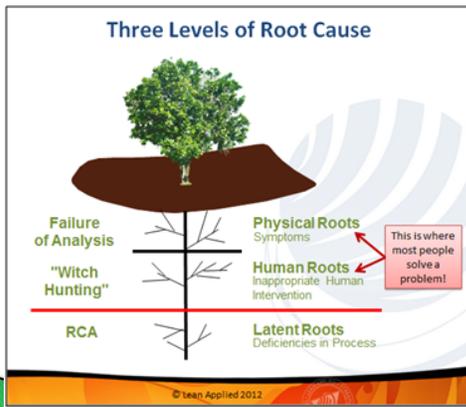


Swiss cheese and pressure ulcers

- ▶ Incomplete procedures
- ▶ Regulatory narrowness
- ▶ Mixed messages
- ▶ Production pressures
- ▶ Responsibility shifting
- ▶ Inadequate training
- ▶ Distractions
- ▶ Clumsy technology
- ▶ Deferred maintenance

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Three Levels of Root Cause



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Principles of RCAs

- ▶ Systematic review with both conclusions and root causes backed up with evidence
- ▶ A team is best
 - All causes should be identified
 - If more than one cause is found, solutions are more difficult to sustain
- ▶ A sequence of events is usually effective to understand relationships
- ▶ RCAs can be threatening to many cultures and environments
 - Non-punitive policy for problem identifiers needed

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Steps to RCAs

- ▶ 1. Define the problem or event factually
- ▶ 2. Gather data (chart and interview) as evidence
- ▶ 3. Create a time line of events
 - Ask "why?" with each piece of data and each step in time line
- ▶ 4. Identify all causes of problem
- ▶ 5. Identify all possible solutions for each cause
- ▶ 6. Monitor effectiveness of solutions

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A case as an example

- ▶ 64 year old female
- ▶ PMH: Diabetes on insulin, hypertension on meds, overweight
- ▶ Had a total knee done 3 days ago
- ▶ Arrived last evening wearing TEDs
- ▶ Purple heel found 2 days after admission



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Defining the Problem

- ▶ Is this wound a pressure ulcer?
 - Was it due to pressure?
 - Was it due to shear?
 - What is the role of poor perfusion?
- ▶ Is this a diabetic foot ulcer?

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Digging into the roots

- ▶ What was the condition of the skin on admission?
 - What happens to the RCA if the admission assessment:
 - is blank in skin assessment?
 - lists skin as intact?
- ▶ Were there any additional assessments?

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Digging into the roots

- ▶ What was admission risk score?
 - Was it accurate?
- ▶ Did a prevention plan stem from the score?
 - Was the heel elevated from the bed?

*However, we are only at the physical roots....The symptoms
What more information is needed?*

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Steps to RCAs

- ▶ 1. Define the problem or event factually
- ▶ 2. Gather data (chart and interview) as evidence
- ▶ 3. Create a time line of events
 - Ask "why?" with each piece of data and each step in time line
- ▶

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Defining the Problem

- ▶ Is this wound a pressure ulcer?
 - Was it due to pressure?
 - Was it due to shear?
 - What is the role of poor perfusion?
- ▶ Is this a diabetic foot ulcer?
 - Yes, this is a DTPI
 - Yes, it could be pressure from the bed or the TED. Could be shear from doing leg exercises in bed. Her risk could be high due to DM and HPT
 - No, DFU occur on walking surfaces of the foot

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Determining the timing of the ulcer development

- ▶ Stage at time of initial discovery
 - Stage I --- likely began in last 12-24 hours
 - DTI --- purple tissue without epidermal loss likely began 48 hours ago
 - Important because
 - you might not have had this patient 48 hours ago
 - Turning may have been impossible
 - OR cases
 - Stage II --- likely began in last 24 hours
 - Stage III-IV --- began at least 72 hours ago

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Consider the location of the ulcer



Digging into the roots

- ▶ What was the condition of the skin on admission?
 - What happens to the RCA if the admission assessment:
 - is blank in skin assessment?
 - lists skin as intact?
- ▶ Were there any additional assessments?

Intact, it is not possible to determine if the TEDs were removed - Why?

No assessments show DTI

Did the patient c/o pain in her heel?

