Root Cause Analysis
*A Necessary Evil?*

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HA Convention
8th May 2012
"To address this mistake we need to utilise our thorough system of root cause analysis. I will begin, if I may, by pointing out that it’s not my fault"
Root Cause Analysis (RCA)

• The use of RCA as an organization learning tool
  – first deployed by Veteran Affairs Hospitals in US in 1990s
  – then it has been adopted by National Patient Safety Agency in UK & Canada
  – Hong Kong jumped on the bandwagon since 2003
  – Up to 2010, VA had conducted over 10,000 RCAs & Joint Commission over 4,000 RCAs
What is RCA?

• Defined as an analytic method that is able to articulate “the most basic cause that can be reasonably identified and that management has control to fix

  Livingstone et al, 2001

• RCA enables clinicians to investigate serious incidents to identify the underlying causes and to guide solutions to address safety system failures

  State Government of Victoria, Australia, 2006
Four Major Attributes of RCA

- Thoroughness
- Fairness
- Efficiency
- Independence

State Government of Victoria, Australia
• It displaces attention from individual’s actions
• Focus on system and recurrent practices
• It challenges staff to confront the underlying principles of an incident with the objective to engage in “double loop” learning (Argyris, 1999)
Fundamental Issues

• Is the Healthcare industry the same as the other “High Risk” industries like the nuclear plant industry or aviation industry?
• Can the RCA process be used as a learning tool as well as governance tool?
Issues

- In a NPSA evaluation, wide variation of standards of RCA reports among different trusts.
- Examinations of RCAs from 7 practice regions in England suggested exemplary practice in 2, less rigor in 3, and “scant evidence of recognizable features of RCAs” in 2 (Wallace LM, 2006).
- Not all RCA participants were aware of whether outcomes were implemented, or whether it impacted on patient safety.
- Identifying contributory factors is only the first step towards developing solutions.
Training Issues (1)

- In the NPSA evaluation, wide variation of standards of RCA reports among different trusts
- Unlikely that skilled practice can be achieved simply by attendance at a 2-3 day workshop
- It may not be good enough just to teach about the RCA techniques
- May need to teach critical thinking so that the practitioner has the cognitive tools to address the complexity and novelty of new incidents

Wallace LM, 2006
Training Issues (2)

• Possible Solutions
  – Develop RCA template
  – Develop Master class
  – Adopt an accreditation system for RCA practitioners
  – Need to develop a system of training to ensure newcomers are trained
Involvement of Patients in RCA (1)

- 46% of NPSA RCA practitioners welcome service users as part of the RCA team (Braithwaite J et al, 2006)
- In a NPSA study, only 16% of patient surveyed were consulted on how the incidents could be prevented in future and only 20% were told what the hospital would do to prevent a similar occurrence (Wallace LM, 2006)
Involvement of Patients in RCA (2)

• Potential Benefits
  – Demonstrate the organization’s transparency regarding errors and its responsiveness to patients
  – Improves fact finding
  – Facilitates HCP own healing
  – Promotes forgiveness
  – Improves outcome of the RCA
  – Helps the organization re-establish trust with the patient

Grissinger M, 2011
Involvement of Patients in RCA (3)

- Potential Risks to Patient (& Family)
  - Harm through reliving the trauma
  - May exacerbate grieving and affect objectivity
  - Emotional impact on the patient or family may outweigh the benefit of participation

- Potential Risks to Organization
  - Legal risk
  - Staff discomfort

Grissinger M, 2011
RCA Recommendations Issues

• Quality of Recommendations
  – sometimes too broad and general
  – Some recommendations are of low-level controls or mitigating measures for risks identified, e.g. training or policy changes
  – Recommendations are made around symptoms for root causes rather than root causes themselves

• From recommendations to implementation
  – Sensible, achievable, practical?
## Classification of Recommendations (1)

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<th>Recommendation Category</th>
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Taitz J et al, 2010
## Classification of Recommendations (2)

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*Taitz J et al, 2010*
Signing Off on Recommendations

• Dilemma faced by senior management
  – How to reconcile change initiatives recommended with the realities of resources limitation and organization inertia?
  – To have the team revise unpalatable recommendations or outright reject them?
Incident Management Vs Complaint Management

• Complaints are often handled by staff other than those involved in risk management
• Complaints are seldom investigated using the RCA approach
• Often there are 2 parallel processes going on
• Clearly there is a disconnect between complaint management and incident management
Outcome Issues

- No studies in peer-reviewed literature on the effectiveness of RCA in reducing risk or improving safety
- No evaluations of cost-effectiveness of RCA compared with other tools in mitigating hazards

Wu AW, 2008
The HA Experience
HA System for Root Cause Analysis

- Hospitals set up the Panel (external members, lay person)

- Done for all Sentinel Events and other incidents / Near misses if feel necessary

- Not link to Accountability system
HA System for Root Cause Analysis

• All RCA for Sentinel Events reviewed by Corporate RCA panel

• Feedbacks back to the Hospital via the RCA hospital visits

• Follow up visits 6 months to ensure improvement measures are in place
The HA Experience

- Between Oct 2009 and Sept 2011, a total of 77 sentinel events were reported
- A total 216 recommendations were made
- In 2 RCA, there were no recommendations
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The HA Experience

- Weak: 60%
- Medium: 25%
- Strong: 15%
HA Vs NSW

HA

- Weak: 60%
- Medium: 25%
- Strong: 15%

NSW

- Weak: 88%
- Medium: 7%
- Strong: 5%
Some Examples of Dubious Recs

- Obstetric emergencies can occur anytime – staff should be vigilant at all times
- To take appropriate measures to prevent, detect and manage complications of high risk pregnancy
- To alert staff on possibility of breakage of fragile consumables
- Emphasize use of *appropriate* pull force while pulling Hickman catheter through a tunnel
Some Example of Good Recs

• To develop and implement a “Time-out” practice to verify correct patient and correct site for bedside invasive procedure

"But Seek First of All God's Kingdom..." - Matt. 6:33
How well are the recommendations being follow up?

- The Recommendation “Explore feasibility of outreach team providing support to mentally ill patient during home leave on weekend and public holidays” appears
  - Jan 2010 X 2
  - Feb 2010
  - May 2010
  - June 2010 X 2
  - Feb 2011
How well are the recommendations being follow up?

- The Recommendation “Design washroom to ensure that the partition are extended to the ceiling to minimize the risk of being used as supporting point for hanging” appeared
  - April 2011 X 2
  - June 2011
But We Do Have Success Stories..

• Task force on Suicide
  – Assessment tool ready
  – Environmental screening
Sharing & Learning
Issues Identified by HA Quality Managers

- Training
- Depth of Recommendations
- Difference between clusters in their approach to processing recommendations
- Signing off process
- Implementation of recommendations at corporate level
- Corporate Incident Management Policy
Other Issues

• Patient and family participation in RCA – Are we ready?
• Better communication of recommendations implementation
In Conclusion

- It is not a matter whether RCA is a necessary evil
- RCA is a useful tool and has contributed to the building of learning culture in HA
- However, in order that it won’t lose its credibility and becomes just a ritual, we need to improve on the issues raised
Thank You