Diagnostics for Patient Safety and Quality of Care

Carol Haraden, PhD
APAC Forum
This presenter has nothing to disclose.

Vulnerable System Syndrome

• Three core pathologies
  - Blame
  - Denial
  - And the pursuit of (the wrong kind of) excellence
What data do you have about how people are harmed and why they die? So what do you do with all this information?

Diagnostic Journey

• Do people die unnecessarily every day in our hospitals?

• In order for us to understand this, we need a diagnostic journey that moves out of a model for judgment and into a model for learning.
### The Mortality Diagnostic – 2x2 Matrix

- Review most recent 50 consecutive deaths.
- Place them into a two by two matrix based on:
  - Was the patient admitted for palliative care?
  - Was the patient admitted to the ICU?
- Focus your work initially on boxes that have at least 20% of your mortality.

#### Diagnostic – The 2 x 2 Matrix

<table>
<thead>
<tr>
<th>Admitted to the ICU?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Box #1</td>
<td>Box #2</td>
</tr>
<tr>
<td>No</td>
<td>Box #3</td>
<td>Box #4</td>
</tr>
</tbody>
</table>
US 2X2 Table Aggregate
64 Hospitals

<table>
<thead>
<tr>
<th></th>
<th>ICU Admission</th>
<th>No ICU Admission</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Comfort Care</strong></td>
<td>86/3175</td>
<td>402/3175</td>
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<tr>
<td></td>
<td>3% 3%</td>
<td>13% 13%</td>
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<tr>
<td></td>
<td>(0-14%)</td>
<td>(0-40%)</td>
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<tr>
<td><strong>Non Comfort Care</strong></td>
<td>1161/3175</td>
<td>1526/3175</td>
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<tr>
<td></td>
<td>37% 37%</td>
<td>48% 48%</td>
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<tr>
<td></td>
<td>(10-72%)</td>
<td>(18-76%)</td>
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</tbody>
</table>

The Mortality Diagnostic
- Failure to Recognize, Plan, Communicate

• Analyze deaths in box 3 and 4 for evidence of failure to: recognize, communicate, plan.

• This will help you understand the local environment.
The Mortality Diagnostic
- The Impact of Care

Evaluate ALL deaths in box 3 and box 4 to assess the estimated impact of our care on mortality:

*As you review the deaths in box 3 & 4, ask yourself the questions honestly (focusing on learning, not judgment):
  – **Was perfect care rendered?**
  – If perfect care wasn’t rendered, could the outcome of death have been prevented if the care had been better?
    - What number of deaths could have been prevented?

Recognize, Communicate, Plan

- **Failure to Recognize**: Any situation in which a patient has died and there was evidence that an intervention could have been made anytime prior to the patient’s death
  Example: the staff was worried, change in heart rate, change in respiratory rate, change in blood pressure, change in O2 saturation or change in consciousness or neurological status that was not responded to.

- **Failure to Plan**, such as: diagnosis, treatment, or calling a rescue team.

- **Failure to Communicate**: Patient to staff, clinician to clinician, inadequate documentation, inadequate supervisor, leadership (no quarterback for the team), etc.
The Mortality Diagnostic
- Evidence of Adverse Events

- Analyze deaths in box 3 and 4 for evidence of adverse events using the Global Trigger Tool.
- This will give some further direction to local problems.

Global Trigger Tool

- Review chart for triggers that are sensitive and specific for harm
- Find a trigger- was there harm?
- Not all triggers mean there was harm!
Global Trigger Tool Modules

- Cares (General)
- Critical Care
- Medication
- Surgery
- L&D
- ED

Cares Module Triggers

<table>
<thead>
<tr>
<th></th>
<th>Cares Module Triggers</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>Transfusion or use of blood products</td>
</tr>
<tr>
<td>C2</td>
<td>Any Code or arrest</td>
</tr>
<tr>
<td>C3</td>
<td>Dialysis</td>
</tr>
<tr>
<td>C4</td>
<td>Positive blood culture</td>
</tr>
<tr>
<td>C5</td>
<td>X-Ray or Doppler studies for emboli</td>
</tr>
<tr>
<td>C6</td>
<td>Abrupt drop of greater than 25% in Hg or Hematocrit</td>
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<tr>
<td>C7</td>
<td>Patient fall</td>
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<tr>
<td>C8</td>
<td>Decubiti</td>
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<tr>
<td>C9</td>
<td>Readmission within 30 days</td>
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<tr>
<td>C10</td>
<td>Restraint use</td>
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<tr>
<td>C11</td>
<td>Infection of any kind</td>
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<tr>
<td>C12</td>
<td>In hospital Stroke</td>
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<tr>
<td>C13</td>
<td>Transfer to higher level of care</td>
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<tr>
<td>C14</td>
<td>Any procedure complication</td>
</tr>
<tr>
<td>C15</td>
<td>Other</td>
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</tbody>
</table>
How it is Actually Done

