

Implementing a Video Surveillance Monitoring System

Greenwich Hospital

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Nursing Administration

Current Statistics

- > million inpatient falls occur in U.S. hospitals per year
- National Fall Rate: 0.562fall/1000 discharges (CMS)
- 1-3% of falls result in fracture
- Injuries cause distress & delay in rehabilitation
- 45% of falls R/T toileting
- 31% of Falls R/T impulsivity
- Potential for increase LOS
- Financial Implications

Why Do Patients Fall?

- Impulsivity
- Dementia/Delirium
- Polypharmacy
- Unfamiliar environment
- Toileting
- Independence/Autonomy
- Hypotension

Greenwich Hospital Fall Prevention Program



Patient Demographics

Gender 51% Female
 49% Male

Average Age 84

Average LOS 4 days

Our Focus: Our Patients



Implementation

- Interdisciplinary Team formed
- Facilities involvement -installation of equipment
- Policy & Procedure developed
- Legal review of Policy obtained
- Downtime Procedures created
- Inclusion/Exclusion /Discontinuation Guidelines developed
- Patient Information formatted
- Roles & responsibilities for staff established
- Daily Log for data collection created
- Signage installed

Video Monitoring Program

Video Surveillance Monitoring: The use of a video camera placed in a designated area to observe a patient's activities related to risk for fall.

Video Monitor Team: A rotation of staff members assigned to view surveillance monitor and round on patients.

Video Monitoring Guidelines

Inclusion Criteria

- Fall Risk Score >10*
- History of a fall
- Impulsive behavior
- Impaired cognitive function
- Unsteady gait
- History of wandering
- Moderate Addiction withdrawal

Exclusion Criteria

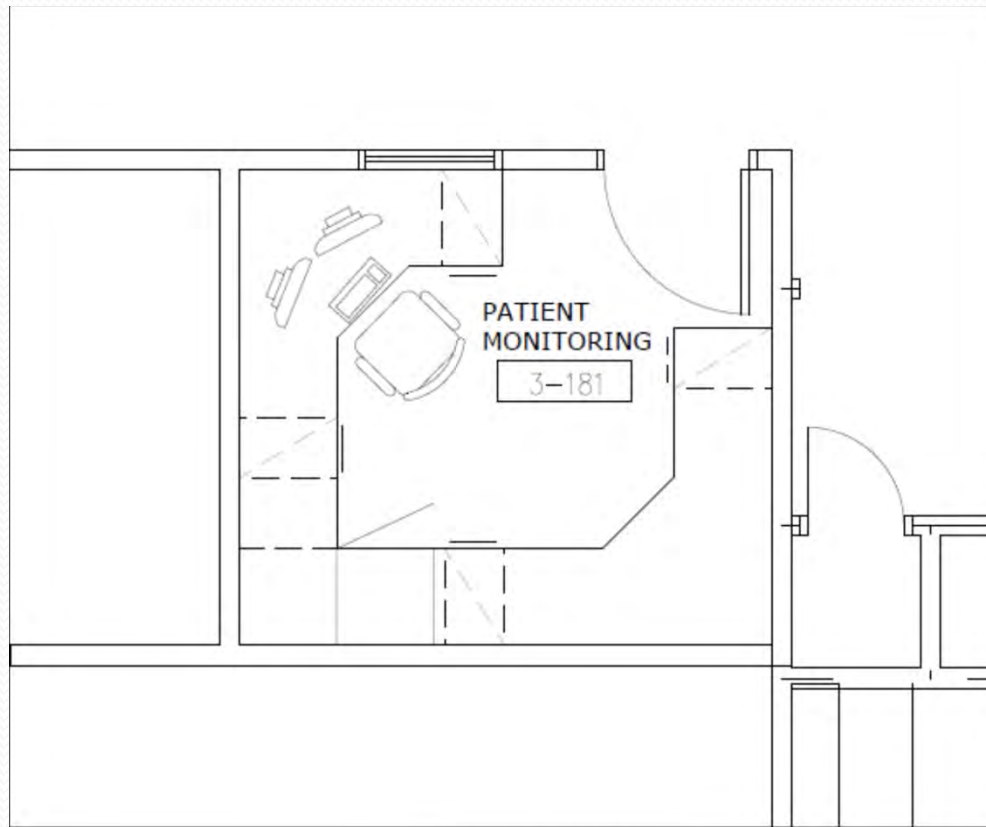
- Committed Behavioral Health
- Inability to follow direction
- Severe Addiction withdrawal

