

Abstract

Background: Delirium is a neurocognitive syndrome common in the older adult (65 years or older) population characterized by rapid onset, fluctuating attention, and disorganized thinking. Delirium is costly, under-recognized, and can be fatal. Delirium can lead to long-term cognitive decline, functional decline, increased risk for 30-day readmission, and institutionalization. Despite these factors, delirium is preventable in up to 40% of older adult post-acute care patients.

Method: This QI project followed the Plan-Do-Study-Act model. Skilled nursing facility staff were given in-service training specific to delirium risk factors and prevention. A delirium prevention protocol was then implemented for all new admissions. Pre- and post-implementation chart audits were conducted to assess new-onset delirium incidence in the older adult post-acute care population. Additionally, the staff was surveyed after implementation to evaluate their perception of the protocol.

Results: In the pre-implementation chart audit sample, 8% of patients were diagnosed with new-onset delirium during their post-acute care stay. The post-implementation sample group had 0 cases of new-onset delirium. The licensed nurses found the protocol simple to use. This group also reported the protocol to moderately change their daily practice. The CNAs reported the education and protocol significantly changed their daily practice.

Conclusion: This QI project's results suggest that the implementation of a delirium prevention protocol can change nurse and CNA daily practice and has the potential to decrease the incidence of new-onset delirium.

Purpose

The purpose of this quality improvement (QI) project was to create, implement, and evaluate an evidence-based delirium prevention protocol in a post-acute care facility in Sonoma County, California.

Background/Significance

- Delirium: acute brain failure – rapid onset, fluctuating attention, disorganized thinking
- Prevalence: up to 70% of post-acute care patients
- Costly: \$164 billion per year in the US
- Preventable: 30-40%
- Risk factors: old age, dementia, depression, alcohol misuse, physical restraints, metabolic abnormalities, infection, surgery, medications
- Outcomes: long-term cognitive decline, functional decline, increased length of stay, 30-day readmission, institutionalization & mortality
- 12% of US NPs practice in nursing home/long-term care

Methods

Design: Quality Improvement

Model: Model for Improvement

Setting: 116-bed Skilled Nursing Facility

Data Collection: Chart audits & participant surveys

Results

Sample Demographics

	Pre-implementation		Post-implementation	
	M	SD	M	SD
Age	77	9	80	10
Length of Stay	21	13	15	8
Number of medications on admission	15	6	15	5
	n	%	n	%
Gender				
Female	15	60	14	61
Male	10	40	9	39
Race				
White	18	90	13	93
American Indian/ Alaska Native	1	5	0	0
Asian	1	5	1	7
Ethnicity				
Not Hispanic or Latino	15	88	14	100
Hispanic or Latino	2	12	0	0
Primary Language				
English	24	96	16	100
Spanish	1	4	0	0
Admitting Diagnosis				
Fracture	5	20	4	18
Fracture with surgical repair	3	12	3	13
Cardiovascular	3	12	0	0
Infection	3	12	2	9
Stroke	3	12	0	0
Elective surgery	0	0	1	4
Respiratory	2	8	1	4
Other	6	24	12	52
AWOL (+)				
Yes	a	a	17	65
No	a	a	8	35
Psychotropic medications on admission				
Yes	14	56	18	78
No	11	44	5	22
Routine pain medications on admission				
Yes	6	24	4	17
No	19	76	19	83
New onset delirium				
Yes	2	8	0	0
No	23	92	23	100

Participant Feedback

	Licensed nurses N = 7		CNAs N = 13	
	n	%	n	%
Employment Status				
Full-time	7	100	12	92
Part-time	0	0	1	8
License Type				
RN	2	29	-	-
LVN	5	71	-	-
Aware of protocol				
Yes	7	100	13	100
No	0	0	0	0
	M	SD	M	SD
Change in practice	2.8	1.57	4.54	0.88
Assessment tool difficulty	0.28	0.76	-	-
Batch order difficulty	0.43	1.13	-	-

Discussions/Conclusions

Key Findings:

1. CNAs report practice significantly changed
2. Reduced incidence of new-onset delirium
3. Reduced average length of stay

Implications:

- Practice: implement in other facilities
- Policy: integration into facility policy
- Research: further research is needed to determine impact on delirium incidence

Limitations:

- Small sample of convenience in a single urban skilled nursing facility in Northern California

Impact of COVID-19:

- Social distancing changed training delivery
- Facility was closed to admissions for a period during data collection
- Additional stress on nurses and CNAs

Sustainability:

- 3-, 6-, and 12-month chart audits
- Ongoing nursing and CNA training
- Integrate into new-hire orientation for nurses and CNAs

Dissemination:

- Partner with other local SNFs to implement.

Funding:

- AANP Grant
- ~ \$1,200 per implementation site



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References

