Reporting Hospital Acquired Complications using CHADx: Our Experience

Presenter: Kevin Trentino
KEY PROBLEM

- No current automated system to report hospital acquired complications to hospital executive

- Little understanding of incidence of system wide hospital acquired complications and impact on patient outcomes and hospital resources locally

- In seeking assistance our search didn’t identify other implementations of CHADx at the hospital level nationally
  - difficult to code/implement?
AIM OF THIS INNOVATION

- Report the incidence of hospital acquired diagnoses using CHADx across all inpatient discharges presenting to Storm, Altair, Titan, Titan2, Titan3.

- Investigate the association of hospital acquired diagnoses with multi-day hospital length of stay, hospital costs and emergency readmissions within 28 days

- Implement systems for automated CHADx reporting
BASELINE DATA

- Hospital acquired complications were present in 7% of discharges.

- Multi-day discharges crude mean LoS was significantly higher for those with hospital acquired complications.

- After adjustment discharges with a hospital acquired complication had almost four times the mean LoS of discharges without a hospital acquired complication.
KEY CHANGES IMPLEMENTED

- Developed an abstract model for implementing the CHADx classification system
- Integrated into clinical activity warehouse
OUTCOMES SO FAR

- Composite CHADx flag as a measure in our hospital business intelligence (BI) tool: analysis services cubes.
  - Cubes refreshed daily
  - Allow users to analyse composite CHADx rates by specialty, DRG, ward etc…
- Dashboards (including CHADx) for Wards being tested
LESSONS LEARNT

- An automated system to report and analyse complications using the CHADx model important tool to increase the awareness of system wide hospital acquired complications.

- Small number DRGs account for a large proportion of hospital acquired complications.

- These insights will assist in designing targeted approaches to reducing hospital acquired complications, improving patient safety and reducing hospital costs.