

**mistake**

**Oh the Mistakes We've Made!**

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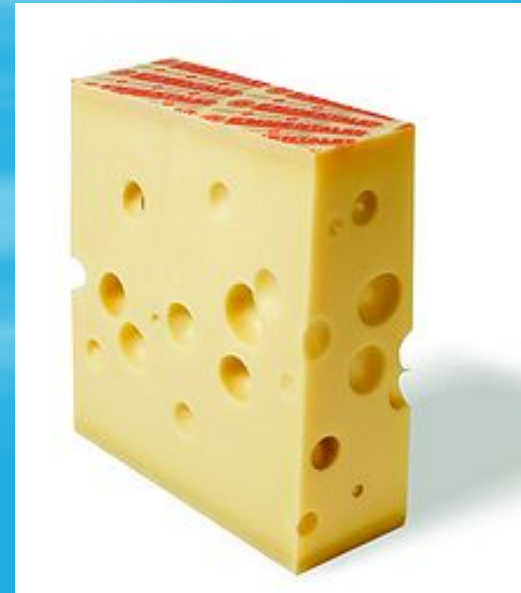
- Nationally Registered Paramedic-1998
- Registered Nurse-2003
- Colonial Heights Fire & EMS
- Chesterfield Fire & EMS
- Carilion Roanoke Memorial Hospital-  
Emergency Department
- Carilion Clinic Life-Guard
- CFRN-2010

# Objectives

- Discuss mistakes and the “Swiss Cheese” theory
- Review several cases of mistakes/incidents that could have been prevented
- Evaluate ways to improve and prevent mistakes from further happening

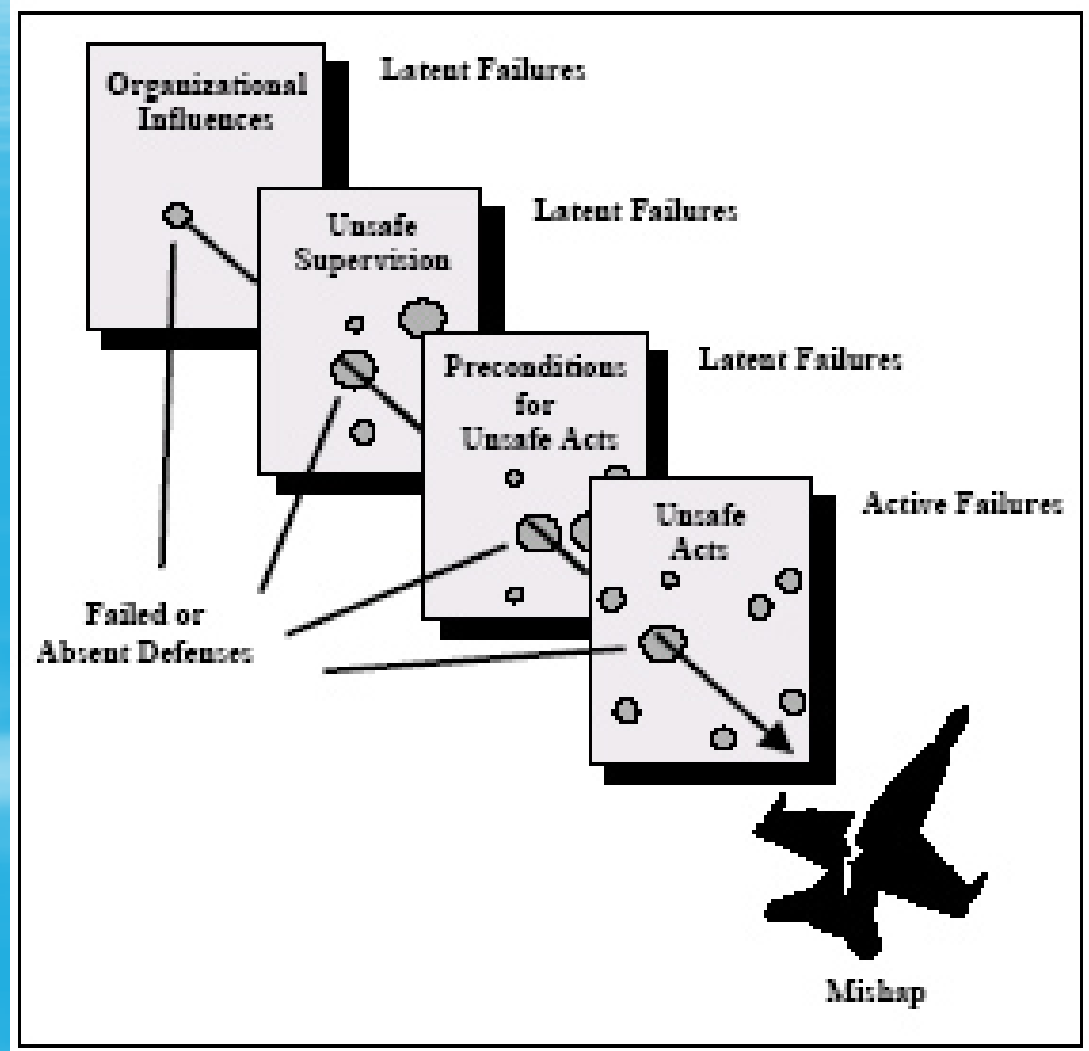
# Swiss Cheese Model

- James T. Reason, British Psychologist, University of Manchester in 1990.
- Healthcare, Aviation Safety, and Emergency Services.
- Divided into four levels of failure:
  - Organizational Influences
  - Unsafe Supervision
  - Preconditions for unsafe acts
  - Unsafe acts themselves