Staff thought that wound nurse would examine the skin

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Digging into the roots

- ▶ What was admission risk score?
 - Was it accurate?
- ▶ Did a prevention plan stem from the score?
 - Was the heel elevated from the bed?
 - Were boots used?

▶ *Braden*

- *4,4,3,3,4,3 = 21*
- *Why wasn't the leg immobility and DM captured?*

▶ *No, none was needed per Braden score*

▶ *Boots were still in the bag from hospital*

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What other "why's" do we need?

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Continuing the analysis

- ▶ 4. Identify all causes of problem
 - ▶ Was this ulcer POA? Why did no one see it?
 - ▶ Why did the TEDs stay on?
 - ▶ Why did the boot not get put on?
 - ▶ Was this ulcer less severe upon admission?
 - ▶ What did the hospital transfer form say about the heel?

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Continuing the analysis

- ▶ 5. Identify all possible solutions for each cause
 - ▶ Admission nurse tried to remove TEDs but resident c/o pain in her knee
 - ▶ Aide did not know what the heel boot was for and she did not have time to ask because she was trying to get other residents ready for bed
 - ▶ Nurses do not know how serious DTPI can become

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Closing the Loop

- ▶ 6. Monitor effectiveness of solutions
 - ▶ Skin assessment of the heel reviewed,
 - Mirrors placed on med carts to help "see" the heel
 - ▶ Information on DTPI provided to staff
 - ▶ In-services developed on how to don and doff TEDs and use heel boots

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Case 2

- ▶ 55 year old female
- ▶ MS long-standing
- ▶ Ambulates with w/c
 - Uses slide board
- ▶ This is the appearance of her buttocks on admission



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Defining the Problem

- ▶ Is this wound a pressure ulcer?
 - Was it due to pressure?
 - Was it due to shear?
 - Was it due to friction?

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Defining the Problem

- ▶ Is this wound a pressure injury/ulcer?
 - Was it due to pressure?
 - Was it due to shear?
 - Was it due to friction?
- ▶ *No, this is not a pressure injury*
- ▶ This wound is from chronic friction

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While it was not an incident ulcer....can it be closed?

- ▶ Will require that friction be reduced
 - Check w/c cushion
 - Needs to be high immersion
 - Use clothing to reduce friction
 - Open areas will need treatment

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Case 3

- ▶ How many conditions are present?
- ▶ Is there
 - PI (DTI)
 - IAD
 - Candida



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RCAs continued

- ▶ If due to microclimate...
- ▶ Was the skin kept clean and dry?
 - Was incontinent urine and stool quickly removed?
 - Was the method of skin cleansing nonabrasive?
 - Was the skin protected against next exposure?
 - Was the skin moisturized?
 - Was an incontinent brief removed for several hours each day?
 - Was a low air loss or microclimate surface used?

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Case 4

- ▶ 88 year old female
- ▶ Advanced dementia, PVD
 - Legs are cool, pulses difficult to palpate, nails thick
- ▶ Doing our RCA..
 - Are these wounds PI/PU?
 - What do you need to know?



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RCAs continued

- ▶ If due to protein calorie malnutrition
 - Was the patient hydrated and fed at the dietician's recommendations?
 - Were supplements consumed?
 - Was swallowing addressed?
 - If not, was the deviation explained?
 - E.g., Advanced Directives

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Considering Nonadherence

- ▶ Pressure ulcer prevention must become a lifestyle for some patients
 - Find ways to help them adapt
- ▶ If nonadherence is present
 - Document it factually
 - Document what you told them and what they did
 - Be certain your awareness of nonadherence and the documentation appears in the record before the ulcer starts

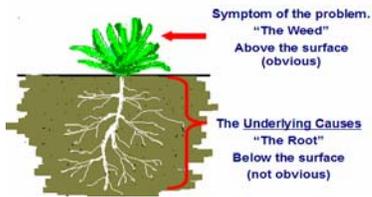
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Using RCA data

- ▶ Classify as quality improvement to reduce discovery
- ▶ Use the location and stage at discovery to find the timing of the ulcer
 - What was happening to patient at that time?
 - Was pressure ulcer prevention possible?
 - If yes, was it carried out? Documented?

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Root Cause Analysis



Much like fall assessments , Root cause analysis provides evidence on the system

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