Conducting Aggregate RCA and Individual RCA Facilitator Training

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Why are we here?

• Limits to human performance
  – Sensory
  – Cognitive
  – Overestimate abilities
  – Underestimate limitations

• Poor reliability of health care processes

• Need strategy to deal with unsafe acts

• Strategy
  – acknowledge and plan for human limitations
  – Implement evidence-based practices to improve reliability of processes

• Demo
What Impacts Our Performance?

- Fatigue
- Lack of sleep
- Illness
- Drugs or alcohol
- Boredom
- Frustration
- Fear
- Stress
- Shift work
- Reliance on memory
- Reliance on vigilance

- Distractions
- Noise
- Heat
- Clutter
- Motion
- Lighting
- Too many handoffs
- Unnatural workflow
- Procedures or devices designed in an accident prone fashion
Comparative Reliability Between Industries

- IRS - Tax Advice (phone-in) (140,000 PPM)
- Airline Baggage Handling
- Domestic Airline Flight Fatality Rate (0.43 PPM)
- Mammography Screening
- Inpatient Medication Accuracy
- Post Heart Attack Medications
- Low Back TX
- Difficulty with Referral

Sigma Scale of Measure

- Sigma
  - 1: 50%
  - 2: 31%
  - 3: 7%
  - 4: 1%
  - 5: 0.02%
  - 6: 0.0003%

DEFECTS

PPM

- 1,000,000
- 100,000
- 10,000
- 1,000
- 100
- 10
- 1
UNSAFE ACTS ALGORITHM

Were the actions as intended? NO → Evidence of illness or substance use? NO → Knowingly violated safe procedures? NO → Pass substitution test? YES → History of unsafe acts?

NO → Known medical condition? YES → Were procedures available, workable, intelligible, correct and routinely used?

NO → Deficiencies in training, selection, or inexperienced?

YES → Deficiencies in training, selection, or inexperienced?

NO → System induced error

YES → System induced error

NO → Possible reckless violation

YES → Possible reckless violation

NO → Substance use with mitigation

YES → Substance use with mitigation

NO → Substance abuse without mitigation

YES → Substance abuse without mitigation

NO → Sabotage, malevolent damage

YES → Sabotage, malevolent damage

Culpable Gray Area Blameless

Preventing Errors...The Role of Complexity

Probability of Performing Perfectly

Probability of Success, Each Element

<table>
<thead>
<tr>
<th>No. Elements</th>
<th>0.95</th>
<th>0.990</th>
<th>0.999</th>
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<td>25</td>
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<td>100</td>
<td>0.006</td>
<td>0.37</td>
<td>0.90</td>
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</table>
Three-level Design of Safe and Reliable Systems of Care: Prevent-Identify-Mitigate*

**Prevent** → Design the system to prevent failure
   *I.e. Implement Evidence-based Practices*

**Identify** → Design procedures and relationships to make failures visible when they do occur so that they may be intercepted before causing harm
   *Voluntary reporting, FMEA, RCA…tools to make system failures and risk visible*

**Mitigate** → Design procedures and build capabilities for mitigating the harm caused by failures when they are not detected and intercepted
   *Communicate and disclose unanticipated events to patients and peers. Communication and Teamwork Training... Use briefs, huddles, debriefs*

*Earl Weiner U of Miami Espinosa/Nolan BMJ March 2000*
Error Reduction Strategies

- Avoid reliance on memory
- Simplify
- Standardize
- Use constraints/forcing functions
- Use protocols and checklists
- Improve information access
- Reduce handoffs
- Increase feedback
- Decrease look-alikes
- Automate carefully
- Take advantage of habits and patterns
Objectives – Aggregate RCA

• Use Severity Assessment Code (SAC) to determine risk level of events—need for aggregate or individual analysis?

