# Sustaining Low NDNQI Falls Rates in an Inpatient Rehabilitation Unit Using Innovative Falls Prevention Interventions

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## PURPOSE:

Implement strategies to decrease total falls and injury falls rates on the inpatient rehabilitation unit.
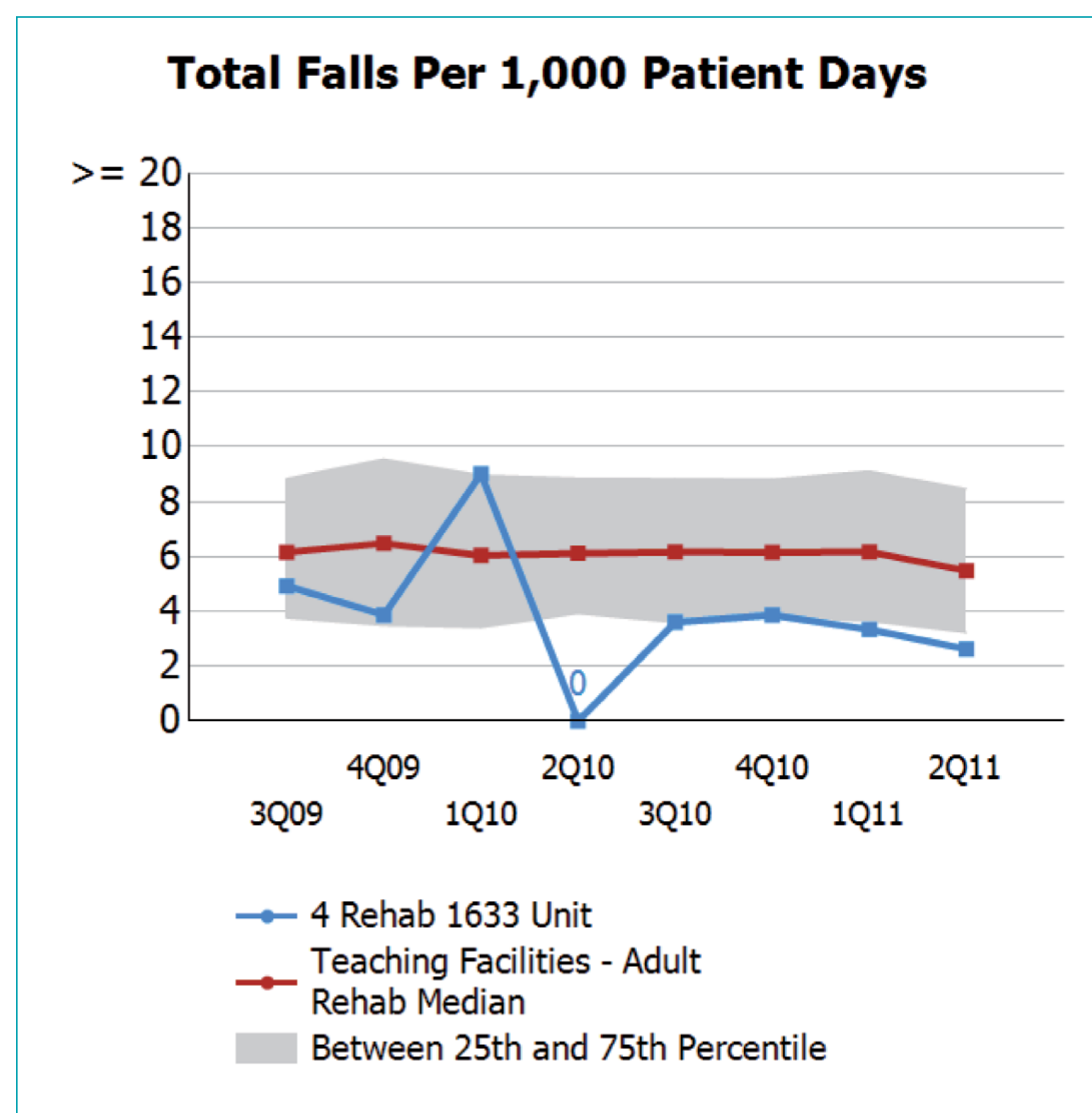
## HISTORY:

- Falls are the fifth leading cause of death in elderly patients and contribute to 40% of nursing home admissions.
- Falls outcomes include poorer quality of life, extended hospital lengths of stay, and increased resource utilization.
- Patient falls incur $20 billion in direct health care costs annually.
- Patients on an inpatient rehabilitation unit are at high risk for falls due to their primary diagnoses and co-morbidities.

## METHODS:

- Every patient is placed on falls prevention protocol.
- Patients are not allowed out of bed without shoes.
- Staff implemented use of the Egress test, an assessment of patient stability and readiness to ambulate.
  - The assessment is done on admission and on every shift.
  - The Egress test involves three steps:
    1. Sit to stand.
    2. Stationary marching.
    3. Stepping forward and backward.
- Because patients in rehabilitation unit settings tire easily, the test is individualized for patients.

### EGRESS TEST

- Perform prior to ambulation.
- Patient to perform independently (may use assistive device).

