation can inform evaluation activities, coaching strategies, and/or measure development. The purpose of this work is to move the needle on creating practical tools for helping organizations to integrate behavioral health and primary care quickly and efficiently. Understanding when each area of motivation and capacity is most important for successful integration, and whether it can be improved via external
assistance, informs next steps for strategically integrate behavioral health and primary care.
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### Table A.1 Data collection overview

<table>
<thead>
<tr>
<th>Phase</th>
<th>Component</th>
<th>Data collected</th>
<th>Type</th>
<th>Timing</th>
<th>N</th>
<th>Dates Collected</th>
<th>Purpose</th>
</tr>
</thead>
</table>
| 1     | Round 1 of Delphi study | Semi-structured interviews, 1 hour each, by phone | Qual | ---    | 10   | August 8-24, 2018 | 1) Obtain background and eligibility information  
2) Panelists share initial opinions on research questions  
3) Panelists select appropriate stage framework |
| 1     | Round 2 of Delphi study | Online survey 38 comment boxes, 95 Likert items (7-pt) | QUAL + quan | Concurrent | 9   | September 25-October 10, 2018 | 1) Panelists weigh others' perspectives  
2) Panelists share additional perspectives on research questions  
3) Panelists make initial rankings |
<p>| | | | | | | |</p>
<table>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Round 3 of Delphi study</td>
<td>Online survey 95 Likert items (7-pt), 38 comment boxes</td>
<td>QUAN + qual</td>
<td>Concurrent</td>
<td>8</td>
<td>October 30-November 28, 2018</td>
</tr>
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<td></td>
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</tr>
<tr>
<td>1</td>
<td>Debrief of Delphi study</td>
<td>Semi-structured interviews, 1 hour each, by Zoom</td>
<td>Qual</td>
<td>---</td>
<td>8 (in 3 parts)</td>
<td>December 12-18, 2018</td>
</tr>
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<td></td>
</tr>
<tr>
<td>1</td>
<td>Process evaluation of Delphi study</td>
<td>Post-study online survey (optional), 7 Likert items (5-pt), 1 comment box</td>
<td>QUAN + qual</td>
<td>Concurrent</td>
<td>6</td>
<td>December 17-27, 2018</td>
</tr>
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<tr>
<td>2</td>
<td>Integration Aid survey</td>
<td>Online survey, 35 Likert items (5-pt), 5 comment boxes, demographics</td>
<td>QUAN + qual</td>
<td>Concurrent</td>
<td>33</td>
<td>February 9-March 16, 2021</td>
</tr>
</tbody>
</table>

1) Panelists weigh others' perspectives
2) Panelists share additional perspectives on research questions
3) Panelists make final rankings

1) Panelists view preliminary results on research questions
2) Panelists discuss reactions to process and results
3) Panelists generate ideas for implications and next steps

1) Additional form of member checks
2) Panelists share anonymous perspective on study process
3) Assess perceived acceptability of Integration Aid
4) Assess perceived appropriateness of Integration Aid
5) Gather ideas for quality improvement
### DATA ANALYSIS OVERVIEW

**Table A.2 Data analysis overview**

<table>
<thead>
<tr>
<th>Phase</th>
<th>Analysis</th>
<th>Purpose</th>
<th>Data</th>
<th>Method</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Process analysis: Round 1</td>
<td>Generate Round 2 questions</td>
<td>QUAL (Round 1 transcripts)</td>
<td>1) Deductive concept coding of transcripts  2) Representative phrases extracted by determinant</td>
<td>Deductive coding should be used in Delphi studies (Fletcher &amp; Marchildon, 2014); Conceptual frameworks are appropriate structures for implementation research (Hamilton &amp; Finley, 2019); Round 1 should group similar items together (Hasson et al., 2000)</td>
</tr>
<tr>
<td>1</td>
<td>Process analysis: Round 2</td>
<td>Compile perspectives to share in Round 3</td>
<td>QUAL (Round 2 comments)</td>
<td>1) Deductive concept coding of comments  2) Representative phrases extracted by determinant and stage</td>
<td>Delphi panelist opinions are shared with other panelists (Hasson et al., 2000); Paraphrasing ensures panelist identities kept hidden from each other (Fletcher &amp; Marchildon, 2014); Avoid quantifying panelist opinions (Bolger &amp; Wright, 2011)</td>
</tr>
<tr>
<td>1</td>
<td>Process analysis: Round 3</td>
<td>Generate preliminary findings to share in debrief</td>
<td>QUAN (Round 3 Likert-scale items)</td>
<td>1) Quantify each item by ratings of 6 (important/helpful) or 7 (very important/very helpful) on 7-pt Likert scale  2) Translate results into table for sharing with participants  3) Indicate consensus strength by range of percent agreement</td>
<td>Percent agreement is the most common metric for analyzing consensus in Delphi results (Diamond et al., 2014); There is no cutoff indicator for consensus strength (Hasson et al., 2000; von der Gracht, 2012); Percent consistency can be displayed as a gradient (Attieh et al., 2014); Participants should be invited to interpret results (Fletcher &amp; Marchildon, 2014)</td>
</tr>
</tbody>
</table>
| 1 | Initial analysis: Validity (credibility & transferability) | Assess credibility of process and transferability of results | QUAL (debrief transcripts) -> quan (process survey) | 1) Deductive concept coding of transcripts  
2) Organize into matrix by participant and first-cycle codes  
3) Pattern coding to collapse first cycle codes into themes for validity-related perceptions  
4) Calculate descriptive statistics on validity-related items, match to themes |
|---|---|---|---|---|
| 1 | Initial analysis: Implications | Understand potential impact of research, from panelist perspective | QUAL (debrief transcripts) | 1) Deductive concept coding of transcripts  
2) Organize into matrix by participant and first-cycle codes  
3) Pattern coding to interpret themes in study implications |
| 1 | Initial analysis: Additional questions | Determine next steps for post-hoc exploratory analyses | QUAL (debrief transcripts) | 1) Deductive concept coding of transcripts  
2) Organize into matrix by participant and first-cycle codes  
3) Pattern coding to interpret themes in additional questions and future work  
4) Select questions for post-hoc analyses (by whether |

Participants in Delphi studies should be partners in interpreting results and generating next steps (Fletcher & Marchildon, 2014; Kezar & Maxey, 2016); Conceptual frameworks are appropriate structures for implementation research (Hamilton & Finley, 2019); the Framework Method can be used for coding and interpreting transcriptions (Gale et al., 2013); pattern coding aids interpretation during second cycle coding (Miles et al., 2020). Functionally, quantitative data can be converged/triangulated with qualitative data to assess findings’ strength (Creswell et al., 2011; Palinkas et al., 2011).
| 1 | **Exploratory analysis 1** | Investigate if Delphi study ratings varied by role | 1) Calculate two-way random absolute agreement ICC, reported by the average measures unit  
2) Inspect inter-rater correlations by panelist  
3) Extract stated experience by role from interview transcripts  
4) Plot panelist correlations (high-low) in a matrix with stated role  
5) Visually inspect for patterns in weak agreement by role  

This analysis *expanded* upon questions raised in initial analysis; ICCs show inter-rater reliability and will indicate if a rater is an outlier that would increase the alpha (Hallgren, 2012); ICCs are supplemental for assessing magnitude of agreement in Delphi studies (Ferri et al., 2005; Lau et al., 2016; Trevelyan & Robinson, 2015); Cohen's and Fleiss' Kappas cannot be used with this data (Hallgren, 2012); Two-way ICC is appropriate because this study was a “fully crossed” design, where the same participants rated all items (Hallgren, 2012); Average measures ICC is best when goal is to create an average agreement (as opposed to single measures ICC, where subjects are compared to a single coder; Hallgren, 2012; Koo & Li, 2016); Inter-rater correlations less than .15 indicate poor agreement (Glen, 2018); Plotting pairs in a contrast table is appropriate for investigation (Baer et al., 2004; O'Shea & Grafton, 2013); Qualitative data serves a function of *complementarity* to quantitative data to *elaborate* the findings (Creswell et al., 2011; Palinkas et al., 2011) |
<table>
<thead>
<tr>
<th></th>
<th>Exploratory analysis 2</th>
<th>QUAN (Round 3 Likert-scale items)</th>
<th></th>
</tr>
</thead>
</table>
| 1 | Exploratory analysis 2 | QUAN (Round 3 Likert-scale items) | 1) For each item: calculate descriptive statistics (median, range), percent agreement, and display frequency distribution (histogram)  
2) Statistics and frequencies plotted in five matrices (stages and TA), determinants are rows  
3) Four relevancy categories were defined using fuzzy set theory: highly relevant, relevant, less relevant, variable relevancy  
4) Two coders independently applied relevancy category labels to each (blinded) item  
4) Two coders reconciled discrepancies between labels to create final study results |
|   | Translation of Phase I results | Results table from Exploratory analysis 2 |   |
| 2 | Translation of Phase I results | Results table from Exploratory analysis 2 | 1) Identify evidence-informed implementation support framework(s)  
2) Adapt existing framework materials (worksheets, assessments) into integrated care versions, informed by final study results  
3) Stylize materials using visualization best practices into final tool (Integration Aid)  
This analysis *expanded* upon questions raised in initial analysis; Descriptive statistics and graphical displays of data are appropriate for Delphi studies (Trevelyan & Robinson, 2015); Levels of dispersion (IQR, SD) are not appropriate for ordinal data (Hasson et al., 2000; Trevelyan & Robinson, 2015; Sullivan & Artino, 2013); Variability (e.g., range), median, and frequency distributions are alternative options for ordinal data; Type 2 fuzzy set theory defines categories where data have relative degrees of membership within the category, which recognizes ranges or uncertainties within the classification scheme (Zimmerman, 2001) |
|   | Not analytic; included here to illustrate procedure connecting phases |   |   |
| 2 | Translation of Phase I results into a tool | Results table from Exploratory analysis 2 |   |
|   | Not analytic; included here to illustrate procedure connecting phases | Results table from Exploratory analysis 2 |   |
| 2 | Translation of Phase I results into a tool | Results table from Exploratory analysis 2 |   |
|   | Not analytic; included here to illustrate procedure connecting phases | Results table from Exploratory analysis 2 |   |
| 2 | Integration Aid perceptions | Assess perceived acceptability and appropriateness of tool for practical application | QUAN + qual (Integration Aid survey) | 1) Likert-scale items: Calculate descriptive statistics (median, mode, range) for each survey item 2) Group quantitative survey items by construct: appropriateness (5), acceptability (6), quality improvement (23) 3) Organize written responses into a matrix display by item and participant 4) First cycle coding reviewed responses, summarized comments, and inductively generated 31 initial concept codes 5) Second cycle used pattern coding Appropriateness (Yetter, 2010) and acceptability (Paiva et al., 2014) demonstrate an innovation's perceived fit/feasibility and palatability, respectively; each affect whether the innovation would be used in practice (Proctor et al., 2011); Median, mode, and range are most appropriate for ordinal Likert scale data (Hasson et al., 2000; Trevelyan & Robinson, 2015; Sullivan & Artino, 2013); the Framework Method can be used for coding and interpreting transcriptions (Gale et al., 2013); pattern coding aids interpretation during second cycle coding (Miles et al., 2020); Qualitative data serves a function of complementarity to quantitative data to...
|                  |                  | coding to condense initial codes into three parent themes | elaborate the findings (Creswell et al., 2011; Palinkas et al., 2011) |
APPENDIX B. PHASE I

DELPHI METHOD LITERATURE REVIEW

A literature review was conducted by this author to ensure a rigorous study process informed by best practices. Consultation phone calls were also held with researchers familiar with the method. Ensuring rigor with the Delphi method involves four metrics: credibility, dependability, confirmability, and transferability. These were briefly described in the Methods section but will be fully described here to illustrate choices made in the study design.