• Use medication error reporting data to identify similar events for aggregate RCA

• Complete an aggregate RCA of similar events in your organization to determine latent sources of error (including role of human factors)
Culture of Safety Model (USP, 2004)

Culture

Data Collection

Data Analysis

Plan Change

Implement Change

Assess Impact of Change

Aggregate RCA
Individual RCA
HFMEA
Determining Risk

• Use Safety Assessment Code (SAC) to determine system RISK represented by each event report
  – Assign 1 of 4 severity categories
  – Assign 1 of 4 probability categories

• Score actual and near miss events

Modified from VA National Center for Patient Safety
Severity Categories

• Catastrophic
  – Death or major permanent loss of function (sensory, motor, physiologic or intellectual) not related to the natural course of the patient’s illness or underlying condition.

• Major
  – Permanent lessening of bodily function (sensory, motor, physiologic or intellectual) not related to the natural course of the patient’s illness or underlying condition.
Severity Categories Cont.

• Moderate
  – Increased length of stay or increased level of care

• Minor
  – No injury, nor increased length of stay, nor increased level of care
Severity Categories

• For actual Adverse Events, assign severity based on patient’s condition

• For close calls, assign severity based on reasonable “worst case” systems level scenario

• Example: If 0.5mg digoxin was prepared for a newborn, but the dosing error was discovered by an RN before administration, the error would be considered “catastrophic” because death would be a reasonable outcome of the error
Probability Categories

- How often is it likely to occur in your facility?
  - Frequent – Likely to occur
    - Several times each year
  - Occasional – Probably will occur
    - Several times in 1 to 2 years
  - Uncommon – Possible to occur
    - May happen sometime in 2 to 5 years
  - Remote – Unlikely to occur
    - May happen sometime in 5 to 30 years
## Severity Assessment Code Matrix

<table>
<thead>
<tr>
<th>Severity Probability</th>
<th>Catastrophic</th>
<th>Major</th>
<th>Moderate</th>
<th>Minor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequent</td>
<td>3</td>
<td>3</td>
<td>2 or 3</td>
<td>1</td>
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<tr>
<td>Occasional</td>
<td>3</td>
<td>2 or 3</td>
<td>1 or 2</td>
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<tr>
<td>Uncommon</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Remote</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
Scoring Example

• MD wrote order to discontinue order for Morphine injection and initiate morphine PCA. The morphine PCA was initiated, but the morphine injection was not discontinued. The 70 year old female was also receiving Ativan. Error was discovered before morphine injection given again.
Who Should Assign Scores?

• Severity may require multidisciplinary team
  MD → RPh → RN

• Probability – depends on originating phase
  RN → RPh → MD

• Including MDs may
  – Improve understanding of system
  – Create buy-in
  – Increase the likelihood of participation in future RCAs
SAC Scoring Practice

- Each hospital will SAC score 1 - 3 error reports (10:15 – 10:25 AM)

- Display error report(s) and score for others to review in gallery walk (10:25 – 10:35)

- Each hospital answers questions from gallery walk (10:35 – 10:45)
Small Group Work

• Identify patterns and system causes of error across groupings of similar events
  – Bar graph of error type by severity...drill down to descriptions
  – Top Five Types of Error Drill Down for A - B reports
  – Top Five Types of Error Drill Down for C - I reports
  – High alert therapeutic classes: anticoagulants, insulin, opioid analgesics
• Relate error descriptions to process map, select focus for improvement, design and evaluate interventions
• Use staff time efficiently—analyze trends; don’t analyze each case in-depth

