# DISSERTATION APPROVED BY

04-01-2015
_____
Date

_Cindy Slone, Ed.D., RN_
_____
Cindy Slone, Ed.D., Committee Chair

_Peggy Hawkins, Ph.D., R.N._
_____
Peggy Hawkins, Ph.D., Committee Member

_____
Isabelle Cherney, Ph.D., Program Chair

_____
Gail M. Jensen, Ph.D., Dean

STANDARDIZING AN ORGANIZATIONAL APPROACH TO CARF SURVEY

PREPARATION:

A QUALITY IMPROVEMENT PROJECT

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By

Deborah Hines Butler

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A DISSERTATION IN PRACTICE

Submitted to the faculty of the Graduate School of Creighton University in Partial

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Abstract

*Standardizing an Organizational Approach to CARF Survey Preparation* is a design-based research project that synthesizes the existing knowledge of four interdisciplinary communities of practice to create an effective and efficient program that is process-driven rather than person-dependent.  As a quality improvement project, its final product consists of instruments that facilitate ongoing readiness for accreditation preparation and serve as the basis for better practices in the organization under study.

*Keywords:* quality improvement, CARF, accreditation, design-based research, action research, Communities of Practice Theory

Dedication

This is dedicated first to servant leaders viewing our shared achievement from another realm:

*Marge, Mary Lou, Larry G., Robert G., and my parents:*

*I hope you know I watched, I listened, and I learned.*

Then to those people – also far away but who give my life meaning and purpose:

*Peter, Amy, Carly, Nolan, Jon, and Becky:*

*Now it's your turn – believe me, the water's just fine!*

To those who came alongside, allowed me to ignore them, and loved me anyway:

*Boomer, Brie, Tony – Vegas or Disneyland?*

And finally to *Mr. John E. Butler*, who knows that of all we have been given and all we have achieved, the one thing I cherish more than anything is the gift he has been to me over the span of our long lives. *I love you; always have, always will.*

    *~ Mrs. J. E. Butler*

Acknowledgements

*with Reflections from Camus via Greenleaf (1991, p. 5)*

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*"You heard a faint flutter of wings and the gentle stirring of life and hope" in me*

My deepest gratitude goes to the teams in the study who may never know the

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of your thoughtfulness, your care for our patients and staff; it stands as a testimony to

your character and enormous heart.  And to Kathy and Michelle who jumped right into

the deep end with me: Your courage also made this study possible. You deserve those

awesome results, but the fun has just begun!

*You are the "individuals whose deeds and works every day negate frontiers and the*

*crudest implications of history"*

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*personalis*: *May you continue to "create dangerously" and keep lit and shining "the ever*

*threatened truth that each and every person, on the foundations of their own sufferings*

*and joys, builds for us all" ~ Camus.*

Continued blessings and thank you all. Deb

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CHAPTER ONE: INTRODUCTION

**Background and Statement of the Problem**

At the beginning of 2014, four programs in a large vertically integrated healthcare

system in the Pacific Northwest faced the triennial renewal of accreditation from the

Commission on Accreditation of Rehabilitation Facilities (CARF).  As with many

organizations that use CARF, this healthcare system put off planning and applying for the

upcoming surveys until three months prior to the accreditation expiration date.  In the

past, experienced staff familiar with CARF survey processes had comfortably managed

starting the survey preparation so late, working together to seamlessly accumulate,

update, and prepare existing documents.  For the organization in this study, changes in

staff and services in the previous three years and limited availability of the local subject

matter expert disrupted the normal process, leaving the prospect of a successful survey in

jeopardy for several programs.  Barriers included:

- New staff unfamiliar with CARF standards

- Program leads who had not managed CARF survey preparation

- Multiple surveys in a four-month window

- Key staff turnover including the quality consultant for the service lines

- Lack of continuity in and poorly communicated handoffs for ongoing readiness

- Unique nature of CARF surveys and standards

Only one of the four programs (Team 2) retained leadership staff who had previously

completed successful CARF surveys, whereas the other three programs had limited

access to their process or knowledge because of divergent practices for survey

preparation within the organization.  The decision was made to leverage Team 2's

considerable experience and begin to standardize a comprehensive, organizational process for all CARF surveys and continuing accreditation.

In March 2014, an interdisciplinary, interdepartmental, quality improvement (QI) project for standardization of CARF preparation was approved by the service line leadership. The initial aim of the initiative was to apply a whole systems approach to performance improvement that would maximize technology, process, culture, and change management to develop a reliable system of ongoing readiness and better practices in program preparation for CARF.

Poor planning, lack of a realistic ongoing quality improvement process, and ineffective interdepartmental communication (Longenecker & Longenecker, 2014) threatened the triennial CARF re-accreditation of the Behavioral Health and Community Services programs. Situational analysis of the CARF accreditation readiness environment indicated an opportunity to develop and apply a consistent process that would leverage the strengths of the current experienced staff against the documentation gaps and relative inexperience of new key members of the four teams.

## Purpose of the Study

The purpose of this quality improvement study was to describe the shared learning of four distinct interdisciplinary health care communities of practice participating in a rapid quality improvement project to prepare for impending triennial re-accreditation under CARF. The goal of the quality improvement project was to standardize an organizational approach to CARF surveys to improve survey presentation and results. This required the shift from a person-dependent, unsystematic model to one that is process-driven, efficient, and effective.

**Research Questions**

The overarching question in the development of a systematic, organization approach to CARF survey preparation was simple: Of the current processes being used in preparation for CARF surveys, which are most effective and efficient?  This question indicated a need for an appropriate conceptual framework that could first provide an adequate analysis of multiple programs and variables in the current environment. Bardach's *Eightfold Path for Policy Analysis* (Bardach, 2005) was chosen for the analysis phase of the rapid cycle team approach because a quality project for accreditation readiness is, by definition, designed to assess and modify the current social and professional practices involved in preparing for survey.  The Eight-Fold Analysis mirrors other quality improvement methodologies that rely on cyclical revisions and reflection to modify processes in real time, but also accounts for variability and context.  The following research questions were asked at each level of the process refinement and, for this study, included:

1. *Define* better practices: Which processes do the individual programs use with success and consistency?

2. *Assemble evidence*: What processes and information can be shared among programs to successfully meet shared standards?

3. *Construct alternatives*: What factors promote sharing of knowledge and replication of better practices?

4. *Select criteria*: What processes are most effective and efficient?

5. *Project the outcomes*: Does the shared, ongoing process result in a more

comprehensive coverage of required documentation and promote compliance with

operational timelines?

## Significance of the Study

The significance of a systematic evaluation and modification of practices that

prepare programs for CARF survey lies in outcomes that successfully demonstrate the

adoption of a continuous quality improvement process to dispense and standardize

knowledge across departments and disciplines.  For the organization under study,

achieving better practices for ongoing readiness requires an improved, shared process that

reduces waste of staff time, allows for continuous updating and encourages

communication among interdisciplinary teams with a similar goal.

Moreover, while the debate continues about the impact of accreditation on safe

practices and improved patient care, surveys conducted by an external recognized entity

remain tied to reimbursement.  Therefore, an ability to comply with accreditation

standards in an effective and efficient way at the very least constitutes good stewardship.

For the organization in this study, the project establishes process-driven rather than

person-centered compliance with CARF standards, operational timelines and

training/education requirements.  The ability to communicate changes, measure

performance, save staff time, and share knowledge results in better evidence-based

practices and a safer, improved patient-centered experience.

## Aim of the Study

The overall aim of the study was to synthesize the experience and existing

knowledge (structure) and diverse experience of four interdisciplinary communities of

practice (Wenger, n.d.) to develop (processes) sustainable, evidence-based tools for

ongoing accreditation readiness (outcome). This included refining current practices for

document management, creating clarity and consistency in the reporting and developing a

tracking mechanism for improving ongoing compliance with required CARF operational

timelines. Concurrence and evaluation of the tools will occur in late January or early

February 2015 when the communities of practice meet in a Roundtable meeting as a

subcommittee of Accreditation Readiness.

**Method Overview**

The system redesign of four programs preparing for re-accreditation under CARF

standards in 2014 is presented as part of an organizational quality improvement project.

The limited purpose of the project was to standardize and streamline the local process of

survey preparation within the organization. The US Department of Health and Human

Services (DHHS) recognizes quality improvement as "systematic and continuous actions

that lead to measureable improvement in healthcare services" (2011, p. 3). The Institute

for Healthcare Improvement (IHI) defines quality improvement as organizational

activities whose purpose is to "formulate and codify generalizable knowledge that yields

predictable improvement" (Scoville & Little, 2014, p. 12) in a specific system. This has

been shown to successfully occur through an iterative process of continuous but

incremental change within an existing process.

This qualitative study focused on creating an organizational environment that

would promote and support shared learning of best practices among four separate groups

of interdisciplinary professionals as they prepare for a triennial survey with an intent that

they learn from one another. From among multiple continuous quality improvement

tools and techniques, the iterative design-based research model (Amiel & Reeves, 2008) was chosen. This action-based, collaborative research approach amplifies and refines existing methods as a means to address process challenges by leveraging "artifacts, technological tools and curriculum…that support and lead to a deepened understanding" (Kennedy-Clark, 2013, p. 26). Like many QI models, design-based research (DBR) is recognized as a cyclical and adaptable research methodology that:

- "(Addresses) complex problems in real contexts in collaboration with practitioners,

- (Integrates) known and hypothetical principles with technological advances to render plausible solutions …

- (Conducts) rigorous and reflective inquiry to test and refine innovative learning" (Reeves 2006, p. 58)

The teams (cases) participating in the quality improvement project began preparing for their separate surveys in January 2014. The action research framework remained "highly focused and geared to the needs of local folks" (Vann, 2012, p. 5) and included the researcher as consultant and quality program manager (QPM) who guided the process of reflective problem-solving throughout the surveys, scheduled for July, September and November 2014.

Having multiple cases in succession allows for replication or modification of project objectives, field procedures, data collection and the narrative report of the survey (Yin, 1994) in each subsequent survey. As the study progressed, the iterative study design informed the refinement and testing of plausible solutions to existing challenges, followed by a reflective analysis of each implementation. Changes that promoted

efficiency and effectiveness were then applied to the next cycle, analyzed and refined to produce better practices and improved results. Processes and results of CARF surveys from 2011 were also available for comparison to 2014. In three of the cases studied, the program managers preparing for survey remained constant and therefore, had previous, direct experience with the survey preparation process.

## Definition of Relevant Terms

The definition of terms for the study relate to its focus as a quality process improvement project and to the specifics of CARF accreditation language. A list of additional acronyms used in this narrative is found in Appendix A.

**CARF** – The Commission on Accreditation of Rehabilitation Facilities (2014) an independent, international, nonprofit organization providing one- to three-year accreditation of health and human services.

**Standards** – a defined level of quality used as the basis for an "objective evaluation process that can help healthcare organizations measure assess and improve performance" (The Joint Commission, 2014, n.p.); rules that require compliance for accreditation.

**Action research** – a style of research "in which the researchers work explicitly with and for people rather than undertake research on them" (Meyer, 2000, p. 178)

**Quality Project Manager (QPM)** – the researcher's role as quality consultant that included project management of the quality improvement project to standardize the organizational approach to CARF preparation

**Communities of Practice (CoP)** – groups of people who share a concern or passion for something they do and learn how to do it better as the interact regularly (Wenger- Trayner, n.d.)

**Employment and Community Services (ECS)** – a set of CARF standards that cover programs that provide employment, housing and training programs and services

**Behavioral Health (BH)** – a set of CARF standards that cover core behavioral health programs including – but not limited to – mental health, psychosocial rehabilitation, addiction treatment and associated family services

**Design-based research (DBR)** – a qualitative research model that uses an iterative approach to address complex contextual issues by collaboration with practitioners, reflective inquiry and refinement of the learning environment

Section 1 ASPIRE to Excellence® - A set of standards shared by all CARF programs that represent best practices

**Survey preparation questions** – the system developed by CARF that acts as a self-study evaluation of conformance with CARF standards.  This self-survey is completed in the months preceding the scheduling of a survey and following the Intent to Survey application.

**Accreditation** – confirmation by the survey organization that there has been an application and implementation of the standards.  Programs may be accredited for three years (highest), one year, provisional, preliminary or non-accreditation suggesting various levels of deficiencies in meeting the standards

**Quality Improvement** – systematic and continuous actions that lead to measureable improvement in healthcare services (DHHS, 2011) that use "peer analysis, intervention, resolution and follow-up" (Center for Medicare & Medicaid Services [CMS], 2003, p. 2)

**Process** – a series of actions that produce something or that lead to a particular result (Merriam-Webster, 2014)

**Narrative** – A product of the CARF self-analysis presented as an organized account rather than a question/answer response to standards. In this study, a facility narrative covered all the responses to Section 1 that are commonly held by all programs and represented the facility compliance with those standards.

**Operational timeline** – the metrics provided by CARF for compliance to standards. Includes review of policies, safety checks, training schedules, annual report submissions and other activities done on a routine basis.

**Burn folder** – a primary technology innovation with electronic versions of documentation hyperlinked to the narrative and reproduced on CD for the surveyors. This replaced document binders and hard-copy reports. Does not contain proprietary data or Protected Health Information (PHI). Stored on a secure drive.

**Policies** – organizational directives outlined in handbooks, standard operating procedures (SOPs) and other documents that define practice.

**Ongoing readiness** – a continual process of evaluation of risk and compliance

**Recommendation** – the designation of a deficiency in meeting standards that

requires a quality improvement plan (QIP) to retain accreditation.  Also called a

finding.

**Consultation** – the designation of an area of improvement not meeting the criteria

for deficiency.  May or may not be accepted as an intervention but offered by the

surveyor as a suggestion for improved practice.

## Assumptions

The primary assumption of the quality improvement project to standardize an

approach to survey preparation was that sharing successful processes would result in

better survey outcomes through comprehensive and accurate responses to accreditation

requirements with a smaller investment of staff time and effort.  Redundancy in procuring

documentation, writing facility narratives and resource file management is unnecessary

when teams collaborate and shared learning works to support a common effort toward

common goals.

A second assumption was that the surveys would be adequately spaced to provide

time to apply an iterative, reflective research design that could initiate the necessary

improvements.  This then would mean that the outcome of the final survey would result

in fewer findings or recommendations than the first three and that all programs would

perform at a higher level of compliance than they had in previous years.

The third assumption in the study was that the practice improvements could be

standardized into a system that promotes measureable and sustainable compliance and

accountability.  This establishes true ongoing readiness that is no longer person-

dependent but process-driven.  The final assumption expanded the third – that the

standardized process will be adopted and continually refined by other teams in the

organization seeking CARF accreditation.

## Delimitations and Limitations

Delimitations in the study are found both in process and content.  The literature

review was largely restricted to peer-reviewed articles that dealt with issues of quality

improvement and accreditation within the United States.  Although there is a significant

body of literature regarding global QI activities and international responses to accrediting

organizations, the study is conducted in one US facility and therefore, the process of

article selection prioritized US findings.  For instance, a systematic review of the

literature comparing attitudes of healthcare professionals toward accreditation

(Alkenhezian & Shaw, 2012) found that more than 70% of US rural hospital

administrators "did not think the perceived benefits from accreditation (were) worth its

cost (or) demands on staff time" (p. 76).  On the other hand, hospital owners in India

overwhelmingly agreed "on the need for accreditation" (p. 75) with a "high level of

support for the classical features of accreditation" (p. 77).  The reasons for such regional

disparity are unknown and beyond the scope of this study, and introducing evidence that

may reflect different cultural or sociopolitical environments in healthcare was determined

to have a confounding rather than clarifying effect on the analysis.

The narrow content focus (CARF) also demonstrates a planned delimitation.  The

results from the study to standardize the organizational approach to CARF survey

preparation cannot easily be propagated to other surveys.  While the evidence-based

standards in CARF bear some resemblance to other agencies' assessments (e.g., The Joint

Commission (TJC), Healthcare Facilities Accreditation Program (HFAP) and Det Norske

Veritas (DNV), the onsite survey processes and required documentation and training for

program-focused surveys may not apply to other accrediting bodies.  The standards for

CARF are broader and less prescriptive but specifically devised by CARF.  Moreover,

because of its consultative structure, CARF reports examine organizational involvement

without specifications, encouraging participants to choose and address standards to meet

the organization's – rather than CARF's – needs.  This relies on a unique internal

composition and often, proprietary quality improvement processes.  Other organizations

seeking to replicate this study may or may not have the structures, policies and processes

necessary to support the same changes.

Limitations were also based in process and content.  With a quality improvement

project at its core, the iterative process designed to transform *existing* knowledge into

changes in practice limits the study.  The problems, as well as the solutions to those

problems, focus on structured learning of the unique teams and practice-based evidence

to improve outcomes "at the *local* level" (Duke University Health System, 2013).  The

additional content limitation included the restriction of the study to only two sets of

CARF standards: Behavioral Health (BH) and Employment and Community Services

(ECS).  Other CARF accredited programs within the organization will be asked to review

applicability of the process standardization, but how it will impact their existing practice

is currently unknown.

### The Quality Program Manager, Leadership and System Redesign

Although the role of the researcher in this quality project to standardize

organizational practices is addressed at length in Chapter 3, the context of the project

(interdisciplinary and interdepartmental) required the researcher, as quality program

manager (QPM), to also assume a leadership role. Previous survey preparation practices

cast the QPM as the subject matter expert (SME) for CARF. Program leads worked

individually and in relative isolation with the QPM to accumulate, update and prepare

documentation for surveyors to review. This person-dependent process failed when key

staff turnover created a void of knowledge and expertise at the top. The first leadership

decision made by the QPM in collaboration with program leads was to "include the active

participation by those who carry out the work in the exploration of problems they identify

and anticipate" (Adelman, 2006, p. 9). At the beginning of 2014, many of the front-line

staff were far more experienced in preparing for CARF than the QC or even most of the

program leads.

There are numerous models for making the shift from top-down to lateral

management of the human affairs or quality improvement projects. Lewin's action

research demonstrated that productivity could improve through "democratic participation

rather than autocratic coercion" (p. 7). Greenleaf, in *The Servant as Leader* (1991) noted

that during a leadership crisis, "the danger, perhaps, is to hear the analyst too much and

the artist too little" (p. 5). The perceived lack of critical resource personnel unlocked an

opportunity to involve the artists, the caregivers, and the people who carried out the work

the narratives would describe. The challenge for leadership was to develop an

environment in which those voices could be heard.

Direction for this new setting came from an ancient source. Lao Tzu (571 BCE)

said, "the leader is best when people barely know he exists, when his work is done, his

aim fulfilled, they will say, 'We did it ourselves' " (BrainyQuote, 2015, n.p.). With that

as the vision, the leader becomes the servant; encouraging, empathetic, and open to the

goals and gifts of those she serves.  The participant QPM becomes a change agent who uses communication and feedback to suggest or spread interventions already constructed by the teams (Adleman, 2006), meaning the strategies for change would come from them.

## Summary

Social psychologist Kurt Lewin proposed action research as a methodology that "gives credence to the development of powers of reflective thought, discussion, decision and action by ordinary people participating in collective research on (issues) they have in common" (Adelman, 2006, p. 8).  This statement cogently summarizes the context, goals and objectives of the QI project to standardize an organizational approach to accreditation survey preparation that have been outlined in Chapter 1.  The common issue or challenge for the interdisciplinary teams in this study was a lack of planning and ongoing compliance with the operational timelines and documentation development required by the survey.  Looming deadlines, limited resources and the loss of the CARF subject matter expert (SME) created an atmosphere of high anxiety and low morale.  The significance of the study is found in the processes developed to overcome these obstacles and deficits.

Rather than attempt to repeat the past didactic practice of a SME meeting with program leads individually to consult and provide guidance on survey preparation, the teams met in March 2014 to assess the organizational strengths, weakness, and resources. This "discussion of problems followed by group decisions on how to proceed" (p. 9) is at the heart of Lewin's model for action research and exposed an opportunity for a system redesign or quality improvement project that would standardize and streamline survey preparation.  The active participation of staff in leveraging their own expertise and

sharing knowledge and processes meets the aim to synthesize the experience and existing knowledge by allowing the teams to identify problems, anticipate obstacles and refine their own solutions.

CHAPTER TWO: LITERATURE REVIEW

**Introduction**

One of the challenges inherent in developing a strategy for reviewing the relevant

literature of any quality project is that, by its nature, quality improvement (QI) begins

with an investigation of "difficult, applied, practice-driven questions" (Dede, 2005, p. 2)

for which empirical studies may not exist.  The researcher acting as Quality Program

Manager (QPM) must consider the practical importance of the questions in a limited

context of ethnographic variables specific to the problem under study and then determine

how to develop plausible solutions with no history of statistical validation.  In quality

improvement, solutions evolve from multiple sources through observation and reflection,

bringing to mind the Jainian fable of the *Elephant and the Blind Men* (Jainworld, 2011);

all views *considered together* create the whole picture of what is being examined.  To

examine one element or theoretical perspective too narrowly leads to faulty perceptions

that misinform practice.

The following literature review for standardizing an approach to CARF survey

preparation considers the complexity of key features that lead to small-scale successes in

quality improvement.  Many are theoretically based while other topics explored in the

review cover specific elements of  "a phenomena that does not yet exist" (Squire, 2005,

p. 5), e.g., the systematic, organizational approach to survey preparation.

The first theme examines literature that describes, supports, or challenges the

principles of QI as a valid research paradigm.  The general overview includes a brief

history of the discipline, a discussion of the differences between QI and traditional

evidence-based research requirements, the iterative cycle that underwrites most QI investigations and the design-based research paradigm selected for use in this study.

The second theme examines the phenomena of health sector accreditation, its history, models, and modes.  The risks and benefits of the models for accreditation as well as the type of leadership required to guide teams through the process provide a backdrop for the next discussion – the specific elements of the survey under study.  As an emerging accreditation alternative for many organizations, the organized review of this literature compares and contrasts CARF with other surveys, clarifying the unique needs of teams undergoing the process of preparation.