1 - Set your timer for 20 minutes
2 - Review the coding summary (look for e-codes and obvious events)
3 - Review the discharge summary
4 - Review the lab
5 - Review the x-ray reports
6 - Review the procedure notes
7 - Any time left over, review nurse notes

Example of a trigger:
Transfer to higher level of care

• Endoscopy
• Post procedure somnolent and hypotensive (BP 80) transferred to ICU
• Placed on Bi-Pap
• Received standard Demerol and Versed for procedure
• Given Romazicon; stayed in unit 12 hours.
Global Trigger Tool Examples

- Readmit within 30 days with recurrence of abscess right hip.
- Readmit next day with ileus s/p exp lap for tumor.
- Stopped lasix-acute renal failure.
- Readmitted in 30 days for wound revision due to incisional seroma.
- Readmit related with wound infection.
- Volume Depletion with altered mental status caused by Lasix - resulted in hospital admission.
- ARF due to nephrotoxicity due to combination of ACE and NSAIDS taken at home.
- Ischemic colitis had rt hemicolectomy. New onset CP=MI. Unresponsive, coded. Decreased loc & sats on Morphine PCA. Rec'd Narcan.

<table>
<thead>
<tr>
<th>Chart</th>
<th>+Triggers T1-T11</th>
<th>+Triggers that led to events</th>
<th>Classification of events E-I</th>
<th>Total number of events</th>
<th>Total number of months reviewed</th>
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<td>Total events</td>
<td>Total Months</td>
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Trigger Explanations

Trigger 1-New Diagnosis of Cancer. Look for preventive measures not done. Timeliness issues. Events surrounding therapy and follow-up. Was the correct diagnosis made.

Trigger 2-Nursing home placement. Was the placement the result of an event. A fall due to over-sedation etc.

Trigger 3-Admission and discharge from the hospital. Look for reasons for admission, discharge medications reconciled with usual outpatient medications. Look for appropriate follow-up

Trigger 4-More that three consultants. Are the consultants talking to each other. Has communication problems arisen.

Trigger 5-Surgery Done. Was the reason for surgery related to some outpatient event that could have been prevented or improved upon. Did follow-up unveil any complications.

Trigger 6-ED visit. Reason for the visit. Was this a failure of the outpatient clinic. Was there a problem related to follow-up

Trigger 7-Greater than 5 medications. Look for drug drug interactions. Particularly over-sedation or over-medication.

Trigger 8-MD Change. Was there an abrupt change in MD in charge. What might that reason be. Look for care problems.

Trigger 9- Complaint letter. Was the complaint related to an event or care issue.

Trigger 10-Greater than 6 nursing calls. Are those calls related to an event.

Trigger 11-Abnormal lab value. Was this followed up properly and was an event associated with it
Waste Identification Tool

Design Elements

• Identifies waste from perspective of the “shop floor”
• Engages front line staff
• Use of the Tool is simple
• Provides an infrastructure for continuous and deliberate waste identification and reduction sensitive to the political and economic environment
Module Definitions

- **Ward** – waste related to bed utilization
- **Patient Care** - unnecessary patient care
- **Diagnosis** – unnecessary diagnostic tests and procedures
- **Treatment** – treatments given that are not supported by scientific evidence and therefore may be unnecessary (protocols, pathways, guidelines)
- **Patient** – waste from the patient’s perspective
Waste Identification Tool Worksheet

Ward Module: Clinical Waste

Date: Wed, April 10

Bed ID  | Waste | Waste Streams
--- | --- | ---
T-1  | X | Assisting PICC, BR
T-2  | X | Lap chole scopy
T-3  | X | Futility, EOL, family
T-4  | X | No Plan
T-5  | X | No drip on floor, Pt walking around ICU
T-6  | X | No insulin drip on floor
B-7  | X | No OR prep
B-8  | X | Card, Consult, no family meeting, EDL
B-9  | X | Pt died, No OR prep
C-1  | X | End of Life (EOL)
C-2  | X | Trach, Collar, tube not done
V-1  | X | Waiting trach & G-Tube
V-2  | X | Int & EOL, obesity
V-3  | X | Prevented, no OR prep
V-4  | X | Graft, int. & hemorrhage

Patient Safety Executive Development Program
Institute for Healthcare Improvement
Patient Module Interview

54 year old male with recent hip replacement:
• EKG done the day of surgery when had been done in internists office two days before surgery.
• Sequential compression devices which kept falling off and did not ever seem to work.
• Physical therapy continued walking patient even after he was walking on his own without difficulty.
• Portion sizes for meals continued to be large even though he requested smaller portions at least three times.

Resources

• White papers
  — Mortality
  — Global Trigger Tool
  — Waste Tool