Credibility is roughly congruent to internal validity and refers to the perceived believability of the results (Hasson & Keeney, 2011). Achieving credibility requires the process to be iterative, with feedback given to participants in multiple rounds, similar to qualitative member checks (Engles & Kennedy, 2007). The Delphi method is conducted through repeated inquiry, then each participant’s anonymized response is fed back to the group. Participants weigh others participants’ opinions when deciding whether to revise their own response for the subsequent round. Best practice suggests the number of rounds should be determined a priori, with two-to-three rounds sufficient for saturation (Trevelyan & Robinson, 2015). Traditional Delphi methods initiate data collection with open-ended prompts, either via interview or written responses (Hasson, Keeney, & McKenna, 2000). This allows for unbiased opinions to be expressed and informs the design of the latter two rounds, which each use a structured questionnaire with Likert-
scale response options (Trevelyan & Robinson, 2015). However, some methodologists suggest a modified Delphi technique – where a structured interview or questionnaire may be used in the first round – is appropriate when seeking additional information about a topic that has already amassed a body of knowledge (Watkins et al., 2013). Subsequent rounds synthesize the data and present participants with results from the previous round. Participants are presented the same questions in each subsequent round with an invitation to revise their response or keep their previous response; they are then asked to provide rationale for their selection (Rowe & Wright, 2011). There is debate in the literature on whether participants’ opinions should be shared with the group as quantified data (e.g. “63% of participants agreed with this item”) in each round (Hasson, Keeney, & McKenna, 2000), versus sharing solely qualitative summaries (e.g., “Here is the written rationale from participants who agreed with this item…”; Bolger & Wright, 2011; Rowe & Wright, 2011). While the former method is effective at gaining consensus, it also risks pushing the group towards a false agreement.

**Dependability** is similar to reliability in quantitative research; it refers to the stability of the data collected (Hasson & Keeney, 2011). Ensuring dependability in the Delphi method requires including a heterogenous sample of experts as participants (Cornick, 2006). Participants selected to participate should have diverse perspectives on the topic but be viewed as equal status (Bolger & Wright, 2011; Powell, 2003; Trevelyan & Robinson, 2015). This is based on the notion that those with lived experience of the problem or setting (e.g. behavioral health practitioners) are no more or less expert than those with broad theoretical knowledge in the topic (e.g. researchers). One study on the utility of diversity in Delphi participants found that “non-expert” opinion is less stable
but no less accurate than “expert” opinion (Hussler, Muller, Ronde, 2011). In healthcare studies this means incorporating people across levels of the system (Fletcher & Marchildon, 2014). Random sampling is not desirable here, as there must be assurance that participants are knowledgeable on the topic (Hasson, Keeney, & McKenna, 2000), are motivated to make a meaningful contribution (Landeta, 2006), and can effectively represent different viewpoints on the topic (Bolger & Wright, 2011). When choosing participants, naturalistic, purposive, and snowball sampling are all appropriate for qualitative methods (Brodsky, Buckingham, Scheibler, & Mannarini, 2016). The use of snowball sampling – where key informants nominate others – is helpful in a Delphi study because this enhances the chances that participants have the time, willingness, and expertise to participate (Brady, 2016; Oostendorp, Durand, Lloyd, & Elwyn, 2015). If using self-assessment of expertise, only those with deep knowledge or very deep knowledge should be included in the study process (Hussler, Muller, & Ronde, 2011). The suggested number of participants in a Delphi study varies by purpose, but is generally 8 to 15 respondents (Trevelyan & Robinson, 2015). Because the participant group moves through the process collectively, weighing each other’s responses in each round, it is best practice to retain participants’ opinions even if they drop out (Hasson, Keeney, & McKenna, 2000). Limiting attrition is critical, and there are several recommended practices to ensure people complete the study. One recommended practice is to provide full and clear information about participation and be transparent about the aims and process (Hasson, Keeney, & McKenna, 2000). This can be accomplished by conducting a presentation of the study’s importance to increase motivation of participants (Landeta, 2006). Another recommended practice is to help participants feel like they are
partners in the study and have a say in its design and outcomes (Trevelyan & Robinson, 2015). Quick turnaround of each round (e.g. no longer than two weeks) is also helpful to maintain interest (Trevelyan & Robinson, 2015). Finally, incentives – either financial or social – may increase motivation to contribute (Bolger & Wright, 2011; Rowe & Wright, 2011; Toma & Picioreanu, 2016).

**Confirmability** implies neutrality, or the ideal of objectivity in the research process and results (Hasson & Keeney, 2011). To maintain confirmability, best practices propose that researchers maintain detailed records of the Delphi study process, including data collection and analysis (Powell, 2003). Data collection was described above in the section on credibility. It involves using iterative rounds, first with a semi-structured interview then with structured questionnaires. There is also the matter of assessing participant responses. The qualitative data collected in Round 1 should be used to inform the quantitative structure of Rounds 2 and 3 (Hasson, Keeney, & McKenna, 2000; Toma & Picioreanu, 2016). Some pre-existing information may be provided to participants in the first round where relevant knowledge already exists (Attieh et al., 2014; Watkins et al., 2013). For subsequent structured rounds, a 7-point Likert scale is the most appropriate method for assessing responses, presented in a horizontal layout with ascending options without numerical anchors (Toma & Picioreanu, 2016). Analysis of Delphi study data generally includes a metric of group consensus. There is little agreement on how to determine consensus (Hasson, Keeney, & McKenna, 2000; von der Gracht, 2012), but it is best to establish the criteria prior to beginning the study (Diamond et al., 2014). For Round 1, qualitative content analysis is used to group similar items together (Hasson, Keeney, & McKenna, 2000) to present back to participants in later
rounds. For the survey rounds, percent agreement is the most common method with
degree of consensus ranging from 51% to 80% participant agreement; 75% is the median
cutoff (Diamond, 2014). Other researchers have used gradients of agreement, such as
“strong consensus” being ≥75% or “moderate” being 60-74% (Attieh et al., 2014;
Domlyn & Wandersman, 2019). Others have argued that no percentage of agreement is
appropriate and the study should analyze stability of responses across rounds (Crisp,
Pelletier, Duffield, Adams, & Nagy, 1997), but this is argued to reflect internal reliability
rather than consensus (Trevelyan & Robinson, 2015). Regardless of the method of
analysis, a detailed and transparent account of the process from recruitment to analysis
aids in achieving confirmability of the study.

**Transferability** refers to the generalizability (like external validity) of results to
other settings or scenarios (Hasson & Keeney, 2011). This is ensured by verifying Delphi
process results through independent means (Kennedy, 2004), such as repeating the
process with another pool of participants or collecting data on the same research
questions using a different method. Using a diverse sample of participants to represent
different viewpoints on the topic is another way to maximize generalizability
(Oostendorp et al., 2015). For healthcare studies, this connotes including practitioners
across different settings as well as researchers from different institutions (Fletcher &
Marchildon, 2014; Oostendorp et al., 2015)
DELPHI STUDY INTERVIEW PROTOCOL

Round 1 Script

Introduction (5 min)

Thank you for being willing to speak with me! This interview serves as the first round of the Delphi process, and will take about an hour. As a reminder, this study aims to understand when different areas of capacity and motivation are most important for successfully integrating behavioral health and primary care within a clinic. This interview is mostly just an introduction to the study and a broad overview.

On this call, I’d like to learn more about your experience. Then we’ll take a moment to review the materials I sent out. I’ll have some questions for you to answer based on your experience. Finally I’ll touch on what you can expect for next steps.

I sent along additional information about the study. It doesn’t require written consent to participate, but I want to make sure I take a moment to answer any questions and ensure I have your verbal consent. Please note you’re welcome to withdraw from this process at any time.

Information about the expert (15 min)

First, I’m curious to learn a bit more about you.

• What is your current organization?
• What is your current position within this organization?
• Details on experience
  o What is your experience implementing organizational changes in healthcare clinics?
    ▪ How would you rate your level of experience: none, minimal, adequate, or extensive?
  o What is your experience helping healthcare clinics to implement organizational changes, such as providing funding or technical assistance?
    ▪ How would you rate your level of experience: none, minimal, adequate, or extensive?
  o What is your experience in implementation science? Integrated care or working with FQHCs?
    ▪ How would you rate your level of experience: none, minimal, adequate, or extensive?
  o NOTE: If any rate themselves as “none” on all three criteria, they will be thanked for their time and notified that they are ineligible for the study.

General Readiness Questions (10 min)
What do you see as the role of readiness for integrating care? Do you have any stories from your own experience that illustrates the importance of readiness?

Let’s take a moment to review the motivation and capacity framework. How knowledgeable are you of readiness as a concept? Motivations and capacities?

Are you familiar with this framework?

**Overview of R=MC² framework (5 min)**

A comprehensive literature review was undertaken to identify all the elements that affect an organization’s ability to implement anything new. The review came up with 18 subcomponents, grouped into three main categories. These categories show that one element important for successful implementation is general capacity, or how the organization is functioning overall. Then there are two categories that are specific to whatever the “it” is (the innovation) that’s being implemented; those include the capacities needed for that specific innovation, and the motivation to do so. Each of these three main components is broken down into subcomponents, and you see the definition there.

Certainly, many of these overlap and aren’t as discrete as shown here, but it’s a rough framework.

There are a few things we don’t know about this framework. Primarily, are all these subcomponents important all the time? I suspect that some may be, but some might be important only during certain stages of implementation. Also, can any of these be changed via additional resources? This would help to determine whether to target certain areas of motivation or capacity for the sake of integrating care more quickly.

The aim of this study is to understand when each area of motivation and capacity is most critical for integrating care, and whether they can be built up by additional resources like technical assistance.

Any questions on this?

**General Implementation stages questions (5 min)**

What do you see as the relevance or utility of breaking down integrated care into stages? How familiar are you with NIRN implementation stages? What about SAMSHA’s six levels of collaboration and integration?

**Overview of implementation stages (5 min)**

Let’s take a moment to review the idea of implementation stages. The four NIRN stages represent the process for implementing any innovation. These look different in each setting, but it gives a rough breakdown of some key elements that
indicate the progress towards successful implementation. To quickly overview, let’s review the stages at the top of the page on the one-pager sent.

Below this is SAMSHA’s six levels of collaboration and integration. It is hypothesized that to achieve each level of integrated care, an organization would need to move through all four stages of implementation (Exploration, Installation, Initial Implementation, and Full Implementation).

Any questions on this?

Overview question (10 min)

Do these stages of integrated care make sense, based on your experience?

How do you think these different areas of readiness could be relevant across stages of implementation? Looking at the different stages, how do you think General Capacity, Motivation, and Innovation-specific Capacity could operate differently over time?

Wrap Up (5 min)

Thank you for talking with me! We still have several interviews to get through, then I’ll be collecting all the information to create a survey round with comments to be sent out next month. The survey will require familiarity with the readiness framework and stages of implementation, but I’ll send those out again.

Any questions before we hang up?
DELPHI STUDY SURVEY QUESTIONS

Introduction

Thanks for participating in this integrated care Delphi process. This survey is Round 2. Results will be shared with everyone after Round 3 is completed (early December).