For both themes, initial search terms (*quality improvement* and *accreditation*) were entered into CINAHL, EBSCO, PubMed and Ovid, accessed online through the Foley Library at Gonzaga University in Spokane, Washington.  The number of hits was recorded and the search was incrementally limited by dates, full-text, peer-reviewed, English language and in most cases, geographic location (United States).  PDFs were downloaded and tracked in an annotated bibliography and separate commentary file that allowed easy access to key terms, quotations and summaries.  The gray literature, blogs, professional websites and public commentary in reference sections were also examined to validate claims in the literature and, when needed, accessed through the JSTOR database or Google.  The databases provided a convenient sorting by topic and resource to accumulate study specific titles for review.

Chapter 2 synthesizes over 100 scholarly articles and supporting documentation to discuss the strengths and weaknesses of the QI and accreditation literature.  It highlights both what is currently known as well as the gaps in knowledge and lack of structure for

the administrative mandates (Izumi, 2012 p. 260) of both QI and accreditation that

permeates so much of health care.  The history and distinctive separate elements of QI,

including the iterative cycle, are examined and then considered together with the

accreditation process to complete the whole picture of an informed, structured approach

to survey preparation for CARF.

## Purpose of the Study

The purpose of this quality improvement study was to describe the shared

learning of four distinct interdisciplinary health care communities of practice

participating in a rapid quality improvement project to prepare for impending triennial re-

accreditation under CARF.

The goal of the quality improvement project was to standardize an organizational

approach to CARF surveys to improve survey presentation and results. This required the

shift from a person-dependent, unsystematic model to one that is process-driven,

efficient, and effective.

## Aim of the Study

The overall aim of the study was to synthesize the diverse experience and existing

knowledge (structure) of four interdisciplinary communities of practice (Wenger, n.d.) to

develop (processes) sustainable, evidence-based tools (outcome) and a continuous quality

improvement structure for ongoing accreditation readiness.

The study used an iterative research model in the development of a structure for

continual quality improvement and ongoing readiness.  This included refining current

practices for document management, creating clarity and consistency in the reporting and

developing a tracking mechanism for improving ongoing compliance with required

CARF operational timelines.

**Creating Change: Standardizing Practice through Quality Improvement**

The initial literature review began with focused searches in CINAHL, EBSCO,

OVID, and PubMed using the terms quality + improvement + health care.  Delimiters

included dates (2007- present), full-text PDF, English and peer-reviewed articles.  As the

search continued, the common names used for quality improvement were also queried.

These included Total Quality Management (TQM), quality assurance, Six Sigma, Lean,

Continuous Quality Improvement (CQI) and ISO 9000.  The Cochrane Library was

queried as well as the Agency for Healthcare Research & Quality (AHRQ), the National

Quality Forum (NQF), American Society for Quality (ASQ), US Department of Health

and Human Services (DHHS) and Center for Medicare and Medicaid Services (CMS) to

develop a working definition of QI.  The more limited searches returned substantially

fewer results with greater focus on specific QI processes or projects.  The overall picture

of QI was, in true QI fashion, shaped more by individual objectives or local context than

a shared conceptual framework. There was, however, one area of consensus: Most

authors cited Walter Shewart, Edwards Deming, Avedis Donabedian and more recently,

Donald Berwick and Lucian Leape as the primary leaders or pioneers in the QI

movement and their original works were added to this literature review.

Nurses writing about quality improvement often attributed pioneer status to their

founder, Florence Nightingale, for her seminal work during the Crimean War (Sheingold

& Hahn, 2014; Majoua & Bozic, 2012; Mitchell, 2008; Mainz, 2004; Neuhauser, 2003).

Quality improvement did not emerge as a health care phenomenon, however, until well

after Walter Shewart (1931), W. Edwards Deming (1950) and Joseph Juran (1947) revolutionized efficiency and cost-controls for industry (Marjoua & Bozic, 2012; Varkey, Reller & Reser, 2007; Chassin & O'Kane 2010). Although 1951 saw the formation of the Joint Commission on Accreditation of Hospitals (JCAHO), and voluntary evaluations of health care were being conducted, the lessons learned from manufacturing about quality were not formally applied to health care until 1966 when Donabedian introduced a framework (Figure 1) for continuous quality improvement.

In *Evaluating the Quality of Medical Care* (1966), Dr. Donabedian summarized the limited quality research of his time, reflecting concern that, as a value-based judgment, "the definition of quality may be almost anything anyone wishes it to be" (p. 692). He went on to describe a paradigm that moved beyond values and examined the physician-patient interaction in terms of "structure, process and outcomes" (Varkey, Reller & Resar, 2007, p. 735).

| Resources (Structure) | Activities (Processes) | Results (Outcomes) |
|---|---|---|
| People Materials Information Technology | 1. What is done 2. How it is done | Health services delivered Change in health behavior Patient satisfaction |
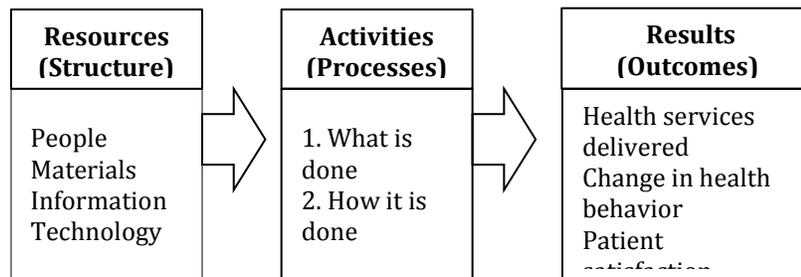
*Figure 1*. The Donabedian Framework. This figure illustrates the process of creating reliable outcomes. In Massoud, Askov, Reinke, Franco, Bornstein et al., 2001, p. 4

The Donabedian Model stood in stark contrast to previous evaluative models based on compliance with structural standards and a culture that assigned responsibility for poor performance to "a miscreant who could be punished for the transgression" (Decker, 1992, p. 165). Arguing from a position and understanding that patient care is largely personal and *value-driven* from the practitioner's perspective, Donabedian was an

early voice of reason, recognizing quality improvement is not just a systems issue that

depends on good operations.  It also must rely on the relational aspects of a patient-

centered process to ensure positive outcomes.

In spite of Donebedian's prolific efforts, the body of quality improvement

literature in health care did not appreciably expand until the late 1990's – nearly 30 years

after his seminal work.  Table 1 is a graphic representation of the quality literature and

based on a timeline attached to a PubMed (2014) search using the terms *quality +*

*improvement.*  What changed?

There is little doubt that prevailing public opinion, led by academia and

government, resulted in a proliferation of scholarly works on quality improvement in

health care after 1991.  Most authors cite the Institute of Medicine (IOM) publication of

*To Err Is Human* (Kohn, Corrigan, & Donaldson, 2000) and the subsequent study

*Crossing the Quality Chasm* ([IOM], 2001) as turning points in the quality movement.

These two seminal works raised public awareness of the impact of medical errors and

argued the case for continuous quality management as a method to control those errors.

The reports together moved the meter of public discourse and, in the words of Leape and

Berwick (2005), "galvanized a dramatically expanded level of conversation and concern"

(p. 1).  Moreover, the decision by The Joint Commission to link quality improvement to

accreditation and establish national measures of quality inextricably tied QI to

reimbursement.  The skewed timeline of articles in the PubMed search led to another

level of inquiry into the environmental and sociopolitical factors that appear to have

stimulated both interest and spread of quality improvement as an intervention to improve

health care.  Vertical lines in the following graph  (Table 1) represent factors and events

that shaped the evolution of quality improvement literature and led to current attitudes

and increased interest in quality improvement as a process and, for some a science.

Table 1

Comparison of Published Literature on Quality with Socioeconomic Events 1965-2015

**Dispersion of Quality Improvement Literature (Healthcare) 1955- present**

| | 1955 | 1960 | 1965 | 1970 | 1975 | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | 2010 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Series1 | 29 | 11 | 32 | 72 | 403 | 595 | 1180 | 3470 | 6826 | 11280 | 18156 | 33168 | 15 |

**Legend:**

| | | |
|---|---|---|
| Before 1955 | | Shewart, Deming & Juran |
| 1965 | —— | Social Security Act of 1965 (Conditions of Participation) |
| 1966 | —— | Donabedian |
| 1970 | – – – | Institute of Medicine (IOM) chartered |
| 1989 | ········· | Agency for Healthcare Research and Quality created |
| 1990 | —— | National Committee for Quality Assurance established |
| 1993 | ········· | National Health Care debated |
| 1995 | —— | Medicare enrollment doubles |
| 1998 | – – – | Joint Commission requires ORYX performance measures |
| 1999 | | To Err is Human |
| 2001 | | Crossing the Quality Chasm |
| 2006 | | Public reporting of quality measures |

Much of the quality improvement literature after 2001 echoes the sentiments of Berwick who has been called " the most clearly heard evangelist of applying industrial methods of continuous quality improvement in health care" (Jencks, 1999, p. 1067). Many of the articles reviewed described the application of *Six Sigma*, *Lean*, and the PDSA cycle, all of which are covered in the section on quality tools and practices.  Even as proponents of quality improvement as a method to assure safe, efficient care dominate the 21st century conversation, they have yet to reach consensus.  Given its industrial parentage and sociopolitical birth, QI entered the world of health care under suspicion by some scholars.  Detractors and cynics also published, particularly in the early evolution of QI as the unassailable answer that would reshape, reform and re-establish health care as "a human right" (Smith, Howard, & Berwick, 1999, p. 250).

**Quality Improvement versus Research**

Much of the dissent in the literature comes from the research community. Although Donabedian, one of the earliest fathers of QI, clearly and repeatedly stated that "quality assessment is neither clinical research nor technology assessment" (1988, p. 1148), methods are shared by both disciplines.  Both involve systematic investigation, rely on the existing literature to inform the process, develop a plan and collect, aggregate and analyze data.  Results of the activity may lead to new knowledge and improved outcomes/processes.  Those results can be shared with the larger healthcare community (DHHS, 2010).  Given those similarities, a critical first step in conducting this project required an accurate delineation of research and QI.  Both the literature and governmental bodies are clear about the differences, although ethical concerns about oversight of QI

and an underlying suspicion that QI may be used as a rapid-cycle workaround to replace traditional research protocols persists.

The discussion of QI as research has been ongoing, but in 2007, the Office for Human Research Protections (OHRP) investigated researchers at Johns Hopkins University for a quality improvement research project aimed at reducing catheter-related infections in ICUs (Miller & Emanuel, 2008).  Because the project sought to routinely implement five existing evidence-based procedures as standard practice, the study was approved as a quality project with minimal risk and patient consent waived by the Johns Hopkins Institutional Review Board (IRB).  The OHRP held that the project failed to protect the patients by obtaining informed consent and, as human research, required IRB oversight.  Additionally, publishing study results indicated intent to add to the general body of knowledge.  Johns Hopkins voluntarily stopped the study.

Since that time, the research and quality communities have worked together to clarify what constitutes research and when quality improvement activities fall under the auspices of an IRB.  The Hastings Center (2007) published a statement from a collaboration of scholars and health care leaders, gathered to examine the regulatory issues that impact the increasingly popular option to perform QI instead of traditional research.  They concluded that "QI is a structured, data-guided form of the innovation and adaptation that has always been part of normal health care operations, and it has proven to be effective in improving U.S. health care" (Lynn, Baily, Bottrell, Jennings, Levine et al., 2007 p. 667).  To develop a comprehensive comparison of current attitudes toward QI and research, the literature review includes both peer-reviewed articles on

research versus quality and the IRB statements from four institutions. Table 2

summarizes the characteristics of a study that qualifies as a Quality Improvement Project

Table 2

Differentiating Research and Quality Improvement*

| Domain | Research | Quality Improvement |
|---|---|---|
| **Purpose** | Advance scientific knowledge | Improve process |
| **Scope** | Small to large | Small and local |
| **Risks** | May place subjects at risk | No greater than normal |
| **Knowledge** | Generates or evaluates theory | Improves program/process/system |
| **Data** | Systematic data collection | Systematic data collection |
| **Methods** | Observes rigid protocols and structure, experimental controls, random sampling | Serves organizational goals but flexible and adaptable for rapid incremental change |
| **Testing** | Proves or disproves hypothesis | Continually compares changes to baseline |
| **Applicability** | General | Local only |
| **Goals** | Creates new generalizable knowledge | Translates existing knowledge/practice |
| **Learning** | Experimental | Experiential |
| **Privacy** | Protects confidentiality | Protects confidentiality |
| **Consent** | Informed consent | Part of treatment/job responsibilities if minimal risk |
| **Review** | Related to potential risk | Related to potential risk |
| **Insights** | Guided by theory | Guided by data and experience |
| **Publication** | "Intent to publish is an insufficient criterion for determining whether a quality improvement activity involves research" (HHS, 2010, n.p.) | |

*Resources: (Dugan & Fowler, 2014; University of Washington, 2014; Stanford University, 2013; HHS, 2010, np. Duke University, 2013; Platt, Grossman & Selker, 2013;Morris & Dracup, 2007; Cook & Lowe, 2012 & Lynn et al. 2007)

Even with clarification, concerns remain, particularly with respect to patient safety and

ethical practices. QI projects easily serve as the foundation for formal clinical research

studies. Overlapping activities may produce "both local improvement and new, enduring

knowledge about the nature and function of human beings and their environment" (Lynn

et al., Baily, 2007 p. 671). Care must be taken both in the planning and implementation

of a QI project to assess its potential for research, especially when human subjects or

patients are involved. The Johns Hopkins QI project took place in 67 Michigan hospitals

(Miller & Emanuel, 2008) and the authors argue that the single research component – a

systematic measurement of infection rates – "posed no risks" (p. 767) to subjects. They

and many others warn that an often burdensome and narrow insistence on full or even

expedited IRB review for quality projects will stunt vital continuous quality

improvement.

    To sum up: Increasingly stringent regulations on research and the demand for QI

measures as documentation of process oversight and self-regulation (Reinhardt & Ray,

2003) necessitate clear distinctions between research and QI in healthcare. Although

research and QI share many of the same scientific approaches, the primary difference

between research and quality improvement studies begin with intent. QI addresses

internal process questions with the goal of making local improvements. Research is

designed to generate new scientific knowledge that can be generalized to other settings.

Although both processes observe an ethical responsibility to *first do no harm*, research

must assess risk and follow procedures (protocols, informed consent, IRB oversight) that

protect human subjects from potential or planned risk. QI may not exceed minimal or

ordinary risk.

**Understanding Today's Quality Improvement**

    Among the articles reviewed, the most frequently cited ethical protections are

found in the conceptual frameworks and tools common to the quality improvement

process.  By following QI methods in data collection, process, analysis and evaluation,

integrity and safety is consistently maintained.  Indeed, throughout the literature, the most

practical tools and practices of QI are designed to illustrate movement (improvement in

defect) toward a desired outcome.  Donabedian (1988) positioned this same attribute in

the positive with his quality continuum of structure to process to outcome by observing

that "good structure increases the likelihood of good processes that increase the

likelihood of a good outcome" (p. 1745).  A critical principle in this improvement design

is recognizing the health professional's work as process- and system-based (Massoud, et

al., 2001) and data-driven rather than person-dependent.

Although QI employs much of the structure of research, the processes and tools

that support the data-driven environment are often quite different from the rigorous

procedures and protocols employed by traditional research, and there are over 100 QI

tools currently available (ASQ, 2014).  It beyond the scope of this review to evaluate

them in detail; rather the general categories and popular QI frameworks are discussed to

develop the rationale for the tools chosen and used in this study.

**Quality improvement models: The iterative cycle.** In a systematic review of

quality improvement models, Powell, Rushmer and Davies (2009) examined QI for

evidence of efficiency and effectiveness at the organizational level.  They summarized

the five most widely known and used models. As the prior analysis of QI literature

indicates (Table 1), however, mandates for QI measures dramatically increased the

information flow.  In the earliest literature, authors might assert a preference for one

model over another, explaining its use and citing its successes.  As time went on, authors

began to recognize that, when applied to health care, the models tend to share the

"common thread" (Kahlighi, 2007, p. 7) of an iterative cycle of analysis, implementation

and review.  In the last decade, these common threads served to define quality

improvement as an "extension of clinical practice" (Baily, 2008, p. 147).  The literature

now tends to interpret Total Quality Management (TQM) or Continuous Quality

Improvement (CQI), once a separate methodology, as a conceptual umbrella that governs

the study, implementation and knowledge management of current health care

improvement models (Table 3).  Although there are other contenders (Theory of

Constraints, FADE, ISO 9000, Queuing, VA-TAMMCS, Business Process

Reengineering), most QI models are some iteration of one or more of following three

approaches to CQI in healthcare: Model for Improvement, Lean and Six Sigma.

Table 3

Common Total Quality Management/Continuous Quality Improvement Models in Health Care*

|  | **Model for Improvement** | **Lean** (Toyota System) | **Six Sigma** |
| --- | --- | --- | --- |
| Champions | Institute for Healthcare Improvement (IHI) | Accountable Care Organizations (ACOs) | Johns Hopkins |
|  | Agency for Healthcare Research and Quality (AHRQ) | The Joint Commission (TJC) | Mayo Clinic |
|  |  | National Quality Forum (NQF) | Microsoft |
|  |  |  | General Electric |
| Theorist | Deming/Langley | Toyota/Ohno | Motorola/ Womack |
| Driver | Collaboration | Continuously monitored data | Statistical analysis |
| Focus | Small local changes | Eliminate waste | Remove source defects |
|  | Multiple cycles | Maximize value added activities | Reduce variation |
| Benefits | Quick turnaround | Low to moderate investment | Improved reliability |
|  | Involves many perspectives | Effective waste | Data driven |

| | | elimination | |
|---|---|---|---|
| Disadvantages | Sustainability<br>Narrow focus | Formal training required<br>Costly /time-consuming | Formal training required<br>Significant investment |
| Team Structure | Interdisciplinary: single focus | Permanent (ongoing) | Top-down implementation |
| Characteristics | Rapid cycle<br>PDSA<br>Small to medium projects | Value stream mapping<br>5S/ 7 Wastes<br>Root Cause analysis | DMAIC: define, measure, analyze, improve, control<br>Large system change |

(*AHRQ, 2013)

Since the beginning of the QI transition to healthcare, the effectiveness and

efficiency of any of these methods has been questioned.  Even before QI built its

reputation in manufacturing and other process-driven industries, health care was making

the case for an evidence-based practice (EBP) model, firmly established in robust clinical

research.  In contrast to the qualitative methods common to QI that quickly developed a

following among social scientists and nursing, EBP enforces a rigid hierarchy of

procedural evidence (Figure 2).

QI was and still is considered a "pseudoscience" (Sibert, 2014, n.p.) by some.

Moreover, systematic reviews of QI benefits to healthcare have been less than reassuring.

The earliest authors cite the "paucity of available data" (Shojania, McDonald, Wachter &

Owens, 2004, p. 23) to support effectiveness in the novel approach.  Yet after two

decades of use and promotion by both private and federal regulatory agencies, authors

reviewing the *quality* of QI remain skeptical about its value.  Systematic reviews were

obtained in the initial literature search and reviewed for this section.  A summary of 14

published reviews and commentary is found in Appendix B.  Even for studies that

claimed benefits and positive results, reviewers noted that the quality of the process was

most often poor, did not consistently comply with QI key principles, or did not

demonstrate a clear connection to outcomes.  The summative evidence that quality

improvement is efficient or effective, therefore, remains highly debatable.  Yet QI

activities continue unabated, leading one group writing for The Joint Commission to

observe, "With nearly all health care institutions (participating in QI), the lack of

substantial improvement in quality is disheartening" (Glasgow, Scott-Caziewell &

Kaboli, 2012, p. 23).

In 2007, Auerbach, Landefeld and Shojania warned of the unintended

consequences that might result from the inclination of QI proponents to "consistently

favor action over evidence" (p. 608).  This retrospective evaluation of patient safety and

quality improvement interventions examined the rationale behind the rapid dissemination of initiatives with "strong face validity" (p. 610) but little supporting evidence.  They argued that QI interventions should be subject to the same standards "that are applied to the adoption of all medical technologies".  As the systematic reviews of QI indicate, these authors are not alone.  Pronovost and Jha (2014) analyzed the



*Figure 2.* EBP Evidence Hierarchy
(Leavitt, 2013, p. 11).

results of CMS Partnership for Patients (PfP) report and concluded that "PfP's weak

study design and methods, combined with a lack of transparency and rigor in evaluation,

make it difficult to determine whether the program improved care" (p. 691).  These are

the most common complaints about positioning QI as a science, generating calls for

greater scientific rigor, peer review, and more attention to "issues of design, methods and metrics" (p. 692). These "critics" have attempted to close the quality gap by developing a taxonomy of QI strategies, criteria for consistent evaluation of evidence, and documenting conceptual models and the beginnings of a theoretical basis for QI interventions.

Advocates of QI have responded by portraying themselves as the new pioneers in health care innovation (Berwick 2008), challenging an evidence-based establishment that places faith in the EBP Evidence Hierarchy (Figure 2). They reduce opposing opinions to an epistemological or an even simpler semantics dispute. They characterize cross-contamination, lack of power or other "serious problems in execution (as) common in social science" (p. 1182). The current crop of Improvement Scientists proudly "call into question the wisdom of favoring the status quo" (p. 1183) in health care. Their solutions include putting the "Crown Prince of methods (the RCT)" (Berwick, 2005, p. 315), in its rightful place, relaxing publication standards, embracing a more pragmatic science, and tearing down the evidence-based wall to be open to more forms of knowledge. Academics and frontline staff need to be allowed to update the "iconoclasts of the past" and modify the "intellectual hegemony" to free the "lowly case series, the suspect expert opinion and the bestial anecdote" (p. 315). Only through a total system redesign can health care hope to achieve the "conjoint action (of) improving clinical evidence and improving the process of care" (Berwick 2008, p. 1182).

Most of the literature, whether for and against QI, does not reflect nor deserve this level of rhetoric. The greater number of authors commends the complementary relationship between QI and research but also, pragmatically, recognizes the needs for

improved quality in quality improvement.  Current QI models, derived from industry and

independent of predictive research, have been adopted and now applied to healthcare

without the rigor or structure of EBP (Figure 2).  Until QI models and interventions meet

the same research standards as other innovations in health care, the skeptics concern will

remain: that the rapid, unverified fixes sought for and provided by QI will continue to

"blind us to harms, squander scarce resources or delude us about the effectiveness of our

efforts" (p. 612).

