

# AGING RESEARCH SPOTLIGHT on FIDELITY



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YU CARE member Dr. Liane Ginsburg trained in healthcare organization and management at the University of Toronto where she received her PhD. She is an Associate Professor in the School of Health Policy and Management at York University and an Ontario Ministry of Health Career Scientist. Liane teaches Applied Research Methods in Health to 4<sup>th</sup> year undergraduate students in the Honors Bachelor of Health Studies Program at York. Her research interests focus on patient safety culture and learning from patient safety events. She has published several recent peer reviewed papers in these areas, most recently in *Health Services Research, Social Science and Medicine, Quality and Safety in Health Care* and *Implementation Science*. Liane is also interested in knowledge translation, specifically with respect to the utilization of

research, data and other information by health system managers and she is the scientific officer of the Canadian Institutes for Health Research (CIHR) Knowledge Translation peer review committee. Liane is currently principal investigator on CIHR and CPSI funded studies.

## Abstract

Background:

Fidelity in complex behavioral interventions is underexplored. This study examines the fidelity of the INFORM trial and explores the relationship between fidelity, study arm, and the trial's primary outcome—care aide involvement in formal team communications about resident care.

Methods

A concurrent process evaluation of implementation fidelity was conducted in 33 nursing homes in Western Canada (Alberta and British Columbia). Study participants were from 106 clinical care units clustered in 33 nursing homes randomized to the Basic and Enhanced-Assisted Feedback arms of the INFORM trial.

Results

Fidelity of the INFORM intervention was moderate to high, with fidelity delivery and receipt higher than fidelity enactment for both study arms. Higher enactment teams

experienced a significantly larger improvement in formal team communications between baseline and follow-up than lower enactment teams ( $F(1, 70) = 4.27, p = .042$ ).

### Conclusions

Overall fidelity enactment was associated with improvements in formal team communications, but the study arm was not. This suggests that the intensity with which an intervention is offered and delivered may be less important than the intensity with which intervention participants *enact the core components of an intervention*. Greater attention to fidelity assessment and publication of fidelity results through studies such as this one is critical to improving the utility of published trials.

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## Abstract

### Background

Fidelity in complex behavioural interventions is underexplored and few comprehensive or detailed fidelity studies report on specific procedures for monitoring fidelity. Using Bellg's popular Treatment Fidelity model, this paper aims to increase understanding of how to practically and comprehensively assess fidelity in complex, group-level, interventions.

### Approach and lessons learned

Drawing on our experience using a mixed methods approach to assess fidelity in the INFORM study (Improving Nursing home care through Feedback On perfoRMance data—INFORM), we report on challenges and adaptations experienced with our

fidelity assessment approach and lessons learned. Six fidelity assessment challenges were identified: (1) the need to develop succinct tools to measure fidelity given tools tend to be intervention specific, (2) determining which components of fidelity (delivery, receipt, enactment) to emphasize, (3) unit of analysis considerations in group-level interventions, (4) missing data problems, (5) how to respond to and treat fidelity 'failures' and 'deviations' and lack of an overall fidelity assessment scheme, and (6) ensuring fidelity assessment doesn't threaten internal validity.

### Recommendations and conclusions

Six guidelines, primarily applicable to group-level studies of complex interventions, are described to help address conceptual, methodological, and practical challenges with fidelity assessment in pragmatic trials. The current study offers guidance to researchers regarding key practical, methodological, and conceptual challenges associated with assessing fidelity in pragmatic trials. Greater attention to fidelity assessment and publication of fidelity results through detailed studies such as this one is critical for improving the quality of fidelity studies and, ultimately, the utility of published trials.

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