Organizational Factors in Integrated Healthcare Delivery Models: A Review of Measurement Tools

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1. Background

The mixed performance outcomes of integrated care models may be explained partly by differences in organizational context and capabilities.

We define **'organizational context'** as anything internal to the organization, but not directly a part of integrated care processes or practices. This definition encompasses a wide range of factors from organizational structures and governance, to social and psychological elements, and process capabilities.

Despite widespread recognition of the influence of such factors on the success of integrated care initiatives, we lack clarity on when and how these factors matter.

Both researchers and managers require guidance and tools to systematically examine and compare the context and capabilities of organizations involved in delivering integrated care to shared patient populations. This requires the use of common instruments and consistent data collection methods across sites, which raises the question, **"What measures are currently available to assess the organizational conditions for integrated care delivery?"**

Objective

This study aims to identify, organize, and assess measurement instruments and scales that can be used to describe and compare the organizational context and capabilities required for effective integrated care delivery.

2. Methods

Development of the Context for Integrated Care (CIC) Framework

- Searched the integrated care literature to identify enablers and barriers
- Organized and categorized enablers and barriers
- Cross-checked the results with review papers on innovation implementation, quality/performance improvement, and organizational change

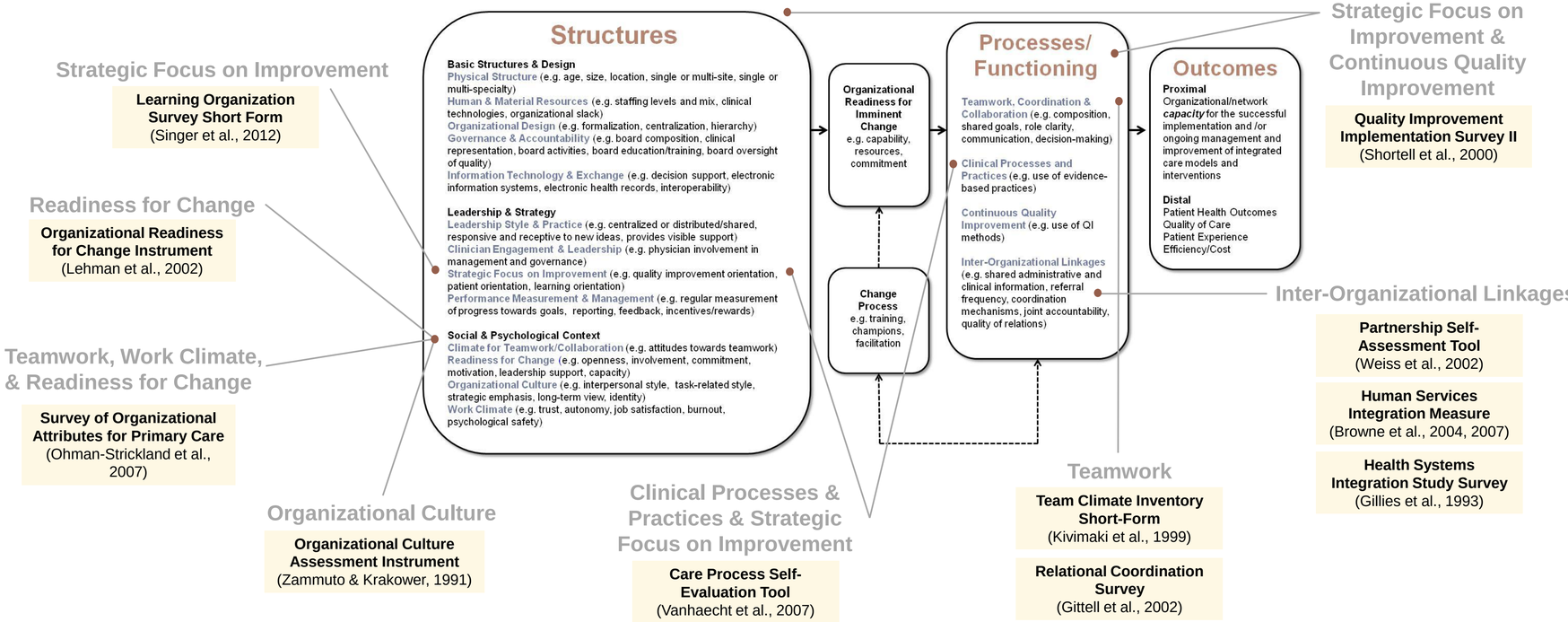
Instrument Search Strategy

- Conducted independent searches for *each* construct in the CIC Framework using Medline and Google Scholar. Inclusion criteria for papers:
  - ✓ Describes the development and/or use of a quantitative instrument (or scale) in sufficient detail to enable assessment of its content
  - ✓ The instrument measures one or more constructs in the CIC Framework
  - ✓ A full copy of the instrument is readily accessible
  - ✓ The instrument has been used in a healthcare setting
- Asked 40 Canadian experts in health services research to help identify relevant instruments

Instrument Assessment, Comparison and Selection

- Extracted key data from the included papers
- Compared instrument content and assessed their psychometric properties and practical considerations using the COSMIN Checklist (*At this stage, we excluded instruments with very weak properties or insufficient detail)*
- Determined the empirical use of each instrument
- Explored the applicability and appropriateness of each instrument for use in integrated care initiatives based on prior use and relevance to multiple healthcare settings

Context for Integrated Care Framework



3. Summary of Results

Over **110 quantitative instruments and scales** were identified across the diverse constructs, primarily self-administered questionnaires with Likert-type scales. Psychometric properties and empirical use varied widely with the majority of instruments requiring further use and testing.