**Design-based research.** On the other hand, the QI project to standardize an

approach to survey preparation did not need to be limited to the usual and highly debated

QI models.  The challenge to leverage previous experience and share knowledge among

interdisciplinary professionals is largely educational rather than clinical, requiring a

naturalistic learning environment that fosters innovation to close the local gap between

research and practice.  In a query for appropriate "doctorate research models,"

Donabedian's reflective framework, the small, iterative cycles of QI and the application

of lessons learned in a real world context coalesced in an interdisciplinary research model

from the learning sciences: Design-based research (DBR).

Like QI, DBR departs from predictive research models or laboratory isolation to explore

problems in real contexts, develop solutions based on existing knowledge, and use

iterative tests to refine solutions that are followed by reflective evaluations (Figure 3).

The *progressive refinement* in both DBR and QI "involves putting out a first version to

see how it works (and then) the design is constantly revised based on experience until all

the bugs are worked out" (Collins, Joseph & Bielaczyc, 2004, p. 18).  Like QI, DBR

employs a form of reflection-in-action (Kennedy-Clark, 2013, p. 27) where each step

assesses impact and determines the design for the next iteration.  The cyclical iterations

of analysis, design, evaluation and revision are, according to Plomp (as cited in Kennedy-

Clark, 2013, p. 27), "like all systematic and instructional design processes." DBR, like

QI, however, has not been without its critics for many of the same reasons.  The field is

under-defined, the scope and nature of experimentation and testing is responsive rather

than rigid and the variables and processes intentionally change throughout the iterative

process.  Whereas Deming and Ishikawa used industrial QI to control variability, health

care QI and DBR exploit "variables that are deliberately and appropriately not

controlled" (Dede, 2005, p. 3).

**Predictive Research**

| Hypotheses based on existing theories | → | Experiments test hypotheses | → | Theory refinement based on test results | → | Theory application by practitioners |

Specification of new hypotheses

**Design-based Research**

| Collaborative analysis of practical problems | → | Solutions use existing principles | → | Iterative cycles of testing /refinement of solutions in practice | → | Reflection produces design principles / solutions |

Refinement of problems solutions, methods and design principles

*Figure 3*. Predictive versus Design-based Research (Amiel & Reeves, 2008, p. 34).

Even so, DBR has re-emerged as an option in Higher Degree Learning Research

in Education where context matters and applied research is expected (Kennedy-Clark,

2013).  Many of the authors, writing about DBR, characterize learning as a complex,

fragile, and messy social interaction, "with context being a core part of the story and not

an extraneous variable to be trivialized" (Barab & Squire, 2004, p. 3) or controlled.

Consequently, the DBR framework is designed for flexibility, revision, and an ever-changing but interdependent set of variables that enable the researcher  or in this case, the QPM, to fully capture and account for the social context in which people learn.

Although much of DBR aligns with good QI, they differ in one important way. To distinguish it from other formative educational tools, DBR is inextricably tied to a theoretical framework.  Indeed, it is used in educational research to develop or refine theory, but the extent to which theory generation needs to occur varies by author.  For instance, researchers involved in the development of technology for classrooms saw the connection to theory as fluid and subject to change over the course of the process (Dede, 2005; Amiel & Reeves, 2008; Cotton, Lockyer & Brickell, 2009).  For these research projects, the artifact or instrument refinement was the key outcome, raising criticism that, in the absence of theory generation, DBR could not be considered research at all but simply a different type of formative evaluation.

Other authors took a more constructivist approach.  Ann Brown (1992), the researcher turned educator who conceived DBR, observed that a "critical tension in our goals is that between contributing to a theory of learning … and contributing to practice" (p. 143).  For her theory, development was the foundation of research.  Many in the field of DBR share Brown's dedication to theory development or enrichment as an outcome to the DBR process.  In a recent review of the DBR literature, Richards (2013) stated, "design research needs to lead to shareable contextualized theories" (n.p.).  Kennedy-Clark (2013) sees DBR as a methodology that will "further an existing theory or develop new theories in a naturalistic setting" (p. 26).  Wang and Hannafin (2005) assert that DBR is a form of theory-driven, grounded research "embedded within practical

activities" (p. 9) that produces theories with greater external validity than isolated

laboratory research.  Yet even the most adamant supporters of DBR's claims to

educational theory building acknowledge Brown's *critical tension* dilemma.  Barab and

Squire (2004) noted that while producing theory must remain a key construct for DBR,

design changes that occur through the iterative, flexible processes might only provide

"evidence for the viability" (p. 6) of an existing theory in multiple settings under a variety

of conditions.  The Design-Based Research Collective (DBRC, 2003), a think-tank

funded by the Spencer Foundation, included developing sharable, contextualized theories

as one of the central goals of DBR.  They also confirmed that the commitment to theory

building, which sets DBR apart from other methods of formative evaluation, raised

"significant challenges" (p. 7).  In DBR, the researcher, in a departure from traditional

scientific investigation, actively manipulates and refines the design to create an

improvement.  They, like Berwick (2008) and other QI champions, called for an

alternative to these traditional methods and randomized clinical control trials that might

"hinder innovation" or "systematically fail" (p. 6) to account for the ubiquitous

interdependent contextual variability that characterizes real-life practice.

   A tutorial designed by the University of Georgia for Instructional Technology

students (N.A., 2006) further clarifies DBR as a pragmatic research paradigm that differs

from formative evaluation.  Authors noted that formative evaluation "improves the

practice of design" while DBR is "refinement of both design and theory" (p. 5).  In this

framework, outcomes for DBR are recognized as " both theories and practical education

interventions that advance education theory" (p. 2) in the following domains:

- *Theories* – learning situations that involve students, teachers, environments and their interactions

- *Design Framework* – a design solution that provides a set of design guidelines

- *Design methodologies* – a result of the iterative process that makes interventions more applicable to practice

Including the design methodologies among the delineated outcomes makes DBR a practical choice and functional framework for QI.  In the final analysis, the method of investigation must fit both the research questions and the context in which they are asked, echoing Khalighi's (2007) advice: "no one method is best for everyone or all situations. Pick a method that makes sense to you and follow it" (p. 7).  For the present QI study, DBR's interactive, iterative cycles of analysis, design, evaluation and revision met the goal to improve understanding of the structures, processes and outcomes for survey preparation among interdisciplinary professionals in a naturalistic environment.

**Health Sector Accreditation**

There is significant historic disagreement in literature about the benefits of accreditation to patient outcomes and little empirical evidence of best practices in preparing for accreditation (Wagner, McDonald, & Castle, 2013; Nicklin & Dickson, 2009; Black & Roberts, 2001).  Although numerous consultant services exist, each with a plan and program guaranteed to create comprehensive preparation for a positive survey experience, the validity of their methods or reliability of their products is primarily based on previous and often proprietary success rates.  The accreditation organizations themselves may offer "steps" or processes, fee-based consultant services and manuals that outline expectations, but there is little in the literature to recommend a solid

conceptual framework or theoretical foundation to guide the processes that consistently

and efficiently meet those expectations.  Queries in CINAHL, EBSCO, PubMed, OVID,

and ProQuest yielded a total of only ten articles relevant to *preparation* for hospital

accreditation, including a systematic review of external accreditation published by the

Cochrane Library.  That review concluded that there were "too few studies … to draw

any firm conclusions about the effectiveness" (Flodgren, Pomey, Taber, & Eccles, 2011,

p. 3) of the accreditation process.  In describing the intervention, however, researchers

noted that participating facilities were assisted by surveyors in performing self-

assessment and implementation of a QI process to meet standards.  Additional searches of

gray literature and links to experience-based articles and blogs returned articles and

opinions that generally support accreditation but recognize the need for further empirical

studies.  All articles looked at specific aspects of the accreditation process (Table 4) with

commentaries summarized in Appendix B.

Table 4

Overview of Literary Resources for Hospital Accreditation Preparation

| Article | Focus |
| --- | --- |
| Alkhenizan & Shaw (2011) | Systematic review of the impact of accreditation |
| Bellin & Dubler (2001) | External oversight of QI/QA |
| Flannigan, Clusky, & Gard (2002) | Planning for an accreditation visit |
| Greenfield, Pawsey, & Braithwaite 2010 | Studied professional response to accreditation |
| Greenfield, Pawsey, & Naylor, & Braithwaite 2013 | The reliability of accreditation survey teams |
| Hare (2009) | CARF accreditation benefits and overview |
| Hinchcliff et al.  (2013) | Qualitative study of enabling factors |
| Meldi, Rhoades, & Gippe (2009) | Matrix of hospital accrediting agencies |
| Perkins & Tulod (2012) | Process specifically tracers in TJC |

| Stiefel (2010) | Critique of DNV and NIAHO |
| Tabrizi, Gharibi, & Wilson (2011) | Advantages /disadvantages of accreditation models |
| Tanner (2012) | National League for Nursing Accreditation Commission |
| Thornlow & Merwin (2009) | Relationship between accreditation and outcomes |
| Viswanathan & Salmon (2000) | Overview of accrediting organizations and QI |

**A Brief History of Accreditation**

The American College of Surgeons (ACS), with a one-page Minimum Standard for Hospitals, formally initiated accreditation of health care in the US (Patterson, 1995, p. 38) in 1917.  When they began onsite surveys that same year, only 89 of the 692 hospitals passed and the results of the surveys were "burned in the furnace in the basement of the Waldorf Astoria Hotel" (p. 38).  As time went on, the ACS joined with other medical associations to create the current version of The Joint Commission (TJC), the most well known and largest accreditation agency in the world.  Other accreditation organizations generally have a narrower focus but nearly all follow TJC model of an independent, not-for-profit organization that works collaboratively with health care providers to inspire "them to excel in providing safe and effective care of the highest quality and value" ([TJC], 2014, n.p.).

In recent years, accreditation in healthcare has been "affirmed as a process designed to improve the quality, efficiency and effectiveness" (Nicklin & Dickson, 2009, p. 2).  Proponents of accreditation believe that attention to the Donabedian model of structure, process and outcomes (1988) completes a public-private sector partnership (Galvin, 1998) that results in high quality, safe patient care.  Public accountability includes statutory mandates for certification and licensure that generally apply to individuals, organizations or programs within those organizations.  On the other hand

accreditation is voluntary and "usually applies only to organizations" (Alkhenizan &

Shaw, 2011, n.p.).  The alliance of government and private sector oversight is

"increasingly seen as an approach to ensuring health standards (are) recognized as a

symbol of quality" (Tabrizi, Gharibi & Wilson, 2011, p. 2).  Driven by the heightened

public concern for quality and safety, accreditation has been elevated to a good business

decision that tells patients and payers that the organization meets an external and

independent set of performance and quality standards.  Accreditation assures its internal

customers and stakeholders that the organization is committed to reducing risk and error

to create a culture of safety and best practices.

Therefore, much of this assurance comes at the behest of governments: local,

state, and federal.  The sociopolitical environment that created an explosion of QI

literature (Table 1) set the stage for accreditation agencies to assist healthcare groups to

demonstrate accountability.  Although the use of government mandates to incentivize or

penalize organizations based on the findings of an independent private regulator raised

uneasy ethical questions (Longenecker & Longenecker, 2014; Siebert, 2014; Flodgren,

Pomey, Taber, & Eccles, 2011; Stiefel, 2010; Thornlow & Merwin, 2009), steps have

been taken to increase government's role.  In 2008, the US Congress passed legislation

that requires organizations seeking "deeming status" (DiCecco, 2010, p. 23) under

Medicare now apply through the Center for Medicare Services (CMS).  Deeming

authority certifies that an organization has "met or exceeds Medicare Conditions of

Participation" (p. 22) and is currently reserved for only three regulatory agencies.  More

recently, Devers (2011), writing for the Robert Wood Johnson Foundation, pointed out

that, in spite of the questionable performance of QI interventions, "the Affordable Care

Act's numerous quality provisions …have increased pressure on providers to improve health care quality" (n.p.).

This fundamental need, documented quality improvement, has long been the purview and goal of TJC and other regulatory bodies.  The thousands of standards to which healthcare organizations must comply are primarily designed to "reduce variations in medical practice, eliminate medically inappropriate care and decrease some cost escalation" (Viswanathan & Salmon, 2000, p. 1117).  The literature, for the most part, supports external oversight as the better motivation for organizations to improve quality of care.  There is, however, little information on the real costs—much less the return on investment (ROI)—of either QI activities or accreditation.

Even as statutory pressure for accreditation increases, some healthcare plans and hospital systems have decided to opt out or change accreditation vendors.  Rocky Mountain Health Plans® allowed its excellent ratings to expire because their customers preferred lower premiums (Cross, 2003, n.p.).  Overall, it appears that the lack of evidence-based support leaves health care undecided on the benefits of accreditation.  On one hand, groups continue to view accreditation as a competitive edge, regardless of its cost coupled with the lack of evidence that it improves quality in patient care and services.  On the other, those who choose to *not* seek national or global accreditation do so because "it no longer makes business sense to pursue it" (n.p.) or because they regard quality improvement and the accreditation process that drives it as flawed.  "An institution that invests millions of dollars or expends hundreds of personnel hours in implementing an ineffective system almost certainly could have made other investments that would have benefited its patients" (Auerbach, Landefeld, & Shojania, 2007, p. 611).

**Types of Surveys**

In spite of criticisms that accreditation may not improve the quality of service

delivery, the literature reviewed for this study found that accreditation in its present form

is worth the sizeable investment to most organizations (Viswnathan & Salmon, 2000;

Morrison, 2005; DerGurahian, 2008; DiCecco, 2010; Greenfield, Pawsey & Braithwaite,

2010; Alkhenizan & Shaw, 2011; Tabrizi, Gharibi & Wilson, 2011; Davis, Bevec &

Schenck, 2014).  While there is increasing pressure from both local and global

governments to *demonstrate* improved quality and patient safety, most accreditation is

voluntary, sponsored by a non-governmental agency (NGO)[1] and staffed by trained peer

reviewers, subject matter experts and healthcare professionals in a variety of different

fields.  Surveys vary in size of teams (several surveyors for 2-7 days), focus (laboratory

services, home-health, surgical services, radiology, etc.), scope, and rationale (a

complaint, scheduled, or unannounced).  Survey groups use standards, "the 'optimal

achievable' … instead of  'minimum essential' levels of quality" (p. 38).  Their findings

are submitted in reports to the institution, granting full accreditation, limited or no

accreditation.  Hospitals are then required to submit action plans for any deficits.  Is there

a cost for failure? Most scholars concede that, with accreditation so closely linked to

reimbursement, "most hospitals can't risk not being accredited" (Norman, 13 September,

2014) by some external group.

In a 2012 monograph, Greeley, Fritz, Searcy, Sagin & McGinty outline a program

to assist hospitals and healthcare leaders in choosing the type of surveys/accreditation

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[1] One notable exception to that is Veteran's Health Administration (VHA), the largest integrated health care system in the US.  The VHA is subject to oversight from multiple federal groups including the VA Central Office (VACO), the Department of Justice, the Office of the Inspector General (OIG), the Veterans Affairs Committee and individual members of Congress.

organizations that "provides the highest ROI" (p. 4) by weighing internal resources and external environmental factors against organizational goals.  They included a matrix to compare over 32 criteria to analyze the cost and benefits associated with the accreditation process (p. 17-20).  In 2009, Meldi, Rhoades and Gippe (2009) provided a similar analysis when CMS granted its coveted deeming authority in 2010 to Det Norske Veritas Healthcare, Inc. (DNVHC), the only health accreditation agency to align with the international standards of ISO 9001 (DiCecco, 2010; Lewis, 2013).

**The big three.** In spite of its "near monopoly" (Blair, 2014, n.p.) and global market share, TJC has never stood as the lone healthcare accrediting organization in the U.S.  The Healthcare Facilities Accreditation Program (HFAP) began surveys in 1945. Det Norske Veritas Healthcare (DNV), a Norwegian-based risk management group operating in the US since 1898, debuted in 2008 as a healthcare accrediting competitor with its National Integrated Accreditation for Healthcare Organizations (NIAHO). Although the number of accredited hospitals under each varies widely, the requirements, survey process, and categories are similar.  Accreditation from any of these three signifies that the organization meets the Medicare Conditions of Participation, simplifying reimbursement for the more than 120 million patients using Medicare or Medicaid services (Rappleye, 2014).

The costs and complexity of the surveys and degree of variation among surveyors range from high (TJC) to low (DNV and HFAP) (Greeley et.al, 2012).  Each group shares the goal to increase quality improvement, but the objectives for surveys organization also vary.  DNVHC stresses quality assurance and education.  HFAP focuses on a streamlined "application of its consistent standards" (Meldi, Rhoades & Gippe, 2009, p. 14).

TJC, with close ties to government (Blair, 2014), constantly revises standards to insure continual progress toward a high reliability organizational (HRO) model recommended by AHRQ and the Partnership for Patients (PfP) program (Bielaszka-DuVernay, 2011). Champions of PfP include the Department of Defense (DoD), the Military Health System (headed by the US Secretary of Defense), and the VHA. As an initiative of CMS, PfP was awarded a one billion dollar budget from the Affordable Care Act (McKinney, 3 May, 2014; Bielaszka-DuVernay, 2011)) and the areas of focus (adverse drug events, catheter-associated urinary tract infections, falls, pressure ulcers, etc.) are reflected in the National Patient Safety Goals enforced by TJC. The overlap between TJC and government targets has been perceived in some quarters as a conflict of interest (COI), leading Blair (2014) to argue that "the quasi-monopoly accreditation structure and lack of competition in setting and measuring performance standards has hindered rather than advanced" (n.p.) continuous quality improvement and patient safety. Concerns for COI do not appear in the literature for any other accrediting agencies.

**Commission on Accreditation of Rehabilitation Facilities (CARF)**. No other accrediting agency matches the size and scope of contracts with TJC and it could be argued that their over-representation in the market subjects them to greater scrutiny even as it permits greater prescriptive power. Smaller agencies abound and most follow TJC model and processes. Those other smaller groups were not included in the literature review, but because the accreditation program examined in this study (CARF) departs from major aspects of TJC's prescriptive approach, this section examines preparing for CARF more specifically.

CARF is an international non-profit founded in 1966, which carved out its place among the pantheon of accreditation institutions through a focus on rehabilitative specialties.  From its beginning, CARF committed to "serve as the preeminent standards-setting accrediting body for quality rehabilitation services … delivered to people with disabilities and others in need of rehabilitation" (Galvin, 1998, p).  Their approach is consultative rather than prescriptive with a focus on persons served and the business practices that support that service, making the survey process a collaboration from the initial completion of the intent documents through the site visits to the quality improvement plans that address deficits identified in the survey.

The collaborative process begins with applicant organizations choosing the standards under which they will be evaluated.  CARF standards span the continuum of care: from children to seniors, home care to supported employment and multiple levels of psychosocial and physical rehabilitation.  In all, there are eleven separate manuals representing particular services, and organizations typically choose one category.  For the programs in this study, two manuals were used, Behavioral Health (BH) and Employment and Community Services (ECS).  Applicants then further delineate the specific program standards that they feel best align with the services they provide.  The first section of each manual describes ASPIRE to Excellence® (Appendix C) a quality improvement framework of standards developed by CARF to assess business integrity, patient-centered care and performance.  Although standards in subsequent sections differ among programs, ASPIRE standards are the same for everyone applying for accreditation under CARF.

Hare (2009) divided the next steps into "planning, writing, implementing, evaluating, and critiquing" (p. 15) the lengthy and descriptive narratives that document compliance with the selected standards.  Black and Roberts (2001) recommended establishing a 12-month timeline for these tasks.  They added that the preparation, however arduous, ultimately provides a "blueprint for efficient and effective operations" (p. 208).  The narratives for CARF are created through a slow, methodical self-evaluation presented as questions under each standard.  This self-evaluation defines documentation requirements, allows for the presentation of compliance examples and artifacts and primarily serves as a reflective exercise to recognize and understand the "levels of internal quality, involvement of patients, staff member cohesion and service" (Hare, 2009, p. 14).  The narratives, data preparation that demonstrates program strengths and examples of good practice are carefully assembled before the site visit and delivered to the surveyors the night before the survey begins.  Subsequent site visit activities, including facility tours, reviews of documentation, and interviews with patients, staff and community stakeholders, are designed to confirm or validate consistent and ongoing compliance with CARF standards.

One the most significant differences, and a source of criticism, has been differences in how a survey is announced.  TJC and other groups typically provide a window of time in which they begin the survey process but their appearance on site is unannounced.  In a trials study on short-notice (*e.g*., surprise) surveys in Australia, Greenfield and colleagues determined that, in short-notice surveys, most organizations fell below the threshold for awarding full accreditation status (Greenfield, Moldovan,

Westbrook, Jones, Low, et al., 2012). The significant findings in the study question the value and effectiveness in the common practice of advanced notification.

In contrast, CARF consultative surveys are not only announced but also scheduled, according to the identified needs of the organization. Moreover, the survey agenda is determined first by the organization, allowing for scheduling of staff and persons served for interviews. The sites visited are also initially selected by the organization, although any of the proposed activities or dates may be altered or negotiated with the lead survey prior to the visit. Even so, in a large study of US nursing homes, Wagner, McDonald and Castle (2013) found that voluntary CARF-accredited nursing homes are more successful than non-accredited nursing homes in short-stay outcomes, including immunizations and control of "pain, delirium, and pressure ulcers" (p. 174). The study supported the hypothesis that CARF-accredited nursing homes and rehabilitative care "demonstrate better quality with regard to short-stay quality measures" (p. 167), regardless of how and when their partner organizations are notified.

Overall, the literature for healthcare accreditation advocates an ongoing process of continual readiness for accreditation. Greenfield, Pawsey, Naylor and Braithwaite (2013) found that survey outcomes improve "when reliability of process and consistent application of standards are enacted" (p. 9). The standardization of that process is one goal of this QI project.

## Summary

In a 2010 report to Congress, the Carl T. Hayden Veterans Administration (VA) Medical Center was honored as one of only 20 *Top Performers on Key Quality Measures*® by TJC. A 2011 audit showed the Phoenix facility "at or above target values

established by (TJC) for every major category of health care and administration"

(Wagner, 2014, n.p.).  In April 2014, CNN released the first of a series of reports that

stunned the nation, alleging that extended delays in care and treatment had contributed to

the deaths of Veterans enrolled in the Hayden VA integrated services network (Bronstein

& Griffin, 2014).

