Evaluating Dedicated Education Units: A Presentation of Preliminary Findings

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Overview of Today’s Presentation

1. DEU Partnership Development/Background
2. Introduction to Project PDQ Evaluation Study
3. Research Methods & Data Collection

4. Preliminary Findings:
   1. Educational Quality
   2. Teaching Capacity
   3. Faculty Work life

5. Reflections and Next Steps
Introduction: Building a DEU Clinical Education Partnership

2006 Academic Service Partnership created by the College and Agency Partner for multiple purposes

2007 The DEU Clinical Education Partnership began with UMass Boston and two agency partners, Massachusetts General Hospital (MGH) and Brigham and Women’s Hospital (BWH) from Partners HealthCare

2008 DEUs began with agency variation on two units, with a focus on QSEN competency development at the unit level (QSEN Phase II-RWJF school with pilot study) and workforce diversity

2009 RWJF Grant Recipient for *Evaluating Innovations in Nursing Education*: Began implementation of rigorous clinical education evaluation research study

2010 Added two additional DEUs: Good Samaritan Medical Center, Brockton and Children’s Hospital, Boston and now …
Introduction: Selected DEU Mechanisms

- DEU Partnership- entire group meets at least once a semester with monthly phone meetings with directors
- Strong nursing management and innovative units
- CFC presence on units first three weeks for orientation and conferencing, then weekly coaching, 24-7 communication
- DEU student presentations- QSEN/IOM concerns on individual units
- DEU Orientation and Prof. Devt. at beginning of each semester
- DEU Program Support- Director and Clinical FacultyCoordinator
- DEU student hiring- aides during program, RNs post
- Incentives/Rewards tuition vouchers, stipends, ladders
- Board of Nursing regulation alignment
Partnership Findings

- Partnership building takes years with
- Strong relationships between academia and service (Deans, Chairs, CNOs, Education/Prof.Devt./QI)
- Commitment, contact, communications and resource allocation required
- Benefits for participation at all levels articulated

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What would it take to develop a clinical education partnerships at your site?
Overarching Research Question

“How does the DEU intervention develop new instructors (thus building capacity), enhance faculty worklife (thus sustaining recruitment, retention, and productivity), and promote educational quality, functioning within a shared DEU partnership structure and within local contexts, amidst nursing unit similarities and differences?”
Study Design

Mixed methods study with:
- 4 Randomized control trials (Students)
- Qualitative study (Staff nurses, CIs, CFCs)
  - Interviews
  - Surveys
  - Activity Logs

Internal Validity:
- RCT (causality, selection)
- Two threats: Hawthorne, attrition
- Replication
- Triangulation of data and methods

External Validity:
- Subjects are typical nursing students
- Are sites/people typical?
Study Design

- 14 Week Semesters
- 4 Cohorts (Students)
- Surveys, Interviews, Activity Logs

**UMB CNHS Juniors, Good Academic Standing**

**Junior Year:** NU310

**Senior Year:** NU455

**CFCs:** Coach CIs and provide clinical instruction guidance

**CNHS Faculty:** Provide classroom-based instruction; Colleagues with CFCs in academic service partnership

**Control 8:1**

**Control 1:1**

**DEU 2:1**

**DEU 1-2:1**

Random Assignment

4 Clinical Rotations

Clinical Instructors: Provide clinical instruction to students

CFCs: Coach CIs and provide clinical instruction guidance
Year 1 Participation Rates

<table>
<thead>
<tr>
<th>Response Rates</th>
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<tbody>
<tr>
<td>Students:</td>
<td></td>
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<tr>
<td>Umass Survey</td>
<td>66%</td>
</tr>
<tr>
<td>BoE Survey</td>
<td>62%</td>
</tr>
<tr>
<td>CIs/Nurses:</td>
<td></td>
</tr>
<tr>
<td>Activity Log (3 Administrations)</td>
<td>39%</td>
</tr>
<tr>
<td>Survey (2 Administrations)</td>
<td>82%</td>
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<tr>
<td>Interviews (2 Cohorts)</td>
<td>78%</td>
</tr>
<tr>
<td>CFCs</td>
<td></td>
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<tr>
<td>Survey (2 Administrations)</td>
<td>100%</td>
</tr>
<tr>
<td>Interviews (2 Cohorts)</td>
<td>100%</td>
</tr>
<tr>
<td>Faculty:</td>
<td></td>
</tr>
<tr>
<td>Survey (2 Administrations)</td>
<td>71%</td>
</tr>
<tr>
<td>Interviews (2 Cohorts)</td>
<td>71%</td>
</tr>
</tbody>
</table>
Education Quality: DEU Students Rate Clinical Environment Learning Opportunities Higher

Student Ratings: Unit and Instructor

Q5I The Student to Faculty ratio on this unit provided adequate supervision and support

Q5B I had adequate opportunities to practice my communication skills

Q5E Nursing staff on this unit informed students of potential learning experiences

Q6H The nursing staff encouraged me to pursue possible employment at this setting

Q6F I was able to collaborate with other health care team members on this nursing unit

Unit Item Grouping

Q8G My instructor provided adequate guidance

Q7D My instructor was positive about serving as a resource to students

Q8I I was encouraged by my instructor to ask questions

Q8B I felt comfortable asking questions of my instructor

Overall Instructor Ratings

C2 Diff | C1 Diff
DEU students report significantly more growth in nursing knowledge and skills

