Effects of Simulation Training of Interprofessional Collaboration: Baseline and Follow-Up Measurement of Clinician-Reported IPC Behaviour

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Study objectives
Development and evaluation of simulation as a means of teaching health professionals (IPC competencies).

Rationale
IPC is considered beneficial and currently a significant health policy agenda but there is little post-licensure training available for healthcare teamwork in the practice setting; simulation may be one method.

Simulation description
Simulation sessions using scenarios (table-top and lab-based) developed and led by an experienced clinical simulation team.

Participants
Regulated health care professionals (n=154) working in a community hospital in the Greater Toronto Area.

Design
An uncontrolled intervention study with longitudinal self- and proxy-report survey data collection.

Healthcare professionals took one group simulation training session. 12 group training sessions held between June 2002 and May 2003.

Data collection: self-administered IPC and teamwork scales completed at 3 times:

- Time 1: measures completed on the same day, A immediately before the simulation session;
- Time 2: measures completed approximately 14 days after Time1 training;
- Time 3: measures completed about 6 months after Time1 training.

Note: Qualitative data collected will be presented in a separate report.

Measures
5 scales/subscales adapted from previously used instruments:
Nurse Opinion Questionnaire (Adams, Bond, & Atlee, 1995) - adapted IPC scale based on nurse-physician relations subscale; adapted for use with 3 healthcare groups - nurses, physicians, other professionals - written in a round robin format - a group/profession member assesses members of the other 2 groups in the clinical setting on behaviours and practices, e.g., nurse: items target physicians and other professional physicians; items: target nurses and other professionals, etc.; 14 items with 4 response options numbered 1-4: strongly disagree/disagree/agree/strongly agree.

Nursing Work Index (Adams, Bond, & Arber, 1995) - adapted IPC scale based on nurse-physician relations subscale, adapted for use with 3 healthcare groups - nurses, physicians, other professionals - written in a round robin format - a group/profession member assesses members of the other 2 groups in the clinical setting on behaviours and practices, e.g., nurse: items target physicians and other professional physicians; items: target nurses and other professionals, etc.; 14 items with 4 response options numbered 1-4: strongly disagree/disagree/agree/strongly agree.

Nurse-Physician Relations Subscale; adapted for use with 3 healthcare groups - nurses, physicians, other professionals - written in a round robin format - a group/profession member assesses members of the other 2 groups in the clinical setting on behaviours and practices, e.g., nurse: items target physicians and other professional physicians; items: target nurses and other professionals, etc.; 14 items with 4 response options numbered 1-4: strongly disagree/disagree/agree/strongly agree.

Atitudine Toward Health Care Teams scale (Blumenstein et al., 1999 - 3 subscales: Team Value; Team Efficiency; Team Intentions; 6 items; Team Intentions Efficiency; 5 items; Shared Leadership with Physicians; 5 items; responses on 1-4 scales).

Diversity: Demographic background data: gender (MM), professional role (Consultant, Physician, RN, LPN, Other), years in practice, years out of practice, total years in practice.

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Analysis
Internal consistency reliability of all subscales was excellent for all data collection waves.

Multilevel regression models for growth curves: unconditional means model, unconditional growth model.

Random effects model to examine mean scale scores by ‘leadership capacity’ at 3 waves.

Results
1. Descriptive statistics: 154 participants at least one wave of data (Time 1 to Time 3).

2. between-subjects variables: All main effects are significant at p<0.05.

3. within-subjects variables: All main effects are significant at p<0.05.

4. correlation coefficients: All correlations are significant at p<0.05.

5. descriptive statistics: All means and standard deviations are reported.

Discussion:
Inter-group differences: Doctors gave higher ratings to the other groups on the IPC scale than nurses received from the other groups. Both other groups listed doctors visited their office two or three times a week.

Doctors always have the lowest scores on the attitude items. They are not as likely as others to endorse team work aspects. Scores for the Shared Leadership subscale were even lower than the Team Efficiency subscale.

No consistent predictors of change over time emerged in this study. Some limited change was observed: IPC was higher and the variation between persons increased over time. The possibility of change was most evident on the Shared Leadership scale, where the correlations between initial scores and change were moderate or large.

Differences in attitudes scores between leadership capacity levels tend not to persist over time, except on Shared Leadership, indicating where there is temporal stability (Shared Leadership) and where there is flexi-

Study Limitations

- Sample size is limited.
- Lack of control group.
- Lack of cross-cultural studies.

Take Away Messages:
- Most scales demonstrated acceptable reliability.
- Mixed support for Shared Leadership – limited evidence.
- Limitation of data collection methods: self-report.
- Shared leadership capacity in most junior and senior clinicians a potential source of change in IPC.

References
[Provide a list of references here]

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