*CPM Fall Risk Assessment


Discontinuation Of Video Monitoring

- Demonstrates appropriate communication skills
- Follows direction and responds accordingly
- Daily Log review indicates a decrease in staff interventions
- Demonstrates stable gait
- Delirium clears and demonstrates alert behaviours

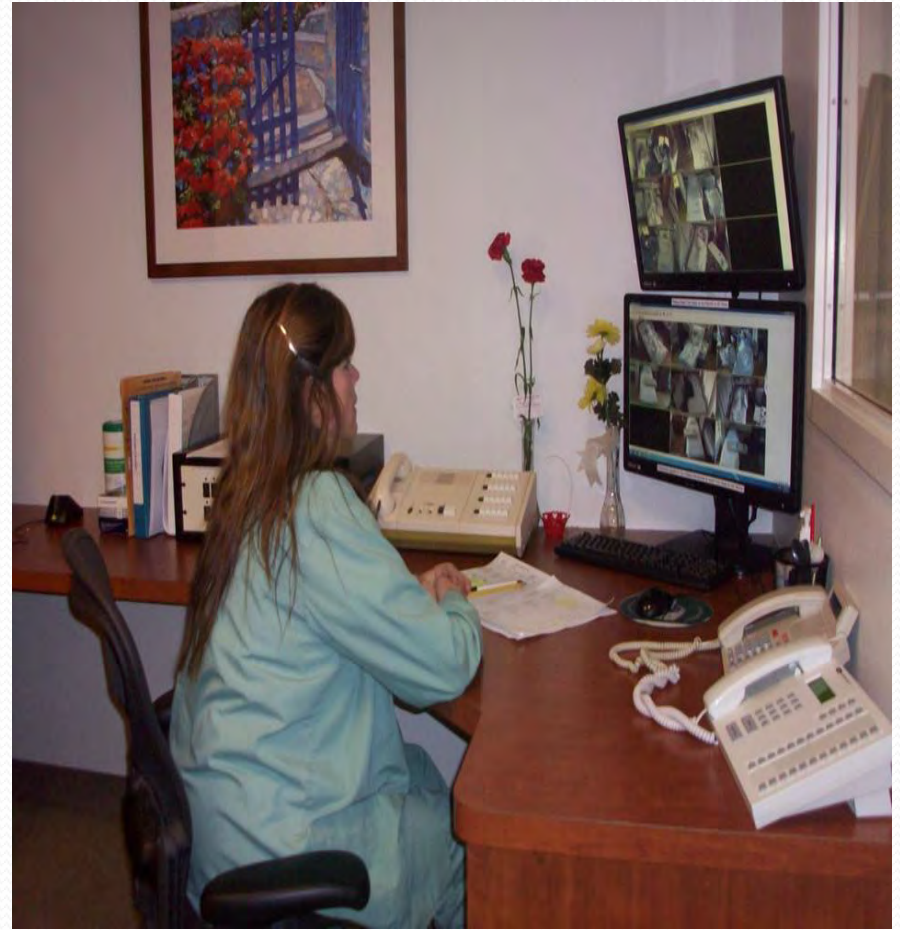
Video Monitoring Suite Design



1 PATIENT MONITORING SUITE
Scale: 1/2"=1'-0"

 GREENWICH HOSPITAL Yale & New Haven Health Endocrinology, Sleep & Cardiology University of Medicine & Dentistry of New Jersey	
PROJECT: WATSON - HELMSLEY	
DRAWING: PATIENT OBSERVATION SUITE TELEMETRY MONITORING PATIENT OBSERVATION STATION	A-1
DRAWN BY: JUAN RODRIGUEZ	
SCALE: 1/2"=1'-0"	
DATE: 07-30-12	REVISED: 10-23-12

Video Monitor Tech



Patient and Family Notification



Audio Intervention



Rounder



Fall Alert



Daily Log Definitions

- Occupancy Rate: The number of occupied beds at 0700
- Monitored Beds:
Ten (10) on Medicine
Four (4) on Telemetry
- Verbal Reminders: Video monitoring staff communicates to patient via intercom and offers verbal instructions
- Staff Intervention: Video monitoring staff member communicates to Rounder via spectralink phone
- Fall Alerts: Fall alert signals overhead for additional staff assistance

Daily Data Collection Log

Video Monitoring Record

Date: _____

7-3

Rm/Pt name	Verbal reminders	Staff Intervention	Fall alert	Comments/Initials
3-184				
3-186				
3-188				
3-190				
Totals				