Most instruments focused on teamwork and social or psychological factors, while very few focused on structural constructs. However, some structural elements such as resources, design, and leadership are often subsumed and measured under other constructs such as work climate, organizational readiness to change, and inter-organizational collaboration. We cross-referenced numerous instruments to various parts of the framework due to overlap in content.

Very few of the identified instruments have been used in an integrated care setting; those that have been are focused primarily on organizational processes (e.g., teamwork and partnerships), elements which can be considered part of the model or intervention. This result supports our claim that limited attention has been given to organizational context in empirical research on integrated care.

In addition, the few instrument uses we identified tended to focus on integrating specific sets of services such as those related to mental health, HIV/AIDS or substance use.

We argue that collecting data on the organizational factors depicted in the CIC Framework as part of the planning, implementation and/or evaluation stages of integrated care initiatives could yield new insights on their outcomes and performance. In particular, we suggest that **explicit measures of integrated care be supplemented by measures of the *context* for integrated care** such as work climate, leadership style, quality improvement capabilities and practices, organizational learning climate, and readiness for change.

Our results also suggest that explicit measures of integration still require further testing and development, building on existing methods which utilize social network analysis and teamwork or partnership questionnaires. In particular, additional work is needed to improve measures of information technology and exchange, governance and accountability structures, incentives, and clinical processes or practices as they relate to integrated care delivery.

4. Conclusion & Next Steps

Framework Validation with Key Informants

To validate the framework and to help prioritize important factors, focus groups will be conducted with leaders from purposefully sampled Health Links in Ontario.

Development of a Case Study Guide

Based on instrument profiles and a prioritized list of factors from the focus groups, the research team will select instruments for inclusion in a Case Study Guide. Quantitative instruments will be supplemented by semi-structured interview guides as well as document review procedures. The Guide can be used to collect data across multiple integrated care initiatives.

Summary

This study provides an overview and assessment of measurement instruments that can be used for standardized data collection and comparison of organizational factors across integrated care providers and settings. Researchers and practitioners can use this bank of valid, reliable measures to describe and compare a range of organizational factors as a means to better understand the relationship between context and performance, and to inform change management efforts, respectively.

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