Typical Item from an Aggregated Review of Medication Errors

• Of 114 events…
  – 37 (32%) Omission Errors
    • All reached the patient
  – 23 (20%) Improper Dose/Quantity (3As, 6Bs, 14Cs)
  – 9 Unauthorized Drug (2Bs, 5Cs, 2Ds)
  – 9 Extra Dose (2As, 6Cs, 1D)
  – 5 Wrong Route (4Cs, 1D)
  – 8 Drug Prepared Incorrectly/Wrong Admin Tech
    • 7Cs, 1B
  – 1 Wrong Patient (1D)
<table>
<thead>
<tr>
<th>Type Of Error (C-I)</th>
<th>Top 3 Causes</th>
<th>Top 3 Contributing Factors</th>
<th>Top 3 Level of Staff, Made</th>
<th>Top 3 Generic Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>Omission error (37)</td>
<td>Procedure/protocol not followed (18)</td>
<td>A contributing factor not determined (16)</td>
<td>Nurse, Licensed</td>
<td>Metronidazole (4)</td>
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<tr>
<td></td>
<td>Workflow disruption (8)</td>
<td>Distractions (8)</td>
<td>Practical/Vocational (19)</td>
<td>Calcium and Vitamin D (3)</td>
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<tr>
<td></td>
<td>MAR variance (7)</td>
<td>Staff, agency/temporary (4)</td>
<td>Nurse, Registered (13)</td>
<td>Sucralfate (2)</td>
</tr>
<tr>
<td>Improper dose/quantity (14)</td>
<td>Procedure/protocol not followed (5)</td>
<td>A contributing factor not determined (6)</td>
<td>Nurse, Registered (6)</td>
<td>Sertraline (1)</td>
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<tr>
<td></td>
<td>Calculation error (3)</td>
<td>No 24-hour pharmacy (3)</td>
<td>Nurse, Licensed</td>
<td>Lactated Ringers Injection (1)</td>
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<tr>
<td></td>
<td>Brand/generic names look alike (1)</td>
<td>Staff, agency/temporary (3)</td>
<td>Practical/Vocational (4)</td>
<td>Nitroglycerin (1)</td>
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<tr>
<td>Wrong time (8)</td>
<td>Procedure/protocol not followed (5)</td>
<td>A contributing factor not determined (5)</td>
<td>Nurse, Licensed</td>
<td>Sucralfate (1)</td>
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<tr>
<td></td>
<td>Transcription inaccurate/omitted (3)</td>
<td>Staffing, alternative hours (1)</td>
<td>Practical/Vocational (3)</td>
<td>Zoledronic Acid (1)</td>
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<td>Knowledge deficit (1)</td>
<td>Workload increase (1)</td>
<td>Nurse, Registered (3)</td>
<td>Paroxetine (1)</td>
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<td></td>
<td>Unit</td>
<td></td>
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<td></td>
<td></td>
<td>Secretary/Clerk (1)</td>
<td></td>
</tr>
<tr>
<td>Extra dose (7)</td>
<td>Procedure/protocol not followed (6)</td>
<td>A contributing factor not determined (5)</td>
<td>Nurse, Licensed</td>
<td>Insulin, Regular, Human (2)</td>
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<td>Reconciliation-admission (1)</td>
<td>Patient transfer (1)</td>
<td>Practical/Vocational (3)</td>
<td>Bumetanide (1)</td>
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<td>Documentation (1)</td>
<td>Shift change (1)</td>
<td>Nurse, Registered (3)</td>
<td>Potassium Chloride (1)</td>
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<tr>
<td>Unauthorized/wrong drug (7)</td>
<td>Similar products (3)</td>
<td>A contributing factor not determined (5)</td>
<td>Nurse, Licensed</td>
<td>Albuterol (1)</td>
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<td>Storage proximity (2)</td>
<td>Staff, agency/temporary (2)</td>
<td>Practical/Vocational (3)</td>
<td>Methylprednisolone Acetate (1)</td>
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<td>Generic names sound alike (2)</td>
<td>No 24-hour pharmacy (2)</td>
<td>Nurse, Registered (2)</td>
<td>Ipratropium and Albuterol (1)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Nurse, Travel (1)</td>
<td></td>
</tr>
<tr>
<td>Type Of Error (A – B)</td>
<td>Top 3 Causes</td>
<td>Top 3 Contributing Factors</td>
<td>Top 3 Level of Staff, Made</td>
<td>Top 3 Generic Names</td>
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<td>-----------------------</td>
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</tr>
<tr>
<td>Improper dose/quantity (9)</td>
<td>Transcription inaccurate/omitted (3), Procedure/protocol not followed (2), Labeling (your facility's) (2)</td>