2014 marked nearly 100 years since the American College of Surgeons began

systematic evaluations of hospital practices, over 60 years since TJC had formalized its

position as the premier US accrediting body and 15 years after the publication *To Err Is

Human* (Kohn, Corrigan & Donaldson, 2000) launched the quality movement.

Moreover, the VHA is arguably one of the most surveyed health institutions in the

country with ongoing oversight from the Office of the Inspector General (OIG), a 20-year

association with TJC and limited partnerships with CARF and numerous smaller

accrediting bodies.  As an early adopter of both QI analytics and performance-based

metrics, the failures of Phoenix VA were seen as a condemnation of both accreditation

and the quality improvement model.  Some called for the VA leadership to not only clean

up their hospitals but to "hold their sole external evaluation mechanism accountable[2]"

(Blair, 13 June, 2014, n.p.).

This literature review of accreditation and its dependence on good QI not only

informs the current project to standardize an organizational approach to preparation for

CARF surveys.  It also sheds light on the challenges of identifying a single process for

change in the absence of accounting for the rule of unintended consequences (Auerbach,

Landefeld & Shojania, 2007).  Since their inception, the interdependence of accreditation

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[2] In a sea of oversight, Blair has singled out TJC.

and quality improvement has been driven more by sociopolitical connections than by scientific constructs.  As the literature reveals, in spite of early efforts to ground standards and QI practice in an evidence-based model, a later preference for action largely subsumed evidence-based principles.  Indeed, proponents of QI resist the research community's demands for more rigorous evaluation or the validity provided by the traditional models of evidence "applied to the adoption of all medical technologies" (p. 612) and patient care innovations.  Moreover, in spite of a plethora of writings over the long history of accreditation, there remains a paucity of procedural guidance from scholars on evidence-based practices for either preparation or compliance with prescriptive standards.

Even as the VA rapidly employed the services of TJC to audit patient care operations and performance measures not only in Phoenix but also in all other VAs, the intervention showed no apparent recognition of the pitfalls of action over evidence (p. 611), much less a propensity to change what was obviously *not* working (*e.g.,* TJC survey process).  In light of the 2014 VA scandal, the literature on accreditation and quality improvement provides a cautionary tale.  It suggests that, without a firmer foundation in theory and research, the thin evidence supporting accreditation and QI as science will continue to foster an environment that allows a normally conscientious, patient-centered program to precipitously and perilously fall from grace.

CHAPTER THREE: METHODOLOGY

**Introduction**

This chapter first describes how an appropriate theoretical framework serves the

purpose and aim of the study.  It describes the rationale for applying qualitative design-

based research (DBR) as the methodology and then focuses more closely on how a DBR

model meets the specific objectives or questions that the study addresses.  Next, the

participants or teams in the study are described retrospectively, followed by the

instrumentation and processes used or created for data collection.  The researcher's role,

as the Quality Project Manager (QPM) is then presented in the context of the study

design and theoretical framework because in this qualitative, applied action research, the

QPM is part of the team working to modify and standardize practices.  This is followed

by a detailed overview of the procedures for data collection, the proposed data analysis

and verification processes as well as an outline of ethical considerations common to any

QI project.  Finally, in preparation for the discussion of study results and implications in

Chapter 4, a review of the study elements and their interactions summarizes main points.

**Purpose of the Study**

The purpose of this quality improvement study was to describe the shared

learning of four distinct interdisciplinary health care communities of practice

participating in a rapid quality improvement project to prepare for impending triennial re-

accreditation under CARF.

The goal of the quality improvement project was to standardize an organizational

approach to CARF surveys to improve survey presentation and results. This required the

shift from a person-dependent, unsystematic model to one that is process-driven, efficient, and effective.

## Aim of the Study

The overall aim of the study was to synthesize the diverse experience and existing knowledge (structure) of four interdisciplinary communities of practice (Wenger, n.d.) to develop (processes) sustainable, evidence-based tools (outcome) and a continuous quality improvement structure for ongoing accreditation readiness.

The study used an iterative research model in the development of a structure for continual quality improvement and ongoing readiness.  This included refining current practices for document management, creating clarity and consistency in the reporting and developing a tracking mechanism for improving ongoing compliance with required CARF operational timelines.

## Creating Connections: Process, Structure, and Theory

The quality improvement (QI) project to standardize an organizational approach to CARF survey preparation began with an evaluation of common QI methodologies. The literature review revealed that typical QI frameworks lack the theoretical link common to doctoral dissertation, suggesting consideration of other, more robust qualitative models.  Because the purpose of the project involved *shared learning* of multiple groups or individuals conducted through an iterative process, conceptual frameworks in the learning sciences were queried to examine other scholarly methodologies that could support the shared learning objective and the rapid cycling.

**Communities of Practice (CoP): Theory or Reality?**

Among several education theories considered, the theoretical framework that best fits the goal of achieving better practice through shared learning is Lave and Wenger's *Communities of Practice* (Wenger-Trayner, n.d.; Smith, 2003). It is among a canon of experiential learning models that develop learning outside a traditional classroom setting. According to the developers of the theory, the *in situ* learning environment often occurs naturally, particularly in a healthcare or other professional work environment. It can be constructed as an apprenticeship, or as for this study, an option for "people who share a concern or passion (to) learn how to do it better as they interact regularly" (Wenger-Trayner, n.d. p. 1). In contrast to traditional classrooms or mentor relationships, CoPs employ a lateral collaborative process where learning comes from within the collective and the "community acts as a living curriculum" (p. 4). These key characteristics and the following requisites of CoP aptly described the teams preparing for CARF survey in the study, making this model highly appropriate. The required components include:

- *Domain*: shared domain of interest to which members are similarly committed
- *Community*: group in which members of the domain interact, help each other and share information
- *Practice*: group members as practitioners who share competencies, resources and experience

As the study teams began to prepare for survey in early 2014, the lack of experienced and knowledgeable staff led to the conclusion that developing an interdisciplinary community of practice around CARF preparation was preferable to the previous norm of isolated, program-specific planning. The primary assumption of the study was that

*sharing successful processes will result in better survey outcomes*, necessitating the need

for the development of an environment where the learners "become full participants (in

learning) … brought together by joining in a common experience" (Smith, 2003 n.p.).

The joint experience of an imminent survey was the catalyst for transforming the

scattered knowledge and divergent experiences of multiple players into a standardized,

organizational approach to CARF.  CoP was the best model to provide a structure that

meets the needs of a QI project to achieve better practices for ongoing readiness through

an improved, shared process that allows for continuous updating and encourages

communication among interdisciplinary teams with a similar goal.

Moreover, in his introduction to CoP (n.d.), Wenger-Trayner offered practical

advice on activities that typically cultivate and characterize a community of learners.

This simple taxonomy (Table 5), along with the previously stated key characteristics

(domain, community and practice), can be used to analyze process and evaluate the

validity of the theory.

Table 5

**Communities of Practice: What Do They Look Like?**

| | | |
|---|---|---|
| Problem-solving | Reusing assets | Documentation projects |
| Requests for information | Coordination and synergy | Visits |
| Seeking experience | Discussing developments | Mapping knowledge /identifying gaps |

(Wenger-Traynor, n.d., p. 2)

**Method**

In any qualitative research, but particularly in quality improvement, it is necessary

for the methodology to match the research question, context and available resources.

Design-based research (DBR) was chosen because it develops an outcome through

continuous adaptation, iterative cycles or micro-phases among a range of different

participant groups (Kennedy-Clark, 2013).  This type of research aims to "ascertain if and

why an intervention," or in this case, a particular practice, works (p. 26).  The flexibility

of the design allows each iteration to inform the next micro-phase, as the teams *become*

the variables, offering multifaceted, practice-based data that affect the final product or

improve efficiency or effectiveness in the process.  Moreover, the QPM is an active

member, participating in both the problem solving and reflection-in-action.  Most

importantly, DBR evolved from education, comfortably aligning with the theoretic

framework (CoP) that articulates a process by which professionals with a similar goal but

diverse skills and experiences can function in a naturalistic environment.  Successful

realization of the quality improvement goal to standardize preparation for CARF surveys

relies on the ability of the QPM and the individual experts or groups to educate one

another in better practices that are both efficient and effective.  Table 6 summarizes the

criteria that defined DBR methodology in this study.

Table 6

Criteria for Design-Based Research in the Standardization of CARF Survey Preparation

| Criteria | Description | Example |
| --- | --- | --- |
| Micro-phases | Iterative cycles that refine the approach, advance an adaptation and reflect on the need for changes | Group 1 provided the baseline (how preparation is done). Subsequent groups added or modified the design. |
| Expert groups | Apply counter-balance to embedded researcher to ensure objectivity through in-process evaluation and data integrity | Multi-disciplinary team members with CARF expertise review and advise changes in practice. External CARF surveyors also provided feedback. |
| Diverse participant groups | Provides comprehensive testing of solutions through the application of multiple variables. Use of different | Series of four separate service lines using the same standards (Section 1) with different combinations of |

| | groups increases feedback from participants with relevant experience and adds to robustness of adaptations. | multi-disciplinary members (psychologists, social workers, nurses, peer support and vocational rehab) |
| Flexibly adaptive | Stays responsive to field data to develop pertinent outcomes in a naturalistic environment | Initial measures for improvement refined through continuous redesign and reflection for efficiency and effectiveness |

(Kennedy-Clark, 2013, p 31)

## Research Questions

The overarching question in this qualitative study is: Of the current processes being used in preparation for CARF surveys, which are most effective and efficient? The facility in this study faced four re-accreditation CARF surveys over a period of three to five months. Prior to January 2014, none of the four groups had prepared, and there was significant variance in staff experience with the unique accreditation process. An analysis of the current context and organizational climate was based on

- *Defining better practices*: Which processes do the individual programs use with success and consistency?

- *Assembling evidence*: What processes and information can be shared among programs to successfully meet shared standards?

- *Constructing alternatives*: What factors promote sharing of knowledge and replication of better practices?

- *Selecting criteria*: What processes are most effective and efficient?

- *Projecting the outcomes*: Does the shared, ongoing process result in a more comprehensive coverage of required documentation and promote compliance with operational timelines?

The four groups tentatively agreed that working together to share knowledge and experience would enhance learning for all, improve interventions and understanding of the process and lead to better practices. Using a design-based research model, the groups met to discuss their past experiences and present concerns. The discussion led to a series of questions about the practical problems and common challenges to successful surveys. From this discussion of baseline preparations, the strengths and weaknesses of each program were identified. Shared threats to the desired outcome became opportunities for quality improvement and those modifications served as the targets for better practice.

The purposeful application of a DBR methodology allows for the iterative cycles or series of surveys to inform the preparation for subsequent surveys. The iterations are the surveys themselves, separate and spread over several months. As the study progresses, these basic formative research questions will be asked after each iteration:

Question 1: Did the modification/intervention work? How do we know?

Question 2: Was the process more effective and efficient than before?

Question 3: What adaptations will improve the process?

Question 4: Can the adaptations be applied to the next cycle or team?

### Description of Participants

The participants in this qualitative study are all professional staff preparing for a triennial CARF re-accreditation survey. The variability in their experience with the activity is spread from novice (no experience) to expert (completed 3 or more surveys). They are divided into four teams by service lines and include both supervisory and front-line staff. As multidisciplinary teams, participants come primarily from behavioral health but also include social workers, peer support workers and vocational rehabilitation

specialists.  Administrative personnel above the level of director are not included in the

survey preparation or on the teams in this study.  Table 7 describes the makeup of the

individual teams and the standards under which their programs are evaluated.

The procedure for selection of and assigning responsibilities to participants is

determined by each program director who formulates his/her own team based on

availability, competence and familiarity with the process.  The QPM was asked to

participate in the preparation by three of the team leads (1, 2 & 4) with her

responsibilities being determined by the program directors.  Team 3 chose to include the

QPM in a consultant role only.  In addition to having prior CARF survey experience, a

number of the team members have been scheduled to attend professional offsite CARF

workshops prior to and during the survey preparation period from January 2014 until

completion of each survey.

Table 7

Description of Teams for CARF Accreditation Readiness

|  | # | Type of professionals | Survey date | Survey Standard |
|---|---|---|---|---|
| Team 1 | 3 | Social worker (lead) | July 2014 | BH* |
|  |  | 2 psychologists |  |  |
| Team 2 | 7 | Vocational Rehab manager (lead) | July 2014 | ECS* |
|  |  | 3 vocational rehab specialists |  |  |
|  |  | 2 peer support specialists |  |  |
|  |  | 1 social worker |  |  |
| Team 3 | 4 | Psychologist (program director) | September 2014 | BH |
|  |  | 1 nurse manager |  |  |
|  |  | 1 staff psychologist |  |  |
|  |  | 1 administrative assistant |  |  |
| Team 4 | 12 | Social worker (program director) | November 2014 | ECS |
|  |  | 3 nurses |  |  |
|  |  | 1 staff psychologist |  |  |

        2 administrative assistants

        5 social workers

\* BH- Behavioral Health Standards      \* ECS – Employment and Community Services Standards

**Instrument Design and Analyses**

    In early 2014, *Bardach's Eightfold Path* (2005) for process improvement was

applied to assess the historical approaches to CARF preparation and develop alternative

solutions as a quality improvement project for the service line.  The Bardach steps (pp.

133-140) outlined the initial data collection or analytic phase (Herrington, McKenney,

Reeves, & Oliver, 2007) of the project and are covered in more detail in the *Data*

*Collection Procedures* section of this report.  The results of the preliminary research

phase created a checklist of baseline practices considered efficient and effective and

identified practices that needed improvement.

    **Pre-survey data collection for instrumentation assessment.** Apart from

difficulties scheduling senior-level managers for interviews, all obstacles or weaknesses

reported by the teams related to current document management processes.  This proved to

be a crucial element for standardization because, unlike other surveys, successful CARF

accreditation can be linked to the quality of the instrumentation used to create the reports

and organize documentation that supports compliance.  In this initial phase, the reports

for prior CARF surveys were also reviewed, revealing considerable variation in report

structures, with a significant amount of productive time being used by managers or

directors to generate reports and accumulate an updated body of supporting

documentation. The data from staff interviews and analysis of prior practices revealed

shared deficits in the process and informed an initial list of solutions based in alterations

to existing designs and revisions to the current instrumentation.  These included:

- Document management

- Training for new staff

- Facility participation

- Facility support

**Intra-cycle data collection for instrumentation revision.** The initial assessment suggested that the challenges could be resolved through the systematic redesign of the instrumentation.  Because the DBR model uses iterative adjustments in naturalistic settings, this process followed DBR methodology to continually evaluate the prototypical instrumentation for efficiency and effectiveness through the application of innovation to subsequent cycles (individual program surveys).  Table 8 shows the interventions and their application to the four communities of practice or teams participating in this project.

Table 8

Evolution and Application of Instruments

|  | Description of Tool/Instruments | T1 | T2 | T3 | T4 |
|---|---|---|---|---|---|
| Report/responses | Standards were divided between three or more staff to create program level reports and facility narratives | X | X |  | X |
| Policies, plans and procedures management | Compendium of all policies and procedures that are cited in the narrative and support facility practices. Documents, updated annual reports, plans and handbooks in hard copy binders | X | X | X | X |
| Electronic resource file | The resource file with all supporting documents in electronic form. Includes class schedules, marketing tools, surveys, staff minutes, handbooks, data collections, emergency and safety checks |  | X | X | X |
| Templates for required reporting of plans * | Consistent look and feel formatting that has all the required elements for each plan. These include strategic, technology, accessibility and risk management |  |  | X | X |

| | | T1 | T2 | T3 | T4 |
|---|---|---|---|---|---|
| Facility narrative * | The complete overview of how the facility meets the standards in Section 1 ASPIRE. Used for each program without alteration | | | X | X |
| Report template * | Consistent look and feel formatting that contains both facility narrative and program expression of the standards each section covers. Reports edited for active voice and hyperlinking to resource file | | | X | X |
| Operational timelines * | Followed timelines prescribed by CARF – when and what needs to be done with links to documentation of compliance | | | | X |
| Required training tracking* | Followed requirements prescribed by CARF – who should be educated or trained, schedules and linked to documentation that demonstrates compliance | | X | X | X |
| Spread sheet for tracking* | Excel sheet that contains standards, policies and procedures updates, operational timelines, required training, acronyms and following the survey, recommendations and quality improvement plan | | | | X |
| Total Application of Innovations per Team | | 2/9 | 4/9 | 6/9 | 9/9 |
| * an innovation created during iterative design phases | | **T1** | **T2** | **T3** | **T4** |

**Post survey data collection for instrumentation effectiveness.** The third level of instrumentation was the survey results.  The four surveys covered exactly the same material for all four programs in Section 1 ASPIRE.  Assessment and evaluation of the individual programs came from two similar standards – Employment and Community Services and Behavioral Health with two programs evaluated under each.  Separate, experienced CARF surveyors use CARF-supplied checklists to consistently assess validity of the narratives and documentation to assure compliance under each of the standards.

Finally, staff interviews took place in January 2015 to discuss the redesigned processes.  An overview of the quality improvement process, the models, conceptual

framework and theoretical foundation was reviewed.  The initial obstacles and barriers to

performance were reviewed and the subsequent tools to resolve those issues discussed in

detail.  Most specifically, the group examined and evaluated the evolution of the report

instrumentation that is now part of their program toolbox for ongoing readiness.

As a frequent goal of DBR, the development of instrumentation follows an

iterative process that continually refines curricula, artifacts or processes and effects

systemic change (Amiel & Reeves, 2008).  By addressing "complex issues in real

contexts with practitioners" (p. 34), DBR leverages practice-based evidence to fine-tune

innovations that result in higher levels of efficiency and effectiveness. DBR is the best

framework to manage the rapid survey schedule among four distinct teams, refine

processes and produce practice-based innovation or instrumentation that could be shared

among the four groups and beyond with other CARF-accredited programs in the

organization.  DBR also uniquely applies the iterative process to refine and develop

instrumentation *throughout the research cycle*.  In this framework, the evolving

innovations inform that design and the improved instrumentation provide concrete

outcomes of the process becoming increasingly reliable instrumentation; to wit, the

greater the number of cycles, the more trustworthy and credible the tool.

**The Narratives**

The primary document for CARF surveys is a lengthy report or narrative,

compiled in response to a self-assessment (Appendix D) of compliance with the

standards. The report and supporting documents (e.g. policies, marketing documents,

class schedules etc.) are delivered to the surveyors the evening before the survey is

scheduled.  Surveyors, having reviewed the report before coming on-site, use the

remaining time to validate key elements of the narrative. This is done through tracer

technologies, interviews with staff and patient and inspection of the facility.

Group 2 used a simple question-answer format that progressed through the survey

preparations in a simple manner, and their narrative included both the standard and

supporting information.  This resulted in lengthy and often repetitious content with few

citations. Groups 1, 3 and 4 employed the narrative format that, according to the prior

subject matter expert (SME) was preferable to the more direct question-answer structure.

The authors of the narratives in this format used a copy-paste methodology, creating the

"story" by recycling previous reports from a variety of sources.  The copy/paste method,

also used by Group 2, meant that much of the narrative or documentation of compliance

had been derived from other authors without attribution.

The lack of appropriate or accurate citations as well as difficulties in

comprehension and clarity that are the consequence of numerous authors, created an

inconsistent look and feel and a dense and often inaccurate description of the programs.

Although this weakness in the presentation could be resolved in the editing process, the

less-than-scholarly approach to documentation was inconsistent with the credentials of

the writers and program leadership, many of whom are PhDs.  Consistent (or common)

look and feel (CLF) is a process known and used by editors to increase clarity and

comprehension.  Developing this as one of the facility standards so that all reports

submitted to CARF were clear and accurate raised the level of response to one that was

more in keeping with expectations for writers with terminal degrees in their fields.

These changes, developed in one phase and then implemented in the next became

most obvious in the evolution of Section 1, the ASPIRE standards that were shared

among all CARF applicants.  Initial assessment exposed an obvious weakness in the copy

and paste method for writing narratives.  Recycled information was frequently inaccurate

and woven throughout content that did not clearly identify facility versus program

compliance.  In the innovation, the first section of this chapter covered general *facility*

compliance with the standards.  A second section was added to further delineate the

individual program approach and the ways in which the program met the standards.  This

top-down modular format allowed for consistent and replicable demonstration of facility

policy or processes without affecting the narrative of the individual programs.  As the

surveys progressed, some changes in facility policy occurred (updates to policy or

handbooks) but the modular structure and divisions between facility and program reports

allowed for modifications that were easy, accurate and immediate.

**Document Management and the Burn Folder**

As with most accreditation programs, CARF compliance is validated through the

connection between practice and policy.  The body of supporting documentation for the

programs in this study typically exceeds 600 separate documents that are then linked to

the narratives and program descriptions.  While much of the documentation is policy,

standard operating procedures, facility reports and checklists, the required documentation

for CARF also includes meeting minutes, marketing, class schedules and quality

improvement records.  In past surveys, this information had been provided in several hard

copy binders to each surveyor.  In the first (baseline) iteration, this practice continued

because Team 1 expressed that preference. However, Team 2 had, in previous years,

developed a process for organization of documents in an electronic file that could be

burned to CD or a thumb drive.  Instead of delivering several binders and reports to the

surveyors the night before the survey, Team 2 sent a CD to each surveyor with the narratives. All the supporting resource documentation within the narratives were linked to a resource file on the CD and the surveyors merely had to click a link to open a policy, a class schedule or one of the several hundred documents stored there. This innovation from Team 2 became known as the *Burn Folder*.

Because the largest set of supporting documentation is used in the Section 1 ASPIRE narrative and shared by all programs, in the next phases, the resource file was copied and pasted onto the preparation folders for Teams 2 and 3. Although the team leaders needed add or remove some documents to personalize their program responses (e.g. class schedules, marketing materials, program plans, satisfaction surveys, etc.), the Burn Folder contained all the local policies and facility documents required by Section 1 in addition to the narratives specific to that program. Even counting the time it took to review the documents, adjust some content and link to the narratives, this innovation proved to be highly efficient in saving staff time and resources. It was also favorably received by the surveyors, who commented on the effectiveness of being able to click a link rather than find a hard copy from among several large binders. The seven (out of nine) expert surveyors (three out of four surveys) who used the electronic files option all had positive comments about the ease of use, the time they saved and the comprehensive picture of organizational effectiveness provided by a fully developed Burn Folder.