1. **Three repetitions: sit to stand.**
- First attempt patient should lift buttocks off of bed or chair 2 to 3 inches and then return to sitting.
- On second and third attempt, patient should stand upright and then return to sitting. (Determines ability to bear weight)
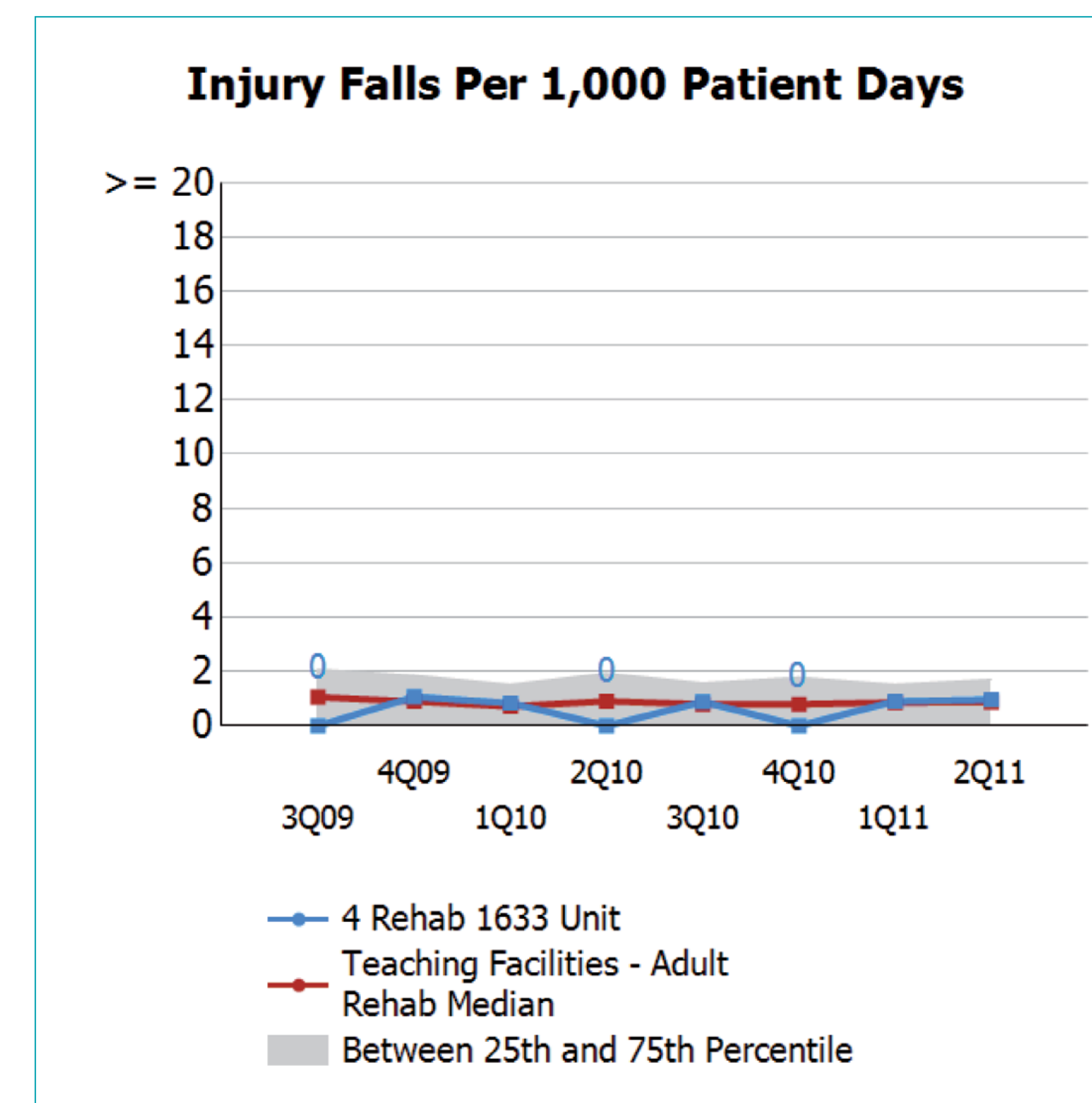
*Note: Partial or full upright standing reflects ability to bear weight.*

2. **Three steps stationary marching.**
*Note: Determines ability of each extremity to bear weight.*

3. **Each leg one step forward and backward; weight bearing leg stationary.**
*Note: Determines forward and backward weight shifting.*

## RESULTS:

Measurement: NDNQI fall data

- Total falls on the unit have remained below the NDNQI national mean for 7of the last 8 quarters.
- Injury falls have remained below the national mean for all 8 quarters.

**Total Falls Per 1,000 Patient Days**

y-axis: >= 20, 18, 16, 14, 12, 10, 8, 6, 4, 2, 0
x-axis: 3Q09, 4Q09, 1Q10, 2Q10, 3Q10, 4Q10, 1Q11, 2Q11

Legend:
- 4 Rehab 1633 Unit
- Teaching Facilities - Adult Rehab Median
- Between 25th and 75th Percentile

**Injury Falls Per 1,000 Patient Days**

y-axis: >= 20, 18, 16, 14, 12, 10, 8, 6, 4, 2, 0
x-axis: 3Q09, 4Q09, 1Q10, 2Q10, 3Q10, 4Q10, 1Q11, 2Q11

Legend:
- 4 Rehab 1633 Unit
- Teaching Facilities - Adult Rehab Median
- Between 25th and 75th Percentile

## IMPLICATIONS:

- A telemetry unit in the hospital is piloting use of shoes during ambulation of their stroke patients.
- Nursing leaders in other inpatient units in the hospital are considering adoption of the Egress test for specific patient populations.
- A team of nurses and leaders are revising job responsibilities for sitters.
- Documentation of the Egress test may be added to the electronic medical record.