<td>A contributing factor not determined (4), Does not apply (3), Staffing, alternative hours (1)</td>
<td>Does Not Apply (3), Pharmacist (2), Nurse, Registered (2)</td>
<td>Data Not Provided (1), Enalapril (1), Pioglitazone (1)</td>
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<tr>
<td>Mislabeling (6)</td>
<td>Labeling (your facility's) (2), Storage proximity (1), Brand/generic names sound alike (1)</td>
<td>A contributing factor not determined (3), Does not apply (2), Staff, agency/temporary (1)</td>
<td>Pharmacist (2), Does Not Apply (2), Pharmacy Personnel, non-specific (1)</td>
<td>Data Not Provided (2), Enalapril (1), Pioglitazone (1)</td>
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<tr>
<td>Extra dose (2)</td>
<td>Procedure/protocol not followed (1), Documentation (1)</td>
<td>Does not apply (2)</td>
<td>Does Not Apply (2)</td>
<td>Phenytoin Sodium (1), Ocular Lubricant (1)</td>
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<tr>
<td>Unauthorized/wrong drug (2)</td>
<td>Brand/generic names sound alike (1), Brand names sound alike (1), Transcription inaccurate/omitted (1)</td>
<td>A contributing factor not determined (2)</td>
<td>Nursing Personnel, non-specific (1), Pharmacist (1)</td>
<td>Primidone (1), Multiple Vitamins (1)</td>
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<tr>
<td>Drug prepared incorrectly (1)</td>
<td>Knowledge deficit (1)</td>
<td>Staff, agency/temporary (1)</td>
<td>Nurse, Travel (1)</td>
<td>Insulin, Lispro (1)</td>
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<tr>
<td>Description</td>
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<tr>
<td>-------------</td>
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</tr>
<tr>
<td><strong>DESCRIPTIONS OF OMISSIONS</strong></td>
<td></td>
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</tr>
<tr>
<td><strong>Times were yellowed out on the MAR as they were written incorrectly initially, the new times were written next to the yellowed area. LPNC omitted 1 dose as she saw the yellow and mistook it as being discontinued.</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>At 0930 nurse noted the 0600 primaxin had not infused. The powder was still in the vial but the liquid infused. The powder was not activated</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>scheduled dose of primaxin hung at 2400. Noted at 0400 that it had not infused. Roller clamp not released</strong></td>
<td></td>
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<tr>
<td><strong>Flagyl 1 gram ordered every 12 hours, nurse gave only one 500mg bag of premix for 2 days. Found by nurse who had hung the bag that she omitted 1/2 of dose. Normally a dose is 500mg so that is what she hung.</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Found @ 0730 start of shift. Rocephin not infused. Med still in vial, was not added to addvantage system, only the NS was infused @ 0100. Given @ 0730</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Omitted 1700 dose of dicloxicillin</strong></td>
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<td></td>
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</tr>
<tr>
<td><strong>Times meds to be given were changed and lined out and new times written to the side on the MAR. Missed giving metronidazole at 0900. Found at 1315 and given.</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Order of vancomycin 1300mg every 36 hours. Med was initiated at 0300 on 7/22/06 as ordered by MD, next dose should have been on 7/23/06 at 1500. There was an X through 7/23/06 on the MAR indicating med was not due on that date. Med given when error found, 19 1/4 hours late.</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Blood sugar check ordered for 0300 and not checked until 0500 due to a concurrent emergent situation. Therefore sliding scale insulin was given late at 0500</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>1400 discovered that 1200 sliding scale insulin was not given. Lab did an extra accucheck, result 284. 8 units of humalog insulin given at 1420</strong></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
Aggregate Analysis of 37 Omission Errors...
Three primary causes for 67% of true omissions

