

Improving Resident and Nurse Satisfaction Through Focused Interventions on Care Team Communication

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October 2013

A. Study Purpose and Rationale

The purpose of this study is to assess current levels of resident and nurse dissatisfaction with their work environment and to test simple, focused interventions addressing likely drivers looking for meaningful improvements in resident and nurse satisfaction. It is well known that residents (defined as interns through chief residents) and practicing physicians have high levels of dissatisfaction when dealing with the logistical aspects of providing care. Difficulty in communication with ancillary staff, broken or substandard technology and lack of focus on work-life balance are just some of the many drivers that lead residents to feel dissatisfied with their work environment and add to an already stressful situation. The logistical issues that plague residents and lead to their dissatisfaction likely also affects nurses and other ancillary staff as well. Thus it is expected that nurses and other ancillary staff would have similar levels of work dissatisfaction. Even though this dissatisfaction is well known little objective research has been done into both the main factors that go into resident and nurse dissatisfaction and potential simple interventions that can be instituted to improve the working experience. By surveying residents and nurses before and after the interventions, we will be able to directly assess whether an intervention has an effect and if so, its magnitude. By focusing on communication as one of the main drivers of dissatisfaction and implementing simple, easy solutions with rapid feedback we will be able to decide whether to continue or modify a solution in real time. While similar research is common in the organizational change literature many of these theories and research methods have not found their way to clinical medicine. Not only will this initial research help to identify the main drivers for resident and nurse dissatisfaction and highlight possible solutions but also it may help institutions to better understand a methodology to implement interventions quickly and efficiently within the organization.

B. Study Design and Statistical Analysis

This study is designed to be a *prospective, cohort* study to take place at NewYork-Presbyterian hospital. The primary method of collecting data will be an independently validated survey of clinician and clinical staff satisfaction(see part D). The survey will allow us to quantify resident and nurse satisfaction prior to intervention and then 6 to 12 months post intervention with one site acting as the control group. The study will run for a total of 12 months.

alpha (probability of committing a type 1 error): 0.05

beta (probability of committing a type 2 error): 0.02

Power: 80%

Effect size: 10% increase in survey response is considered meaningful

Residents

Mean individual pre-intervention survey response: 65%

Expected variability in individual responses: -10% (min) - +24%(max) = range of 34 absolute percentage points

Implied standard deviation = $(\frac{1}{4}) * 34\% = 8.5\%$

Therefore number of resident participants = $1 + 16 * (8.5 / 6.5)^2 = 28$ residents per group

Nurses

Mean individual pre-intervention survey response: 55%

Expected variability in individual responses: -10% (min) - +22%(max) = range of 32 absolute percentage points

Implied standard deviation = $(\frac{1}{4}) * 32\% = 8\%$

Therefore number of nurse participants = $1 + 16 * (8.0 / 5.5)^2 = 35$ nurses per group

C. Study Procedure

The Columbia University internal medicine residency program and medicine nurses will act as the intervention group while the Cornell University internal medicine residents and nurses will act as the control group. Both groups will be surveyed six months after the start of the year (December 2013). This is to allow new first year residents a chance to experience the work environment in their respective programs. This first survey will serve as each group's baseline.

Interventions:

1. *Physician, Nurse and ancillary staff interdisciplinary counsel*
2. *Monthly clinical staff bounding activity (e.g. happy hour, BBQ, etc) open to all clinical staff*

Interventions will be instituted at the Columbia University site while no changes will be made to the Cornell site. After six months of intervention first and second year residents at each site and their corresponding nurses will be surveyed again as an interim value. After another six months all groups will be survey again and then study will end.

D. Study Questionnaires

The satisfaction survey being used is the Healthcare Team Vitality Instrument (below). This is a survey used to assess satisfaction among different types of clinical staff. Using the same survey on both nurses and resident physicians will allow us to directly compare drivers for resident as compared to nurse dissatisfaction. The assessment tool looks at different areas that are related to work environment satisfaction among clinical staff.