The purpose of this survey is to find out which factors affecting an organization's motivation and capacity are most important for integrating behavioral health and primary care. The Delphi Method uses panelists' opinions and experience to answer these questions. It requires multiple surveys where respondents are given the option to revise their answers (or not) based on how other panelists responded to the items. This method ensures each respondent may remain anonymous and are free of social pressure from other respondents to change their answer.

Round 2 asks you to consider each subcomponent of the R=MC² framework. Select when each subcomponent is most important for successfully integrating behavioral health and primary care. Then select how easily this subcomponent can be improved. Use the comments box to provide your justification. These comments will be aggregated and included in Round 3 so that other panelists can understand your rationale.

Some participant comments from Round 1 (the phone interviews) are included for your consideration. These comments are not exact transcriptions; they are paraphrased and selected to show a variety of opinions.

How do we operationalize “when” these areas are important?
Given several possible options for how to determine when different areas of capacity and motivation are important for integrating care, panelists overall preferred the National Implementation Research Network (NIRN) four stages of implementation. These stages are applicable to any innovation or setting. Learn more about them here.

Questions

Part I: Motivation

“Motivation” refers to the degree to which an organization wants to integrate behavioral health and primary care. This has six subcomponents: Relative Advantage, Compatibility, Simplicity, Ability to Pilot, Observability and Priority.

ITEM 1 – RELATIVE ADVANTAGE
“Relative Advantage” refers to whether integrated behavioral health and primary care seems better than the organization’s current practices.

Panelists have made these comments about Relative Advantage:
Relative Advantage is important during **Exploration**. It's an attitude – Relative Advantage of innovative care as better. It, and Compatibility, affect the perceived Simplicity that integrated care is straightforward.

Maintaining agreement on relative advantage, while moving through all the stages, that this is better than what they're currently doing could help with fatigue. It’s an “eye on the prize” focus and could be a guiding principle for the other ones.

The Relative Advantage is most important part of Motivation. Clinicians need to understand the Relative Advantage of integrated care for their patients. Once the medical director and nurses all see the advantage, that’s when they’ll be ready.

**Relative Advantage is less important than Priority.**

How important is the perceived Relative Advantage of integrated care during the **Exploration** stage? This stage happens before implementing a change. It involves identifying needs, deciding whether to adopt a change, developing implementation plans, and preparing supports.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

How important is the perceived Relative Advantage of integrated care during the **Installation** stage? This stage includes preparing infrastructure and supports, trying out practices, working out details, and communicating expectations.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

How important is the perceived Relative Advantage of integrated care during the **Initial Implementation** stage? This stage includes putting systems into place for coaching, data measurement and reports, as well as revising implementation plans. This is when the first implementation activities take place.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

How important is the perceived Relative Advantage of integrated care during the **Full Implementation** stage? During this stage, the practice becomes fully operational, stakeholders have adapted to the new processes, data is used to make decisions, and outcomes start to be seen.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

What is the rationale for your choice of implementation stage(s)? [optional]

How helpful would additional technical assistance or other support be to improve the perceived relative advantage of integrated care?
1 = Very Unhelpful, 2 = Unhelpful, 3 = Less Helpful, 4 = Neither Helpful nor Unhelpful, 5 = Somewhat Helpful, 6 = Helpful, 7 = Very Helpful
What is the rationale for your choice about support(s)? [optional]

**Figure B.1 Survey 2 screenshot (part 1)**

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**PART I: Motivation**

“Motivation” refers to the degree to which an organization wants to integrate behavioral health and primary care. This has six subcomponents: Relative Advantage, Compatibility, Simplicity, Ability to Pilot, Observability and Priority.

**ITEM 1 - RELATIVE ADVANTAGE**

“Relative Advantage” refers to whether integrated behavioral health and primary care seems better than the organization's current practices.

*Panelists have made these comments about Relative Advantage:*

*Relative Advantage is important during Exploration. It's an attitude – Relative Advantage of innovative care as better. It, and Compatibility, affect the perceived Simplicity that integrated care is straightforward.*

*Maintaining agreement on Relative Advantage, while moving through all the stages, that this is better than what they're currently doing could help with fatigue. It's an “eye on the prize” focus and could be a guiding principle for the other ones.*

*The Relative Advantage is most important part of Motivation. Clinicians need to understand the relative advantage of integrated care for their patients. Once the medical director and nurses all see the advantage, that's when they'll be ready.*

*Relative Advantage is less important than Priority.*

* 2. How important is the Relative Advantage of integrated care during the Exploration stage? This stage happens before implementing a change. It involves identifying needs, deciding whether to adopt a change, developing implementation plans, and preparing supports.*

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**ITEM 2 – COMPATIBILITY**

“Compatibility” refers to whether integrated behavioral health and primary care fits with how the organization operates.
Panelists have made these comments about this subcomponent:

Compatibility is most important during **Exploration**. Compatibility is also an attitude, affecting perception of how difficult it is to integrate care. If the attitude is that it’s better – that it fits, its easy – then we’re more likely to do it. Perceived Compatibility is affected by the Champion’s abilities, and from Leadership setting a Culture that allows change.

Compatibility is most important during **Exploration** because that’s when you’re looking at fit.

There’s something about “fit” that makes sense for both the **Installation and Initial Implementation** stages.

Compatibility makes the most sense during **Installation or Initial Implementation**. And for Initial Implementation, having those systems in place are relevant for the Culture and that we think that could be compatible with the Culture.

For an individual practice, Compatibility is really important compared to a large health system.

Compatibility is relative. Integrated care doesn’t look the same everywhere. For example, in a rural setting full integration may not be appropriate because a practice might not be able to treat family or friends if they’re the only clinic in the area and it’s completely integrated.

How important is the perceived compatibility of integrated care during the **Exploration** stage? This stage happens before implementing a change. It involves identifying needs, deciding whether to adopt a change, developing implementation plans, and preparing supports.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

How important is the perceived compatibility of integrated care during the **Installation** stage? This stage includes preparing infrastructure and supports, trying out practices, working out details, and communicating expectations.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

How important is the perceived compatibility of integrated care during the **Initial Implementation** stage? This stage includes putting systems into place for coaching, data measurement and reports, as well as revising implementation plans. This is when the first implementation activities take place.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important
How important is the perceived compatibility of integrated care during the **Full Implementation** stage? During this stage, the practice becomes fully operational, stakeholders have adapted to the new processes, data is used to make decisions, and outcomes start to be seen.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

What is the rationale for your choice? [optional]

How helpful would additional technical assistance or other support be to improve the perceived compatibility of integrated care?

1 = not helpful, 7 = very helpful

What is the rationale for your choice? [optional]

**ITEM 3 – SIMPLICITY**

“Simplicity” refers to how simple it seems to integrate behavioral health and primary care.

Panelists have made these comments about this subcomponent:

*No medical system who is trying to remain successful will integrate if they don't see how to do it; so Simplicity comes into play during Exploration. It's motivating because you need to make sure integrating care gets through the primary stages.*

*Working with an EHR that’s complicated makes integrating care more difficult. This is part of Simplicity.*

*Perceived Simplicity could help bring people back to the Relative Advantage as a motivator to work through it. That Relative Advantage could help them work through other areas.*

"Simplicity" is jarring, because integrating care is not simple and understanding that is important. It doesn’t make sense to make it more simple, because it’s not simple.

How important is the perceived Simplicity of integrated care during the **Exploration** stage? This stage happens before implementing a change. It involves identifying needs, deciding whether to adopt a change, developing implementation plans, and preparing supports.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

How important is the perceived Simplicity of integrated care during the **Installation** stage? This stage includes preparing infrastructure and supports, trying out practices, working out details, and communicating expectations.
How important is the perceived Simplicity of integrated care during the **Initial Implementation** stage? This stage includes putting systems into place for coaching, data measurement and reports, as well as revising implementation plans. This is when the first implementation activities take place.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

How important is the perceived Simplicity of integrated care during the **Full Implementation** stage? During this stage, the practice becomes fully operational, stakeholders have adapted to the new processes, data is used to make decisions, and outcomes start to be seen.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

What is the rationale for your choice? [optional]

How helpful would additional technical assistance or other support be to improve the perceived Simplicity of integrated care?

1 = not helpful, 7 = very helpful

What is the rationale for your choice? [optional]

**ITEM 4 – ABILITY TO PILOT**

“Ability to Pilot” refers to the degree to which integrated behavioral health and primary care can be tested and experimented with.

Panelists have made these comments about this subcomponent:

*Ability to pilot is important in Installation, and is determined when experimenting with using different standard operating procedures. If, at this point, you don't already have the budget and procedures and start-up costs, this will affect your Ability to Pilot.*

*Ability to pilot influences the perceived Simplicity.*

How important is the perceived ability to pilot integrated care during the Exploration stage? This stage happens before implementing a change. It involves identifying needs, deciding whether to adopt a change, developing implementation plans, and preparing supports.

1 = not important, 7 = absolutely important

How important is the perceived Ability to Pilot of integrated care during the **Installation** stage? This stage includes preparing infrastructure and supports, trying out practices, working out details, and communicating expectations.
How important is the perceived Ability to Pilot of integrated care during the Initial Implementation stage? This stage includes putting systems into place for coaching, data measurement and reports, as well as revising implementation plans. This is when the first implementation activities take place.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

How important is the perceived Ability to Pilot of integrated care during the Full Implementation stage? During this stage, the practice becomes fully operational, stakeholders have adapted to the new processes, data is used to make decisions, and outcomes start to be seen.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

What is the rationale for your choice? [optional]

How helpful would additional technical assistance or other support be to improve the perceived ability to pilot of integrated care?

1 = not helpful, 7 = very helpful

What is the rationale for your choice? [optional]

ITEM 5 – OBSERVABILITY

“Observability” refers to the ability to see that integrating behavioral health and primary care is leading to outcomes.

Panelists have made these comments about this subcomponent:

During Installation the policies and procedure get set up. We need to know that these procedures are supporting outcomes by using measurement-based care. We need to know by this point what else we need: More people? Additional coaching? A process change?

For client outcomes this is relevant during Full Implementation. When we look at the depression scores, you’ll see clients getting better over time. Once Leadership sees we’re getting outcomes, there’s buy-in to make this happen further.

During Full Implementation is when outcomes start to be seen, so that’s when observability would be most important... or might be the only time it could even be relevant.

In one experience where integrated care stalled, it was because the first leader saw the Observability. But the new leader doesn’t see that. This leads them to prioritize other things over integrated care.
How important is the perceived Observability of integrated care during the Exploration stage? This stage happens before implementing a change. It involves identifying needs, deciding whether to adopt a change, developing implementation plans, and preparing supports.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

How important is the perceived Observability of integrated care during the Installation stage? This stage includes preparing infrastructure and supports, trying out practices, working out details, and communicating expectations.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

How important is the perceived Observability of integrated care during the Initial Implementation stage? This stage includes putting systems into place for coaching, data measurement and reports, as well as revising implementation plans. This is when the first implementation activities take place.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

How important is the perceived observability of integrated care during the Full Implementation stage? During this stage, the practice becomes fully operational, stakeholders have adapted to the new processes, data is used to make decisions, and outcomes start to be seen.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

What is the rationale for your choice? [optional]

How helpful would additional technical assistance or other support be to improve the perceived observability of integrated care?
1 = not helpful, 7 = very helpful

What is the rationale for your choice? [optional]

ITEM 6 – PRIORITY
“Priority” refers to importance of integrating behavioral health and primary care compared to other things the organization is doing.

