

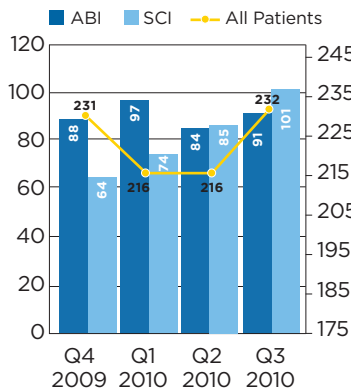
# Why Shepherd



## Evidence

### General Statistics

#### Discharge Volume



Source: Shepherd Center Internal Databases

#### Average Patient Age/# Shepherd Cases

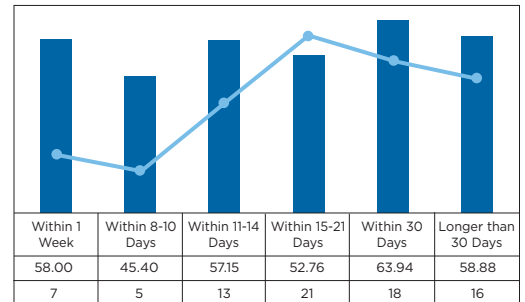
		Q4 2009	Q1 2010	Q2 2010	Q3 2010
Shepherd Total SCI	Avg. Age	38	38	36.6	37.2
	# Cases	91	66	77	79
Nation Total SCI	Avg. Age	50.4	50.3	51.1	50
	# Cases				
Shepherd Total Brain	Avg. Age	31.8	32.2	36.7	33.4
	# Cases	57	51	43	59
Nation Total Brain	Avg. Age	61.2	60.5	61.2	61
	# Cases				
Shepherd Total Stroke	Avg. Age	47	46.4	49.6	45.9
	# Cases	12	26	23	18
Nation Total Stroke	Avg. Age	68.2	67	67.6	67.1
	# Cases				

Source: UDS Quarterly Trends Report M240\_9021 (Oct 1, 2009 - Sep 30, 2010)

### ICU Statistics

#### Length of Time Between Injury and Admission To Shepherd Center ICU

Admissions between April-September 2010

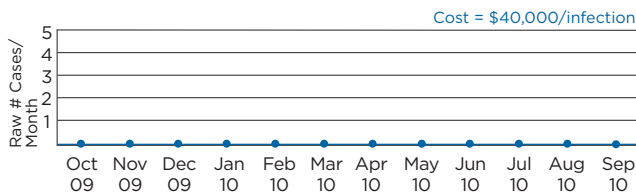


\* Average LOS is shown in days and covers admission to Shepherd Center ICU through discharge from Shepherd Center inpatient program.

## Prevention

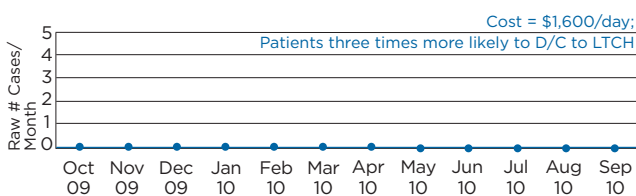
Source for Chart Data Below (Not Cost Data): Shepherd Center Internal Databases

### Ventilator-Associated Pneumonia



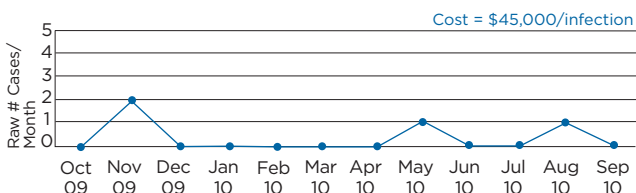
See Office of Quality and Performance (10Q), FY 2008, Q1 technical manual for the VHA performance measurement system. Washington (DC): Washington (DC); 2007 Oct 31. 315p.

### Wounds Requiring Surgical Intervention



See Russo, C.A. (Thomson Reuters), Steiner, C. (AHRQ) and Spector, W. (AHRQ). Hospitalizations Related to Pressure Ulcers, 2006. HCUP Statistical Brief #64. December 2008. Agency for Healthcare Research and Quality, Rockville, MD.

### Catheter-Related Blood Stream Infections



See "An intervention to decrease catheter-related bloodstream infections in the ICU," by Dr. Pronovost, Dale Needham, M.D., Ph.D., Sean Berenholtz, M.D., and others, in the December 28, 2006, New England Journal of Medicine 355(26), pp. 2725-2732.

### ▲ Evidence

#### General Statistics

##### Discharge Volume

- *ABI population includes:* Medical and rehabilitation patients with an impairment code of "ABI" (no dual diagnosis patients).
- *SCI population includes:* Medical and rehabilitation patients with an impairment code of "SCI" (no dual diagnosis patients).

##### Average Patient Age / # Shepherd Cases

Published quarterly by Uniform Data System (UDS). All Shepherd patients are not reported to UDS. UDS requires patients to receive at least three hours of therapy per day to be included in the dataset.

#### ICU Statistics

##### Length of Time Between Injury and Admission to Shepherd Center ICU

- Data collected from Shepherd admission process.
- ICU patients are defined as those who admit at ICU level of care.
- Length of time between injury and admission is calculated in days.
- Average length of stay is shown in days and is defined as the amount of time between admission to Shepherd Center ICU through discharge from Shepherd Center inpatient program.

