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Ward redesign project: Improving admission processes and flow

Charles Pizanis

Elizabeth Snyder

Christopher Smith

Sergio Huerta

Patrick Rendon

THE UNIVERSITY *of* NEW MEXICO
INTERNAL MEDICINE

Residency Ward Redesign: Improving Processes and Flow

Charles Pizanis, MD; Elizabeth Snyder, MD; Christopher Smith, BS; Sergio Huerta, II, MD; Patrick Rendon, MD

Background

With changing ACGME work-hour restrictions, residency programs across the country have continued to work on optimizing admission and workflow processes.

In Fall 2013, the University of New Mexico Internal Medicine Residency began discussions for the redesigning of its residency ward system. Following a month-long pilot in February 2014, a new system was created with an implementation in June 2014.

Purpose

The major goals in modifying the inpatient ward structure were to:

- improve throughput of patients from the Emergency Department (ED) to inpatient floors
- decrease the number of hand-offs of patients between admitting teams
- improve overall education of the interns and residents via changes in the Night Float rotation

System Changes

- Creation of a Night Float Team consisting of two senior residents with interns now only on call during daytime
- Teams now receive admitted patients in handoff and follow daily
- Uncouple day call and MICU transfer responsibilities

Details of Ward Structure

Previous Day Ward System
6 day call cycle, 6 teams
(1 senior, 1 intern)

Day 1	Day Call
Day 2	Protected Day 1
Day 3	Protected Day 2
Day 4	Intern Night Call
Day 5	Night Accept
Day 6	Protected Day 3

- Day Call team responsibilities – admit ER patients and transfer of MICU patients to medicine

New Day Ward System
6 day call cycle, 6 teams
(1 senior, 1 intern)

Day 1	Day Call
Day 2	Protected Day 1
Day 3	MICU/Overflow
Day 4	Protected Day 2
Day 5	Night Accept
Day 6	Protected Day 3

- Day Call team responsibilities – admit ER patients
- MICU/Overflow Team responsibilities – transfer of MICU patients to medicine

Previous Night Float System
1 senior resident, 1 intern (from day 4)

New Night Float System
2 senior residents; intern stays on days without night call

Results

When compared to the previous ward system, the new system was associated with (previous vs new):

- decreased daily patient hand-offs between admitting teams (5.6 vs.3.1 patients, p = 0.021)
- decreased ED-to-admission times (historical average 5.5 hours vs. new system average 2.9 hours)
- increased daily admission evaluations (15.5 vs. 16.6 patients, p = 0.56)
- increased daily admissions performed (10.8 vs. 12.6 patients, p = 0.18)
- minimal change in the daily distribution of patients on medicine ward team censuses over the two study periods (11.2 +/- 2.3 vs. 10.2 +/- 3.1 patients)
- similar inpatient censuses (previous system 81.5 patients vs. new system 81.7 patients, p = 0.917).

References

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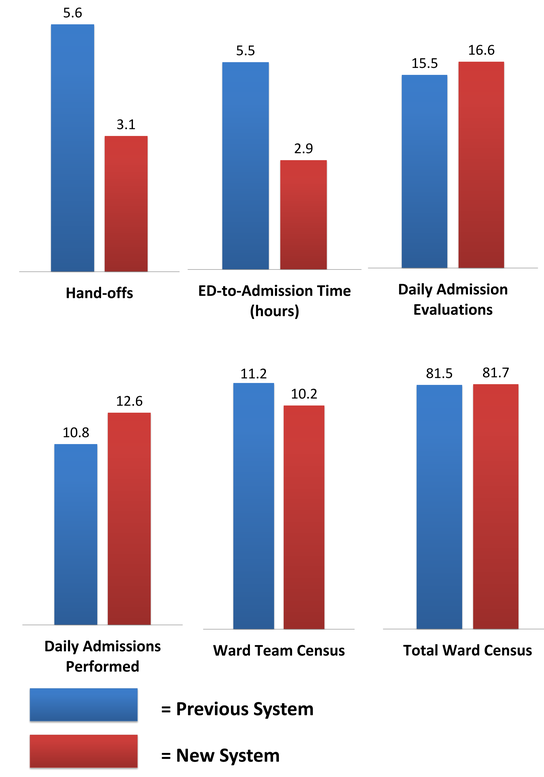
Results



Conclusion

Creation of a two-resident night float team and separating daytime admission and MICU-transfer responsibilities over two teams was associated with improved overall workflow in our resident medicine ward system. The decrease in patient hand-offs between admitting teams was also statistically significant.