Panelists have made this comments about this subcomponent:

Prioritization is key. Either it is or isn't a Priority, but if integrating care is consistently a Priority then this could change everything. It's almost like a decision tree where some things, like Priority, need to be in place first. It's like playing CandyLand, where low priority can set you back to square one.
Other parts of motivation can be over-ridden by Priority, or the urgency of the need.

Priority is most important during Exploration, and is influenced by Leadership.

Priority is huge, and most important at Exploration and Installation. It’s easy for new programs to drop off in the early stages. If no one is thinking about this as a priority, it could easily be dismissed.

It depends how motivated high-up Leadership. We're told providers' opinions matter, but day-to-day what makes us ready is whether Leadership is able to recognize integrating care is a Priority for the system.

How important is the perceived Priority of integrated care during the Exploration stage? This stage happens before implementing a change. It involves identifying needs, deciding whether to adopt a change, developing implementation plans, and preparing supports.
1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

How important is the perceived Priority of integrated care during the Installation stage? This stage includes preparing infrastructure and supports, trying out practices, working out details, and communicating expectations.
1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

How important is the perceived Priority of integrated care during the Initial Implementation stage? This stage includes putting systems into place for coaching, data measurement and reports, as well as revising implementation plans. This is when the first implementation activities take place.
1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

How important is the perceived Priority of integrated care during the Full Implementation stage? During this stage, the practice becomes fully operational, stakeholders have adapted to the new processes, data is used to make decisions, and outcomes start to be seen.
1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

What is the rationale for your choice? [optional]

How helpful would additional technical assistance or other support be to improve the perceived priority of integrated care?
1 = not helpful, 7 = very helpful
What is the rationale for your choice? [optional]
Part II: Innovation-specific Capacity

“Innovation-specific Capacity” refers to what is needed to ensure behavioral health and primary care are integrated. This has five subcomponents: Innovation-specific Knowledge and Skills, Champion, Supportive Climate, Inter-organizational Relationships, and Intra-organizational Relationships.

Panelists made these comments about this component overall:

*During Installation and Initial Implementation*, innovation-specific capacity is going to come into play. It’s important to think about where we are and problem solve during Installation. Because when you’re exploring, you don’t know what it’s going to look like.

These fit best with Initial Implementation. Like a checklist, these are things we need to do to implement in our practice, and this stage ensures we have what we need. Innovation-specific skills are more important during Initial Implementation compared to Exploration and Installation, because those are more related to motivation.

You can’t expect Innovation-specific Capacities to be high when starting something new, and that’s ok. People need time to learn. But these capacities should increase over time, or at least be maintained if they started with a lot of skills.

**ITEM 1 – INNOVATION-SPECIFIC KNOWLEDGE & SKILLS**

“Innovation-specific Knowledge & Skills” refers to the organization having sufficient abilities to integrate behavioral health and primary care.

Panelists made these comments about this subcomponent:

*In Initial Implementation*, knowledge and skills are most important to set up the revision of the implementation plan and activities. Particularly the champion’s knowledge is important.

*During Full Implementation*, knowledge and skills are most important to use the skills, make the changes, and for the champion to provide coaching on the processes.

The knowledge is relatively easy to build and establish whereas skills sets and interaction between team members is deficient or often absent. Skill sets need to be handled differently.

Innovation-specific knowledge and skills are an absolutely essential subcomponent. You need a minimal level or you’re not doing anything.
Coaching primary care providers can make a big difference, particularly for accurate dosages of patient’s psychiatric medication.

How important are having the perceived knowledge and skills for integrated care during the Exploration stage? This stage happens before implementing a change. It involves identifying needs, deciding whether to adopt a change, developing implementation plans, and preparing supports.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

How important are having the perceived knowledge and skills for integrated care during the Installation stage? This stage includes preparing infrastructure and supports, trying out practices, working out details, and communicating expectations.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

How important are having the perceived knowledge and skills for integrated care during the Initial Implementation stage? This stage includes putting systems into place for coaching, data measurement and reports, as well as revising implementation plans. This is when the first implementation activities take place.

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How important are having the perceived knowledge and skills for integrated care during the Full Implementation stage? During this stage, the practice becomes fully operational, stakeholders have adapted to the new processes, data is used to make decisions, and outcomes start to be seen.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

What is the rationale for your choice? [optional]

How helpful would additional technical assistance or other support be to improve the perceived innovation-specific knowledge and skills for integrated care?

1 = not helpful, 7 = very helpful

What is the rationale for your choice? [optional]

ITEM 2 – CHAMPION

The “Champion” is a well-connected person within the organization who supports and models integrating behavioral health and primary care.

Panelists have made these comments about this subcomponent:

*Potentially a Champion is less important, because that can be distributed.*

*Champion is likely more important early on, but then again the diffusion literature indicates that early adopters become distributors.*
Champion is important throughout the stages, but I don’t think Exploration is going to happen unless you have a champion. It’s likely a champion who identifies themselves through their eagerness.

Champion is the most important thing across all stages. It’s brought about by Leadership, which shapes the Culture and Climate, influencing the decision to bring on a champion. During Initial Implementation, Champions’ knowledge on how to things up, looking at the “what” and the “who”, in terms of studying outcomes. During Full Implementation, we need champions to oversee everything.

The Champion will be really important for sustaining things during Full Implementation, particularly during staff turnover. I’ve seen in one practice that after the Champion left, the new clinical director hired wasn’t interested in integrating care and they ended up stopping the process.

How important is having an integrated care champion during the Exploration stage? This stage happens before implementing a change. It involves identifying needs, deciding whether to adopt a change, developing implementation plans, and preparing supports.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

How important are having an integrated care champion during the Installation stage? This stage includes preparing infrastructure and supports, trying out practices, working out details, and communicating expectations.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

How important are having an integrated care champion during the Initial Implementation stage? This stage includes putting systems into place for coaching, data measurement and reports, as well as revising implementation plans. This is when the first implementation activities take place.

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How important are having an integrated care champion during the Full Implementation stage? During this stage, the practice becomes fully operational, stakeholders have adapted to the new processes, data is used to make decisions, and outcomes start to be seen.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

What is the rationale for your choice? [optional]
How helpful would additional technical assistance or other support be to an integrated care champion?

1 = not helpful, 7 = very helpful

What is the rationale for your choice? [optional]

ITEM 3 – SUPPORTIVE CLIMATE
“Supportive Climate” refers to the organization having the necessary supports, processes, and resources to enable integration of behavioral health and primary care.

Panelists have made these comments about this subcomponent:

*Having a Supportive Climate is important during Initial Implementation to support the processes and resources coming from leadership.*

*You can often overcome an absence of a Supportive Climate through Inter- and Intra-organizational Relationships.*

*Supportive Climate is the most important thing for whether the structure is there yet. Supportive Climate and Priority override other weaker subcomponents.*

*The Supportive Climate varies by clinic and levels of Leadership. Our efforts to integrate have stalled because there is an unsupportive climate at the higher leadership level.*

How important is having a Supportive Climate for integrated care during the Exploration stage? This stage happens before implementing a change. It involves identifying needs, deciding whether to adopt a change, developing implementation plans, and preparing supports.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

How important are having a Supportive Climate for integrated care during the Installation stage? This stage includes preparing infrastructure and supports, trying out practices, working out details, and communicating expectations.

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How important are having a Supportive climate for integrated care during the Initial Implementation stage? This stage includes putting systems into place for coaching, data measurement and reports, as well as revising implementation plans. This is when the first implementation activities take place.

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How important are having a Supportive Climate for integrated care during the Full Implementation stage? During this stage, the practice becomes fully operational,
stakeholders have adapted to the new processes, data is used to make decisions, and outcomes start to be seen.

\[1 = \text{Totally unimportant, } 2 = \text{Unimportant, } 3 = \text{Slightly important, } 4 = \text{Neutral, } 5 = \text{Somewhat important, } 6 = \text{Important, } 7 = \text{Very important}\]

What is the rationale for your choice? [optional]

How helpful would additional technical assistance or other support be to improve the perceived supportive climate for integrated care?

\[1 = \text{not helpful, } 7 = \text{very helpful}\]

What is the rationale for your choice? [optional]

ITEM 4 – INTER-ORGANIZATIONAL RELATIONSHIPS

“Inter-organizational relationships” refer to the relationships between organizations that support integrating behavioral health and primary care.

Panelists have made these comments about this subcomponent:

Inter- and Intra-organizational Relationships depend on the people and processes in place. If you have support within the organization, relationships within the organization are more important. If there’s no Champion, Inter-organizational Relationships are more important for referrals or coaching; you’ll need to look at outside places for help. These are most important during Initial Implementation. All relationships are most important during Initial Implementation.

For integrated care the Inter-organizational Relationships are important because that's basically the purpose of the process. You're trying to bring two pieces together, and this describes what you're trying to do.

As a standalone medical center, we have all our departments here and our hospitals in one place. Our organization doesn't have other organizations nearby to learn from. Even those brought from outside have been informational presentations, not relationships. In a remote health system, Intra-organizational Relationships are more important. As a Champion, it is very helpful to hear how other organizations are doing. But from an organizational standpoint, my colleagues don't know nor care how others are doing it, they're looking to the Champions and implementers to see how to do it.

How important is having inter-organizational relationships for integrating care during the Exploration stage? This stage happens before implementing a change. It involves identifying needs, deciding whether to adopt a change, developing implementation plans, and preparing supports.

\[1 = \text{Totally unimportant, } 2 = \text{Unimportant, } 3 = \text{Slightly important, } 4 = \text{Neutral, } 5 = \text{Somewhat important, } 6 = \text{Important, } 7 = \text{Very important}\]
How important are having inter-organizational relationships for integrating care during the **Installation** stage? This stage includes preparing infrastructure and supports, trying out practices, working out details, and communicating expectations.

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How important are having inter-organizational relationships for integrating care during the **Initial Implementation** stage? This stage includes putting systems into place for coaching, data measurement and reports, as well as revising implementation plans. This is when the first implementation activities take place.

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How important are having inter-organizational relationships for integrating care during the **Full Implementation** stage? During this stage, the practice becomes fully operational, stakeholders have adapted to the new processes, data is used to make decisions, and outcomes start to be seen.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

What is the rationale for your choice? [optional]

How helpful would additional technical assistance or other support be to improve the perceived inter-organizational relationships for integrating care?

1 = not helpful, 7 = very helpful

What is the rationale for your choice? [optional]

**ITEM 5 – INTRA-ORGANIZATIONAL RELATIONSHIPS**

“Intra-organizational Relationships” refer to the relationships within the organization that support integrating behavioral health and primary care.

Panelists have made this comments about this subcomponent:

*Intra-organizational Relationships depend on the size of the clinic. For a small clinic with two doctors and one nurse trying to integrate care, this is less important because the relationships aren't as complex. But if you're dealing with a large health system, it's more important to have all the different systems work together.*

How important is having Intra-organizational Relationships for integrating care during the **Exploration** stage? This stage happens before implementing a change. It involves identifying needs, deciding whether to adopt a change, developing implementation plans, and preparing supports.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important
How important are having Intra-organizational Relationships for integrating care during the **Installation** stage? This stage includes preparing infrastructure and supports, trying out practices, working out details, and communicating expectations.

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How important are having Intra-organizational Relationships for integrating care during the **Initial Implementation** stage? This stage includes putting systems into place for coaching, data measurement and reports, as well as revising implementation plans. This is when the first implementation activities take place.