**Tracking the Timelines**

CARF outlines its documentation requirements in the appendices to each program manual. These include operational timelines, required documentation and required training or competency for each of the program standards. Most of the requirements

cover the Section 1 standards shared by all programs.  In the initial assessment phase, only one of the program managers or directors (Team 2) was aware of the information in these appendices.  As Table 9 shows, the format for this often-critical information is less than user friendly as the appendix for each manual contains information for *all* standards in that manual. Pulling out the specific activities is a tedious endeavor and formatting it in an accessible way requires more time than most program managers have.

Table 9

Examples of Required Trainings

| Standard | Training Requirement | Provided to | Competency-based | Frequency |
|---|---|---|---|---|
| 1.A.6.c.(1) | Education on ethical codes of conduct | personnel | No | None specified |
| 1.H.4.b.(3) | Training in emergency procedures | personnel | yes | Upon hire and annually |
| 2.F.2.a | Training in the contributing factors or causes of threatening behavior, including training on recovery and trauma-informed services and the use of personal safety plans | Direct service or front-line personnel | yes | Initial and ongoing |

(CARF International, 2014, p 387-8)

Fortunately, most of the requirements in the appendices refer to Section 1, meaning they are requirement shared by all programs.  In collaboration with the administrative officer from Team 4, the QPM created an excel spreadsheet that includes program specific operational timelines, training and documentation requirements, a list of all applicable facility policies and other information that can facilitate documentation of compliance

with activities. Because programs share most requirements, the initial time commitment to formatting the tool benefitted all programs but the tracking tool also includes program specific requirements.

The rationale behind this instrument was to first raise awareness within the programs of requirements for ongoing readiness. The tracking tool links each activity with the standard and, electronically, with the supporting documentation in the resource file. Moreover, the ongoing readiness requirements are now in one place, easily accessible with timely compliance a measureable quality indicator.

**The Report Templates**

Another unique CARF requirement for all programs seeking accreditation is the development of several business and quality related plans. These required plans include a program level strategic plan, accessibility plan, technology plan and risk management plan. The contents of these plans are prescribed by the standards and must be updated annually. The first two teams had completed and included their plans in the first round of surveys but received consultations because some elements were missing. In response to those findings, a template for each plan was created to include all the required elements and provide a consistent look for reporting. This change was successfully applied to the surveys for Teams 3 and 4. The templates were then made part of the ongoing readiness toolbox.

Compliance with completing these plans on an annual basis will be another quality measure moving into 2015. The programs can choose their own timeline for completion but the anniversary date of their last survey is the agreed-upon deadline. As with all other documents in the Burn Folder, the quality plans may be linked directly to

supporting records in the form of staff minutes, satisfaction surveys or facility safety

reports. Appendix E is an example of the new template for the Accessibility Plan.

### The Researcher's Role: Quality Project Manager (QPM)

As a quality improvement project to standardize processes for CARF preparation,

the application of a design-based research (DBR) framework allows for the spread of

knowledge and better practices through iterative cycles of revision of variables to move

the participants toward the desired outcome.  In this framework, researchers are not

merely observers; they are in fact part of the teams that test and revise changes in the

processes (Brown, 1992; Barab & Squire, 2004; Herrington et al., 2007; Kennedy-Clark,

2013), methodically respond to lessons learned by modifying the next phase or

intervention and analyze the characteristics of the process to evaluate better practices.

For this study, the researcher was also the Quality Improvement consultant

assigned to the service lines preparing for CARF.  This role is consistent with the

principles of DBR where there are multiple dependent variables that include

collaboration among learners, shared learning (as an outcome) and system sustainability

(Barab & Squire, 2004).  In this context, the researcher "moves beyond simply

observing" (p. 2) to actively engineering or systematically changing the contexts in which

improvement takes place.  Rather than presiding over a set of fixed protocols, the DBR

researcher, functioning as a Quality Project Manager (QPM) collaborated with team

members who "are treated as co-participants in both the design and even the analysis" (p.

3) of the evolving methodology, artifacts and tools.  The extent of that collaboration and

specific duties for the QPM was determined by the CARF program leads for each group

seeking accreditation in 2014.

There are so many similarities between QI and DBR that it can be argued that DBR is in fact a QI methodology. They share the same iterative cycle. Their aims are similarly aligned to increasing the effectiveness and efficiency of a local process that is context dependent. They both occur in a naturalistic (as opposed to experimental) environment. The inputs in both QI and DBR are based on the information coming from the people who are actively involved in the process. The outcomes are based on responses made in real time to the modifications.

One of the primary differences is that QI supports evidence-based claims through the use of known QI methodologies and tools drawn from industry.  DBR operates from a baseline or conceptual framework of education theory.  However, the major difference between QI and DBR is the role of the researcher/QPM. In QI, the consultant may or may not assume the role of project manager, leading the collaborative efforts of a chartered team that reviews the inputs and outcomes and makes decisions about adjustments to the interventions. In DBR, the researcher actively manages the project, makes those decisions because the researcher's leadership role is the one constant between several diverse and often disconnected teams.

### Data Collection Procedures

A design-based research study typically collects data during three of its phases: preliminary research, prototyping, and assessment.  For this study, data collection began in January 2014 with interviews with staff preparing for their 2014 CARF re-accreditation surveys.  The QPM met with the groups individually and together to assess any anticipated challenges and to share perceived strengths in current processes.  This was done within the context that continuous quality improvement is part of the job

expectations of members of the healthcare team.  The framework for the interviews was

based in Bardach's *Eightfold Path for Policy Analysis* (2005).  The steps include:

1.     Defining the problem/Select the process for change

2.     Assemble evidence to understand the problem

3.     Construct alternative solutions

4.     Select criteria for the solution

5.     Project the outcome

6.     Confront the trade-offs

7.     Decide and implement the solution

8.     Evaluate results and tell your story

The design-based research model encourages the "definition of (an) outcome and

then focusing on how to create an environment that supports the outcome" (Kennedy-

Clark, 2013, p. 27).  These interviews produced a hypothesis or outcome that a shared

process that is not person-dependent would result in reporting of required compliance

with more comprehensive but easily modified documentation.  A second anticipated

outcome was that the iterative process of sharing knowledge and practices would increase

the efficiency of those preparing reports by reducing the amount of time spent gathering,

sorting, updating and organizing supporting documentation.

In contrast to traditional predictive research (Figure 3), data collection and

analysis in a design-based quality project is ongoing and adaptive.  Amiel and Reeves

(2008) call this the design-reflection-design cycle where data are "collected

systematically in order to redefine the problems, possible solutions and the principles that

might best address them" (p. 35).  In some ways, the data become the variables, with each

iteration reflectively evaluated for its impact on the environment or movement toward the

desired outcome.

**Development of Best Practices for CARF Preparation**          **Summative Evaluation**
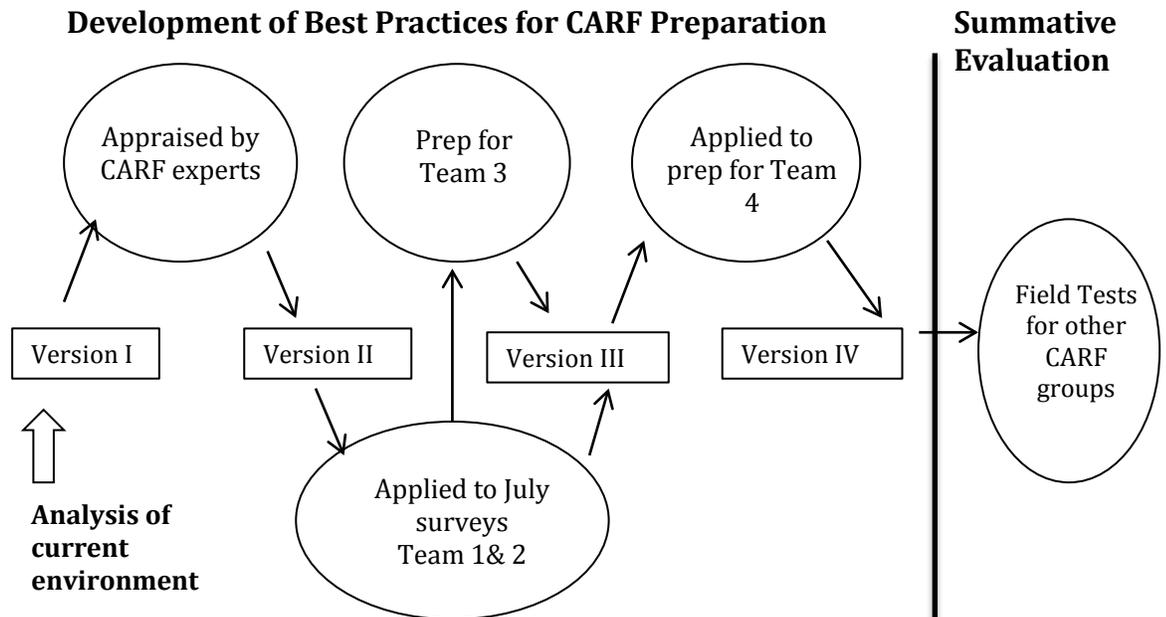


*Figure 4.* Research design showing micro phases adapted from Mafumiko, cited in Kennedy-Clark (2013).

Because multiple types of data or inputs change throughout the research process

(Herrington et al., 2007), validity is based on the "triangulation criteria" (p. 6) of data

sources, methods and investigators.  The cycle of data collection is shown in Figure 4.

There is an expectation that a variety of all three are employed to provide the

most comprehensive picture, or in this case, practice.  For this project, the triangulation

criteria were found in the principles of quality improvement: efficiency, effectiveness and

repeatability.

## Data Analysis Plan

Although the inputs and data change throughout the research process, the

triangulation criteria that form the analysis of those data do not.  The QPM and

participants were continually challenged by the following research questions: Are the

innovations (or recent changes to process) more efficient and more effective than the previous process and can the process be replicated in other facility programs preparing for CARF accreditation surveys?

Although much of the analysis was reflective and ongoing, the primary analyses occurred in the prototyping or third phase of a design-based research project.  It is through the iterative cycles that tools, instruments, artifacts and curriculum are refined as better solutions to a practice problem.  The final summative evaluation at the CARF Roundtable provided a team review of the outcomes in relation to the research question with an additional quantitative measurement: the number of recommendations that result from the survey.  As mentioned previously, an improved process may result in fewer findings; however, it is beyond the scope of this project to evaluate the large number of variables that ultimately impact survey results.  The comparison of the number of findings between programs and against previous surveys therefore serves the limited purpose of advancing a theory that would necessitate a more traditional predictive research model.

## Verification

Although the experiential framework of DBR generates empirical results, Alghamdi and Li (2013) note that "strict criteria for evaluating the rigor of the findings in terms of objectivity, validity and reliability" (p. 7) in DBR have yet to be established. This is particularly true for the rapid cycling of continuously redefined solutions to local problems such as in a quality improvement project.

Advocates of DBR acknowledge the difficulties in traditional verification of select data and offer instead validation based on the usefulness and accuracy of resultant

design principles, procedural knowledge, and product or enhanced professional

development (Herrington et al., 2007). "The outcomes of design-based research are a set

of design principles or guidelines derived empirically and richly described, which can be

implemented by others interested in studying similar settings and concerns" (Amiel &

Reeves, 2008, p. 35) and it is through the usefulness to others in similar settings that

assures veracity. Indeed, it is through the use of micro-phases, expert analysis, and

diverse participant groups (Kennedy-Clark, 2013) that objectivity, validity and reliability

are maintained. Since the product of this study is standardization of a process for

accreditation, the verification of the data lies in adherence to the research design and

usefulness of that product.

Assessment of usefulness will be done by the multi-disciplinary teams who

participated in the 2014 surveys and evaluation of the processes created by those groups

who have yet to prepare. They met in January 2015 in Roundtable of all CARF programs

for concurrence in the final design. The tools and instruments designed through the

research process were presented and discussed. These are the artifacts that form a

structured program of accountability for ongoing readiness under the auspices of quality

improvement and monitored by the QI consultant, CARF subcommittee members and

service line leadership. Moreover, by creating a standardized process for ongoing

readiness, the progress of individual programs can be tracked and quantified as

performance measures. Those measures will be determined by the subcommittee for

CARF accreditation readiness but could include issues such as:

- Are programs completing the annual reviews of policies and procedures according
  to operational timelines?

- Is the quality records review being done?

- Are fire and safety drills on schedule?

- Is required training and education on schedule?

- Are annual reports updated?

Although the DBR quality improvement project is driven by practice-based evidence, it is through compliance with ongoing readiness and the usefulness to other groups preparing for or who are new to CARF that evidence-based claims of successful learning and better practice can emerge.

### Ethical Considerations

The primary ethical consideration in the study to standardize a process for CARF accreditation was to clearly distinguish it as a quality improvement project rather than predictive research. The distinctions between the two methods are discussed at length in the literature review and the QPM and improvement teams remained focused on the goal to improve process through small changes in existing practice. Team members are expected to participate in continuous quality improvement, systematic data collection and therefore remain at minimal risk throughout the project. Anonymity of the organization and individual teams is maintained in this report, however; the teams were individually identified to the organization as part of its regular performance review of accreditation outcomes. This included a poster presentation for the annual Quality Fair (October, 2014), a competitive event that features internal quality improvement and systems redesign initiatives. Judges in the facility-wide competition are senior managers and representatives from research and systems redesign.

As a quality improvement project, the standardization of CARF preparation did

not require oversight from either the local Institutional Review Board or the Creighton

University Social Behavioral IRB. Before its implementation, however, the project was

presented as a rapid cycle process improvement to the Performance and Quality

Improvement Council (May, 2014) for the service line.  This body is composed of service

line leadership and meets monthly to review all performance and quality measures.

Results of the surveys (as they occurred) and changes to the process for accreditation

were reported to the Council in August through December 2014.  Compliance with

ongoing readiness performance measures will be reported on a quarterly basis to the

Council as well as to the Director of Quality Improvement and the Leadership Quarterly

Measures Review (LQMR), a subcommittee for performance and quality improvement

that reports to senior leadership.  Following the meeting to charter the CARF

subcommittee for ongoing readiness in April 2015, the tools developed for CARF

accreditation will be made available on the Quality Improvement SharePoint® site.

## Summary

The decision to bypass traditional QI models in the project to standardize an

approach to CARF preparation was based on several factors.  First, the literature was

inconclusive that the standard QI models are effective and efficient.  Moreover, some

authors express significant concerns about sustainability because the models are not

generally evidence-based.  Secondly, success in this project depended on creating an

environment that facilitates shared learning and collaboration among professionals with

similar goals but vastly different skills and experiences.  QI models tend to control rather

than optimize that variance.  Thirdly, because the QPM is the quality consultant to the

teams preparing for CARF, the role required interaction as a full member and leader of the process, rather than as an observer and recorder of team behavior.  Finally, although most QI methods rely on the iterative model, the truncated time frame dictated by the scheduling of the surveys did not allow adequate time for QI cycling and validation. Rapid cycling in QI project involves months between cycles rather than the weeks allowed by the CARF survey schedule.

Applying the DBR model with an underlying theoretical framework of CoP provided a level of validity not available to most QI methods; however, the most significant benefit of both DBR and CoP can be seen in how closely they align to the context and environment in which the teams functioned.  Both DBR and CoP are natural fits for interdisciplinary teams working collaboratively toward best practices in survey preparation.  As a framework (CoP) and a model for creating change (DBR), these two evidence-based practices elevate the collective learning and collaboration through strict adherence to CoPs constructs (domain, community practice).  The outcomes of the study are "guidelines derived empirically and richly described, which can be implemented by others interested in studying similar settings and concerns" (Amiel & Reeves, 2008, p. 35).

CHAPTER FOUR: FINDINGS AND THE EVIDENCE-BASED SOLUTION

**Introduction**

In the quality improvement (QI) project to standardize an organizational approach to CARF accreditation, an initial assessment of the preparation methods of individual programs yielded a fairly broad set of variables. This led to the primary question of this study: of the current processes being used, which are most effective and efficient?  The overarching premise was that a shared process that is not person-dependent results in better preparation, improved documentation and increased staff engagement.  To answer the question and validate the premise, a design-based research  (DBR) model was used which, unlike experimental designs, allows the outcome (more efficient and effective practice) to be defined first and then subjected to an iterative process of revisions and refinements that focus on creating an environment to support that outcome (Kennedy-Clark, 2013).

This chapter presents the results of that research and the product that meets the aim of the study. It begins with a review of the purpose and aim statements followed by a summary and presentation of the survey findings and the outcome of instrument development.  An analysis and synthesis of product leads to a multi-faceted discussion of the outcome and how the iterative process resolved identified barriers to ongoing accreditation readiness.  These solutions, in the form of a tracking tool, cover document management, training and development of key staff, and facility engagement.  A description of support structure and resources required to implement the tools and sustain the process includes changes made in facility policies to address potential barriers that arose in the study process.  Bandura's Social Cognitive Theory (1989) and Block's

(2005) Civic Engagement model outline the internal and external elements needed for successful behavioral change in the adoption of the solution. Finally, a summary ties the two important elements of this chapter together: how the study process influenced findings and informed the solution and the leadership needed to sustain change.

## Purpose of the Study

The purpose of this quality improvement study was to describe the shared learning of four distinct interdisciplinary health care communities of practice participating in a rapid quality improvement project to prepare for impending triennial re-accreditation under CARF.  The goal of the quality improvement project was to standardize an organizational approach to CARF surveys to improve survey presentation and results. This required the shift from a person-dependent, unsystematic model to one that is process-driven, efficient, and effective.

## Aim of the Study

The overall aim of the study was to synthesize the diverse experience and existing knowledge (structure) of four interdisciplinary communities of practice (Wenger, n.d.) to develop (processes) sustainable, evidence-based tools (outcome) and a continuous quality improvement structure for ongoing accreditation readiness.

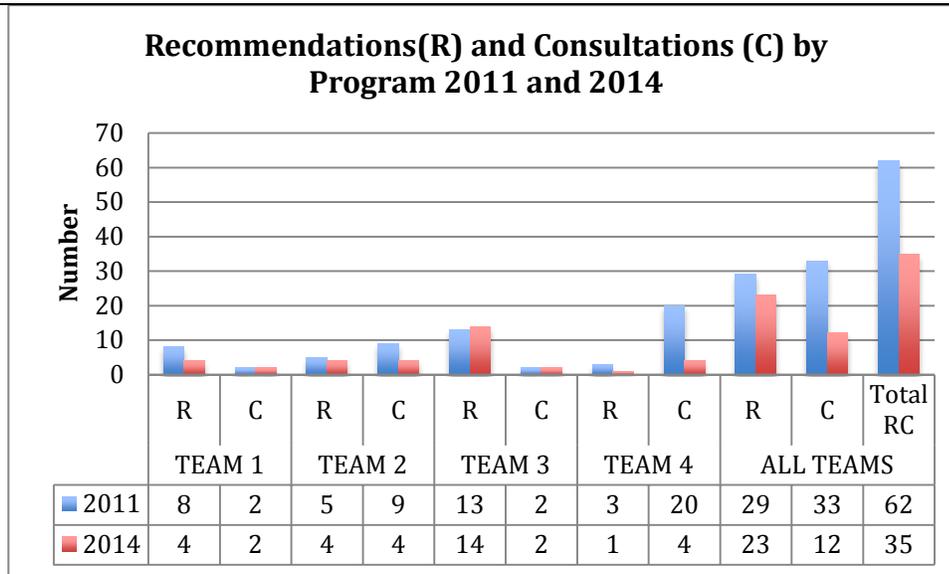## Summary and Presentation of the Results

Although the primary goal of this study was to develop a process and tools to improve accreditation readiness, the primary measure of success for most observers would be in the number of survey findings that result during and after implementation. Indeed, a primary assumption made at the beginning of the study asserted that there

would be a decrease in survey findings as the tools and methodologies were refined.

Unfortunately, tools and methods are not the only variables in any accreditation survey.

In the CARF survey process, individual surveyors review facility or program

narratives, reports and other documentation prior to the site visit.  During the site visit,

patient records for consistency with the standards and local policies. Interviews with

patients, stakeholders, and staff validate the services reported are the services delivered.

Most surveyors use the published checklist to evaluate compliance with the standards and

totals from the checklists determine facility levels of conformance to standards.

Accreditation decisions are based on continuous conformance, on-going quality

improvement, and benefit to persons served.

Table 10

Comparison of 2011 and 2014 CARF Survey Findings



Recommendations(R) and Consultations (C) by Program 2011 and 2014

|  |  | R | C | R | C | R | C | R | C | R | C | Total RC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  |  | TEAM 1 | | TEAM 2 | | TEAM 3 | | TEAM 4 | | ALL TEAMS | | |
| ■ | 2011 | 8 | 2 | 5 | 9 | 13 | 2 | 3 | 20 | 29 | 33 | 62 |
| ■ | 2014 | 4 | 2 | 4 | 4 | 14 | 2 | 1 | 4 | 23 | 12 | 35 |

Partial or non-conformance to standards results in a *recommendation*, requiring an

immediate QI plan.  *Consultations* by the surveyors indicate minor program deficits but

the organization is not required to accept nor address the suggestions offered. Table 10

compares the number of recommendations (R) and consultations (C) in the 2011 and 2014 CARF surveys.

**The Survey Results: Program Findings**

Comparison to the 2011 surveys demonstrated fewer findings overall as expected (62 versus 34).  For teams in the first two cycles, application of the innovations was minimal but both experienced a drop in the total findings (recommendations and consultations) of 60 and 57 percent respectively.  Team 3 had one more finding than in 2011 even though the facility narrative, resource file and templates were used.  The sources of those findings were attributable to three significant differences in the Team 3 survey and the others in the survey: survey preparation, experience within the team and experience among the surveyors.

