IMPLEMENTATION DETERMINANTS AND STRATEGIES TO INFECTION PREVENTION AND CONTROL PRACTICES IN NEONATAL CARE: INTERIM RESULTS OF AN EXPLORATORY NETWORK ANALYSIS

Universität Zürich[UZH] | Institute for Implementation Science in Health Care

EMANUELA NYANTAKYI[1], MARIE-THERESE SCHULTES[1], PER BLOCK[2], LAUREN CLACK[1,3]

[1] Institute for Implementation Science in Health Care, University of Zurich; [2] Institute of Sociology, University of Zurich; [3] Department of Infectious Diseases and Hospital Epidemiology, University Hospital Zurich

EMANUELA.NYANTAKYI@UZH.CH

BACKGROUND AND AIM

Current research often overlooks the relational aspects of implementing infection prevention and control (IPC) practices in neonatal care settings, focusing on and addressing isolated contextual factors.

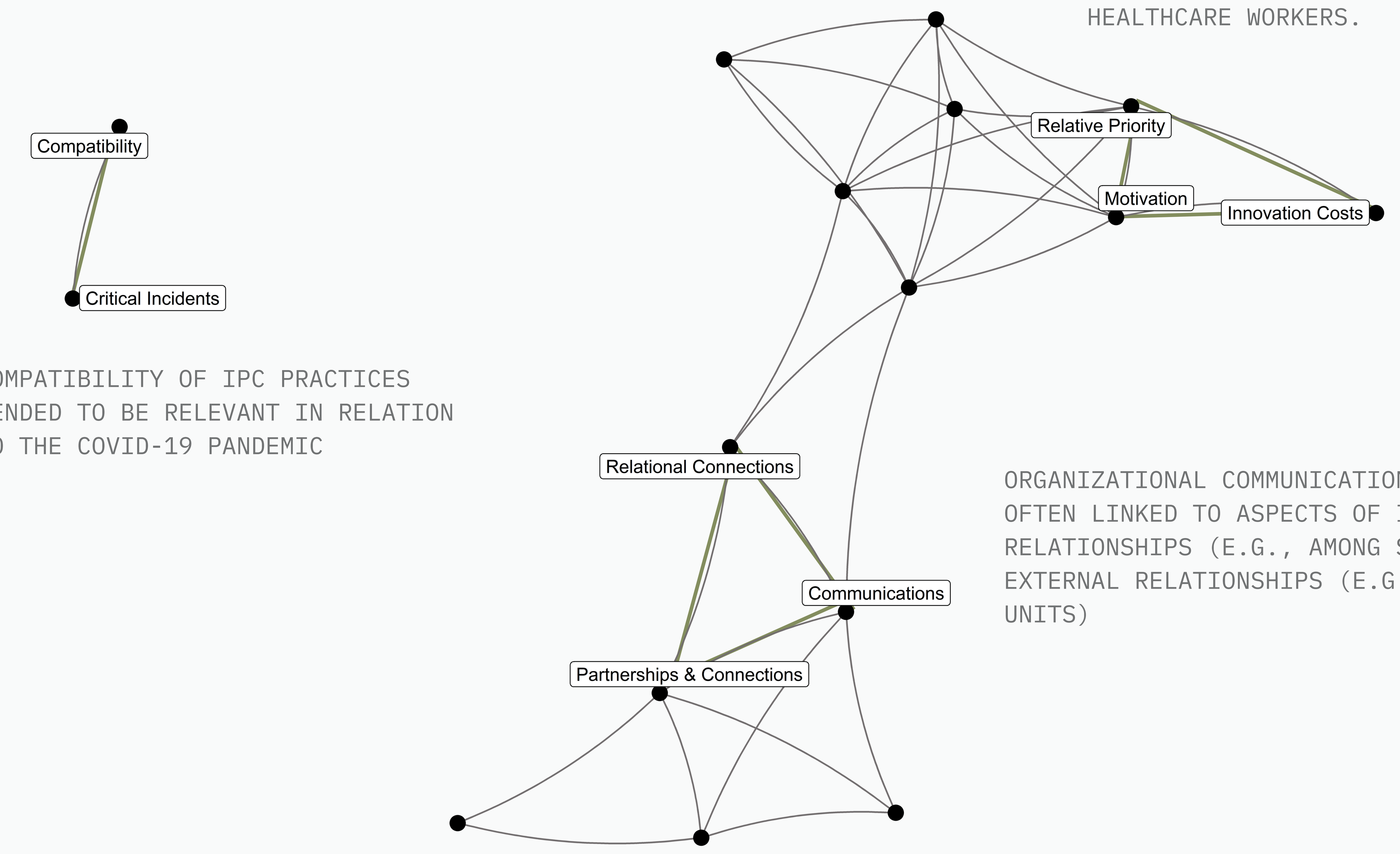
Within this study, neonatal care settings were conceptualized as complex systems. Network analysis was applied to explore relationships among reported implementation determinants and implementation strategies across different IPC practices.

IMPLICATIONS

This study expands the application of network analysis as an exploratory and comparative methodology within the field of Implementation Science. It applies a systems lens by using network analysis to explore interrelationships among implementation determinants and strategies that shape current implementation approaches. Generated insights can be used to inform the design of tailored implementation approaches; for instance, by anticipating which contextual factors should be considered together.

Several meaningful relationships were identified among implementation determinants, indicating that certain combinations of contextual conditions influenced a strongly overlapping set of IPC practices.

COSTS OF IPC PRACTICES WERE FREQUENTLY REPORTED ALONGSIDE THE ORGANIZATIONAL PRIORITY FOR THESE PRACTICES AND THE MOTIVATION OF KEY GROUPS, SUCH AS HEALTHCARE WORKERS.



COMPATIBILITY OF IPC PRACTICES TENDED TO BE RELEVANT IN RELATION TO THE COVID-19 PANDEMIC

ORGANIZATIONAL COMMUNICATION WAS OFTEN LINKED TO ASPECTS OF INTERNAL RELATIONSHIPS (E.G., AMONG STAFF) AND EXTERNAL RELATIONSHIPS (E.G., ACROSS UNITS)

WHAT ARE COMPLEX SYSTEMS? Complex systems are composed of interdependent components that interact dynamically, producing behaviors and outcomes that are not easily predictable. Networks can be regarded as foundational structures of complex systems.

METHODS

- We **extracted implementation determinants and strategies** from 156 studies included in a systematic review, coded according to the updated Consolidated Framework for Implementation Research (CFIR) [1] and Expert Recommendations for Implementing Change (ERIC) [2]
- We **summarized the studies by IPC practices** and transformed this information into adjacency matrices (*IPC Practice x ERIC strategy/CFIR construct*)
- We **estimated the pairwise similarity** between different CFIR constructs/ERIC strategies based on their connection patterns to IPC practices
- We **computed a network** to visualize the relationships between CFIR constructs/ERIC strategies using the calculated similarity values

[1] Damschroder LJ, Reardon CM, Widerquist MAO, Lowery J. The updated Consolidated Framework for Implementation Research based on user feedback. Implement Sci. 2022;17(1):75.[2] Powell BJ, Waltz TJ, Chinman MJ, Damschroder LJ, Smith JL, Matthieu MM, Proctor EK, Kirchner JE. A refined compilation of implementation strategies: results from the Expert Recommendations for Implementing Change (ERIC) project. Implement Sci. 2015;10:21.

THE NEOIPC PROJECT HAS RECEIVED FUNDING FROM THE EUROPEAN UNION'S HORIZON 2020 RESEARCH AND INNOVATION PROGRAMME UNDER GRANT AGREEMENT NO.965328

NeoIPC