### ◀ Prevention

- *Ventilator-Associated Pneumonia:* Cases reported by Shepherd Center Infection Control. Figure reflects number of healthcare-associated infections of patients on ventilators.
- *Wounds Requiring Surgical Intervention:* Cases reported by Shepherd Center wound nurse. Figure reflects number of patients with hospital-acquired wounds.
- *Catheter-Related Blood Stream Infection:* Cases reported by Shepherd Center Infection Control. Figure reflects blood stream infections where central venous line (CVL) or peripherally inserted central catheter (PICC) is the primary source of infection.

# Early Intervention

2008					
Level of Injury	Total Volume	# D/C Home on Vent	# Weaned	Avg Days to Wean	Wean Rate
C1 - C2	12	9	3	27	25%
C3	6	4	2	21	33.3%
C4	27	4	22	24	81.5%
C5 - C7	26	2	24	13	92.3%
T1 - T12	18	2	15	20	83.3%
Rancho 1 - 3	6	1	5	12	83.3%

2009					
Level of Injury	Total Volume	# D/C Home on Vent	# Weaned	Avg Days to Wean	Wean Rate
C1 - C2	10	8	2	19	20%
C3	8	4	4	15	50%
C4	20	7	13	32	65%
C5 - C7	31	5	25	19	80.6%
T1 - T12	11	1	10	24	90.9%
Rancho 1 - 3	17	2	15	9	88.2%

Vent weaning data is analyzed annually by Andrew Zadoff, MD, Medical Director, ICU and Pulmonary Services.

◀ Vent Weaning is the active process of liberating the patient from the ventilator. Data includes patients admitted within the calendar year.

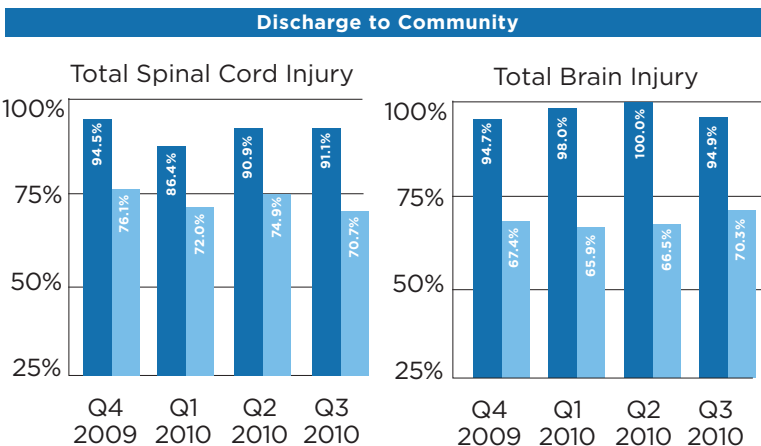
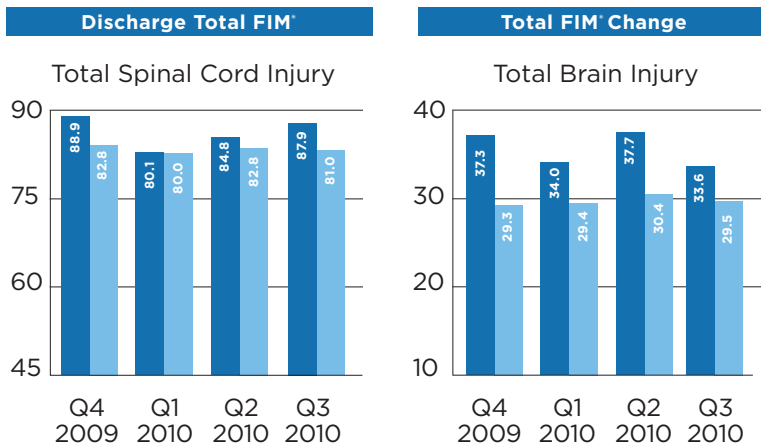
- The table reflects calculations for:
- Patients with a primary diagnosis of either SCI or ABI.
  - Patients who discharged by reporting cut-off date (TBD).

SCI/ABI dual patients are reported according to their SC injury level.

Extubated patients or patients with a trach that are liberated from the ventilator and subsequently are unsuccessful at sustaining that liberation and must return to a ventilator are counted as another episode.

DPS patients are not weaned from mechanical ventilation At Shepherd Center. Patients are discharged home on a ventilator. The Diaphragm Pacing System is inserted as an outpatient procedure and is therefore not reported as part of Shepherd Center's Inpatient Scorecard.

# Independence



Source: UDS Quarterly Trends Report M240\_9021 (Oct 1, 2009–Sep 30, 2010).

Definitions of all measures and terms published by UDS quoted directly from UDS published glossaries and FAQs.

## Story Behind the Data

### Wean Rates

- Data represents medically complex patients only.
- Influenced by clinical acuity and primary/secondary diagnoses, the following are considered significant influences in determining the potential capability to wean a patient from ventilator assistance:
  - Level of injury
  - Patient age
  - Complete vs. incomplete spinal cord injury
  - Co-morbidity

### Discharge to Community

- Consistent results attributed to Shepherd family education programs and continued support of families in their homes.

- ◀
- *Discharge Total FIM\* (Total SCI)* Published quarterly by UDS. The functional assessment instrument is composed of 18 items rated on a seven-level scale that represents gradations in function from independence to complete dependence. Measured at discharge to the rehabilitation program.
  - *Total FIM\* Change (Total Brain Injury)* Published quarterly by UDS. The difference in FIM\* Score as measured at discharge to the rehabilitation program and admission to the rehabilitation program.
  - *Discharge to Community (Total Spinal Cord Injury and Total Brain Injury)* Published quarterly by UDS. The percentage of patients who return to a community based setting, including a home (of the patient, relative, or another person), transitional living setting, board and care setting or assisted living residence.