Teams 1, 2, and 4 took a collaborative approach to preparation, involving and educating staff through weekly meetings and delegation of responsibilities.  Each of these teams had members who had participated in CARF surveys although only one (Team 2) had retained the same team leader.  Team 3 began weekly meetings with a staff and team lead who had attended CARF trainings, but none of that small group had experienced CARF.  The Team 3 leader isolated himself to prepare the narratives, rewrite handbooks and SOPs and compile the performance and quality measures, preventing the inexperienced team members from the learning that occurs during the preparation phase. This became a factor during staff interviews with surveyors.

However, it may have been the difference in the surveyors' approach and expectations that affected the survey findings most significantly.  Both men use their knowledge, position and expertise in CARF accreditation to supplement their income as

independent consultants by preparing organizations for CARF.  By contrast, TJC (2013) and other accrediting bodies expressly prohibit the dual role of surveyor/consultant as a conflict of interest.  During the interviews and onsite inspections, they both used proprietary checklists and did not observe the normal separation between administrative and program survey responsibilities, resulting in duplicate findings.  Most importantly, they declined to accept the consultative revisions, a unique characteristic of CARF collaborative practices that modifies a potential recommendation to a more manageable consultation.  In validating the shared documentation and compliance with Section 1 ASPIRE standards, the seven other CARF surveyors in 2014 issued one recommendation for each program.  The Team 3 surveyors made 10 recommendations for those same standards, announcing during the closing conference that, for them, a good survey had an average of 12 recommendations.

The challenges of inter-rater reliability and Team 3's surprising performance did not deter Team 4 from adopting the evolving systems approach.  With a two-month gap between surveys, Team 4 applied all the innovations to their survey preparation.  This would be the largest and most complicated survey for a program that had nearly tripled in size since the last survey.  Their only finding was related to the lack of an emergency plan for a temporary office space that had been recently acquired to house outreach staff. The surveyor commented that she had to make "at least one".  This final survey, seen as proof of concept, validated the processes throughout the cycle.  Thus, the tracking tool for ongoing accreditation readiness was ready for concurrence.

**The Study Results: An Ongoing Readiness Tracking Tool**

In DBR, each iterative cycle informs changes in the next to refine or redefine the methods, instrumentation or understanding of participants in the study.  The outcome of the study is often predetermined with the study designed to "develop effective, scalable and sustainable innovation" (Dede, 2004, p. 5).  Analysis of each cycle is ongoing and reflective, producing an environment to support the desired outcome with data analyzed "immediately, continuously and retrospectively" (Kennedy-Clark, 2013, p. 29).

In this study, a standardized approach to CARF accreditation was the desired outcome with the criteria that the elements of that approach use existing knowledge and experience to create an efficient and effective approach that is accessible to the various programs that have to prepare for CARF.  Validation of the innovations introduced with each cycle follows the "design-reflection-design" (Amiel & Reeves, 2008, p. 35) prototype. Reflections on each change evaluate its actual use, the degree to which the improvements meet the outcomes and the level of professional development or understanding of the process that is produced.  This assessment by the QPM and those implementing the changes ensured a progressive and trustworthy refinement of the instruments that were developed for the study.

The presentation of those instruments is organized to first analyze the outcomes as they are related to the formative research questions posed throughout the research cycle. They are then discussed in detail as solutions to the barriers and obstacles identified by the teams in the initial assessment phase: documentation management, training and education of key staff, and facility participation and support.

## Analysis of Innovations as Outcomes

The outcome of a set of standardized processes and instruments to facilitate more efficient and effective preparation for CARF surveys was evaluated immediately and continuously with the introduction of each innovation.  The formative evaluations were based on the following questions:

Question 1: Did the modification/intervention work?

Question 2: Was the process more effective and efficient than before?

Question 3: What adaptations will improve the process?

Question 4: Can the adaptations be applied to the next cycle or team?

Table 11 demonstrates each innovation response to the research questions and tallies the percentage of conformity with each question.

Table 11

Analysis of Innovations as Outcomes

| Innovation | Question 1 | Question 2 | Question 3 | Question 4 |
|---|---|---|---|---|
| Multiple authors | Yes | Yes | Single editor | Yes |
| Electronic resource file | Yes | Yes | Formatting | Yes |
| Shared decision making | Yes | Yes | Delegation | Yes |
| Group scheduling | Yes | Yes | None | Yes |
| Facility narrative | Yes | Yes | None | Yes |
| Templates for plans | Yes | Yes | None | Yes |
| Tracking tool (solution) | Yes | Yes | Application | TBD |
| ACHIEVE TOTAL | 100% | 100% | NA | 85% |

The lower percentage of achievement for the tracking tool is based on its late introduction to the research cycle. Although participants in the CARF Roundtable unanimously support using the tools for tracking, they have yet to be consistently applied to most programs.

**Document Management**

Documentation management was the primary threat shared by the four teams preparing for CARF accreditation.  The Bardach (2005) analysis and assessment of current practices showed that the greatest number of facility and program documents are required in Section 1, which is the same for any program seeking accreditation. Therefore, having each program individually seek out, verify and apply the same documents was redundant.  In a shared learning environment, the communities of practice could compare their documentation compliance with the standards and create an overall resource file to manage, organize and disseminate the most appropriate artifact, whether a policy, organizational chart or training program.

With the narratives and program plans as the primary documentation of compliance with standards, the preliminary research phase also indicated that composing the facility level response to Section 1 standards was, again, redundant, often out of date and frequently lacked continuity.  Combining existing knowledge of the facility practices and creating a single facility narrative that could be shared suggested a solution that, after the initial investment in time and energy in its creation, would ultimately save time for all involved.  Similarly, the required accessibility, strategic, risk management and technology plans could be formatted into a shared template that would provide a comprehensive report with a consistent look and feel. The results of these solutions to document management are discussed in more detail below.

**Results for electronic resource file innovation: Applied to three of four programs.** Team 1, as the baseline program, used hard copies of documents in several binders that were provided to each of their two surveyors.  Creating these copies,

assembling and labeling the binders and creating citations within their narrative took two

weeks.  In contrast, accumulation of documents for the resource file initiated by Team 2

was a group effort, with the folder available for team members to drop copies or PDFs of

the required documents, plans and handbooks already in electronic form.  Linking to an

internal SharePoint was not an option, as the surveyors could not be granted permissions

to internal information technologies.  Having the resource file in a single folder also

provided the opportunity to copy the file directly to the next program's folders.  The

formatting of each resource file varied among the teams and future work may include

collaboration on a general resource file that can be held on the CARF SharePoint.  A

library for all CARF policies, procedures and handbooks has been created on the Policy

SharePoint so that, as policies are updated by the facility, they will automatically be

updated in the library.  A quality measure has been created to track compliance with the

program quarterly review of the policies as proscribed by CARF standards and facility

policy.

> **Results for facility narratives innovation: Applied to two of four programs.**

As mentioned earlier, three of the four programs already used the narrative form to

describe compliance with standards.  The content was generally copied and pasted from

previous reports and resulted in a disjointed, often inaccurate accounting of current

program activities or supporting documentation.  Poor editing contributed to lack of

consistent, scholarly voice and none of the reports were formatted for easy

comprehension.  The fourth program (Team 2) simply copied the self-assessment

questions, inserted responses and submitted that revised document *in toto*.  This huge

document unnecessarily retained instructions for self-assessment, the actual standards,

intent statements and other qualifying explanations.  As another copy-and-paste

document from previous reports, the information in Team 4's report was also often

outdated or inaccurate.

The innovation, begun after the first survey, combined all the raw content of the

reports.  Program-specific information was eliminated, leaving only facility-level

information.  That information was then updated, formatted with headings and

subheadings, linked to documents in the resource file and attributed as needed.  The

program director for Team 3 provided the initial edit, followed by a professional editor

input and then specific program information added as a separate section under each

heading.  Team 4 used the facility narrative and, like Team 3, added individual program

elements as a second section.

The primary weakness in this solution was that there is no method to hyperlink

the supporting documents to a common file and embed those links in the template.  This

still needs to be done with each iteration.

**Results for templates for plans innovation: Applied to two of four programs.**

The QPM, in collaboration with Teams 2 and 3, developed the templates for the risk

management, accessibility and technology plans.  The format followed the one developed

by Team 2, but was expanded to include requirements outlined in the standards.  Team 3

applied this user-friendly template and added descriptive text as an introduction. Team 4

used the final iteration with no changes.  The strategic plans used by the programs

remained unchanged primarily because the strategic planning process varies among

communities of practice. The subcommittee for CARF accreditation readiness will decide

whether or not that process can or should be standardized when it is charted in March of

2015.

**Training and Education of Key Staff**

The loss of the previous subject matter expert (SME) and key staff turnover was

cited as a vulnerability during the assessment phase.  Although many staff had CARF

survey experience and their existing knowledge of program processes was significant,

most expressed a low comfort level with interpreting the standards to demonstrate

compliance.  This was, in part, because of the unique nature of CARF standards and

reporting mechanisms.  The organization provided opportunities for offsite education at

CARF conferences for new employees, but the surveys are retrospective and the loss of

key players in the time between surveys created a disruption in ongoing readiness

oversight.  Moreover, several staff who had participated in previous surveys now found

themselves as program managers with responsibilities for which they did not feel

prepared.

Apart from concerns that reports and documentation would be incomplete,

program leads noted that the time necessary to learn and then author responses could

negatively impact patient care activities.  An assessment of the existing knowledge within

the communities of practice suggested the tentative solutions to these challenges could be

found by learning from one another rather than from the formal education offered in the

conferences.

**Results for multiple authorship: Applied to three of four programs.** The use

of multiple authors and spreading out the self-assessments and writing of the narrative

was one of the first innovations of this iterative process. Team 1 used it successfully to

balance the workload, but the writing was often redundant and difficult to read. Team 2

used a similar process with the program manager editing the final content to create a

consistent voice and control over repetition.  The program for Team 3 took on the writing

tasks after delegating the self-assessments and this proved to be a very time-consuming

process. The raw draft of the facility narrative had been prepared and the director edited

that very large document in addition to the other sections.  In the end, the documents that

emerged from Team 3 had both a professional journalistic quality and consistent look.

Group 4 used the facility narrative and a variation on Team 2 responses for Sections 2

and 3.  The hybrid approach worked well and the three surveyors assessing Team 4

remarked that the organization was better than any they had seen.  Even though the

survey for Team 3 resulted in the largest number of findings, the surveyors, who both run

independent accreditation readiness consulting agencies, were highly complimentary of

the organization and the ease with which they could conduct their investigations because

of the clarity of the narratives.

   **Results for shared decision making as innovation: Applied to three of four**

**programs.** Shared decision making was evaluated anecdotally through the team meetings

and trainings during the preparatory phase leading up to the survey.  Two out of the four

teams held open meetings with large numbers of staff, and all supervisory staff were

included. Teams 1 and 3 restricted the size and membership to three or four.  The effect

of the exclusions of staff became most noticeable in the staff interviews with surveyors.

For Teams 2 and 4, surveyors interviewed the staff who had authored the sections, knew

the standards and could speak to compliance issues with confidence and authority.  The

interviews for Teams 1 and 3 went less well, with surveyors requesting additional items

or validation and it should be noted that Team 3 had a much larger number of recommendations (i.e., citations) than the other three teams.

At the CARF Roundtable, program owners agreed that increased staff involvement improved product quality.  Developing strategies for delegation, tracking and increasing staff participation will be one of the areas covered in the CARF subcommittee meetings.

**Facility Participation and Support**

Initially presented as two separate challenges, the facility role in a successful CARF survey evolved into a single issue of communication in two areas: timely recognition of leadership requirements and the education of leaders or subject matter experts about CARF and the programs receiving CARF accreditation.  One innovation, group scheduling, met this need specifically.  Two other innovations revised to meet staff deficits and already described (narratives and plan templates) were repurposed and those innovations spread to cover the education of key staff scheduled for interviews with surveyors.

**Results for group scheduling: Applied to four of four programs.** Facility participation in surveyor interviews had been a historic problem.  Program owners reported leadership no-shows and disorganized or unprepared subject matter experts (SMEs) as vulnerabilities that had resulted in recommendations in past surveys.  In collaboration with the program leads, the QPM developed group interviews that allowed leaders or SMEs addressing similar standards to be interviewed at the same time.  Those required to attend were notified as soon as the dates for the survey were announced and allowed to block out times in which they would not be available.

The facility narrative and an explanation of CARF were sent with their interview time to give them a context for the interview questions. Additional support was also offered at that time.  More importantly, in the first three surveys, the email invitations were sent from the Quality Improvement Accreditation specialist rather than the program owners or the QPM. Because this individual coordinates higher-level surveys, it was theorized that responses to her request would carry more weight.  For the first time in the history of the CARF surveyors, 100% of the facility staff was present during the times requested for the first three surveyors. Attendance dropped to 85% for the fourth and final survey when the Accreditation specialist sent the first email only and the program owner sent the follow-up reminders.

### Analysis and Synthesis of Findings

The aim of the QI project to synthesize the knowledge and experience of four distinct communities of practice was largely successful.  Each of the first three programs contributed innovations that represent better practices than what had previously been done.  Team 4 validated the practices through implementation drawn from the most surveys, and that resulted in the most successful survey results.  Additionally, four programs that were not part of the study were included in the January CARF Roundtable, and each of those programs plans to implement the successful innovations of the study. These include the elements of the toolbox: the facility narrative, the electronic files, the templates for reports and the tracking tool.  Facility quality consultants will work with these other programs to create program-specific documentation.  Moreover, all programs expressed enthusiastic support for the chartered CARF subcommittee for ongoing

readiness where open discussion of the tools, the challenges and implementation

strategies will be discussed on a quarterly basis.

**Proposed Solution: The Tracking Tool for CARF Continuous Readiness**

Systematic tracking of healthcare activities and patient outcomes has been part of

the healthcare delivery since the days of Florence Nightingale (Neuhauser, 2003). The

relatively recent alignment of QI with industrial performance measures, however, has

elevated the continuous process of collecting effective metrics for data analysis to an

essential requirement for demonstrating improvement in healthcare (Curin, Woodcock,

Poots, Majeed, & Bell, 2014). Although it is beyond the scope of this study to justify

tracking data as an evidence-based practice, it should be noted that, despite the ubiquitous

demand to track metrics in QI, the debate about evidence-based QI continues.  In

outlining the EBP challenges to normal QI methods, Shojania and Grimshaw (2005)

noted that one improvement strategy for QI research is the application of models that

"inform the decision to select specific implementation strategies" (p. 148).  These models

account for target characteristics, context and "relevant attitudes and beliefs" (p. 148).

The DBR model meets those EBP specifics; the development of a tracking mechanism as

a solution is derived from the naturalist environment of practice and based on the relevant

knowledge and beliefs of four diverse communities of practice.

This QI study – aimed to synthesize existing CARF knowledge and experience to

refine sustainable tools for ongoing CARF readiness – concluded that a user-friendly,

comprehensive tracking tool could resolve the identified challenges of staff education,

facility participation and, most importantly, document management.  The tracking tool

development began during the initial assessment phase, prior to the first survey. The

information provided by the CARF manuals, operational timelines, training schedules

and required documentation were converted to an Excel spreadsheet to assure that teams

were meeting CARF compliance.  This was later expanded to include a listing of all

CARF-related policies and procedures that were further sorted by anniversary dates into

quarters for annual review.  The final step linked the activities to the CARF standards and

the applicable facility or program documentation.

**Support for the Solution from the Data Collected**

Adherence to the annual reviews of policies drove the goal of creating a process

to track compliance with continually updated policies.  None of the teams had developed

a method for this (i.e., 0% compliance).  Moreover, their understanding of ongoing

readiness requirements for training, education, and operational timelines as well as

accountability for those measures was based on their reading of the standards, rather than

a systematic organization of when and how those activities should occur.  The lack of a

checklist led to significant variance in program preparedness. For instance, only one

(Team 2) had completed annual reports for strategic, risk management, technology and

accessibility planning.  Although most training requirements were covered by the

organizational learning system, other requirements such as driving record checks,

competencies for medication management and credential tracking for providers are

assigned to each program to track under CARF standards.  Three of the four programs

consigned those responsibilities to the organization rather than tracking and documenting

the compliance themselves.

The systematic and organized tracking tool developed as a result of the study

contains all the current CARF requirements, designates timelines and ownership and

links to supporting documentation.  The tracking tool has also been customized to each

program to include any and all requirements for both shared and program-specific

standards.  Because it is built into an Excel spreadsheet, it is both user- and metric-

friendly.  The programs, program leaders and the QI department can develop compliance

measures for ongoing accreditation readiness based on the tracking tools.

The tracking tool in this format also satisfies what Hughes (2008) has identified

as essential, evidence-based best practices in quality improvement.  In her *Taxonomy of*

*Quality Improvement Strategies* (p. 3-4), Hughes asserted that provider reminder systems,

audit and feedback, and provider education are methodologies that support sustainable

improvement changes.  These research elements can be translated into standard practices

that ensure ongoing accreditation readiness.

**Existing support structure and resources.** Forrest (2015), in an article on

achieving effective metrics noted that "buy-in from senior management and employees"

(n.p.) is critical to the process-driven change frequently associated with environments of

continual quality improvement.  Facility oversight and support for the study to develop

evidence-based tools for CARF accreditation readiness was provided before and

throughout the research cycle by the Quality Improvement Department and the service

line Performance and Quality Improvement Council.  The facility also maintains a

Committee for Accreditation and has agreed to charter a subcommittee for CARF

Accreditation Readiness that will begin formal meetings by March of 2015.

Another example of existing support within the organization is seen in the

refinement of the policy list as part of the tracking tool. With the CARF list of policies

thus created, the manager of the policy SharePoint set up a CARF Policy Library that

includes not only the relevant documents, but also facility handbooks.  These documents

are under continual revision; having them in one place with a single owner reduces waste

in terms of time or effort with the most recent versions.  Programs can be alerted when

revisions are made and program leads can check policies out and sign off on them in the

same place.  This library can then be transferred into the electronic resource files prior to

the next survey.  The annual review of policies is then documented in one place and can

be monitored for ongoing compliance as a quality improvement measure.

Apart from the CARF Library on the Policy SharePoint, tracking tools, resource

files, narratives and templates are currently stored on a controlled-access drive for facility

workgroups.  These files will eventually be migrated to the Quality Improvement

SharePoint so they can be made available to groups outside the current facility, but within

the national network, making the tools available to other CARF programs within the

system.

**Policies influenced by the tracking tool.** The challenge of documentation

management for CARF programs cannot be over-emphasized.  With over 600 documents

currently in program resource files, updates as rewrites, additions and excisions of

irrelevant documentation is an ongoing and daunting task.  The primary reason given for

failure to review facility policies on an annual basis as required by CARF was related to

ownership of the task.  Prior to the study, the facility policy on Policies required that

documents be reviewed annually on the anniversary date in compliance with external

accreditation organizations.  The language of that policy has been changed to facilitate

quarterly reviews, and CARF policies have been organized by anniversary dates into a

manageable group. Program notifications with a link to those policies will be sent from the Quality Improvement consultant and tracked for compliance as a quality measure.

Programs will have the option to create local Standard Operating Procedures (SOPs) relevant to the tracking program.  These SOPs carry the weight of a facility policy but do not cross program boundaries.  The decision to implement any additional guidelines for compliance with CARF by adding SOPs will be at the discretion of the program leadership, however, annual changes in the standards are frequently managed at the program level through the development and articulation of new procedures.  With a subcommittee for CARF, information and strategies to adapt to changes in the standards as well as the wording of SOPs can now be shared across service lines and may provide guidance to changes in facility policy.

**Potential barriers and obstacles to proposed solution.** For professionals working in rigid and vertically organized environments, problems with inter- and intradepartmental communication and the lack of trust and competition that result are always a concern.  These concerns can be magnified when introducing interventions that necessitate consensus or threaten the stratified organizational culture.  Poor communication between minimally collaborative communities of practice was identified initially as an obstacle for standardizing the process and remains the primary systems issue. Resistance to implementing the tools that establish and monitor ongoing CARF accreditation readiness may arise if the teams lose their most efficient communication channel (the subcommittee), making collaboration no longer safe or effective.  Adding additional CARF groups could amplify these challenges with restructuring and re-forming the rules of engagement between parallel communities of practice.

One benefit to the DBR model was the role of the QPM as the consistent link among groups. Under a PDSA or Lean model, the program leads would have been consigned to regularly scheduled meetings together to look at modifications, evaluate and assess for the next cycle.  The teams were clear in initial meetings that they would not support this use of their time or their talents.  Team leads spoke negatively about other groups stealing their work or sampling their processes.  Within the framework of DBR, the QPM could moderate the distrust, reinforcing individually that sharing knowledge, experience and process was indeed the goal of the project.  During the CARF Roundtable, these personal views were set aside and the teams were able to see a visual representation of their individual contributions to a process that they all whole-heartedly and enthusiastically endorsed.  Whether that cooperative and collegial spirit can be maintained through the CARF Subcommittee for Accreditation Readiness is yet to be seen.

**Financial and legal issues related to proposed solution.** Although standardizing the process for CARF accreditation will, by participant estimates, save a great deal of staff time, the financial impact may be minimal. Productive versus non-productive hours have not been tracked except for licensed independent providers, and there is no baseline for comparative analyses.

Legal issues, specifically Institutional Review Board requirements, could arise if the program tools are spread outside the organization and further developed for national use.  Data from internal QI projects can frequently expand to inform practices elsewhere, but broader testing or pilots to assess for generalizability leading to changes in practice removes QI protections.  Given that other organizations, including CARF, have requested

information about the success of the study, moving the tools from a local QI project to an

experimental model or multi-facility pilot will require more formal, official oversight.

**Change Theory: Social Cognition**

The transition of CARF preparation from person-centered to process-driven was

largely based on the loss of key staff in early 2014.  The subject matter expert (SME) was

suddenly unavailable and even staff who had participated in or organized CARF

preparation in the past voiced concerns about the leadership void.  Surprisingly, this

skilled group of healthcare professionals doubted that their own knowledge was sufficient

to adequately maneuver through the demanding requirements.  They did not recognize

their own capabilities, much less the attributes and existing knowledge around them.