Communication (6 Causes)
Concurrent ED, Change in personnel, Discharge Reconciliation

Ordering

Transcribing/Documenting

Dispensing

Administering

Monitoring

MAR (9 causes)
Copying, Yellowing out, Times not right, omitted on MAR

Incorrect Activation/Not Infusing (6 causes)
Wrong Patient Error

• RN went to patient’s room, was talking with patient and family. Sat and was talking with them and handed patient, another patient’s meds. He took them and swallowed.
<table>
<thead>
<tr>
<th>Error category</th>
<th>Date of error</th>
<th>Description of error</th>
<th>Cause of error</th>
<th>Therapeutic classification</th>
<th>Action taken</th>
<th>Action taken detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>10/28/2005</td>
<td>0900 Lovenox not given, concurrent emergency. In checking md sheet for further meds to be given it was discovered that pt should have had med at 0900, discovered at 1335 and given at 1340</td>
<td>Workflow disruption</td>
<td>Blood Coagulation Modifiers</td>
<td>Informed staff who was also involved in error</td>
<td>check MAR's as soon as emergent situation is under control</td>
</tr>
<tr>
<td>C</td>
<td>12/30/2005</td>
<td>Upon doing 2100 accucheck, scheduled Lantus 10 units signed on MAR from previous night shift, but could find no Lantus signed out. Upon investigation, agency nurse from night before documented gave regular insulin (2 units) according to sliding scale at 2100 and at 0200. The regular insulin had been signed on the MAR under the Lantus insulin, and regular insulin was repeated at 0200 but the Doctor only ordered sliding scale insulin at meals.</td>
<td>Procedure/protocol not followed</td>
<td>Insulin</td>
<td>Informed patient's physician; Informed staff who made the initial error</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>11/24/2005</td>
<td>Blood sugar check ordered for 0300 and not checked until 0500 due to a concurrent emergent situation. Therefore sliding scale insulin was given late at 0500</td>
<td>Workflow disruption</td>
<td>Insulin</td>
<td>Informed patient's physician; Informed staff who made the initial error</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>05/22/2006</td>
<td>1400 discovered that 1200 sliding scale insulin was not given. Lab did an extra accucheck, result 284. 8 units of humalog insulin given at 1420</td>
<td>Workflow disruption</td>
<td>Insulin</td>
<td>Informed patient's physician; Informed staff who made the initial error</td>
<td></td>
</tr>
</tbody>
</table>
Step One

• Create a team with knowledge of process
• Gather and analyze all information about the events being reviewed
  – Error type, severity, cause, location, time
  – Therapeutic class, brand/generic name
  – Phases of Medication Use: ordering, transcription, dispensing, administration, monitoring
  – Equipment used, patient characteristics
Step Two

• Develop a process map (flowchart)
  – Map the actual high-level process, not the ideal
  – Can consider phases of process separately

• Ask frontline staff how the process REALLY works

• Link error descriptions to process map
Aggregate Review of Bar-Code Errors

Order is entered via CPRS.

Medications are filled.

Medications are sent to the floor.

ID bands are scanned.

Not enough reasons to indicate in system.

Cord is too short in ICU.

Empty packages are sent.

Ink not dark enough on the packaging.

Machines not taken into rooms.

Rooms too small.

Scanner doesn't work.

ID band won't scan.

Two tablets in the packages.

Some narcotics are still not barcoded (Percocet, Morphine Sulfate 2mg.).

Patient states they "don't take that pill".

Patient is instructed on medications as needed.

Medication is scanned.

Medication is administered.

