

Implementation of a Teaching Service and Delivery of Care at a Community-based Hospital



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BACKGROUND

- Community hospital sites offer robust educational opportunities for pediatric learners.
- The implementation of inpatient teaching services at community and/or auxiliary hospital sites is of interest to leaders in pediatric medical education.
- The impact of learners on delivery of care is poorly understood.

OBJECTIVE

- To measure associations between type of inpatient service (teaching vs non-teaching) on patient outcomes including, length of stay, discharge times, readmissions, rapid response team (RRT) calls and transfers of care.

METHODS

- In July 2016, an inpatient teaching service was implemented at a community site affiliated with a large tertiary pediatrics hospital in Texas.
- The teaching service consisted of 1 senior pediatric resident, 1 pediatric intern, and 2 medical students staffed by an attending pediatric hospitalist.
- The teaching service replaced a prior hospitalist-only team, covered daytime hours only, and worked side-by-side in the same acute care floor with a pediatric hospitalist-only non-teaching service.
- The same hospitalists rotated on the non-teaching service and teaching service.
- New admissions were assigned to either the teaching service or non-teaching service based on census numbers maintaining equal patient numbers between teams.
- Patients admitted and discharged from this acute care floor during a 1 year period ranging from October 1st, 2016 to September 30th, 2017 were reviewed.

Patient Demographics by Service			
	Non-Teaching Service N = 1038	Teaching Service N = 1066	p value
Age in Years	6.75	6.54	0.42
Male Sex	51.7%	52.2%	0.83
Race			0.92
White	65.0%	64.6%	
Black	21.9%	22.7%	
Hispanic	8.0%	7.1%	
Other	0.5%	0.5%	
Unable to Obtain	4.6%	5.0%	
Primary Language			0.32
English	87.2%	86.2%	
Spanish	11.7%	11.8%	
Other	1.2%	2.0%	
Insurance Payer			0.25
Public	51.7%	48.1%	
Private	44.2%	47.6%	
Uninsured	4.1%	4.3%	
Patient Complexity			0.67
Non-chronic	55.3%	53.3%	
Non-complex Chronic	24.3%	25.1%	
Complex Chronic	20.4%	21.6%	

Patient Outcomes by Service			
	Non-Teaching Service N = 1038	Teaching Service N = 1066	p value
Length of Stay (Median hours)	45	45.5	0.58
Time of Discharge (Median)	14:20	14:16	0.93
Discharge Order Time (Median)	13:00	12:45	0.27
Readmissions at 30 days (Number, Percent)	35 (3.4%)	33 (3.1%)	0.81
Rapid Response Calls (Number, Percent)	25 (2.4%)	13 (1.2%)	0.04
Transfers to PICU (Number, Percent)	24 (2.3%)	13 (1.2%)	0.06

RESULTS

- During the study period, 2104 patients were admitted and discharged from the acute care floor; 1066 from the teaching service, and 1038 from the non-teaching service.
- There were no statistically significant differences between services in patient demographics including age, sex, race, primary language, insurance payer, or complexity (table 1).
- There was no statistically significant differences between services in patient outcomes including patient length of stay, time of discharge, time of discharge order, readmissions, rapid response calls, and transfers to a higher level of care (table 2).

DISCUSSION

- At our single institution study, a teaching service was not inferior to a non-teaching service in the studied patient outcomes.
- Many prior studies have compared teaching services to non-teaching services at different hospitals or patient units at different points in time.
- Our study is the first known comparison of pediatric patient outcomes on a teaching service and non-teaching service on the same nursing unit, with the same attending physicians, over the same period of time.
- Limitations include the retrospective cohort at a single center.

CONCLUSIONS

- In our single center retrospective cohort study, a teaching service was not associated with inferior patient outcomes.
- This study may help inform administrative and educational leaders who are considering implementing new teaching services.