3-11

Rm/Pt. Name	Verbal reminders	Staff Intervention	Fall alert	Comments/Initials
3-184				
3-186				
3-188				
3-190				
Totals				

11-7

Rm/Pt name	Verbal reminders	Staff Intervention	Fall alert	Comments/Initials
3-184				
3-186				
3-188				
3-190				
Totals				

Time	Signature/Print name	Time	Signature/Print name

Data Collection Sample Period

Video Surveillance Monitor Program June 2012	Occupancy Rate Patients in VMP at 0700	# Patient Falls in VMP	Verbal reminders in VMP	Staff interventions in VMP	Fall Alerts activated in VMP	# Falls on unit in Non-video monitored beds
June 5-10, 2012 4 beds	100%	None	182	182	1	None
June 11-17, 2012	93%	None	127	97	5	1
June 18-24, 2012	93%	None	178	169	0	1
June 25-July 1, 2012	100%	None	151	126	1	1
July 2-8, 2012	93%	None	136	100	1	1
July 9-15, 2012	94%	None	93	213	0	2
July 16-22, 2012 8 beds	91%	None	182	217	7	0
July 23-29, 2012 Low unit census	76%	None	119	159	1	0
July 30-Aug. 5, 2012	94%	None	183	131	2	1
August 6-12, 2012	87%	None	116	130	0	0
August 13-19, 2012	98%	None	234	220	6	0
August 20-26, 2012	98%	None	178	169	2	0
Aug 27-Sept 2, 2012	91%	None	237	181	0	0
September 3-9, 2012	92%	None	186	165	0	0
3 Month Totals	92% avg	None	2,302	2,259	26	7

VMP = Video Monitoring Program

Occupancy Rate: # beds occupied ÷ 7 days = weekly occupancy rate

Beds available: June 5th = 4 beds. July 16th = 8 beds

Verbal Reminders = staff tells patient to sit down

Staff Interventions = monitor calls staff member to go into room

Fall Alerts = Emergency called overheard for staff to assist patient immediately

Results- 6 Month Sample Period (June 12-December 12)

- Average Bed Occupancy rate: 95-100%
- Verbal Reminders: > 4500
- Staff Interventions: > 4000
- Fall Alerts: <1 per week
- Patient Satisfaction

Outcome: June 2012-June 2013

Over a **12** month period
in
14 monitored rooms

Only **One** fall has occurred

* *March 2013 ONE fall occurrence.*

As of this date there has not been any further falls in this program.

Installation Costs

The total cost for installing 14 cameras
with strobe lights
and intercom system:

\$52,650.00.

Impact of Program

- Verbal and staff interventions have prevented numerous fall opportunities and increased LOS
- Financial savings:
Sitter staffing requirements resulted in reduction of FTEs

Annual Cost Saving Analysis

Average Sitter usage per bi-weekly payperiod:

2011-2012

25 FTE per payperiod
\$18/hour x 1950 hours/yr
\$33,150 x 25 FTEs = \$877,500

2013

18.5 FTE per payperiod
\$18/hour x 1950 hours/yr
\$33,150 x 18.5 FTEs = \$613,275

Savings annualized 2013 = \$264,225

Additional Expense Savings

Registry Aides (Sitters) were utilized by the Float Pool:
Outside contracting fees

Annualized saving = \$158,00

Total Expense savings:

\$158,000

\$264,000

\$422,000

Enhancement to Nursing Practice

Development of the patient selection in the video monitoring program

Accountability for staff interventions required

Integration of **Huddle** initiative in the morning and afternoon unit planning

Observable accountability and pride from staff involved in daily success of program

Fall Prevention Risk Aversion



Interdisciplinary Implementation Team

- Susan Brown, SVP Patient Care Services/CNO
- Barbara Leafe, Director of Nursing Operations
- Priscilla Sterne, NDNQI Site Coordinator/Nursing Administration
- Spike Lipshutz MD, CMO
- Jeremy Barowsky MD, Director of Addiction Medicine
- Loretta Jacobs, Education Specialist
- Kim Acevedo, Nurse Manager, Medicine
- Anna DiPaola, Clinical Coordinator, Medicine
- Dawn Schupp, Clinical Coordinator, MSICU
- Pauline Morgan, Clinical Coordinator, Telemetry
- Nancy Ulrich, Nursing Administration, Office Manager
- Joanne Bellantoni, Nursing Administration, Staffing Secretary
- Guerline Villard, Sophia King, Carrie Gorski, Dieter Meadows, CNAs