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How important are having Intra-organizational Relationships for integrating care during the **Full Implementation** stage? During this stage, the practice becomes fully operational, stakeholders have adapted to the new processes, data is used to make decisions, and outcomes start to be seen.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

What is the rationale for your choice? [optional]

How helpful would additional technical assistance or other support be to improve the perceived intra-organizational relationships for integrating care?

1 = not helpful, 7 = very helpful

What is the rationale for your choice? [optional]

**Part III: General Capacity**

“General Capacity” refers to the organization’s overall functioning, independent of whether they are working to integrate behavioral health and primary care. There are eight subcomponents: Leadership, Culture, Climate, Innovativeness, Resource Utilization, Internal Operation, Staff Capacity, Process Capacity.

Panelists made these comments about this component:

*General Capacity is always important.*

*All parts of general capacity are crucial.*

**ITEM 1 - LEADERSHIP**

“Leadership” refers to the effectiveness of the organization’s leaders.

Panelists have made these comments about this subcomponent:

*During Exploration Leadership is super important because they need to understand that integrated care is the gold standard.*
Strong leadership and adequate staff are important at the beginning just to get initial people trained and on board. However, as it becomes more routine you could continue doing integrated care even if the Leadership isn't strong; so long as the staff has already picked up on it.

We’re working on an innovation right now, and while we have some champions there has been resistance early on in implementation. Securing Leadership buy-in early on would have saved time.

Leadership cuts across all stages. If leadership is in favor of innovating, there might be an organizational mandate, but their buy-in also helps during Installation and Initial Implementation because they can rally and really work towards this. On the opposite end, if they just don’t want to do it they can sabotage it and it won’t get done.

Leadership influences everything. It shapes culture, climate, the decision to bring on a champion. They dictate resources and whether the organization is open to change, they develop operations and capacity. It’s also really important during Full Implementation because operations and process and staffing are all important here.

You need support, but not everything comes from the top-down. While you’re just thinking of ideas, top-level leadership doesn’t need to be involved. But by the end, leadership needs to be on board.

How important is the perception of the organization’s leadership during the Exploration stage of integrating behavioral health and primary care? This stage happens before implementing a change. It involves identifying needs, deciding whether to adopt a change, developing implementation plans, and preparing supports.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

How important is the perception of the organization’s leadership during the Installation stage of integrating behavioral health and primary care? This stage includes preparing infrastructure and supports, trying out practices, working out details, and communicating expectations.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

How important is the perception of the organization’s leadership during the Initial Implementation stage of integrating behavioral health and primary care? This stage includes putting systems into place for coaching, data measurement and reports, as well as revising implementation plans. This is when the first implementation activities take place.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important
How important is the perception of the organization’s leadership during the Full Implementation stage of behavioral health and primary care? During this stage, the practice becomes fully operational, stakeholders have adapted to the new processes, data is used to make decisions, and outcomes start to be seen.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

What is the rationale for your choice? [optional]

How helpful would additional technical assistance or other support be to improve the perceived leadership within the organization?

1 = not helpful, 7 = very helpful

What is the rationale for your choice? [optional]

ITEM 2 – CULTURE

“Culture” refers to norms and values of the organization.

Panelists have made these comments about this subcomponent:

Most important overall is leadership and culture. It is important to have a guiding vision, communicated to everyone.

During Exploration is when having a shared vision with standard of care matters.

Culture is most compatible with the Installation stage.

During Initial Implementation, having systems in place are relevant for the culture.

Culture and climate influences the decision to bring on champion who oversees integrating care. These things go across all phases.

Culture is crucial. If they support innovation and are eager then they can get a lot done. Culture might be the most important part of readiness. It is very hard to change the culture of an organization.

How important is the perception of the organization’s culture during the Exploration stage of integrating behavioral health and primary care? This stage happens before implementing a change. It involves identifying needs, deciding whether to adopt a change, developing implementation plans, and preparing supports.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

How important is the perception of the organization’s culture during the Installation stage of integrating behavioral health and primary care? This stage includes preparing
infrastructure and supports, trying out practices, working out details, and communicating expectations.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

How important is the perception of the organization’s culture during the Initial Implementation stage of integrating behavioral health and primary care? This stage includes putting systems into place for coaching, data measurement and reports, as well as revising implementation plans. This is when the first implementation activities take place.

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How important is the perception of the organization’s culture during the Full Implementation stage of behavioral health and primary care? During this stage, the practice becomes fully operational, stakeholders have adapted to the new processes, data is used to make decisions, and outcomes start to be seen.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

What is the rationale for your choice? [optional]

How helpful would additional technical assistance or other support be to improve the perceived culture within the organization?

1 = not helpful, 7 = very helpful
What is the rationale for your choice? [optional]

ITEM 3 - CLIMATE
“Climate” refers to how employees perceive, appraise, and feel about their current working environment.

Panelists have made these comments about this subcomponent:

Climate is probably less important overall. You might have a mess of an organization where people are unhappy, but this is overridden by seeing integrating care as a Priority. I've worked at places where there's low morale, but you can still get things done.

Leadership affects attitudes, shaping culture and climate. We are the ones determining our mission and values. Culture and climate influences the decision to bring on champion who oversees integrating care. These things go across all phases.

How important is the organization’s climate during the Exploration stage of integrating behavioral health and primary care? This stage happens before implementing a change. It
involves identifying needs, deciding whether to adopt a change, developing implementation plans, and preparing supports.

1 = Totally unimportant, 2 = Unimportant, 3 = Slightly important, 4 = Neutral, 5 = Somewhat important, 6 = Important, 7 = Very important

How important is the organization’s climate during the Installation stage of integrating behavioral health and primary care? This stage includes preparing infrastructure and supports, trying out practices, working out details, and communicating expectations.

1 = not important, 7 = absolutely important

How important is the organization’s climate during the Initial Implementation stage of integrating behavioral health and primary care? This stage includes putting systems into place for coaching, data measurement and reports, as well as revising implementation plans. This is when the first implementation activities take place.

1 = not important, 7 = absolutely important

How important is the organization’s climate during the Full Implementation stage of behavioral health and primary care? During this stage, the practice becomes fully operational, stakeholders have adapted to the new processes, data is used to make decisions, and outcomes start to be seen.

1 = not important, 7 = absolutely important

What is the rationale for your choice? [optional]

How helpful would additional technical assistance or other support be to improve the perceived climate within the organization?

1 = not helpful, 7 = very helpful

What is the rationale for your choice? [optional]

ITEM 4 - INNOVATIVENESS

“Innovativeness” refers to the organization’s openness to change in general.

Panelists have made these comments about this subcomponent: …

*Innovativeness is definitely part of the Exploration phase, maybe even pre-exploration.*

*Innovativeness depends on which direction the pressure to integrate care comes from, thus is could be less important. To the extent that it is important, it’s probably important early on when you’re trying to design what you’re doing, but less important during Full Implementation.*

*During Exploration innovativeness is important because valuing innovative growth is a catalyst for change. If you’re not open to change, you won’t meet the needs of program. Openness to change is also important during Full Implementation because if we’re demonstrating good outcomes then we need to*
keep reviewing the literature and finding ways to learn and innovate. We always need to be actively pursuing new ways to do things.

Innovativeness is a feature of every practice's culture. I've learned that Leadership and Innovativeness require a important mass of people with innovative drive to make change.

When integrating care, how important is an organization’s innovativeness during the Exploration stage of behavioral health and primary care? This stage happens before implementing a change. It involves identifying needs, deciding whether to adopt a change, developing implementation plans, and preparing supports.

1 = not important, 7 = absolutely important

When integrating care, how important is an organization’s innovativeness during the Installation stage of behavioral health and primary care? This stage includes preparing infrastructure and supports, trying out practices, working out details, and communicating expectations.

1 = not important, 7 = absolutely important

When integrating care, how important is an organization’s innovativeness during the Initial Implementation stage of behavioral health and primary care? This stage includes putting systems into place for coaching, data measurement and reports, as well as revising implementation plans. This is when the first implementation activities take place.

1 = not important, 7 = absolutely important

When integrating care, how important is an organization’s innovativeness during the Full Implementation stage of behavioral health and primary care? During this stage, the practice becomes fully operational, stakeholders have adapted to the new processes, data is used to make decisions, and outcomes start to be seen.

1 = not important, 7 = absolutely important

What is the rationale for your choice? [optional]

How helpful would additional technical assistance or other support be to improve the perceived innovativeness of the organization?

1 = not helpful, 7 = very helpful

What is the rationale for your choice? [optional]

ITEM 5 – RESOURCE UTILIZATION
“Resource utilization” refers to the organization’s ability to acquire and allocate resources, including time, money, effort, and technology.

Panelists have made these comments about this subcomponent:
Resource utilization important during Exploration because it’s important for assessing needs. If the practice utilizes resources well, it's important for Installation too because you have the resources to move into another stage.
Otherwise they need to work on this in the Exploration phase. If they acquire the resources they need, then they can adopt quickly. But if they don’t have the resources, then they should make the decision not to adopt a change.

This is important during Full Implementation in terms of when and who Leadership hires to move this forward and sustain.

Allocation of resources is really important to support the innovation. One practice I worked with didn’t have all the resources nor the physical location, but they kept re-investing to make it work. When you don’t invest in EHR, or don’t ensure it’s able to be improved, then change is a lot harder.

How resources are utilized really matters. If you want to provide better care to patients: don’t staff the ER, put behavioral health people in the outpatient practices. It’s not that we don’t have the resources, but they choose to put them elsewhere.

Resource Utilization is less important for integrated care because you’re not necessarily identifying slack to do things here. I don’t see that as being as important.

When integrating care, how important is the perception of the organization’s resource utilization during an Exploration stage of behavioral health and primary care? This stage happens before implementing a change. It involves identifying needs, deciding whether to adopt a change, developing implementation plans, and preparing supports.

1 = not important, 7 = absolutely important

When integrating care, how important the perception of the organization’s resource utilization during an Installation stage of behavioral health and primary care? This stage includes preparing infrastructure and supports, trying out practices, working out details, and communicating expectations.

1 = not important, 7 = absolutely important

When integrating care, how important the perception of the organization’s resource utilization during an Initial Implementation stage of behavioral health and primary care? This stage includes putting systems into place for coaching, data measurement and reports, as well as revising implementation plans. This is when the first implementation activities take place.

1 = not important, 7 = absolutely important

When integrating care, how important is the perception of the organization’s resource utilization during a Full Implementation stage of behavioral health and primary care? During this stage, the practice becomes fully operational, stakeholders have adapted to the new processes, data is used to make decisions, and outcomes start to be seen.

1 = not important, 7 = absolutely important
What is the rationale for your choice? [optional]
How helpful would additional technical assistance or other support be to improve the perceived resource utilization within the organization?
   1 = not helpful, 7 = very helpful
What is the rationale for your choice? [optional]

ITEM 6 – INTERNAL OPERATIONS
“Internal operations” refers to the organization’s effectiveness at communication and teamwork.

Panelists have made these comments about this subcomponent:

   Having standard processes, risk tolerance, structure, and plans in place are all important during Exploration and Installation.

   Internal operations are important during both Installation and Initial Implementation because that relates to climate and culture.

   This is important during Full Implementation.

   With internal operations, I think early on its less important because you’re designing what you need, but later its important because you need people to be in sync.

   For integrated care, people need to know they’re not using different skills, they’re just doing it in a different way. You constantly need to be working on communication processes between behavioral health and primary care, ensuring they know how to talk to each other.

   Whether providers make the necessary referral after screening is influenced by how they understand the process. How they do this is influenced by the processes in place.

