Fall/Delirium Reduction on Nelson 8

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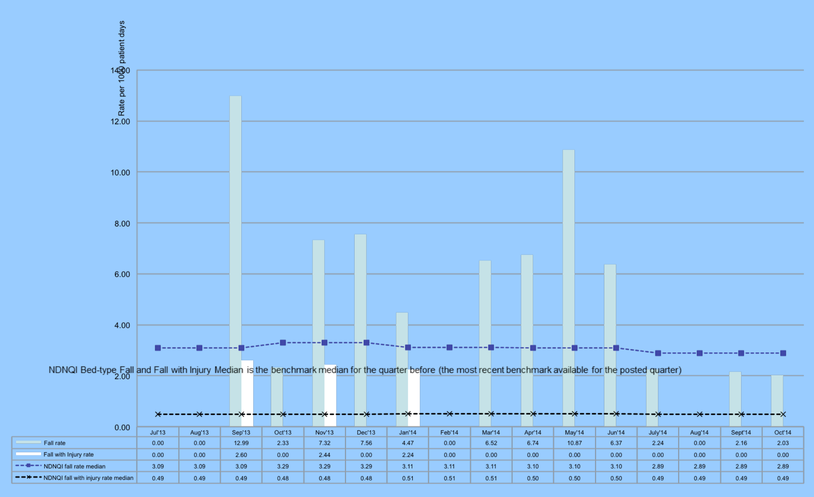
1 Background

The Nelson 8 unit at The Johns Hopkins Hospital according to unit's research, has the highest incidence of fall in the entire hospital and the main reason for that was found to be delirium. The aim of my Quality and Safety Project was to find interventions to prevent delirium and consequently prevent falls on Nelson 8 unit at The Johns Hopkins Hospital.

Monthly Fall and Fall with Injury Rate: Halsted 8



	Jul'13	Aug'13	Sep'13	Oct'13	Nov'13	Dec'13	Jan'14	Feb'14	Mar'14	Apr'14	May'14	Jun'14	July'14	Aug'14	Sept'14	Oct'14
Fall rate	0.00	0.00	12.99	2.33	7.32	7.56	4.47	0.00	6.52	6.74	10.87	6.37	2.24	0.00	2.16	2.03
Fall with Injury rate	0.00	0.00	2.60	0.00	2.44	0.00	2.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NDNQI fall rate median	3.09	3.09	3.09	3.29	3.29	3.29	3.11	3.11	3.11	3.10	3.10	3.10	2.89	2.89	2.89	2.89
NDNQI fall with injury rate median	0.49	0.49	0.49	0.48	0.48	0.48	0.51	0.51	0.51	0.50	0.50	0.50	0.49	0.49	0.49	0.49

Delirium is a sudden and severe change in brain function that causes a person to appear confused, disoriented, or to have difficulties maintaining focus, thinking clearly, and remembering recent events, typically with a fluctuating course. Delirium can be triggered by a serious medical illness such as an infection, certain medications, and other causes, such as drug withdrawal or intoxication (Francis and Young, 2015). Delirium is serious, with significant short and long-term outcomes. Death rates are increased, functional abilities reduced, admissions to long-term care increased, and length of stay increased. Impairment of cognitive function can persist for a year, as can the symptoms of delirium, especially inattention, disorientation and impaired memory (Siddqi et al., 2009). Delirium impacts the safety and quality of the care provided by the health care team, as nurses and physicians may be less precise in appropriately and accurately assessing physical symptoms (Kang et al., 2012).

Prevention and recognition of delirium is very important and have a significant impact in patient's health and hospital costs. It is important to make the health care team aware of the risks, and by doing so detection can be done early and falls can be prevented.

2 Methods

- Literature review fall/delirium prevention.
- Evidence based delirium screen tool.
- Implementation of the 4AT screening instrument for delirium and cognitive impairment.
- Data analysis.

The evidenced based screen tool used, was 4AT (Rapid Assessment Test for Delirium), which provides basic cognitive testing, aimed at detecting moderate-severe cognitive impairment, alongside assessment for delirium (The 4at, 2014). In this assessment, if a patient scores 4 or higher s/he is at risk for delirium, and consequently at a higher risk of fall.
Patients were screen for delirium from January 2015 thru March 2015 at Nelson 8 at the Johns Hopkins Hospital.

4AT scores

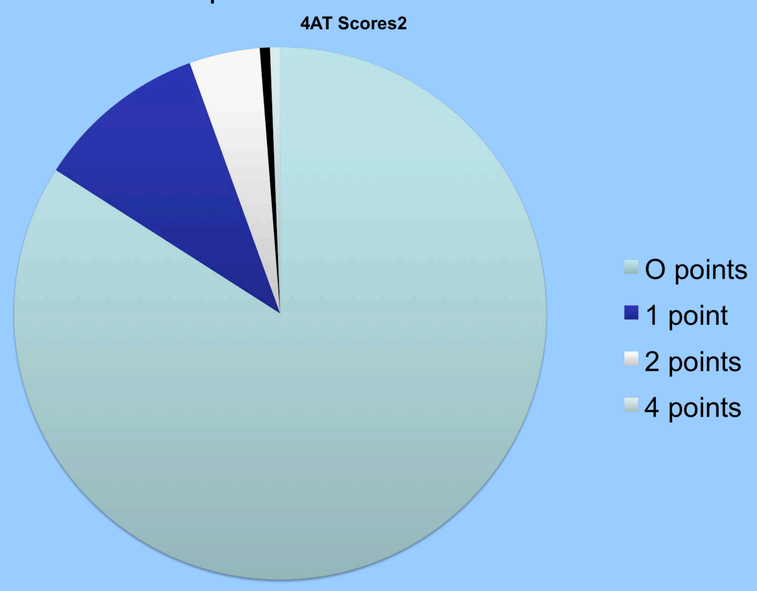
- 4 or above: possible delirium +/- cognitive impairment.
- 1-3: possible cognitive impairment.
- 0: delirium or severe cognitive impairment unlikely (but delirium still possible if [4] information incomplete

3 Results

	1/13/2015	1/15/2015	1/21/2015	2/5/2015	2/9/2015	2/11/2015	2/23/2015	2/25/2015	3/4/2015	3/30/2015
>=4	0	0	0	0	0	0	0	1	0	0
=3	0	0	0	0	0	0	0	1	0	0
=2	1	1	0	1	0	0	1	2	1	0
=1	2	2	1	2	1	1	4	2	2	5
=0	19	18	19	13	12	13	10	12	13	8
Total Screenings	22	21	20	16	13	14	15	18	16	13

A total of 163 patients were screened from January 2015 thru March 2015.

- 137 patients scored 0;
- 17 patients scored 1;
- 7 patients scored 2;
- 1 patient scored 4 points.



4 Conclusions

- Our finds based on the 4 AT score, suggested that delirium is not the issue of falls.
- During the study period, the floor had a high number of new nurses in training, which suggested that they were more attentive to the issue of patients' falls.
- Nelson 8 design prevent delirium?

Cognitive Orientation
- clocks
- Wipe boards
- Windows

Managing Sleep/Wake Disruption
- Private rooms
- Less noise due to more space

Communication/Social Support
- Extended visiting hours, overnight guests, kids allowed

5 Future Directions

- Conduct a study correlating types of medication used by the patients and falls rates.
- Study the relationship between fall rate and training time (nurses).

- Patient and family education

6 References

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