**Transforming Care at the Bedside (TCAB)
Healthcare Team Vitality Instrument (HTVI)
(Enter Hospital Name here)**

The following questions ask you about your current work environment. Circle the number that most closely indicates the extent to which the item is present in your current job:

Please specify by checking the Respondent Type that most closely matches your position

<input type="checkbox"/> Registered Nurse	<input type="checkbox"/> Dietary personnel
<input type="checkbox"/> Physician	<input type="checkbox"/> Respiratory Therapist
<input type="checkbox"/> LPN	<input type="checkbox"/> Physical Therapist
<input type="checkbox"/> Nursing Assistant	<input type="checkbox"/> Other
<input type="checkbox"/> Unit Clerk	

Circle the correct numeric response to each question

#	Question	Survey Scale: 1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree
1	I have easy access to the supplies and equipment I need to do my work on this unit.	1 2 3 4 5
2	The support services to this unit respond in a timely way.	1 2 3 4 5
3	I can discuss challenging issues with care team members on this unit.	1 2 3 4 5
4	My ideas really seem to count on this unit.	1 2 3 4 5
5	I speak up if I have a patient safety concern.	1 2 3 4 5
6	Care team members on this unit feel free to question the decisions or actions of those with more authority.	1 2 3 4 5

Circle the correct numeric response to each question

#	Question	1	2	3	4	5
7	Important patient care information is exchanged during shift changes.					
8	If I have an idea about how to make things better on this unit, the manager and other staff are willing to try it.					
9	Care professionals communicate complete patient information during hand-offs.					
10	Essential patient care equipment is in good working condition on this unit.					

Survey Scale: 1=Strongly Disagree
2=Disagree 3=Neutral 4=Agree
5=Strongly Agree

PLEASE COMPLETE SURVEY BY:
RETURN TO:
THANK YOU!

(enter due date)
(enter location/person)

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E. Study Subjects

The study subjects will be the residents of the internal medicine residency program at NewYork-Presbyterian Hospital both the Columbia and Cornell campuses as well as the nurses working on the associated medicine wards. Resident here is defined as first (interns) and second year residents from either Columbia or Cornell. The eligible nurses will be those that work on the medicine floors at either Columbia or Cornell. Eligible nurses are those who have been on the floor for at least six months prior to the beginning of the study.

F. Recruitment of Subjects

Recruitment will take place over one month by emailing all current first and second year residents introducing the concept, study questions and asking for those interested in participating in the study. Likewise I will email the nurses explaining the study and asking for those who have been working on the associated floors for more than six months and are interested in participating. The residents and nurses who respond will be asked to complete the satisfaction survey. Recruitment will be completed after the one month period and then the intervention will be instituted at the Columbia campus. Following 6 and 12 months of intervention, the same initial respondents will be sent the same survey as used previously and asked to complete it again. After 12 months (1 year) of observing the interventions the study will end.

G. Confidentiality of Study Data

All names/email addresses will be given a number and thus all responses will be received under the associated number. Furthermore, primary outcomes will be aggregated as an overall satisfaction score. Responses will be kept confidential and after the 12 month study period the mapping of email addresses to numbers will be destroyed to maintain anonymity.

H. Potential Conflict of Interest

There are no conflicts of interest

I. Location of the Study

The study will take place at NewYork-Presbyterian Hospital both its Columbia University and Cornell campuses located in New York, NY.

J. Potential Risks

There are no known potential risks to participating in the study.

K. Potential Benefits

Participants may or may not receive benefit as a result of their participation in this study. Possible benefits to participants include:

- Improved satisfaction with work environment leading to improved patient care
- Improved health as a result of a less stressful work environment
- etc.

There may or may not be any potential benefits to society as a result of participation in this study. Possible societal benefits include:

- Improved patient experience and satisfaction with healthcare institutions and professionals
- Improved patient care

L. Compensation to Subjects

There will be no compensation provided for participants of this study.

M. Costs to Subjects

Subjects will not incur any additional costs as a result of participating in the study.

Sources

1. Cohen JS, Patten S. Well Being in Residency Training. A survey examining resident physician satisfaction both within and outside of residency training and mental health in Alberta. BMC Medical Education 2005, 5:21
2. Lee B, Upenieks V. Healthcare team vitality instrument. 2007.