   Working with a system that flows better makes it easier to integrate. The EHR can sell behavioral health components, pull reports, and get specifics in the kind of care that is given to clients.

When integrating care, how important is the perception of the organization’s internal operations during an Exploration stage of behavioral health and primary care? This stage happens before implementing a change. It involves identifying needs, deciding whether to adopt a change, developing implementation plans, and preparing supports.
   1 = not important, 7 = absolutely important

When integrating care, how important is the perception of the organization’s internal operations during an Installation stage of behavioral health and primary care? This stage includes preparing infrastructure and supports, trying out practices, working out details, and communicating expectations.
When integrating care, how important is the perception of the organization’s internal operations during an Initial Implementation stage of behavioral health and primary care? This stage includes putting systems into place for coaching, data measurement and reports, as well as revising implementation plans. This is when the first implementation activities take place.

1 = not important, 7 = absolutely important

When integrating care, how important is the perception of the organization’s internal operations during a Full Implementation stage of behavioral health and primary care? During this stage, the practice becomes fully operational, stakeholders have adapted to the new processes, data is used to make decisions, and outcomes start to be seen.

1 = not important, 7 = absolutely important

What is the rationale for your choice? [optional]

How helpful would additional technical assistance or other support be to improve the perceived internal operations of the organization?

1 = not helpful, 7 = very helpful

What is the rationale for your choice? [optional]

ITEM 7 – STAFF CAPACITIES

“Staff capacities” refer to having enough of the right people to get things done within the organization.

Panelists have made these comments about this subcomponent:

Staff capacities is a cross-cutting piece. During the Exploration phase, it’s one of the needs important to consider before moving forward. If we want to implement something, we may need to hire more staff.

Staff capacity would be most important during early stages. If you don’t have staff support from the get-go, it’s going to make initial implementation pretty difficult, especially for data measuring.

I could see some elements being important at the beginning, like adequate staff trained and on board. As it becomes more routine, you could continue doing integrated care even if the leadership isn’t that strong so long as the staff has already picked up on it. But I think it is important throughout.

Staff capacities are more important later because early on its just developing the supports. It is more important later once processes are getting into place and staff already understand the goal.

You can’t have enough of the right people in place until you can prove it works. Once you demonstrate the value, leadership will find a way to hire the right
people to get the job done. Having "enough" people to get things done would go earlier, but having the "right" people is something different and you need those to make it to Full Implementation.

There is a much greater emphasis in the integrated care literature about how behavioral health practitioners need to change, rather than medical leadership's need to change. You need to have physicians comfortable asking for help from behavioral health specialists.

When integrating care, how important is the perception of an organization’s staff capacities during the Exploration stage of behavioral health and primary care? This stage happens before implementing a change. It involves identifying needs, deciding whether to adopt a change, developing implementation plans, and preparing supports.

1 = not important, 7 = absolutely important

When integrating care, how important is the perception of an organization’s staff capacities during the Installation stage of behavioral health and primary care? This stage includes preparing infrastructure and supports, trying out practices, working out details, and communicating expectations.

1 = not important, 7 = absolutely important

When integrating care, how important is the perception of an organization’s staff capacities during the Initial Implementation stage of behavioral health and primary care? This stage includes putting systems into place for coaching, data measurement and reports, as well as revising implementation plans. This is when the first implementation activities take place.

1 = not important, 7 = absolutely important

When integrating care, how important is the perception of an organization’s staff capacities during the Full Implementation stage of behavioral health and primary care? During this stage, the practice becomes fully operational, stakeholders have adapted to the new processes, data is used to make decisions, and outcomes start to be seen.

1 = not important, 7 = absolutely important

What is the rationale for your choice? [optional]

How helpful would additional technical assistance or other support be to improve the perceived staff capacities within the organization?

1 = not helpful, 7 = very helpful

What is the rationale for your choice? [optional]

ITEM 8 – PROCESS CAPACITIES
“Process capacities” refer to the organization’s ability to plan, implement, and evaluate.

Panelists have made these comments about this subcomponent:
Planning for sustainability as part of implementation is so important. Thinking about the readiness to not just change, but sustain change, is very important. Having this in place is important during Exploration.

Process capacities definitely go into Exploration and Initial Implementation. Then Full Implementation is where you'll evaluate, or that can be part of the fit stage. It can be helpful to figure out what's working and what isn't. This is a cross-cutting one, depending on the activity.

During Full Implementation this is important. We can look at changes in client outcomes over time and take this to Leadership. This helps to get buy-in to hire more providers and informs both organizational processes and patient treatment planning.

Most important piece is the data and making sure people can access data, which highlights how important the EHR is for integrated care. People underestimate the importance of monitoring their data.

When integrating care, how important is an organization’s process capacities during the Exploration stage of behavioral health and primary care? This stage happens before implementing a change. It involves identifying needs, deciding whether to adopt a change, developing implementation plans, and preparing supports.

1 = not important, 7 = absolutely important

When integrating care, how important is an organization’s process capacities during the Installation stage of behavioral health and primary care? This stage includes preparing infrastructure and supports, trying out practices, working out details, and communicating expectations.

1 = not important, 7 = absolutely important

When integrating care, how important is an organization’s process capacities during the Initial Implementation stage of behavioral health and primary care? This stage includes putting systems into place for coaching, data measurement and reports, as well as revising implementation plans. This is when the first implementation activities take place.

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When integrating care, how important is an organization’s process capacities during the Full Implementation stage of behavioral health and primary care? During this stage, the practice becomes fully operational, stakeholders have adapted to the new processes, data is used to make decisions, and outcomes start to be seen.

1 = not important, 7 = absolutely important

What is the rationale for your choice? [optional]

How helpful would additional technical assistance or other support be to improve the perceived process capacities within the organization?
1 = not helpful, 7 = very helpful
What is the rationale for your choice? [optional]
DELPHI STUDY DEBRIEF PROTOCOL

Agenda

• Introductions of Participants – (Name, role)
• Overview of Delphi Process: Where are we now?
• Purpose of Focus Group (to overview results, discuss implications, talk about potential applications)
• Learning Activity: What? So What? Now What?
  o Overview of results from Round 3 (take a few minutes to review with group)
    ▪ What do you notice about the results?
    ▪ Do any of the results surprise you? Why?
    ▪ How do these results seem to relate to what you do?
  o Importance of findings
    ▪ What about these results are important?
    ▪ What are the implications for implementation? For coaching? For measurement?
  o How can findings inform our work?
    ▪ How can we put this information into action?
    ▪ What next steps make sense?
    ▪ What other questions do you still have?
    ▪ Any final comments?
• Next Steps:
  o Keeping in touch
  o Compensation – W2 for University
  o Delphi Process Evaluation survey

Introduction Script

First, I’d like to thank everyone for their time today. I’d like to start with an overview, but first we can do introductions. Unfortunately, not all panelists were available at the same time, so this is one of three calls.

Introductions: My name is Ariel Domlyn, I’m a doctoral student at USC working with Abe Wandersman, and most of my research is developing this organizational framework to ensure it has practical applications. I’m joined by Amber Watson from the Wandersman Center who is helping to take notes and co-facilitate this discussion.

Could everyone briefly introduce themselves?

Thank you! To orient everyone to this call, this is the culmination of a panel you’ve all been participating on to understand the applicability of different pieces of the R=MC2 readiness framework to help the integration of behavioral health and primary care. The panel was a Delphi process, where three rounds were administered to collect individual
opinions on when readiness is important for integrating care, and the degree to which technical assistance could help. The first round was a phone call to gain a baseline understanding of everyone’s experience with these topics, as well as their thoughts about how to approach these questions. The next two rounds were surveys where qualitative feedback was anonymously provided to help weigh the options without coercion. The purpose was to gain consensus, and the results document I circulated describes the consensus.

The purpose of today’s call is to review these results and gather your thoughts. I view this as a sense-making session, where I’d like to hear everyone’s thoughts about the results, the implications of these findings, and how these could be used to inform our work – either for applying this to help integrate care, or avenues for future research.

Any comments before I overview the results?

I’ll only briefly review the results.

[Facilitated discussion follows agenda above]
# DELPHI STUDY PRELIMINARY RESULTS

## Table B.1 Preliminary study results

<table>
<thead>
<tr>
<th>Component</th>
<th>Subcomponent</th>
<th>Exploration</th>
<th>Installation</th>
<th>Initial Implementation</th>
<th>Full Implementation</th>
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</tbody>
</table>

Number indicates percentage of panelists that marked a 6 (important/helpful) or 7 (very important/very helpful) on the subcomponent for that item.

Consensus level indicators: Dark shading = 80%+; Medium shading = 65-79% ; Light shading = 51-64%
### INITIAL ANALYSIS FRAMEWORK MATRICES

*Table B.2 Data topic: Study validity*

#### THEME: RESULTS MAKE SENSE

<table>
<thead>
<tr>
<th>Item</th>
<th>Finding</th>
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</thead>
<tbody>
<tr>
<td>I understood the purpose of the panel while I was participating.</td>
<td>100% (N = 6) agreed or strongly agreed</td>
</tr>
<tr>
<td>I understand why a Delphi process was used for the panel.</td>
<td>100% (N = 6) agreed or strongly agreed</td>
</tr>
<tr>
<td>I felt I had, or could have had, a voice in shaping how this panel was conducted.</td>
<td>67% (N = 4) agreed or strongly agreed; one disagreed, one responded “neutral”</td>
</tr>
<tr>
<td>I think the results of the panel are valid.</td>
<td>67% (N = 4) agreed or strongly agreed; 33% (N = 2) responded “neutral”</td>
</tr>
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#### Debrief Results

<table>
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<tr>
<th>Source</th>
<th>Representative Quote</th>
<th>Concept Codes</th>
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<tr>
<td>Participant 3</td>
<td>A lot of those numbers make sense and seem on par with how I conceptualize these things.</td>
<td>N/A</td>
</tr>
<tr>
<td>Participant 3</td>
<td>It looks like people feel that champion is important from beginning to end, so that confirmed what I thought in the beginning. Leadership looks like it's agreed upon as important across the board.</td>
<td>Champion; Leadership; Stages</td>
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<tr>
<td>Participant 3</td>
<td>[Discussing leadership as important at all stages] As a leader I think it's important to always be forward thinking and trying to always be assessing and evaluating the way that we're doing things and looking for ways to improve... So think it's analogous to situational leadership just as you work with different people in different ways at different times in</td>
<td>Process Capacity; Champion; Leadership; Inter-organizational</td>
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</tbody>
</table>
different contexts... [Per process capacity] So when I think about all these components and sub components being able to utilize them as strengths, address the areas of opportunities, and just being in a state of evaluating all the time, and if you don't have a champion, knowing to bring on a champion if you're not that person. If you don't have relationships within the organization to help in process improvement seeking it out elsewhere through community partners... Relationships; Stages

| Participant 8 | The first thing of that table one is I am delighted and want to celebrate the fact that leadership shows up as being so important across all the stages. I think that's exactly right. I think that's dead on and you just can't overstate how critical prepared leadership is at integrating care. So I just want to put a circle around that as one member of the panel saying that's dead on and you could not possibly overstate its importance. Leadership; Stages |
| Participant 9 | I think my second reaction is I think how generally this conforms to what I would think would be like my hypothesis of how things would be sequenced. N/A |
| Participant 10 | I think the consensus and where I see things [are] closer to one. To me, that actually looks pretty good and makes sense and it's somewhat reassuring in how we've applied this in other projects. N/A |
| Participant 1 | [Another participant] pointed out for the Simplicity... [that if] people perceive it as difficult that it is something that can be taught to change it to [seem] simple. [I agree because] In my mind, people may think it seems like it's hard. But with education, you can change that. So it's not as important to people in the beginning if it seems hard because that's something that can be changed in a way. Simplicity; TA |
| Participant 1 | [Per Relative Advantage and Priority] To me, those are pretty similar questions and yet they sort of have mirror images of each other with the answers from what you were saying. So I might argue I think you're sort of splitting hairs to differentiate those two. And so I might argue that despite that, the last point is rated as important by almost everyone. Relative Advantage; Priority |
| Participant 1 | I think that technical assistance doesn't improve everything and that you can help with some things but something like an organization's leadership. I think about our system which is very big. They barely pick up phone calls from me sometimes never mind that they're going to pick up a phone call from the technical assistance person who's working us somehow. Maybe if that technical assistance is on me. But there are so many things that TA; Culture |
are going on in the medical world right now that I think some of things an organization's values and norms and how the employees feel. There is so many things that go into that.

