The ED is a Business: Intelligent Use of Dashboards

American College of Emergency Physicians

ADVANCING EMERGENCY CARE

May 2011
The ED is a Business; Intelligent Use of Dashboards

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Acknowledge:

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Objectives

- Define Dashboards
- Discuss the value of data and identify critical metrics used in Emergency Medicine
- Identify key data management strategies and best practices for leveraging data using business intelligence to improve processes in the Emergency Department
- Discuss lessons learned

"You cannot manage what you cannot measure"

Lord Kelvin
Your Part of the Session:

• Utilizing an Audience Response System
• At the end of the session or when you leave please return your clicker to an attendant

What is a Dashboard?

• Executive information system (Wikipedia)
• Visual presentation of data obtained during ED visits
  • Specific metrics used for real-time warnings or retrospective review of reports
  • User friendly, easy to read and understand
  • Graphs and reports
• Report card
  – Spot trends and delays
• Management tool to view drive operational performance
Where Did Dashboards Come From?

• History
  – Auto Dashboards
    • Designed to help monitor what is going on at a glance
      (speed, mileage, maintenance, alerts)

• Healthcare
  – Patient’s right to know
  – Need to report data publicly

Different Types

• Timeliness
  – Real time data compared to retrospective data

• Digital
• Intuitive and interactive
• EMR
• Paper
• Excel
We are swimming in a rapidly rising sea of data... How do we keep from drowning? ...
Scorecard that is Posted Publicly

Value of Data

- Identify bottlenecks in the system
  - Delays in the process
  - Detailed facts to make decisions for change in staffing, patient flow, hospital operations
  - Identify negative trends
- Assist senior leadership in understanding patient flow
- Quick identification of outliers
  - Drill down to specific shifts and providers
What metrics do you measure for patient flow?

1. Door to triage
2. Door to discharge
3. Door to physician
4. Door to admission
5. Don’t measure
6. All of the above

Emergency Department Metrics

**Numbers**
- Total patients
- Admissions
- Discharges
- LWBS
- Transfer
- 72 hour returns
- Pediatrics
- Psych
- Boarders
- Arrival times
- Core measures

**Times**
- Front End
  - Door to triage
  - Door to bed
  - Door to provider
- Middle
  - Ancillary Services
  - Consultant times
- Back End
  - Door to disposition
    - Door to discharge
    - Door to admission
    - Bed request to bed assigned
### Business intelligence

Leveraging data to improve the department

### Strategies for Dashboards

#### KEY DATA MANAGEMENT STRATEGIES
Business Intelligence

• “Decision support system”
• Data warehouse
  – Financial
  – Clinical
  – Resources
  – Administrative
• Start with your organization’s strategic plan
  – Where the hospital is going over the next 1-5 years
  – Align your goals with overall plan

Leveraging Data to Improve Department

Visualize the power of your data

Data is growing at enormous rates.

The amount of data you encompass is less important than how it is utilized.
Connect the Pieces

- What are you going to measure?
  - What is the role of data?
- What impact are you hoping for?
- What do you want to accomplish?
- What is the criteria for decisions?
  - 80/20 rule
  - Regulatory

What happened?

to

What is the best thing that can happen?

&

How can we make the best thing happen?

*Data in is data out*
Strategies for Dashboards

• Design best practices around efficiencies in patient throughput
• Use the data to get what you need
  – Pictures and numbers are better than words
• Link the data to outcomes
  – Quality: Improve core measures compliance
  – Patient satisfaction: Decrease complaints
• Change management
  – Involve the entire team

Lessons learned

• Resist extra data - *If you can’t use it to make a decision, don’t include it*
• Don’t silo the information – *Disseminate information to your team and integrate it with key departments*
• Don’t settle – *keep improving the dashboard to help you improve operations*
Summary

• Described what a dashboard is and its uses
• Reviewed key data management strategies
• Discussed application of business intelligence strategies to hospital wide patient flow and operations
• Identified critical data sets that hospital executives strive to capture
• Reviewed strategies for dash boarding and leveraging data to improve your departments