This Figure was taken from an Aggregate Review of 60 events (close calls and adverse events scoring 1 or 2 on SAC).
Step Three

• Describe how the team reviewed the data and its analysis
  – What cases were reviewed
  – Prioritization

• Determine if additional expertise is needed
  – Maintenance, Housekeeping
  – Physician
  – Information Technology
Step Four

• Identify resources
  – Search for evidence-based best practices
  – Review data sources
    • Policies/procedures from network hospital or peers
  – List those who could provide additional information to the team

Step Five

• Use the data and process map to determine the focus of the review
  – Identify a part of the process where patients are at most risk
  – What focus will yield the most benefit

• Write a description of the focus and why it was chosen
Step Six

- Determine root cause / contributing factors
  - Ask “why” several times
  - Consider:
    - Communication
    - Training
    - Fatigue / scheduling
    - Environment / equipment
    - Policies / procedures

Step Seven

• Further develop the root causes
  – Clearly show the cause-&-effect relationship
  – Each human error must have a preceding cause
  – Violations of a procedure are not root causes
  – Failure to act is causal only when there is a pre-existing duty to act
Step Eight

• Determine actions to address root causes
  – Recommend actions that are evidence-based
  – Evaluate feasibility of change
  – Assess cost of implementation before approaching senior leadership
  – Pilot test the action before widespread adoption
  – Assign accountability for implementation

Step Nine

• Write outcome measures
  – The measure should answer the question “Is this change an improvement?”
    • Consider intended and unintended consequences
  – Outcome measures usually expressed as percentage or rates to control for changes in census
    • CAUTION: Don’t use rates from voluntary reports. Consider chart review or observation
  – Plan to report results to an oversight body

Step Ten

• Present analysis and actions to leadership for concurrence
  – Build support from top down and from frontline staff
  – Share lessons learned with all who need to know
Step Eleven

• Implement actions
• Determine if outcome measures are met
  – Evaluate effectiveness regularly and modify accordingly
  – Don’t let perfect be the enemy of good
  – Empower staff to make changes rapidly

Aggregate RCA

- Staff may be more receptive to change
  - Process change based on multiple events
  - Focus on potentially serious events--close calls and errors that reached the patient
  - Staff may be less defensive because focus not on a harmful event...blame less prevalent

- May be used in any setting
  - Inpatient, outpatient, long term care, acute care, home care

- Use in all types of reported events
  - Falls, pressure ulcers, employee events, lab

Aggregate Review Output

- Written document that identifies root causes and action plan to address improvements to processes
- Outcome measures are defined Fall rates
  - Reporting of error types by severity
    - Increase reporting of wrong patient errors as near misses
    - 25% of omission errors will be near misses related to transcription and infusion causes intercepted before reaching the patient

Conclusion – Aggregate RCA

• Aggregate RCA exposes risk described in Category B and C error reports
  – Uses actual and near miss reports to improve processes
  – Maximizes limited QI resources

• Modify the process to meet your needs!
  – May elect to perform an individual RCA on any report, regardless of SAC score
  – Consider using for all types of incident reports
Lunch
Objectives

• Understand what root cause analysis (RCA) is—a structured, and process-focused framework to learn from errors

• Understand the role of individual RCA in achieving a culture of safety

• Understand the five steps in individual RCA

• Identify strategies for success in conducting RCA in small rural hospitals
Individual Root Cause Analysis: A Tool to Understand and Prevent Sentinel Events

Sentinel Event— “Unexpected occurrence involving death or serious physical or psychological injury,

OR THE RISK THEREOF…”

Signals the need for immediate investigation and response
What is Root Cause Analysis?

• A step by step questioning process to identify the basic or causal factors of an error

• Used in high risk industries such as nuclear power, airlines, the military, and increasingly….healthcare
Individual Root Cause Analysis: A Tool to Understand…

• WHAT HAPPENED

• HOW DID IT HAPPEN

• WHY DID IT HAPPEN

• WHAT CAN BE DONE TO PREVENT IT FROM HAPPENING AGAIN
Acceptable Root Cause Analysis

• Focuses on systems & processes NOT individual performance

• Progresses from special causes of specific event to common causes in organizational processes

• Repeatedly digs deeper by asking WHY, HOW…

• Identifies system changes to reduce risk

• Is thorough and credible…

Thorough Root Cause Analysis

• Determines human and other factors most directly associated with the event and the processes and systems related to its occurrence