### THEME: SPECIFIC RESULTS ARE SURPRISING

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<tr>
<th>Source</th>
<th>Representative Quote</th>
<th>Concept Codes</th>
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<tr>
<td>Participant 8</td>
<td>[Per Observability] But to the extent that Exploration and Installation and the Initial Implementation that the team and the practice can see the integration effort in a way that they readily understand, can say something about have confidence, and a spirit of hope that it's simple enough that we can do it. That is the feature that is very important that I felt like was underappreciated in this table.</td>
<td>Observability; Stages</td>
</tr>
<tr>
<td>Participant 8</td>
<td>[I disagree with] whether integrated care seems to be better than current practice. It looks like the panel, in general, thought that was of diminishing importance during the Initial to Full Implementation and that's what I disagree with. At any point in this process of redesigning practice [if] the new approach is no longer seen to be improving the practice ...[then it] stalls and often stops.</td>
<td>Relative Advantage; Stages</td>
</tr>
<tr>
<td>Participant 8</td>
<td>I think [Simplicity is] underappreciated in this table by the panel. The simpler the implementation strategy is for the practice [the better]. Now that said, I think all of us know that this is never simple but simplicity of implementation is something that coaching and external assistance can help a practice substantially at Installation and Initial Implementation and even when they're at the point of Full Implementation. The ability to reduce complicatedness... that's what simplicity meant to me and I think it's underappreciated in this table and it's more important than these numbers suggest.</td>
<td>Simplicity; TA; Stages</td>
</tr>
<tr>
<td>Participant 3</td>
<td>So you also asked about compatibility, it shows greatest consensus around initial and full implementation. When you're doing it I think that there has to be a sense that the two fit behavioral health and primary care and how the organization operates as a whole. I think it's important in the beginning as well, so I guess that is an area of surprise to me that there wasn't greater consensus. It makes sense to me that the greatest consensus would be in the later stages where one is conceptualizing to fit with the organization and if you don't see that by full implementation again the likelihood of you abandoning those efforts is going to increase, but also it is important in the beginning stages to. And I go back to my original sort of diagram I had compatibility as being important in the exploration stage because it's</td>
<td>Compatibility</td>
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</table>
fit, and if I don't think it's going to fit with what we do as an entire organization I'm probably not going to explore it.

| Participant 5 | I agree with [Participant 10]. I was surprised to see how little it appears that people perceive TA to be helpful. | TA |
| Participant 10 | Yikes. I would have liked to see more enthusiasm around whether TA could be helpful for these things. A lot of it seemed really really low to me. Actually, most of them seem really low to me. So that I think really jumps out. That is extremely surprising to me. | TA |
| Participant 7 | I'm not sure if I agree that innovativeness is not that important at Full Implementation. I remember reading through [the other panelists'] comments, and I think it makes sense. [But] when you're doing something, or actually trying to implement something new, it's important that you're innovative. But when it's a complex innovation, like integrated care, I think you're going to need to continuously be implementing something new, or doing CQI, and that kind of stuff. I think that takes innovativeness, too. So, I don't know if I fully agree with the Full Implementation ratings there on that one. | Innovativeness; Stages |
| Participant 2 | There were a couple of places I could imagine there might be a larger role for TA vendors maybe reflected here. I think there is at least some role more than what the percentages seem to show for Relative Advantage and Priority. And I was also thinking in terms of Supportive Climate | Relative Advantage; Priority; TA; Supportive Climate |

**THEME: INTERPRETING QUESTIONS DIFFERENTLY, CONTEXT AND BACKGROUND MAY HAVE INFLUENCED RESPONSES**

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<tr>
<th>Source</th>
<th>Representative Quote</th>
<th>Concept Codes</th>
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<tbody>
<tr>
<td>Participant 3</td>
<td>So when you talk about inter-organizational relationships I think that you see a high consensus there because that's what inter-organizational relationships are: is coaching and technical assistance... And then the intra- or the relationships within the org bringing in outside resources to help with those relationships, those two are hard to conceptualize in terms of technical assistance supporting because I see that the inter-organizational relationships are technical assistance. ...others might be reading the question and probably not the same way in which I'm reading the question. And that's something that keeps coming to my mind as we go through this is how people interpret the language, so I don't know some of these areas that have lower consensus need to be ... and again I know that</td>
<td>Inter-Organizational Relationships; Intra-Organizational Relationships</td>
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</table>
you have a smaller sample size, and the other studies that have looked at this model. But I don't know if there would be any benefits of looking at the language or expanding on definitions just to make sure that people are more on the same page with regards to what it means or how its intended to be interpreted.

**Participant 2**

I just had a bit of reaction to the term 'simplicity' in this context. Because integrating care is not simple and I think it is important for there to be an understanding that the process is going to be a transformation for the entire practice. If it had been a slightly different wording, like 'how feasible it seems for practices to be able to integrate,' [then] I think I probably would have responded differently.

**Participant 7**

General reflection, when I was answering these, I had a lot of trouble answering, I think, because maybe it's my embeddedness in the readiness work, but I think, "Yeah, of course this could be important," and maybe it would vary by context, but I can see how something could be important at any time, or think of probably an example of, "Yeah, it could be important here and there." So, for me, it was hard to try to think critically about generally, X is probably more important at a later stage, or an early stage.

**Participant 7**

I feel like many of my answers were like, 'Sure, and,' or 'Sure, but,' because I don't know. I'm not sure who this TA provider is and what they aim to do. I just think so many of these things could be just context-dependent. Like, how willing is an organization to have you come in and give them advice about leadership? ...[in some instances] we probably couldn't go into their whole organization and advocate for leadership change, but it may be that there are other contexts in which that would be appropriate for a TA provider. ...Sometimes, I said, 'Sure, a TA provider could do this, but I feel like it's unlikely that they would,' or something like that, because in my experience [TA providers have different knowledge bases and skillsets]... I think a lot of these things to me were like, 'Well, it depends on who's the TA provider, and how comprehensive is their TA?'

**Process Survey Comment (anonymous)**

"[My] concerns about validity and the role of [the determinants] are just that the responses are probably context-dependent. It's unclear to me how they may generalize. But I think that this study does help us move forward in gaining a better understanding!"

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<th>Source</th>
<th>Representative Quote</th>
<th>Concept Codes</th>
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**THEME:** DETERMINANTS ARE CONNECTED
Participant 3 | For internal operations that's a little bit of a surprise to me that it was that high because if we're talking about an organization's effectiveness at communication and teamwork I think that's influenced by leadership culture and climate to the extent that someone coming in to do work in that area might be difficult. | Leadership; Internal Operations; Climate

Participant 1 | I found going through this that I had some fatigue exhaustion with trying to think about all the different things. So many of these things are really so interconnected and they cannot be isolated in and of themselves. | N/A

Table B.3 Data topic: Implications

<table>
<thead>
<tr>
<th>Process Survey Results</th>
<th>Finding</th>
</tr>
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<tbody>
<tr>
<td>The results of this study has implications for integrating behavioral health and primary care</td>
<td>83% (N = 5) agreed or strongly agreed; one responded “neutral.”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Debrief Results</th>
<th>Source</th>
<th>Representative Quote</th>
<th>Summary</th>
<th>Theme</th>
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<tbody>
<tr>
<td>Participant 3</td>
<td>I thank you for the opportunity to participate in this work because when I first learned about this model it really opened my eyes to not just integrating behavioral health... I think it's just important to be aware that there are so many different variables that go into a change process and that go into organizations ability to improve itself on a daily basis. And just as I look at each sub component it makes me feel really lucky to work for the organization that I do because I feel like we're strong in a lot of these ways and that's again not just in primary care behavioral health but in all the things that we're doing to improve as an organization, the care that we deliver each and every day.</td>
<td>Helpful for an organization to reflect on the process of integrating care and ensure it's moving forward.</td>
<td>Assessment</td>
<td></td>
</tr>
<tr>
<td>Participant 2</td>
<td>As I was looking at this, I was sort of imagining it could be used for a roadmap for like practice for information organizations and practice facilitators to lay out what components are not important at different stages.</td>
<td>Results could be a roadmap to help organizations integrate care</td>
<td>Assessment</td>
<td></td>
</tr>
<tr>
<td>Participant 8</td>
<td>... [one potential implication is] to help both large practice systems and small practice systems to just recognize how important an assessment of their readiness to take this on is. The practice is a capacity at a particular point in time [but is] different than it will be a year from that time. And you're over a very important target with this work in my view that actually has a chance for a little policy and implementation compassion. It would be a compassionate act to say to a practice, 'if you use this tool, this approach, to accepting your readiness to take this on. You may very well be able to identify and advance where you're going to need some help, and you may also be able to decide that this is not something for you.' At least not right now and then saving a practice the brain damage, and the heartache and the challenges and the disruption that this is going to bring that's a service. That is a good thing. Not a bad thing. So I would hope that a next step is further exposure of the importance of readiness and helping practices take on this challenge.</td>
<td>Helpful for assessing an organization; Helpful for consultants to organizations; Helpful for determining whether organizations are ready to integrate care</td>
<td>Assessment; Policy tool</td>
<td></td>
</tr>
<tr>
<td>Participant 3</td>
<td>...[as a TA provider] I'm going to evaluate them as a consultant and I'm going to see what their readiness is before I start making recommendations because if they're not ready I might tell them that and leave and tell them to call me when they're ready, or I might talk to them about what they might be able to do to improve their readiness. So I think that this is a model to either assess organizations as a consultant or for organizations to use as a self assessment tool. And [as a practitioner and champion] that's originally what I was looking for this toolkit is if there was some type of self assessment that I could take and then it would score it. And then I'd get some coaching behind it that would help me improve in those areas so that I can improve my readiness to the point where my implementation efforts are going to be more successful and more fruitful in the end. ...I would love to see is like an online assessment where I could go to a website and fill out those questions and then it would spit me back an analysis of how ready am I and the areas where I'm strong and the areas where I can improve.</td>
<td>Helpful for assessing an organization; Helpful for consultants to organizations</td>
<td>Assessment; TA tool</td>
<td></td>
</tr>
<tr>
<td>Participant 2</td>
<td>I was also thinking about where in such a time now of increasing demand on practices and lots of different administration projects and different quality measures and different requirements that practices have. And I think there is a big role for technical assistance to help with seeing alignment of initiatives and that help having it be overwhelming to practices that way. That I think that kind of alignment might fit under Compatibility and also in Simplicity too. And so it could come under a few different subcomponents. But I think that's an important role for a technical assistance to be captured also.</td>
<td>TA providers could use this to help organizations prioritize which programs or initiatives should(nt) be undertaken</td>
<td>Assessment; TA tool</td>
<td></td>
</tr>
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</table>
Participant 7: 

[The TA results] maybe reflects most what people's comfort level and experiences are with TA providers. It might be our easiest way to enter into providing TA with different organizations or departments. It makes sense to them that we would help with Observability... they might be more surprised if we came in and talked about fostering a champion, or changing the culture of their organization. To me, that's saying maybe those are things that we would have to tread more lightly with, or do more work to get buy in to help affect change in those areas, or maybe they're things that we just don't touch as much, because people aren't as comfortable with it.

