AN INTERVENTION TO ENHANCE NURSING STAFF TEAMWORK AND ENGAGEMENT

Beatrice J. Kalisch, RN, PhD, FAAN
Director, Nursing Business and Health Systems and
Titus Distinguished Professor of Nursing
University of Michigan, School of Nursing

Presented at the
National Database of Nursing Quality Indicators (NDNQI®) Data Use Conference
January 30 and 31, 2007
Las Vegas, Nevada

Accepted for publication JONA, February 2007

Teamwork has been associated with:

- higher level of job staff satisfaction (1, 2, 3, 4, 5, 6)
- higher quality of care (4, 7, 8, 9, 10, 11, 12, 13)
- increase in patient safety (5, 14, 15, 16, 17, 18, 19)
- greater patient satisfaction with their care (11, 20)
- more productivity (21)
- and a decreased stress level (22, 23)
Link between teamwork and safety

- Staff who had flown together for several days made fewer errors than teams who were rested and had not worked together for very long.
- The fatigued team actually made more errors but were able to compensate and catch one another’s near misses.
- Less stress, knowledge of the vulnerabilities and strengths of other team members and the practice of monitoring performance and giving feedback to one another (22).

**WHAT DOES NURSING TEAMWORK REALLY LOOK LIKE?**
Studies have tested interventions to improve teamwork

- cross training (24, 25)
- teamwork skills training (26)
- Crew Resource Training (14, 27, 28, 29, 30, 31)
- role playing (32)
- simulation (33, 34)
- automation (35)
- post training feedback (36)
- team building activities (37, 38)
- and a combination of training and action groups (39)

Very little done within nursing

- Amos et al -- team-building activities resulted in greater staff communication, stronger interpersonal relationships and greater job satisfaction (43)
- Britton -- a team development program conducted for hospital nurse managers led to greater understanding and clarity of work roles and improved cohesion and teamwork at the management level (44)
- DiMeglio et al -- A team-building intervention showed an improvement in group cohesion, nurse satisfaction and turnover rates (45)
Study Question

What is the impact of an intervention designed to enhance teamwork and staff engagement on the:
- rate of patient falls
- patient satisfaction
- the staff’s assessment of level of teamwork on their unit
- vacancy and turnover rates

Study Setting and Subjects

- 41 bed medical – oncology unit in a community hospital
- 2004/5
- 55 staff members
  - 32 RNs
  - 2 LPNs
  - 15 certified nurse assistants (CNAs)
  - 6 Unit Secretaries (USs)
Measures

- **Patient falls.** Patient falls per 1,000 patient days before and after

- **Patient satisfaction**--Professional Research Consultants (PRC) patient satisfaction survey tool before and after(46)
  - Validity -- PRC reports that they have performed various tests of internal validity.
  - The Cronbach $\alpha$ was .936 (n=824) for this study data
  - Utilizing norm data, PRC states that they have demonstrated stability and consistency across various groups

Measures (continued)

- **Staff ratings of level of teamwork**
  - six months after the intervention
  - 48 of 55 of the unit’s staff interviewed by an external data collector with no previous contact with the organization
  - Interviews were a combination of structured questions (e.g. “Has teamwork improved, stayed the same or gotten worse?”) and semi-structured, open ended questions (e.g. “How do you assess the RN and CNA relationships at this time compared to before the project? Give specific examples”).
Measures (continued)

- **Staff turnover rates**
  - Period prior to (March-August, 2004) and after the intervention (March-August, 2005)

- **Staff vacancy rates**
  - Average of the vacant positions each pay period divided by the budgeted positions
  - 6 months prior and 6 months after
DESCRIPTION OF THE INTERVENTION

- Intervention based on:
  - principles of teamwork (11,14,16,19,30)
  - change management (47)
  - training (32,33,34,36,39,42)
  - and staff engagement/empowerment (47)

Figure 1
STAFF TEAMWORK AND ENGAGEMENT ENHANCEMENT INTERVENTION

Focus groups
Feedback
Values, vision and goals development
Teamwork training
Formation of a guiding team
Creative problem solving sessions
Rapid testing and implementation of ideas
Continual communication about the project with all staff
Follow-up coaching and reinforcement of team skills and the culture of teamwork
EXAMPLE CHANGES MADE BY TEAM TO ENHANCE TEAMWORK/QUALITY

- Redistribution of tasks across shifts
- Clarification of the roles of team members
- Improved ability to listen, give feedback, deal with conflict and appreciate styles
  - Training
  - Follow up coaching
- Skin integrity cards
- Notebook by patients’ beds
- White board in room with nurse and CNAs name

EXAMPLE CHANGES MADE BY TEAM TO ENHANCE TEAMWORK/QUALITY (continued)

- Change from a mix of 8 and 12 hour shifts to all 12 hour shifts
Visible Comparison: Reporting
January vs. April
Number of Interactions

<table>
<thead>
<tr>
<th></th>
<th>January</th>
<th>April</th>
<th>Difference</th>
<th>% Decreased</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Reporting</td>
<td>243</td>
<td>187</td>
<td>-56</td>
<td>23%</td>
</tr>
<tr>
<td>Interactions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Working</td>
<td>2036</td>
<td>1498</td>
<td>-538</td>
<td>26%</td>
</tr>
<tr>
<td>Together Interactions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

EXAMPLE CHANGES MADE BY TEAM TO ENHANCE TEAMWORK/QUALITY (continued)

- Creation of wing teams
  - From 55 staff to 16-18 per team
  - Around the clock
  - 12-16 patients per wing
  - Wing reports including CNAs
  - Plan care TOGETHER for the shift
STUDY FINDINGS

Patient Falls Before and After Intervention

* $t = 3.98$, df=64, $p = 0.00$
STUDY FINDINGS (continued)

Patient satisfaction

- Comparisons of the “excellent” scores for quarters prior to and after the intervention approached but did not reach statistical significance

- Patients’ perceptions of nurses’ promptness in responding to calls increased from 32.0% to 49.0%; nurses’ communication with patients and family increased from 36.7% to 48.0%; and ratings of overall quality of nursing care increased from 46.0% to 52.0%

---

STUDY FINDINGS (continued)

Staff Perceptions of Changes in Teamwork After the Intervention*

![Graph showing changes in staff perceptions](image)

*χ² = 36.065, df = 2, p=0.000
STUDY FINDINGS (continued)

Turnover and Vacancy Rate Before and After Intervention*

* Turnover $t = 2.18$, $df = 63$, $p = .033$; Vacancy $t = 4.55$, $df = 58$, $p = .0000$

FUTURE STUDIES
On-going Studies

- Currently repeating intervention on:
  - Two additional medical-surgical units
  - An ED
  - An ICU
  - A perioperative services unit

- Some different measures

Future Studies

- Measures
  - Patient satisfaction
  - Actual teamwork assessment
  - Cost/benefit analysis
    - decreased staff turnover
    - decreased less errors
    - decreased LOS etc

- Intervention extensive—would a less intense intervention achieve similar results?
THE END