• Determines where redesign might reduce risk

• Identifies risk points and their potential contributions to the event in question

• Determines potential improvement in processes or systems that would tend to decrease the likelihood of such events in the future

Credible Root Cause Analysis

- Include participation/support from leadership and by individuals most closely involved in the processes and systems under review

- Be internally consistent, not contradict itself or leave obvious questions unanswered

- Include consideration of any relevant literature

Sources of Information for Individual RCA

- Incident Report
- Near Misses/Close Calls
- Medication Error
- Customer Complaint
- Employee Complaint
Five Basic Steps of Root Cause Analysis

1. Gather the facts using a timeline
2. Understand what happened
3. Identify root causes using causal statements
4. Determine system improvements to minimize risk of repeating the error
5. Create action plans to implement and monitor effectiveness of changes
Step One:
Facilitator Gathers the Facts and Puts Together a Team
Facilitator Requirements

• NOT directly involved in the incident

• No preconceived idea of causal factors

• Understands purpose, process, outcomes of RCA

• Credibility within organization

• Skills in quality improvement
Gather the Facts

- Facilitator determines the basic facts
  - Review documents related to the event
    - Incident or error report
    - Medical record
  - Brief interviews of those involved
  - Observe the “typical” process
Gather the Facts

• Facilitator interviews
  – Creates trust with those involved in the event
  – Helps to determine those beneficial for the team
  – Defuses gossip, speculation and blame if done as soon as possible after the event
Supporting Materials

- Facilitator develops a **timeline** of the event
- Obtain a flowchart, policies, and procedures related to the intended process
Putting the Team Together

• The Root Cause Analysis Team
  – Inter-disciplinary
  – All staff directly involved in the event
  – Front-line staff who can champion change
  – Experts most knowledgeable about the process
  – Physician champions
  – Administrative support

Everyone on the team is equal
“To address this mistake we must use root-cause analysis. I’ll begin by saying it’s not my fault.”
Step Two:
Understand What Happened using Group Debriefing by Skilled Facilitator
Facilitator Skills

- Skills in group facilitation
  - Sets an agenda, keeps all on task
  - Prevents conflict from escalating
    - Non-verbal cues
    - Verbal...request for break
  - Can facilitate input from all and prevent domination by a few
Step Two: Understand What Happened

- Review Ground Rules
  - Review purpose of RCA…
    - change the system to minimize risk to patients
  - Everyone is a professional, all are equal
  - Use the “parking lot” to validate concerns but stay on task
  - Direct questioning is intended for learning
  - What is said in the room about who said or did what stays in the room …
What leaves the room…

• The proposed system changes are what you should focus on when you leave the room
Step Two: Understand What Happened

• Group Debriefing
  – All those involved in the error are present to review the timeline
Step Two: Understand What Happened

• Group Debriefing about the timeline
  – Review each particular event of the process by asking the questions…
    “Is this the usual way we do it?” and “If not why…why…why?”
  – As questions are answered and discussion proceeds, participants record one idea about system and human factors related to the error per post-it
Step Three: Identify Root Causes
Step Three: Identify Root Causes

- Group post-its into categories of causal factors
  - Human factors – communication/teamwork
  - Human factors – training
  - Human factors – fatigue/staffing
  - Environment/Equipment
  - Rules/Policies/Procedures
  - Information management
  - Culture

- Create causal statements for each category
- Cause and effect diagrams can be helpful
Five Rules for Causal Statements

1. Clearly show cause and effect relationship
2. Use specific and accurate descriptions
3. Identify the system cause of the error
4. Identify preceding cause of policy or procedure violation
5. Acknowledge: failure to act is only causal when there is a preceding duty to act
Causal Statement: Policy/Procedure

• Error: Patient did not receive home medications for 5 days

• The lack of a policy to reconcile home medications with the physician’s admitting orders resulted in the absence of an initial order for administration of specific home medications, which increased the likelihood that the home medications were omitted for five days after surgery.
Error: RN did not follow new policy to double check a high alert medication