Using this could advise TA providers of how to start working with an organization

Participant 7: ...it could be helpful just to normalize for people where they are. I think we do this anyways, but it provides some more evidence. Like, 'Hey, it's okay that you're innovation-specific scores are lower at the exploration phase. No one expects you to have high scores, and it doesn't mean that you're not going to still do well at implementing integrated care.'

Results are helpful to normalize organizations' weaknesses. If they're not strong in an area then it might just be because they're not at that stage yet.

### Table B.4 Data topic: Additional study

<table>
<thead>
<tr>
<th>Source</th>
<th>Representative Quote</th>
<th>Summary</th>
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<tbody>
<tr>
<td>Participant 3</td>
<td>think it's also important keep in mind what you said that people's background and current situation might be framing the lens through which they're viewing that. I don't know how you'd be able to control for that, but ...</td>
<td>Respondent's background and current context may have affected their answers.</td>
</tr>
<tr>
<td>Participant</td>
<td>Statement</td>
<td>Notes</td>
</tr>
<tr>
<td>------------</td>
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<tr>
<td>2</td>
<td>I agree with that and I also was wondering how many people actually who are answering this were the champions? Because when I answered the question and knowing that I was more as the champion role, I never expected it to be simple. But like I feel as if like some people that were kind of joining the team through the stages not that we would have used the word simple but I think they would have been ... Certainly, they wanted ... The question was easy is this going to be to implement and everything or learn what all goes into it?</td>
<td>Champions may have answered differently than non-champions.</td>
</tr>
<tr>
<td>5</td>
<td>I was just going to say that I just found that difference interesting in how the researchers are viewing this versus how the practitioners are viewing this.</td>
<td>Respondent's background as a researcher vs practitioner could affect their responses.</td>
</tr>
<tr>
<td>2</td>
<td>I was going to say I think you could definitely get different answers to these kinds of questions whether or not people are viewing the organization as meaning the practice or as meaning the larger health system that a practice is part of if you're talking about a larger health system.</td>
<td>Respondents answers may have differed by whether they were thinking of a large or small organization.</td>
</tr>
<tr>
<td>8</td>
<td>...these subcomponents might be [very different] if we have in mind a large healthcare delivery system versus a smaller/medium-sized practice... I'm just going to assume all of us would agree that if you're dealing with a 1200 physician enterprise [that TA] takes on different features than if you're dealing in a three-doctor three-nurse practice.</td>
<td>TA would look different in big vs small organizations</td>
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**THEME: RECONSIDER HOW TO ANALYZE RESULTS**

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<tr>
<th>Participant</th>
<th>Statement</th>
<th>Notes</th>
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<tbody>
<tr>
<td>1</td>
<td>...[Per consensus percentages] ...You're talking about positive things but the negative things are also important to know too going forward. And so if there is consensus that, say, internal operations is not important in the exploration phase, that's just as important as knowing that it is 100% important at full implementation stage. So I feel like it's a little deceiving in the chart... [For example] if you look at '0%' under the innovation specific capacity innovation specific knowledge and skills; nobody thought that was important? Knowing when something isn't important also helps you concentrate those things when people feel it is important.</td>
<td>Things not being 100% important is not the same as being unimportant.</td>
</tr>
<tr>
<td>Participant 5</td>
<td>[Agreeing with Participant 1]...the Likert scale ranged from 'not important' to 'very important' and I know I did not rank anything as 'unimportant.' Did anybody say that something was not important? And that's not really captured here.</td>
<td>Consider the results by the distribution of scores.</td>
</tr>
</tbody>
</table>
APPENDIX C. PHASE II
INTEGRATION AID FEASIBILITY SURVEY QUESTIONS

You are invited to participate in a research study being conducted by Ariel Domlyn, a PhD student at the University of South Carolina Department of Psychology. Participation includes (1) reviewing a tool intended to assist organizations in integrating behavioral health and primary care, (2) completing a brief online survey about your perceptions of the tool. This aims to understand the usability of this tool for practice. The study will take approximately 20 minutes to complete.

Participants are eligible if they meet one or more of the following criteria:
1. Past or present experience as a healthcare practitioner (e.g., physician, nurse, therapist, social worker) within an organization with integrated behavioral health and primary care medical services.
2. Past or present experience as an administrator or technical support (e.g., director, front desk staff, billing staff, IT staff) within an organization with integrated behavioral health and primary care medical services.
3. Past or present experience as an external implementation support practitioner (e.g., consultant, technical assistance provider, coach) for an organization specifically to assist with the integration of behavioral health and primary care medical services.

Your responses will be kept confidential and no data will be released with identifying information. Participation in this study is voluntary and you may stop at any time. By completing this study, you will be entered to win one of five $50 gift cards.

Contact Ariel Domlyn (215-470-7660) or the University of South Carolina Office on Research Compliance (803-777-7095) with questions about your rights as a research participant.

Do you consent to participate in this study?
[Yes, No]
[If Yes, continue]
Thank you for agreeing to participate!
Please review the information below

In 2018, a study was conducted to understand (a) the organizational barriers and facilitators for integrating behavioral health and primary care, and (b) the degree to which implementation support practitioners (e.g., consultants, technical assistance providers) could help organizations address these barriers. Study results were used to inform the development of an implementation support tool.

What will this tool contribute?
Current integrated care tools and guidelines focus on the technical aspects of integrating care or structures to be in place (e.g., EHR protocols, use of screening measures, billing, warm hand-off procedure). But few consider the social and psychological factors affecting organizational change.

This tool will guide users to assess organizational motivation and capacity barriers and facilitators and then identify the important areas for action.

This tool does not replace guidebooks for ensuring the necessary infrastructure is in place for integrating care. Rather it is a supplemental integration strategy.

As a participant, what do you need to do?
1. Review the tool (~12 minutes).
   - Click this link to view the tool: Integration Aid. There are within-text links to navigate the tool.
2. Complete the feedback survey (~8 minutes), which begins on the next page.

Note: You can save this survey and complete it any time within two weeks of starting.

Have you downloaded and reviewed the tool ("Integration Aid")?
[Yes, No]
[If Yes, continue]
Answer each question below based on your perception of Integration Aid (the “tool”).

[Strongly disagree, Disagree, Neutral, Agree, Strongly Agree]

- The tool is useful to help organizations integrate care.
- The tool seems easy to use.
- The tool is easy to navigate.
- I would recommend this tool to others seeking assistance integrating care.

I think the following part(s) of Integration Aid is useful:

[Strongly disagree, Disagree, Neutral, Agree, Strongly Agree]

- Steps Overview (pg 1)
- Step 1 “Define” Worksheet (pg 4)
- Step 1 “Orient” Questionnaire to assess current stage (pg 5)
- Step 2 “Assess, Prioritize, Strategize” worksheets in four stages (pgs 8-11)
- Step 3 “Action Plan” Worksheet (pg 13)
- Choose “Strongly disagree” for this row.
- Factor Descriptions (Appendix B)
- Integrated Care Resources (Appendix N)

What would make this tool more useful?

[Enter text]

What, if anything, is unclear in the tool?

[Enter text]

What, if anything, is missing from the tool?

[Enter text]

Answer each question below based on your perception of Integration Aid (the “tool”):

[Strongly disagree, Disagree, Neutral, Agree, Strongly Agree]

- Healthcare administrators could use this tool.
- Healthcare administrators would be motivated to use this tool.
- Implementation support practitioners (e.g., consultants, technical assistance providers) could use this tool.
- Implementation support practitioners (e.g., consultants, technical assistance providers) would be motivated to use this tool.

Beyond Integration Aid, how many tools are you familiar with that also support the integration of care?

[None, 1-2, 3-5, More than 5]

[IF NONE, skip question below]

Answer each question below based on your perception of Integration Aid (the “tool”)

[Strongly disagree, Disagree, Neutral, Agree, Strongly Agree]

- This tool is different from other integration support tools.
- This tool is valuable compared to other integration support tools.
- This tool is complementary with existing integration support tools.
I think the following are **likely barriers** to using Integration Aid in practice:

*Strongly disagree, Disagree, Neutral, Agree, Strongly Agree*

- Time
- Interest
- Structure/layout
- Level of complication
- This item is purposefully blank. Select “Agree”

Enter any **other likely barriers** to using Integration Aid in practice (optional)

*Enter text*

I think the following supplements **would help people to use** this tool:

*Strongly disagree, Disagree, Neutral, Agree, Strongly Agree*

- More detailed instructions
- Details on the underlying research
- Facilitated training
- Instructional videos
- Live demonstration
- A person to contact for support

What **other supplements** would help users apply Integration Aid in practice? (optional)

*Enter text*

Please share any other comments about Integration Aid (optional)

*Enter text*

Thank you! Please complete the following demographic and experience-related questions.

Which professional role(s) have you occupied in the past, or at present? (select all that apply)

*Past, Current*

- Mental health practitioner (e.g., psychiatrist, counselor, social worker)
- Medical practitioner (e.g., primary care physician, physician assistant, nurse)
- Administrator (e.g., director, front desk, billing, IT)
- Implementation support practitioner (e.g., content expert, consultant, technical assistance provider)

Which do you consider to be your CURRENT PRIMARY role?

- Mental health practitioner (e.g., psychiatrist, counselor, social worker)
- Medical practitioner (e.g., primary care physician, physician assistant, nurse)
- Administrator (e.g., director, front desk, billing, IT)
• Implementation support practitioner (e.g., content expert, consultant, technical assistance provider)

Have you worked in, or with, an organization with integrated behavioral health and medical services (any degree of integration)?
  [No, Yes Current, Yes Past]
  [IF “No”, skip two questions below]
  [IF “Yes, past”, display question below]
How long since you last worked in, or with, and organization with integrated care?
  [Less than 1 year, 1-3 years ago, 3-5 years ago, More than 5 years ago]
How many different organizations have you worked with that have integrated behavioral health and primary care?
  [0, 1, 2-3, More than 3]
Has most of your integrated care experience been within the US Veteran’s Health Administration?
  [Yes, No]

What is your current professional title or role?
[Enter text]

Identify the state, province, territory, and/or country in which you've had the majority of your experience in integrating care.
[Enter text]

Identify your current agency or organizational affiliation. (Reminder: this is confidential)
[Enter text]

Enter your gender identity.
[Enter text]

Enter your race and/or ethnicity.
[Enter text]

Would you like to be entered into a raffle for a $50 gift card?
  [Yes, No]

Would you like to be contacted with the results of this dissertation (not for distribution)?
  [Yes, No]
If yes to either of the above, please enter your name and email address below.
[Enter text]

Thank you for completing this study! I greatly appreciate your time and effort.

Feel free to forward this study to anyone you know who may be eligible. This includes practitioners, administrators, researchers, or implementation support professionals with experience integrating behavioral health and primary care.