Swiss  
Cheese  
Model:  
“When all of  
the holes line  
up, it leads to  
a ‘trajectory  
of accident  
opportunity’ “



# Swiss Cheese Model

## Active Failures vs. Latent Failures

### Active

- Unsafe acts by people in direct contact w/ pt or system
- Mistakes, lapses, procedural violations

### Latent

- “resident pathogens”
- Designers, builders, policy writers, top level management
- Understaffing, equipment, fatigue, inexperience
- May lie dormant for days/months/years



# Organizational Influences

- Reduction in expenditures on training
- Decrease staffing/understaffing
- Old/poor functioning equipment



# Unsafe Supervision

- Inexperienced crew being placed together
- Adverse conditions

# Preconditions for unsafe acts

- Fatigued crew
- Poor communications

# Unsafe Acts themselves

- Cutting corners on a procedure
- Pushing the weather limits on a flight

# Time out!

- What is it? When do you call it?
- When you see the holes lining up!
- Overslept, late for a shift; scene flight on arrival
- Ground trip d/t weather
- Picked up in ROA
- Radio issues on the way back
- Forgot a piece of equipment
- Dealing with personal stressors
- Notice your partner is “off”



It's up to YOU to speak up!! Remember,  
how is the accident report going to  
read?

# Case #1, Sepsis

- 72 year old male, being transferred to higher level of care
- Admitted 2 days ago with pneumonia
- Became hypotensive
- Placed on pressor agents
- Worsened, intubated, placed on ventilator

# Case #1, Sepsis

- Renal Failure, dialysis
- Ischemic bowel, which led to bowel resection
- Remains hypotensive

# Case #1, Sepsis

- Ventilator
- Central Line
- 2 Peripheral IV's
- Sedated with Versed, 3mg/hour
- Levophed/Norepi: 24mcg/min, 307ml/hour
- Dopamine: 15mcg/kg/min



# Case #1, Sepsis

- Ask questions!
- Don't ignore that gut feeling
- Ask for help
- Check, recheck, then have someone else check
- There's nothing wrong with questioning someone with more experience or education i.e. Doctor, nurse, paramedic

# Air Medical Case Reviews

# Accidents

- 2008: Maryland State Police, Trooper 2
- 2005: Air Evac Lifeteam, Arkansas
- 2008: Air Angels, IL
- 2008: Flagstaff, AZ
- 2011: Air Methods, Missouri

**Organizational Influences**

**Unsafe Supervision**

**Preconditions for unsafe acts**

**Unsafe Acts themselves**



# So how do we improve??

- Situational Awareness
- Teamwork
- Communication
  - CUS: Concerned, Uncomfortable, Safety Issue
  - SBAR: Situation, Background, Assessment, Recommendation

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- Very ea
- Fixation
- Constar

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**NO CLUE**

On how to handle North Korea.  
Nor Iran, nor terrorism.  
Nor the economy.

# Teamwork

[Youtube.com](https://www.youtube.com)

# Communication

- Concerned
- Uncomfortable
- Safety concern
  
- Be Clear
- Listen Intently
- Think, before you speak
- Ask questions to better understand
- Re-iterate to make sure you understand



# SBAR

Dear Susan,

We are having issues with these helmets. With the hiring and addition of Life-Guard 12, we are short 10 helmets. We have been using the spare helmets as a back up, but even then, they are getting used more, beat up more, and I'm having to send them off for repair much more frequently.

Something else that we may consider doing is organizing them in some way, better than how they are now, so that we can effectively see what we have, what we need, and how we can keep helmets in service longer, without having to send them to the repair shop down in South Carolina. There is a class that they offer every now and then for helmet repairs. Is there the possibility of me being able to take that class? I'm not sure how much it costs, but if its something that you think would be beneficial, I will find out more information and get back with you. Regardless, we need to get these helmets ordered sooner than later. Just let me know what you need me to do and I will take care of it.

Kevin

# SBAR

**Situation:** We need to order 10 new helmets, and get a better handle on the current ones we utilize.

**Background:** Once we added a third base, we developed the need for new helmets. In addition, the helmets we do have are beginning to show signs of wear.

**Assessment:** We will be needing helmets for our new employees, as well as a system to better track our current helmets.

**Recommendation:** We order new helmets at \$1200 each. This is the cheapest quote from 3 different vendors. I have already developed a better way of tracking and maintaining our current helmets. I will continue with this and keep you updated as to our needs. There is a repair class they offer, at a cost of \$400. This would be beneficial for us, allowing me to service helmets in house with little downtime.

# Mistakes

“We cannot change the human condition, but we can change the condition under which the human works.”

-Reason, 1990

Avoid the Cheese...



Questions?