

Infection Prevention in Emergency Care
7 October 2012

Human Factors Breakout

Vicki R Lewis, PhD

Robert L Wears, MD, PhD

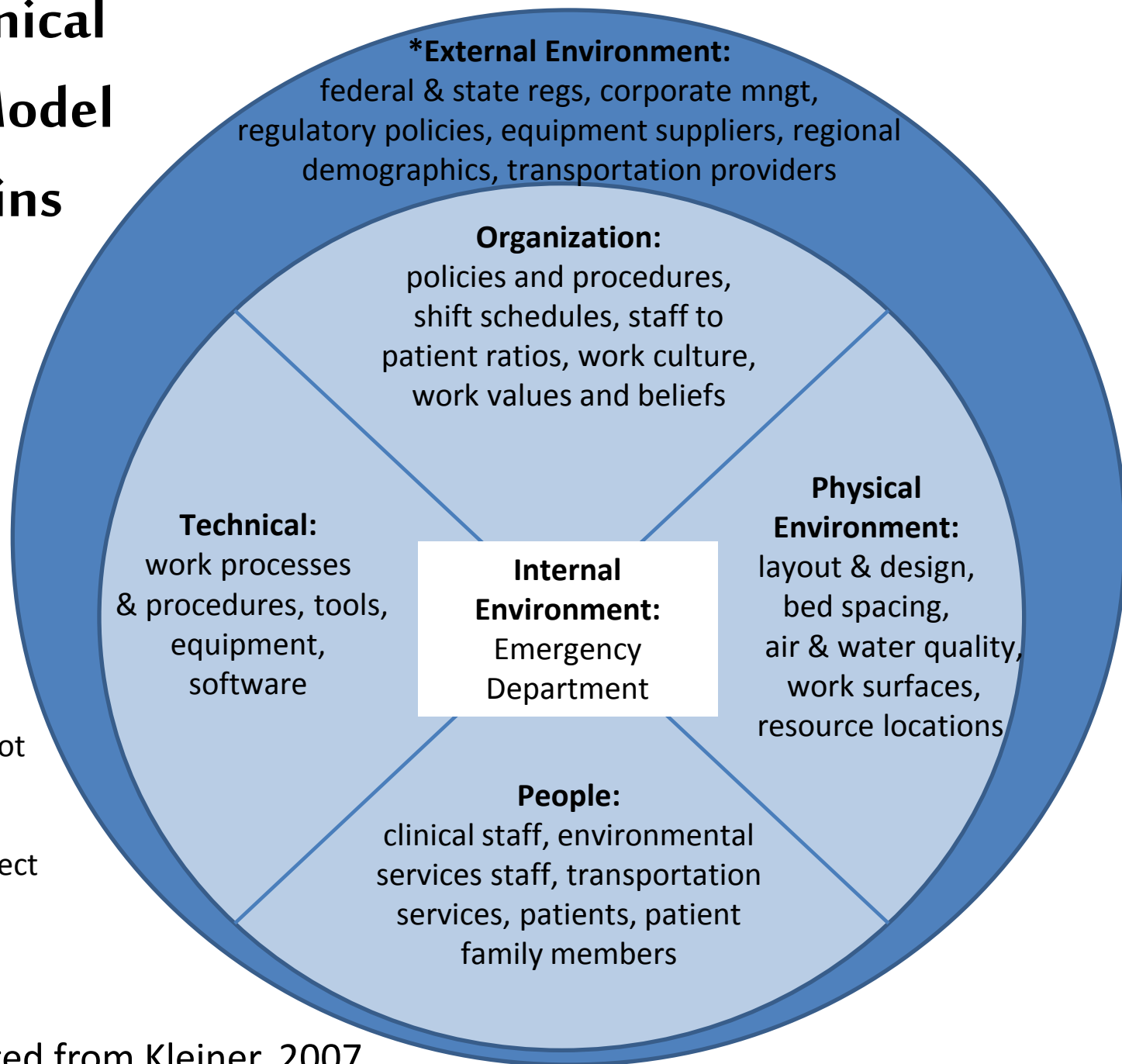
Julius CuongPham, MD, MPH

Objectives

1. Review the five domains of an HF analysis
2. Review the “Wears’ Ground Rules” for developing interventions
3. Consider “Best Practices” to prevent HAI in the ED.
4. Participants discuss the challenges and barriers of the interventions when tried in the ED
 - Provide an idea for how to address each barrier
5. Summarize and report back

Sociotechnical Systems Model

-5 domains



* By definition, we cannot fix problems in the External Environment. They are beyond our direct control. But we may influence them.

Ground Rule - 1

Avoid 'Learned Helplessness'

Don't bound out ideas because "they'd never do it".
Think from the perspective of being the benevolent
CEO with plenty of resources.

Ground Rule - 2

Principle of Local Rationality

People don't do things that don't make sense to them. Therefore, if we see them doing something 'wrong', we need to find out why it made sense.

Because if it makes sense to them now, it will make sense to someone else later.

Ground Rule - 3

Order of Decreasing Effectiveness

Selection & training (most common, least effective)

Administrative (rules, procedures) – limited effectiveness

Physical controls (device, interlocks, layout) – most effective

Ground Rule - 4

Everything is connected

You can't change only one thing

Sometimes to change one thing, you have to also
change many other things

Participant Generated

Barriers and Relevant Interventions

- Remember the ground rules.
- What has been tried at your facility?
- What has worked or not worked and why?
- How do you suggest overcoming the barriers?

Technical Factors

- All-in-one kits
- Attach checklist to kit
- Hand sanitizers inside and outside the room
 - A barrier is rooms divided by curtains and where to place the dispenser in that case.
 - Get rid of curtains
 - Use internal window blinds
 - Use easier to replace curtains
- Wearable hand sanitizers

Technical Factors

- Consider how HER/IT drives processes that may be counterproductive.
- Consistency of cleaning processes.
- Opportunity to invent new products
- Better equipment
 - BP cuffs
 - Pulse oximeter
 - Bedside table
 - Curtain Sleeves
 - Wheel chair

Physical Environment Factors

- Doctor and patient side of patient bed
 - Place sinks on doctor side of bed for easier access.
- Single patient rooms
- Avoid mirror-image rooms to increase efficiency
- One bathroom/room
- Automatic doors/sinks/towel dispensers
- Use mock-up of rooms before they are built to make sure the design layout will work.
- Smart placement of equipment.
 - Don't have towels dispense over sink.
- Material choices/design elements

Physical Environment Factors

- Mount isolation carts outside room as opposed to having movable carts that staff may not be able to find.

People Factors

- Protected time for PI initiatives
- Pizza parties for months without infections
- A roving trophy – healthy competition
- Hand sanitizer with patient
 - Better means to empower patients?
- Simulate the process to learn where breakdowns occur and opportunities to address breakdowns.
- Is there a barrier to cleaning consistency due to communications problems?

Organizational Factors

- Tangible evidence of organizational commitment.
- “Harnessing local wisdom”—asking front line worker what would make your day easier
- IP advocate with dedicated time for each unit
- Have IP staff person clean with ES staff to learn what’s involved
- Dashboards of HAI efforts broken down into specific tasks
- Official agenda of leadership meetings—includes updates of HAI activities
- Support method to provide immediate feedback.