Bandura (1989) labeled the recognition of one's own abilities to affect events in their

lives as "self-efficacy" (p. 1175) and it is the cornerstone of his theory of social cognition

that served as the driver for change is this study

Bandura showed that the stronger the sense of self-efficacy, the greater the levels

of motivation, perseverance and resilience.  In groups, this is expressed through " a

prosocial orientation characterized by cooperativeness, helpfulness, and sharing"

(Bandura, 2000, p. 77). In the present study, the goal was to harness the collective

efficacy and move beyond shared skills and knowledge to an "interactive, coordinative,

and synergistic dynamic of their transactions" (p. 75) that would serve as a model for

future sustainability.  Success in the quality improvement project  to standardize the

organizational approach to CARF depended on developing an environment that allowed

teams to learn to work together and build trust between and within the communities of

practice, even if remotely through the survey cycles. Sustainability and future

DBR was selected as the conceptual framework primarily because it provided the mechanism to pool resources and learn from one another's models. As professional staff with a long track record of successful patient care, they were experienced with setting goals, planning appropriate actions and producing desired outcomes.  Because they had been isolated from one another's work and, prepared primarily under the previous SME's guidance, they had little understanding of the wealth of existing knowledge among the four communities of practice. Although the teams embraced the opportunity to develop a practical and sustainable program for immediate and then ongoing readiness, they had had little exposure to the processes or better practices of other CARF groups before this study. In the naturalistic DBR environment, team members could assess their own capabilities and existing knowledge while evaluating the practices proven to be most efficient or effective.

The challenge for the QPM was to develop opportunities where the "exercise of personal agency" (Bandura, 1989, p. 1182) or self-efficacy resulted in social learning that would benefit the whole. Kritsonis (2005) offered three methods to increase or release self-efficacy: "provide clear instructions, provide the opportunity for skill development and model desired behaviors" (p. 4).  While the clearest instructions were being described by the QPM through the iterative process, the encouragement that each team lead *play* his/her strengths and *practice* weaknesses provided a demonstration of skills that had gone unrecognized.  These skills – whether in setting hyperlinks, formatting documents and computer files, writing plans, or leading staff – generated a synergistic response from the others to move the entire project forward.  With a QPM who was a novice to CARF and with no SME available, the better choice was to move ahead together.

Bandura recognized that increased self-efficacy, born by positive response to group effort increases motivation and the resilient self-belief that "people can effect change in themselves and in their situations through their own efforts" (Bandura, 1989, 1175). This is the personal agency defined by Bandura and supported throughout the DBR cycle. Personal agency served as the precursor to the collective efficacy sought by CoPs, furthering "motivational commitment to their missions, resilience to adversity and performance accomplishments" (Bandura 2000, p. 75),

For the teams in this study, immediate need drove the emphasis on personal agency and collective efficacy and lead to the discovery of the SMEs among them and among their staff.  Choosing to model the efficient and effective practices emerging from the iterative cycles boosted their confidence in the changes being made.  It gave them permission and an emerging incentive to include staff in the preparation as the iterative cycles evolved into a continuum of developmental change.  The shared learning accrued to staff, and that shared knowledge proved to be a crucial component during the survey interviews.  Staff members who had prepared sections of the narrative were available for interviews and as informed escorts for surveyors on site visits.  As shared knowledge was spread, personal agency increased and collective efficacy determined productivity.

## Issues Related to Implementation: Collapse of Community

A number of authors tackled the issues related to the implementation of change in organizational practice. Everett Rogers (2003), Edgar Schein (2002) and Kurt Lewin (Burnes, 2004) described the most popular methodologies that impose change. Their focus on the ability of position (leaders) to leverage group dynamics represents a comprehensive approach to top-down analysis of current conditions in the field.  In these

models, innovations are engineered by leadership and then diffused in a variety of ways

to front-line staff.  Even though the QPM in this QI study functioned as a pivotal agent of

change, dissecting the challenges, assembling information and promoting modifications,

the ideas and better practices that defined the outcomes of the study originated from

within the existing knowledge and experience of the communities of practice.

With the tracking tool and shared learning environment in its infancy, the primary

threat to implementation is leadership that neglects the emerging inclusive, collegial

environment.  If the subcommittee for CARF accreditation readiness reverts to traditional

mechanistic, metrics-driven or leader-centered oversight, dictating goals, mandatory

measures and consequences from the boardroom, the now-prevailing sense of ownership,

collective efficacy and personal agency will dissolve.  The tracking may continue but the

shared learning, open communication and trust that made the tool viable will cease.

Peter Block (2003) articulated the more collaborative and participatory model

used in this study through his work *Civic Engagement and the Restoration of Community*.

In contrast to "the conventional ideology of the default culture about leadership" (p. 8)

that focuses on leaders' abilities to create and sustain change, Block shifts the onus,

control and ownership of the process to those doing the work.  As in DBR, leaders who

facilitate the model of community engagement create conditions or context in a

naturalistic environment that foster change "by asking people to be in charge of their own

experience" (p. 9).  Commitment, accountability, and sustainability arise from the

community's definition of problems, identification of interventions and evaluation of the

outcomes.  When the community members own the process, they observe their ability to

"effect change in themselves and in their situations through their own efforts" (Bandura,

1989, 1175), effectively neutralizing many of the issues that interfere with implementation of solutions that are both systematic and evolving.  Good leadership maintains the collaborative context, reinforcing the continuation of collective efforts.

## Summary

The goal of the study to standardize an organizational approach to CARF accreditation preparation aimed first to synthesize the existing knowledge and diverse experience of four interdisciplinary communities of practice. Weak validation of the assumption that shared practices would lead to improved survey results at the end of the study is seen in the data from survey results for the final and only team to institute a complete set of the innovations with a 78% reduction in findings from the previous survey.  Although overall findings showed a 56% improvement from previous surveys, the numerous variables that contribute to survey findings were not controlled in the DBR model, making these data promising but inconclusive.  Indeed, Team 3, using six of the nine innovations actually exceeded its previous survey findings by one; however, the outcome of that survey was determined to be less related to flaws in the plan or execution than to the surveyor characteristics and conduct.  Even so, the emphasis of the project remained application of existing knowledge within the communities of practice in an iterative refinement of evidence-based tools or methods.  A reduction of an absolute number of findings for the first three teams *during the course of the study* was not expected.

Accomplishing the study goal to develop a standardized process and tools as an evidence-based solution to sustainable accreditation readiness was demonstrated in the development of a tracking program that has been adopted by the teams in the survey as

well as other programs in the organization preparing for CARF in 2015. The *Tracking*

*Tool for CARF Continuous Readiness* has been uploaded to secure program folders and

evaluated in the CARF Roundtable meeting in January of 2015.  Although still in draft

form, the groups attending the CARF Roundtable agreed to continue refinement of the

tool through a chartered CARF Subcommittee for Accreditation Readiness, reporting

through the Accreditation Committee as part of the quarterly Leadership Quality

Measures Report (LQMR) to senior leadership.

The tracking tool (Appendix F) contains an inventory of the standards under

which each program is accredited to encourage sharing of strategies. It also lists the

operational timelines and required training and documentation specific to each program,

the acronyms, policies and handbooks relevant to the standards and a record of findings

from the most recent survey.  This tool serves the dual purpose of an interactive

mechanism to assure timely completion of requirements by program leads as well as

documentation of compliance future surveys.  In the meantime, compliance with required

elements can be used as an internal quality measure for the programs and reported to the

LQMR.

The final innovation is the folder itself containing an electronic resource file of all

supporting documents for survey, templates for the plans and narratives, and a working

file for uploading documents for review.  Facility documents are linked to internal

SharePoint sites for continual and seamless updating of policies, procedures and

handbooks.

The organization and improved operational awareness of how the programs

demonstrate compliance with CARF standards will meet the goal to reduce redundancy,

improve efficiency, and ensure more effective preparation for future CARF surveys. What began as a QI documentation project of continuing good practices turned into an investment in time spent in cooperation and sharing of knowledge, resulting in new connections and behaviors beneficial to future surveys.

This investment yielded many returns, some unforeseen. The first and most obvious return was the significant reduction in survey recommendations, and some corroboration of the efficacy of the iterative process, as the final survey yielded a single insignificant finding. For the present, the four teams have experienced the benefits of cooperation and self-empowerment, free from the vulnerability of dependence on the same single SME.

Ironically, moving from person-dependent to process driven methodology has created much more personal satisfaction among the participants. They have come away with a much enhanced and clearer understanding of the CARF survey process, requirements for preparation, and the confidence in the updated documentation with a sense of mission to keep it current. Their shared knowledge is deeper and broader than even what they expected from their former SME.

From a broader perspective, the collection of updated program documentation has provided demonstrable benefits in three subsequent surveys unrelated to CARF. A complete catalogue of policies, the descriptive narratives of program processes and the orderly documentation of performance and quality measures is literally at the fingertips of program leads who are asked to provide this same information to other accreditation bodies or internal site inspections. Continued information sharing, updating, and general

maintenance of this documentation should significantly reduce fear of meeting impending

surveys while armed with erroneous and outdated documentation.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

**Introduction**

The conclusion of the quality improvement (QI) project to standardize an

organizational approach to CARF preparation, like most QI projects, is really a

beginning.  With the CARF surveys in the past and the tracking tool and process adopted,

all CARF programs and their quality consultants agreed to meet quarterly and continue

the journey together – an invitation to enter into the new unknown. This concluding

chapter discusses the process of beginning again with a new team, the evolving tool and a

great deal more knowledge and experience about accreditation cycles, standards and

survey protocols. Recommendations follow each section.

A summary of the present study sets the stage for future sustainability, revisiting

the original purpose and aim.  Consideration of the solutions that emerged from the study

leads to a discussion of the past and current key players and their roles moving forward,

including the changes inherent in leading a new team of old players.  The leadership

qualities in maintaining the work, buy-in and sustainability are followed by an evaluation

of the influences the study may have on the larger organization and its leadership.

Outlining the current proposal for ongoing implementation and evaluation revisits

sustainability needs and the final summary reviews, from the QPM's perspective, the

project itself, and its meaning.

**Summary of the Study**

The study to standardize an organizational approach to CARF first examined the

practices of four teams preparing for 2014 CARF surveys.  An analysis of the ongoing

readiness revealed several shared barriers and threats, particularly in the area of key staff

turnover and disruption of continuity for ongoing preparedness.  The analysis also

identified several strengths in the significant CARF experience of two members of the

second team and the processes they had developed over twelve years of CARF survey.

The opportunity to share *their* knowledge, experience and process led to the development

of a rapid quality improvement project with an aim to synthesize the existing knowledge

and diverse experience of all four interdisciplinary communities of practice. A second

opportunity, the development of sustainable, evidence-based tools and processes, would

then support a continuous quality improvement structure for ongoing accreditation

readiness.

Design-based research (DBR) qualitative model was used which, unlike

experimental designs, allows the outcome (more efficient and effective practice) to be

defined first. As action research, DBR occurs in a naturalistic practice (in this case)

setting where interventions can be subjected to an iterative process of revisions and

refinements that focus on creating an environment to support that outcome (Kennedy-

Clark, 2013).  Deficiencies identified by the teams directed those interventions and

included a shared facility narrative, a common library of continually updated policies and

procedures, and application of better practices to comply with CARF accreditation

requirements.

The evidence-based solution took the form of a tracking tool, program-specific

resource folders on a shared secure drive and templates for reporting.  The application of

the interventions to the final team (Team 4) resulted in a 78% reduction in findings from

their previous survey with a 56% reduction for all programs from the previous cycle.  As

part of the iterative process, these interventions were not available to all teams, but in a

meeting in January 2015, the study teams and three other CARF programs preparing for survey approved the tools.  They agreed to charter a CARF subcommittee for quality improvement and ongoing readiness, continued collaboration and quality improvement oversight.

## Purpose of the Study

The purpose of this quality improvement study was to describe the shared learning of four distinct interdisciplinary health care communities of practice participating in a rapid quality improvement project to prepare for impending triennial re-accreditation under CARF.

The goal of the quality improvement project was to standardize an organizational approach to CARF surveys to improve survey presentation and results. This required the shift from a person-dependent, unsystematic model to one that is process-driven, efficient, and effective.

## Aim of the Study

The overall aim of the study was to synthesize the diverse experience and existing knowledge (structure) of four interdisciplinary communities of practice (Wenger, n.d.) to develop (processes) sustainable, evidence-based tools (outcome) and a continuous quality improvement structure for ongoing accreditation readiness.

## Solution Processes and Considerations

In early 2014, disruption of on-going preparation and loss of the CARF subject matter expert (SME) created a critical leadership and procedural void as inexperienced program leads and new staff struggled to bring their documentation into compliance with standards.  A situational analysis suggested developing processes that leveraged the

existing knowledge of experienced staff would readily address most of the deficits and provide a solution that would meet this immediate need and lay the groundwork future process-driven readiness.

Even as a successful study and outcomes depended on applying existing knowledge and expertise within the communities of practice, implementation of the evidenced-based solution (the tracking tool) ironically benefited from the urgency of the upcoming surveys and the loss of the SME.  Being largely unprepared for the 2014 surveys, program leads and staff in this study willingly adopted the most efficient and effective practices from other teams, uncharacteristically crossing established borders between service lines and disciplines. Because the teams created the solution, they adopted the solution and met in January 2015 to evaluate their work.

The January 2015 Roundtable marked a fragile peace. Historically, sacrosanct program silos have limited interdepartmental communication and cooperation and, even with CARF nearly upon them, guarded the adoption and implementation of another team's processes during the study.  Moreover, the teams commonly complained about others "stealing our work" (personal communication, April, May & November 2014). During the November site visit, one surveyor who had recently completed a poorly executed survey at another facility in the system lamented, "Don't you people ever TALK to each other?" (personal communication, November 7, 2014).  For the teams in this study, talking to one another, sustaining communication between silos and the collegial sharing of expertise and knowledge had begun out of mutual need.  In the appropriate, supportive environment, it will hopefully continue. The addition of three

new programs and two additional quality consultants (including the former SME),

however, shifts the landscape.

*Recommendation: Construct the future thoughtfully and with care.*

**Roles and Responsibilities of Key Players: Harnessing Chaos**

Far from being considered a shining achievement for professional collegiality,

group consensus to form the subcommittee for CARF ongoing readiness foreshadows a

whole different set of threats to sustainability.  As in many vertically integrated

environments, competition and positional hierarchies influence the conditions of

participation.  With the default roles and responsibilities of key players already tacitly

understood, the group leadership must manage the space between personalities and

pragmatism "to create a context which nurtures an alternative future, one based on

inclusiveness and hospitality" (Block, 2005, p. 9).

Indeed, the appointment of committee leadership could prove to be the first false

path.  The people within the group, including the recent additions, share unpleasant

histories with one another.  Others typify and trade on the pervasive elitism that

permeates the organization culture.  Most interestingly, the resolution of the shared

urgency that initiated this quality improvement project came from those of least status.

The iterative process and development of the tracking tool leveled a vertical corporate

playing field into lateral common ground.  Whether or not the mutual appreciation

expressed at the Roundtable continues into the subcommittee may depend more on the

quality of leadership than the qualifications of its leaders.

*Recommendation: This is not mine to own.*

**Leader's Role: Personal Clarity**

To maintain ongoing readiness through the application of a tracking tool and continual quality improvement, quality in leadership within the subcommittee and teams preparing for CARF begins with a commitment to service and stewardship of those on the team. This shifts the tasks that "set a vision, enroll others in and hold them accountable" (Block, 2003, p. 7) to one that produces engagement, ownership and the invitation to "be cause rather than effect" (p. 27).  When the leader clearly see and models that personal role of service, it becomes the "*modo de proceder* – our way of doing things" (Lowney, 2008, p. 127) of the group and creates an integrated culture of competence and caring rather than competition.

Greenleaf  (1991) recognized this internal reflective process as life changing not only for the leader but for those the leader serves, who, experiencing the model, "become wiser, freer, more autonomous, healthier and better able themselves to become servants" (p. 7).  He also cautioned that "the process of change starts *in here*, in the servant, not *out there*" (p. 34.); so in setting up the committee for ongoing readiness, most likely traditional candidate to lead the team (based on position or rank) could in fact be ill-equipped to provide the continuity, creativity, and collaboration the committee seeks. *Recommendation: Remember who you are.*

**Evaluation and Timeline for the Hopeful Choice**

Still, the leadership for committee oversight is ultimately the choice of the participants, including the QPM who will remain in a quality consultant position to oversee the initial launch and revisions to the tracking tool.  The first meeting is scheduled for early March 2015 when the committee charter, timelines and changes to the

tracking tool will be discussed. The first tasks in tracking were assigned and accepted in January 2015 when the second quarter policy update notifications were sent to the four teams in the study.

The implementation for all required activities is structured in stages to facilitate a comfortable compliance and reverse the current and chaotic "Dash to the Finish" every three years. The tracking tool allows the programs, committee and quality consultants to assess progress and barriers to compliance incrementally, providing the opportunity to develop plans to correct any design flaws or inconsistencies.  Quarterly compliance with internal quality measures identified by the committee affords another level of accountability and will be reported to service line leadership and the LQMR.

*Recommendation: Remember whom you serve.*

**Convincing Others: Built-In Buy-In**

Using the DBR model to design changes in practice and elements of the tracking tool created up-front buy-in from the communities of practice involved in the study.  The Roundtable reinforced this ownership with the contributions of all teams and individuals clearly articulated. Facility and service line leadership, as the earliest supporters, receive regular formal progress reports and have demonstrated consistent and ongoing support.

Buy-in from new members, particularly the former SME, depends on them, but the invitation to participate has been offered. Block (2003) called change "a self-inflicted wound … (for which) people need to self-enroll" (p. 14) and those new to the committee and using the tracking tool have the same freedom to apply yet another iterative cycle to fit the process to their needs.  Block also reminded leaders that "refusal is perfectly

acceptable" (p. 20) and committee participation, application of the tool and process is completely voluntary.

*Recommendation: Ownership generates accountability.*

**One Critical Piece for Sustainability**

While there is no additional expense related to standardizing the preparation process for CARF or maintaining the tracking, changes in a few key staff could prove to be critical. Although program leads can now change without disrupting continuity and new staff can be comfortably trained on the tracking tool, losing the current quality consultant who reviews and recertifies all policies and procedures would dramatically change compliance with the process.

"The Hermit" as he calls himself, maintains the CARF library to which all documents are linked on the Policy SharePoint so that any updates automatically update in the library. In the past year, he has heroically achieved what no other person in that position has done in recent memory and reduced expired facility policies from over 60% to an actual number of 11 at this writing. Moreover, as the former accreditation specialist and someone familiar with CARF, he generously assisted all the teams in obtaining documentation, enthusiastically supported the iterative system redesign and manned the on-site command center for each of the surveys. He is the one critical piece and, as he considers retirement, overcoming that loss, at this juncture, is near impossible to fathom. His replacement ultimately rests with facility leadership.

*Recommendation: Be grateful for lessons learned and let the future take care of itself.*

**Organizational Implications: Sharing Between Silos and Propagation**

The quality improvement project to standardize CARF preparation successfully created a more efficient and effective process for the four groups participating in the study. The processes have not yet been applied to or generalized to the other CARF programs in the facility. Because other accreditation bodies use different standards and require different processes, application of the lessons learned to TJC or other surveys may be limited to the general benefits of maintaining ongoing quality readiness and continual improvement environment.

The tracking tool, specifically constructed for CARF, documents this ongoing readiness and the resource file organizes and updates program-specific documents and artifacts. This one aspect of the study has already demonstrated some use beyond CARF. Four other surveys have been scheduled or completed in the first quarter of 2015. The first and second surveys required a lengthy self-assessment and document "drop."

Using the organized artifacts in the resource file made compliance simple (although not easy) and the surveyors for the first group were satisfied enough by the quality and composition to remove the service line from the site-visit agenda. Miscommunication in announcing the second (triennial) survey resulted in a preparation window of just five weeks. As a large, significant survey, it covered all the programs that completed CARF in 2014 and more, but the preparation for it was less stressful because, again, the documents and artifacts were orderly and up-to-date. The facility narratives on health and safety, accessibility, leadership, human resources, finance and quality performance proved particularly helpful in crafting responses to the self-assessments.

Proliferation of staff attitudes about ongoing preparation as an organized practice – and their part in it – may be the one lasting though immeasurable benefit to the organization. In the study, increased ownership, self-efficacy and control of their practice improved commitment to the work and accountability to the organization. *Recommendation: Maintain interdisciplinary partnerships and communication, yet respect individual contributions to the combined effort.*

**Implications and Considerations for Leaders**

Those leaders who are asked to monitor and support an environment of ongoing accreditation readiness for CARF must, as mentioned earlier, be committed to service first.  They must also recognize the shift from the past person-dependent to the present process-driven model.  Even in that recognition, there are dangers that – left unaddressed or unresolved – could threaten sustainability.

In a process-driven environment, performance and metrics rule the day.  The tool may afford some quantitative assurance that compliance requirements are being met.  The annual review of plans and handbooks will undoubtedly keep leaders aware of the impact of their programs and all of these things will be measured with the tracking tool. But to paraphrase Jesus of Nazareth, the tool was made for man, and not man for the tool.  Staff is likely to resist or resent a legalistic or mandatory imposition of one or more responsibilities that shift the focus from patient care to performance measures. *Recommendation: Trust the process; respect the participants.*

**Evaluation Cycle**

Fully in control of their own destiny and practice, the specific programs determine the evaluation cycles of readiness requirements based on their extant structures. For some

this occurs during monthly staff meetings in the review of the performance improvement grids where CARF activities are action items. The formal user evaluation of accreditation readiness and the tool created in this study occurs at the quarterly CARF subcommittee meetings. A quantitative report of ongoing compliance with CARF accreditation readiness will be reported to the facility level through the LQMR meetings.

The review of CARF requirements at the program level raises local awareness of program responsibility for ongoing training and operational requirements.  Local program needs, including SOP or handbook updates, new training opportunities or QI projects can be addressed as they are identified rather than retrospectively.

The quarterly subcommittee of all CARF programs reviews any challenges or obstacles. This facilitates continual shared learning among the communities of practice to develop consistent strategies that address deficits.  Changes in key personnel can be monitored at the committee level to ensure adequate hand-off or training of new CARF staff.  The committee also reviews facility response to operational needs (safety inspections, training reports, changes in policy or directives, etc.) and allows CARF programs to identify areas of facility improvement.  For instance, even though all residential programs must document fire drills on each shift, the fire safety reports are generated at the facility level.  A significant challenge for CARF programs in the past has been the facility compliance with these and other standards and, more importantly, the timely dissemination of the necessary documentation.  Committee reports of these challenges to senior leadership through the LQMR will improve facility accountability and compliance.

