Risk Perception and Hand Washing Practices in an Early Childhood Center

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The Why

• ECC vs at home:
  • 2-3x risk of infection
  • 18x the pathogens

• Rotavirus
  • 10 particles to infect
  • Costs $1 billion/year
  • 16-30% of ECC surfaces

• Cost of an ounce of prevention:
  • 1% of a pound of cure

• 32 million reasons
• Vulnerability
The How

- A (seemingly) simple solution
- HW vs hand sanitizers
  - HW removes
  - $10^2$-$10^3$ decrease
- Intervention for prevention
- Significant decreases in illness
  - 66-72% less diarrhea
  - 54% fewer colds
  - 17% fewer infections
The problem

• Compliance still low
• Situational factors?
• Perception?
• Need for more education?
• RTE food handling and ECC’s
• 35-42% compliance overall
The study

- Baby steps, fundamentals
- At an ECC
- 3 coders, 1 goal
- Guidelines
- 25 hours of observational data
- Random times throughout the day
- <1-5 years of age
The results

• 349 HW opportunities
• 14 events/hour
• 22% overall
• 30% caregivers
• 11% aides
• 4% parents
• No significant difference in compliance between age groups
• Issues of HW duration
• High soap usage
• High paper towel usage
• 6% washed as long as they should
• 17% turned off faucet w/paper towel
How does it compare?

• Before food handling:
  • Us: 36%
  • Zomer: 31%

• Before eating
  • Us: 13%
  • Zomer: 20%

• After contact w/ bodily fluids:
  • Us: 18%
  • Zomer: 25%

• Overall:
  • Us: 22%
  • Zomer: 42%
The Why

• Entering the classroom and parents

• The guidelines:
  • Caring for our Children
    • 12 different opportunities

• No hand sanitizer allowed as a sub in AR

• Time constraints:
  • 50 sec/wash
  • 12 min/hour needed
The perception

- Inherent
- “…when hands are physically dirty or feel sticky or when hands have been somewhere considered to be ‘emotionally dirty’”
- Waste cleanup, etc
- Them
- Pellegrino 2016

- Elective
- “an individual’s perception that handwashing may not need to be undertaken in a particular circumstance”
- Contact with objects
- Me
The Compliance

- Inherent (caregivers):
  - After cleaning: 30%
  - Before food prep: 36%
  - After food prep: 24%
  - Soap usage: 96%
  - Hand drying: 97%
  - Them

- Elective (caregivers):
  - Cell phone: 13%
  - Before eating: 13%
  - After eating: 0%
  - Lathering: 32%
  - Turned off faucet w/ paper towel: 17%
  - Me
Looking Ahead

• Exploring this relationship more in depth
• Assessing caregiver perceptions
• Understanding the “hierarchy of risk”
• Re-directing our efforts?
Shifts in Perspectives

• Different focus

• Cross-cultural solutions:
  • Nurturing good food safety behaviors
  • Protection vs panic
  • Phasing out fear
    • Habituation to it
  • Disgust
Tricks of the Trade

• Aglow with educational tools
  • Decrease in respiratory infections ECC
  • Increase in compliance hospital patients
  • Increase in compliance food industry workers

• Multisensory learning

• Extra info for extra learning
“The more elaborately we encode information at the moment of learning the stronger the memory”
Questions?