Causal statement: Due to lack of encouragement and oversight by management to attend training AND production pressure, an informal norm was created to miss training and bypass the double check
Step Four:
Determine System Improvements
Step Four: Determine System Improvements

• Relate causal statements to current process, policies/procedures

• Consult the literature, evidence-based guidelines, best practices from JCAHO, ISMP, USP – group member presents to all

• Consult similar hospitals…benchmark– group member presents to all

• Group brainstorming on how the EBM and benchmarks would work in their facility
Step Four: Determine System Improvements

• Desired improvements must be within the organization’s control

• Prioritize necessary system improvements… Consider cost and frequency of occurrence

• Address the system sources of error WITHOUT adding complexity

• Be internally consistent…
Step Five: The Action Plan
Step Five: Create an Action Plan

- Confirm WHAT needs to be done
- Determine WHO will be accountable
- Determine WHEN change initiated
- Determine HOW you will know change is successful
Step Five: The Action Plan

• Implement action plan in all areas where applicable, not just where the event occurred

• Decide how to measure the effectiveness of the action…

• The selected measure must provide data that will truly assess the action’s effectiveness
Step Five: Measuring The Action

• Assign someone to be accountable for measuring effectiveness of change and reporting results
  – To quality council, safety committee
  – To medical staff
  – To the board

• Keep a log of your action plans
Step Five: Tracking Measures

• Implement, monitor and adjust as necessary
  Consider “secret shoppers”

• If periodic measurements reveal that actions are not effective…reconvene the team

• As in any PDSA cycle, it may take a couple of tries to get the process improvement right…Do not give up until measurements and people agree that system source of error is minimized
Special Concerns for Small Hospitals

• Fewer staff to draw team from
  – Management must encourage & adjust staff to allow participation in RCA teams
  – Create an incentive system for participation
  – Ensure feedback / thank yous to participants

• Team members must be truly equal…titles are dropped at the door

• Maintain the firewall
Drop Your Title at the Door

• Open, learning environment must be created
• Symbolic—Place name badges in a bowl
• Administrator may kick off the process to show support and then leave initial meetings; re-engage during action planning
• Facilitator can ask those who blame to leave even if that means the administrator is asked to leave
Firewall Solutions

- Assume system failure NOT individual fault
- If evidence points to an intentional unsafe act, stop RCA and refer for disciplinary action
- Those involved in discipline DO NOT facilitate RCA
- Team is truly interdisciplinary & diverse
- Train multiple people to facilitate RCA
- Consider external facilitator for sensitive events
Consider Different Time Frames for Implementation

- Individual interviews or group debriefing
- Multiple sessions or single session to identify root causes
- Availability of skilled facilitator
Individual or Group Debriefing?

- **Individual Interviews**
  - Internal facilitator has time, skill to conduct multiple individual interviews, & lack of bias
  - Organizational history of success, maturity with RCA process

- **Group Debriefing**
  - Need for external facilitator
  - Need to build organizational understanding & success with RCA process
  - Need to create RCA champions
Number of Causal Meetings

- Multiple meetings
  - Complex process
  - Multiple people involved in the event
  - Staff available for multiple one hour meetings
  - Internal skilled facilitator available

- Single meeting
  - Difficult for staff to meet multiple times
  - Staff available for one 3-hour meeting
  - Need for external facilitator
  - First meeting debriefs & identifies topics for action plans
Symptoms of Inadequate RCA

- Staff quit during/after an RCA
- Staff associate RCA with assigning individual blame- breach of firewall
- Action plans stall
Where to Seek Help??

• Goal…peer review and mentoring for RCA process in CAHs

• List of peer mentors

• Resources from VA
  http://www.va.gov/NCPS/rca.html

• Contact us (last page of handout)
Future Work: Teamwork Training

• Assertiveness Training

http://video.google.com/videoplay?docid=1882664901133929840
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