*Recommendation: Sustain the process-driven rather than person-dependent environment.*

**Final Summary**

As this dissertation was being completed, the quality improvement leadership announced that another facility somewhere in the system had lost its CARF accreditation for failing to file the *Annual Conformance to Quality Report*.  The facility reported very similar circumstances to what the teams in this study faced at the beginning of 2014: loss of key personnel including the subject matter expert, disruption in continuity and facility oversight and new staff who knew little about CARF.  For any healthcare agency, loss of accreditation is a serious situation.

As a result of the study to standardize an organizational approach to CARF readiness, the loss of accreditation is not a threat for teams and the facility in this study. Their preparation has been converted from person-dependent (SME/experienced, long term staff) to process-driven with a variety of safeguards at all levels of the organization.

At the program level, the tracking tools raise awareness of deadlines, required training and documentation; and templates – some of which are yet to be developed – provide an accessible and comprehensive format to describe compliance activities.  The next level of oversight is the CARF subcommittee or accreditation readiness that will monitor compliance, problem–solve using shared learning and develop improved interventions and quality measures that demonstrate the intended level of care. Individual service line leadership and senior management provide the highest (albeit detached) level of oversight, with each receiving quarterly reports on the progress or problems experienced in the service lines.

The four teams in the study met face-to-face in March 2014 for an initial assessment of current practices, needs, resources, and expertise. They tentatively but still

grudgingly agreed to share information under the supervision of a new quality consultant

(the researcher/QPM) who initially knew less about CARF than anyone at the table.

Distrust among groups was as high as disinterest in providing any appreciable assistance

to others, but reputations, defined by a successful survey, were at stake for some.  Others

who had developed efficient or effective processes were reluctant to allow their hard

work make someone else look good.  It was a difficult and disheartening discussion and

all were aware that the decision to work across silos was no small concession in such a

competitive, pay-for-performance cultural environment. The urgency of a looming

deadline and the pressure to deliver made cooperation a more attractive course of action

than was their custom.

To avoid more uncomfortable and potentially acrimonious encounters, an iterative

quality process that could synthesize the knowledge and experience to refine better

practices was initiated.  The model, design-based research, allowed staff to remain in

their communities of practice while the quality consultant worked with the groups

individually, learned and evaluated their methods and recommended changes to

subsequent iterations.  Teams 1 and 2 hosted concurrent surveys in the summer, Team 3

hosted in early Fall, followed by the final survey for Team 4 in November.  Throughout

the cycles, each had something distinct to offer the others but most importantly, each had

something to teach.  As the cycles continued and changes were made, the teams offered

feedback to improve the next cycle.  Although all groups but the baseline Team 1 were

able to apply innovation from another team, and all received Three Year Accreditation,

only Team 4 could apply the total product of the synthesized knowledge.  There was only

one recommendation as a result of that survey, made because, in the words of the lead

surveyor, "We had to find *something*" (personal communication, 7 November 2014).

The teams met again in January of 2015 to revisit and celebrate their success.

Joined by three other programs, that are currently preparing for CARF surveys in 2015,

the product of the study, a tracking tool, was explained and presented for concurrence.

The teams agreed to send program representatives and staff new to CARF to regularly

scheduled meetings as a chartered subcommittee for CARF ongoing readiness.  And that

journey continues.

The final step of program analysis and problem solving using Bardach's (2005)

*Eightfold Path* to problem solving is to "tell your story" (p. 53).  The story of this QI

project to standardize an organizational approach to CARF preparation is less about the

wizardry of tracking tools and templates than it is about turning threats into opportunities

and choosing to be strong in the face of overwhelming weakness.  It is the story of

Ignatian service in practice and a validation of the servant as leader (Greenleaf, 1991).

Ignatian leadership is rooted in humility, *magis*, and discernment (Byron, 2011).

The leader first commits to serve (humility), taking into consideration *cura personalis* –

care of the whole-being of *all persons*, their gifts, attitudes, and aspirations.  A thorough,

valid, and fearless reflection of the circumstances defines both the present and future in

what *could* be (*magis*) – not what *should* be, and begins the gentle process of  "guiding

members toward a shared vision (to) help them achieve the corresponding goals"

(Darmanin, 2005, p. 2). The practice of discernment grants the leader a continuing

openness to all voices throughout the iterative process, as well as the ability to separate

positive and negative arguments and then weigh the evidence to coordinate the better

option that will achieve consensus among the whole.

It was best that, at the end of the work, the teams could see that they had done it

themselves, but the leader who embraces the calling to *Live Ignation* continually models

what Robert Greenleaf  (1991) called "the more hopeful choice".  He wrote, "the enemy

(of a better society) is the strong natural servants who have the potential to lead and do

not  … or those who choose to follow a non-servant" (p. 35).  In spite of their carefully

constructed silos, in spite of external urgency and internal distrust and fear, the teams

welcomed a leader, with much less position and knowledge, who would walk alongside

to serve them, listening, learning, guiding, and encouraging them toward their shared

vision.  Theirs was perhaps, the most hopeful and courageous choice.

### Epilogue

As the team members reviewed their process and the tools at the January

Roundtable, all expressed amazement at the quality of their work and relief that the next

round of surveys, as a group effort, would be infinitely more manageable.  Even so, the

agreement to work together was based on an uneasy and unformed coalition.  Attempts to

dissolve boundaries and build trust can be quickly negated by old wounds, a false sense

of competition, and ingrained animosities.

As I thanked the Team 2 representative, (Dan[3]), for the incredible work he and his

staff had done over the years to bring us to this place, I noticed the Team 3 lead, (Mike)

ever so slowly preparing to leave.  As we finished speaking, Mike approached us,

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[3] Not their real names: The resentment and distrust between these two programs is one of the most infamous chapters in facility lore.

touched Dan's arm and asked "are you ready to go?"  Dan nodded and Mike said, "let me walk with you".

*Recommendation: The most hopeful choice of all:* **Let me walk with you**.

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**Appendix A**
**Acronyms Used in the Study**

| | | | | |
|---|---|---|---|---|
| ACS | American College of Surgeons | | IOM | Institute of Medicine |
| AHRQ | Agency for Healthcare Research & Quality | | IRB | Institutional review board |
| ASPIRE | Section 1 CARF standards | | JCAHO | Joint Commission on Accreditation of Hospitals |
| ASQ | American Society for Quality | | NGO | Non-governmental agency |
| BH | Behavioral Health | | NIAHO | National Integrated Accreditation for Healthcare Organizations |
| CARF | Commission on Accreditation of Rehabilitation Facilities | | NQF | National Quality Form |
| CLF | Consistent look and feel | | OHRP | Office for Human Research Protections |
| CMS | Center for Medicare and Medicaid | | OIG | Office of the Inspector General |
| COI | Conflict of interest | | PDSA | Plan-Do-Study-Act |
| CoP | Communities of practice or Con | | PfP | Partnership for Patients |
| CQI | Continuous Quality Improvement | | QC | Quality consultant |
| DBR | Design-based research | | QI | Quality Improvement |
| DHHS | US Department of Health and Human Services | | QIP | Quality Improvement Plan |
| DNV | Det Norske Veritas | | RCT | Random controlled trials |
| DoD | US Department of Defense | | SME | Subject matter expert |
| EBP | Evidence based practice | | SOP | Standard Operating Procedure e.g. policy |
| ECS | Employment and Community Services | | TJC | The Joint Commission |
| HFAP | Healthcare Facilities Accreditation Program | | TQM | Total Quality Management |
| ICU | Intensive care unit | | VA | Veterans Administration |
| IHI | Institute for HC Improvement | | VHA | Veterans Healthcare Administration |

# Appendix B

## Commentary from the Literature on Systematic Reviews for Quality Improvement Challenges

| Year | Type* | Topic | Authors |
|---|---|---|---|
| 2001 | A | Monograph for improving health care quality | Massoud, Askov, Reinke, Fraco, Bornstein, Kneble, & MacAulay |
| 2003 | SR | QI strategies and programmes | Grimshaw, McAuley, Bero, Grilli, Oxman, Ramsay, Vale, & Zwarenstein |
| | | **Need more rigorous evaluation of the quality of quality improvement strategies** | |
| 2004 | SR | QI strategies | Shojania, McDonald, Wachter, & Owens |
| | | **"paucity of available data" (p. 23)** | |
| 2006 | SR | QI interventions after myocardial infarction | McDermott, Helfrich, Sales, Rumsfeld, Ho, & Fihn, |
| | | **Weak study designs and inadequate information about implementation** | |
| 2008 | SR | QI collaborative | Schouten, Hulscher, Everdingen,Huijsman, & Grol |
| | | **Generally positive but limited; modest to no effects on outcomes** | |
| 2009 | SR | QI models in health care | Powell, Rushmer, & Davies |
| | | **"Rigorous peer-reviewed evaluation" needed (p. 57)** | |
| 2011 | SR | Nurse-focused QI for preventing pressure ulcers | Soban, Hemple, Munjas, Miles, & Rubestein |
| | | **"How the interventions achieve intended results remains (poorly documented and) poorly understood" (p. 251)** | |
| 2012 | SR | QI using Lean and Six sigma in healthcare | Glasgow, Scott-Caziewell, & Kaboli |
| | | **"With nearly all health care institutions, the lack of substantial improvements in quality is disheartening" (p. 23)** | |
| 2012 | SR | QI methodologies from manufacturing (abstract) | Nicolay, Pukayastha, Greenhalgh, Benn, Chaurvedi, Phillips, & Darzi |
| | | **"Evidence is of suboptimal quality and rigorous randomized multicenter studies are needed to bring evidence-based management into the same league same league as evidence-based medicine" (n.p.)** | |
| 2012 | SR MA | QI strategies for diabetes (abstract) | Tricco, Ivers, Grimshaw, Moher, Turner, Galipeau, Halperin, Vachon, Ramsay, Manns, Tonelli, & Shojania |
| | | **Many trials showed improvement but effectiveness of QI strategies on diabetes care "remain unclear" (n.p.)** | |

| 2013 | SR | QI interventions in diabetes | Ivers, Tricco, Taljaard, Halperin, Turner, Moher, & Grimshaw |
|------|-----|------------------------------|------------------------------------------------------------|
| **"The quality of quality improvement trials does not seem to be improving over time" (p. 1)** | | | |
| 2013 | SR | QI interventions in cancer (abstract) | Coory, White, Johnson, Hill, Jefford, Harrison, Winship, Millar, & Giles |
| **"Published evidence is thin.  More investment in needed in research about QI solutions to match the investment in research about the problem" (n.p.)** | | | |
| 2014 | SR | QI to reduce healthcare-associated infections | Mauger, Marbella, Pines, Chopra, Black, & Aronson |
| **Moderate evidence that use of QI methodology (audit, feedback and provider reminders) supports improvement in infection rates.  However study designs are inconsistent and prevent generalization to other settings** | | | |
| 2014 | A | Hospital engagement networks | Pronovost, & Jha |
| **"The field of improvement science is still in its infancy – failing to attend closely to issues of design, methods and metrics leaves us with little confidence" (p.  692)** | | | |
| 2014 | SR | Application of the PDSA method in healthcare | Taylor, McNicholas,Nicolay, Darzi, Bell, & Reed |
| **"Poor compliance with key principles of the PDSA method" (p. 296).** | | | |
| **"Varied application and reporting of PDSAs.  Urgent need for greater scientific rigor in the application and reporting of these methods" (p. 297)** | | | |

*SR- Systematic Review                A- Article                MA – Meta-analysis

# Appendix C

## SECTION 1:ASPIRE TO EXCELLENCE® STANDARDS (CARF, 2014)

**Assess the environment**

    A. Leadership

    B. Governance

**Set strategy**

    C. Strategic Planning

**Persons served and other stakeholders – Obtain Input**

    D. Input from persons served and other stakeholders

**Implement the plan**

    E. Legal requirements

    F. Financial planning and management

    G. Risk management

    H. Health and safety

    I. Human resources

    J. Technology

    K. Rights of persons served

    L. Accessibility

**Review results**

    M. Performance measurement and management

**Effect change**

    N. Performance improvement

# Appendix D

# Example of CARF Standard and Self-Assessment Questions

1.A.2. A person-centered philosophy:

> **a.      Is demonstrated by:**
> **(1)    Leadership.**
> **(2)    Personnel.**
> **b.      Guides the service delivery.**
> **c.      Is communicated to stakeholders in an understandable manner.**

## Intent Statements

The organization's person-centered philosophy should be evident in the development and delivery of services, systems, approaches, and interventions. Implementation of this philosophy from the unique perspectives of the leadership, personnel, and persons served is addressed during the survey process.

## Examples

The organization's services are designed around the identified needs and desires of the persons served, are responsive to their expectations, and are relevant to their maximum participation in the environments of their choice. The organization is committed to a system that nurtures personal growth and dignity of persons served, which is emphasized during orientation and ongoing staff training. This might be demonstrated by services being provided in a setting that provides the best access and is during hours most preferred by persons served. It could be demonstrated by persons served being supported to direct and manage their services to the extent they wish.

## Survey Preparation Questions

How would surveyors see a demonstration of a person-centered philosophy by:

Leadership?

Personnel?

How is your service delivery guided by a person-centered philosophy?

How do you ensure that your person-centered philosophy is communicated to stakeholders in an understandable manner?

## Appendix E

## Template for Accessibility Plan

| Organization Name | | | | |
|---|---|---|---|---|
| **Accessibility Plan 2014** | | | | |
| | | | | |
| **Architectural** | | | | |
| Identifiable Barrier | Plan to Reduce or Eliminate Barriers | Person Responsible | Timelines | 2014 Final Result |
| 1. | | | | |
| 2. | | | | |
| **Environmental** | | | | |
| Identifiable Barrier | Plan to Reduce or Eliminate Barriers | Person Responsible | Timelines | 2014 Final Result |
| 3. | | | | |
| 4. | | | | |
| **Attitudinal** | | | | |
| Identifiable Barrier | Plan to Reduce or Eliminate Barriers | Person Responsible | Timelines | 2014 Final Result |
| 5. | | | | |
| 6. | | | | |
| **Employment** | | | | |
| Identifiable Barrier | Plan to Reduce or Eliminate Barriers | Person Responsible | Timelines | 2014 Final Result |
| 7. | | | | |
| 8. | | | | |
| **Transportation** | | | | |
| Identifiable Barrier | Plan to Reduce or Eliminate Barriers | Person Responsible | Timelines | 2014 Final Result |
| 9. | | | | |
| 10. | | | | |

## Appendix F:

## Examples of the Sections of the Tracking Tool for Compliance with CARF Standards

These contain references to policies that are proprietary but identified according to Joint Commission requirements. These are snapshots of a much larger document.

**Tab 1: Lists the standards under which groups are accredited. This allows sharing of information and strategies**

| Standards Used for 2014 Surveys | | |
|---|---|---|
| team 1 BH | BH | BH |
| Section 1 | Section 2 | Section 3 |
| A | A-H | E |
| C-N | | |
| team 3 BH | BH | BH |
| Section 1 | Section 2 | Section 3 |
| A | A-H | CE |
| C-N | | |
| team 2 ECS | ECS | ECS |
| Section 1 | Section 2 | Section 3 |
| A | ABCD | CE |
| C-N | | |
| team 4 ECS | ECS | ECS |
| Section 1 | Section 2 | Section 3 |
| A | | |
| C-N | | |

Tab 2: Operational timelines. Organized by every 2 years, yearly, quarterly, monthly, weekly and daily

| | **Activities to be Conducted Annually** | | | |
|---|---|---|---|---|
| | **Related Standard** | **Activity** | **Date of Occurrence** | **Source Document** |
| | | CARF ANNUAL REPORTS | Anniversary date | |
| X | 1.A.3.k. | Review of policies guided by leadership *This should be moved to quarterly* | Quarterly | |
| X | 1.A.5.c. | Cultural competency and diversity plan reviewed for relevancy | Annual | |
| X | 1.C.2.e. | Strategic plan reviewed for relevance | Bi annual | |
| X | 1.F.2. | Budgets are prepared and approved | Annual | |
| X | 1.F.10. | Review or audit of the financial statements of the organization by an independent accountant authorized by the appropriate authority | NA | NA |
| x | 1.G.1.b.(1) | Risk management plan reviewed for relevance | Annual | |
| x | 1.G.2.a. | Review of organization's insurance package | NA | NA |
| x | 1.H.4. | Personnel receive training in health and safety practices, identification of unsafe environmental factors, emergency and evacuation procedures, identification and reporting of critical incidents, reducing physical risks, and medication management, if appropriate | Annual | |
| x | 1.G.1.b.(1) | Risk management plan reviewed for relevance | Annual | |
| x | 1.G.2.a. | Review of organization's insurance package | NA | NA |
| X | 1.H.4. | Personnel receive training in health and safety practices, identification of unsafe environmental factors, emergency and evacuation procedures, identification and reporting of critical incidents, reducing physical risks, and medication management, if appropriate | Annual | |

Tab 3: Documents. Lists the required documentation to link standards by chapters, where the facility documentation lives and when it needs to updated

| | Related Standard | REQUIREMENT | Location | System owner | Required Update |
|---|---|---|---|---|---|
| | **CHAPTER 1: ASPIRE TO EXCELLENCE** | | | | |
| | 1A5a | Cultural competency & diversity plan | CULTURAL COMPETENCY PLAN | | Jun-15 |
| | 1A6ab | Ethical codes of conduct and written procedures to deal with violations of ethical codes | RI_09;LD_08 | | Per anniversary date |
| | 1A7a | Policy on corporate compliance, including authorizing document and designation of primary contact | LD_08; | | Per anniversary date |
| | 1C2a-c | Written strategic plan | Strategic plans | | |
| | 1.E.2 | Written procedures to guide personnel in responding to subpoenas, search warrants, investigations and other legal actions | IM_10;EC_06;EC_20; EC_38 | | Per anniversary date |
| | 1.E.3 | Policies and written procedures on records | IM_02; IM_10; IM_03 | | Per anniversary date |
| | 1F2 ab (1,3) | Written budget | Budgets | | Annually per program |
| | 1F4 e | Financial solvency remediation plan | NA | | na |
| | 1F7b1 | *If the organization bills for services*, a quarterly review of a representative sampling of records for persons served documents the comparison of services billed/actually received | NA | | an |
| | 1F9 | *Written procedures for managing funds of persons served* | RI-11 | | Per anniversary date |
| | 1F10 | *Annual review or audit by an independent, authorized consultant* | LD_08; PI_01; | | Per anniversary date |

Tab 4: Training. Personnel and patient training, required frequency and competency and where documentation should be stored

| REQUIRED TRAINING | | | | | | | | | | | |
| Frequency | | | | | | | | | | | |
| Hire | annual | initial | ongoing | as needed | orient & reg Intervals | not specified | Related Standard | Training Requirement | Frequency | competency (Y) | Provided to | Documented in |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Section 1: ASPIRE to Excellence | | | | | | | | | | | | |
| | | | | | | x | 1A6c1 | Education *on ethical codes of conduct | annual | | personnel | personnel folder |
| | | | | | | x | 1A6c2 | * on ethical codes of conduct | annual | | stakeholder | personnel folder |
| | | | | | | x | 1A8 | * to stay current in field | annual | | personnel | personnel folder |
| | | x | x | | | | 1F6b | Training related to fiscal policies and procedures | annual | | appropriate pe | personnel folder |
| | | | | | | x | 1H3 | Education designed to reduce identified physical risks | annual | | persons served | personnel folder |
| x | x | | | | | | 1H4b1 | Training in *health and safety practices | annual | y | personnel | personnel folder |
| x | x | | | | | | 1H4b2 | *identifying unsafe environmental factors | annual | y | personnel | personnel folder |
| x | x | | | | | | 1H4b3 | *emergency procedures | annual | y | personnel | personnel folder |
| x | x | | | | | | 1H4b4 | *evacuation procedures | annual | y | personnel | personnel folder |
| x | x | | | | | | 1H4b5 | * identification of critical incidents | annual | y | personnel | personnel folder |
| x | x | | | | | | 1H4b6 | *reporting critical incidents | annual | y | personnel | personnel folder |
| x | x | | | | | | 1H4b7 | *medication management if appropriate | annual | y | personnel | personnel folder |
| x | x | | | | | | 1H4b8 | * reducing physical risks | annual | y | personnel | personnel folder |

Tab 5: Acronyms for program and surveyor reference

Tab 6: Policies: Listed by quarterly expiration date. Will link to resource file for CARF surveys

| Anniversary Month | Date Revised | Number | Name | CARF Section | Expires |
|---|---|---|---|---|---|
| QT2 | | | | | |
| 1 | Jan-13 | PI_01 | Patient Safety Improvement Process | 1A | 2016 |
| 1 | Jan-13 | EC_61 | Safety Management Plan | 1H | 2016 |
| 1 | Jan-12 | R!_13 | Responsible Conduct of Research (rescinded) | 1J | 2015 |
| 2 | Feb-14 | HR_07 | Equal Employment Opportunity | 1A | 2017 |
| 2 | Feb-12 | IM_41 | Management of Electronic Communications | 1D | 2015 |
| 2 | Feb-13 | PE-16 | Suicide Risk Assessment | 1H | 2016 |
| 2 | Feb-13 | IC_02 | Standard & Body Substance isolation | 1H | 2016 |
| 3 | Mar-13 | HR _35 | Code of Conduct Ethical Standards | 1A | 2016 |
| 3 | Mar-99 | | Whistleblower Protection | 1A | No expiration |
| 3 | Mar-13 | LD_08 | Compliance and Business Integrity Program | 1A | 2016 |
| 3 | Mar-14 | IM_40 | Management of Public Affairs | 1D | 2017 |
| 3 | Mar-13 | EC_26 | Comprehensive Emergency Management program | 1H | 2016 |
| 3 | Mar-13 | EC_47 | Management of Disruptive Behavior | 1H | 2016 |
| 3 | Mar-13 | HR_12 | Competency Assessment | 1I | 2016 |

Tab 7: Handbooks – not added for this paper

Tab 8: 2014 Findings – not added for this paper but also includes the Quality Improvement plan data and deadlines