Student Growth in Nursing Knowledge and Skills, Group Differences

- Ethical and professional behavior development (F=4.7, p<.05)
- Clinical skills and judgment development (F=13.4, p<.01)
- Nursing knowledge (F=4.5, p<.05)
- Scale Mean Differences (F=8.9, p<.01)

Differences show DEU Student Scores – Traditional Student Scores
Original Response Scale: A great deal of growth=5 to No growth=1
DEU Students Spend More Time on Instruction
Time spent on instruction compared to other activities, by group

Traditional
- Direct Care: 65%
- Instructor Coaching: 22%
- Other Tasks: 13%

DEU
- Direct Care: 63%
- Instructor Coaching: 28%
- Other Tasks: 9%
DEU CIs and Staff Nurses

CIs report slightly higher levels of experience
### Workload by Role and Unit

<table>
<thead>
<tr>
<th>Unit / Role</th>
<th>Site A</th>
<th>Site B.1</th>
<th>Site B.2</th>
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<tbody>
<tr>
<td>Assistants</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>0.00</td>
<td>0.57</td>
<td>0.50</td>
<td>1.42</td>
</tr>
<tr>
<td>0.50</td>
<td>0.50</td>
<td>0.50</td>
<td>0.33</td>
</tr>
<tr>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.50</td>
<td></td>
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<td></td>
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<tr>
<td>Acuity</td>
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<td>0.00</td>
<td>2.44</td>
<td>2.50</td>
<td>2.15</td>
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<td>0.50</td>
<td>2.50</td>
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<td>1.00</td>
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<td></td>
</tr>
<tr>
<td>1.50</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Patients</td>
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</tr>
<tr>
<td>0.00</td>
<td>2.94</td>
<td>2.25</td>
<td>2.73</td>
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<tr>
<td>0.50</td>
<td>2.25</td>
<td>2.25</td>
<td>2.83</td>
</tr>
<tr>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.50</td>
<td></td>
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</tbody>
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Total Number of Staff Nurse Respondents: 3
Total Number of CI Respondents: 2

**Role**
- Nurse
- DEU CI

**Acuity Scale:** 1=Low, 2=Moderate, 3=High
Workload: DEU CIs spend comparable time on most direct patient care tasks

<table>
<thead>
<tr>
<th>Duration of Patient Care Activities, by Role*</th>
<th>Nurse</th>
<th>CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Care vs. Direct Care with Students</td>
<td>2.38</td>
<td>2.50</td>
</tr>
<tr>
<td>Direct Care Vs. Direct Care without Students</td>
<td>2.38</td>
<td>1.38*</td>
</tr>
<tr>
<td>Supervision of Students' Skill Performance</td>
<td></td>
<td>2.29</td>
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<tr>
<td>Patient Teaching vs. Supervising Student's Provision/ Teaching</td>
<td>1.44</td>
<td>1.39</td>
</tr>
<tr>
<td>Patient Teaching vs. With Students in Room</td>
<td>1.44</td>
<td>1.61</td>
</tr>
<tr>
<td>Responding to rapid response codes</td>
<td>1.25</td>
<td>1.28</td>
</tr>
<tr>
<td>Answering call lights</td>
<td>1.55</td>
<td>1.50</td>
</tr>
<tr>
<td>Completing admissions and discharges</td>
<td>1.39</td>
<td>1.43</td>
</tr>
<tr>
<td>Other patient care activities</td>
<td>1.84</td>
<td>1.62</td>
</tr>
<tr>
<td>Providing and receiving patient reports</td>
<td>1.08</td>
<td>1.08</td>
</tr>
<tr>
<td>Coordinating and managing patient care</td>
<td>1.45</td>
<td>2.42</td>
</tr>
<tr>
<td>Accessing information on patients</td>
<td>1.83</td>
<td>1.45*</td>
</tr>
</tbody>
</table>

*Significant differences at alpha=.05

Duration: .5 to 2.5 hours (max)
Work Life: Morale and Role: DEU CIs report greater morale than DEU Staff Nurses

- No Significant Differences

- No Significant Differences

- + DEU CIs report more positive morale and changes in morale
Work Life: DEU CIs are re-energized about their nursing practice

…it kind of makes you stop and think why you’re doing what you’re doing because I think a lot of the daily nursing, we just kind of go with the flow, we do what we know but there’s not a lot of thought behind it anymore because it becomes routine for us. (38)

“I’m always like, wow, the smaller things that you step on, like oh yeah, like you don’t even think about anymore like the whys-why are you doing this why are you doing that? Like how you overlook so many things that are so important but you don’t even think about them anymore.” (13)

So it kind of gives you a renewed excitement to it. So I guess that’s, I guess that would probably be the best part. (22)
“So I think it has helped me realize that there is so much still to learn. It keeps you fresh. You keep going back to your basics, you know. Because you kind of get lost in the fact that you’ve been doing this for so long that it becomes old hat to you…” (19)

It definitely made me stronger as a nurse because it made me look things up a little bit more in depth than maybe I would’ve if it was just me. So I definitely think it’s, it’s made me reflect on my own skills a little bit more. (38)

It keeps me up to date with my knowledge. I feel like, you know, you’re kind of molding the brains of new nurses. It makes you learn about yourself, how you learn, positives and negatives. (46)
Reflections

- DEU clinical education quality comparable or better than traditional clinical instruction
- Little impact on nurse workload and unit workload
- Nurses’ work lives are enhanced by the DEU model (increased morale and professionalism)

What do these data tell you about the viability and sustainability of the DEU model for clinical education?
Next Steps

Are you DUE for a DEU?  

Thank you.