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The Power of Infection Prevention During Construction: Leveraging Your Credentials to Gain Clients

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Acronym/Alphabet Soup

Everybody's got theirs; here's mine for today

- AIA = American Institute of Architects
- ACHA= American College of Healthcare Architects
- **CDC = Center for Disease Control & Prevention**
- **CMS = Center for Medicare and Medicaid Services**
- **FGI = Facility Guideline Institute**
- ICC = International Code Council
- **ICRA = infection prevention/control risk assessment**
- PPE = personal protective equipment
- UA = University of Arizona

The Precautionary Principal

Taking corrective action without scientific evidence

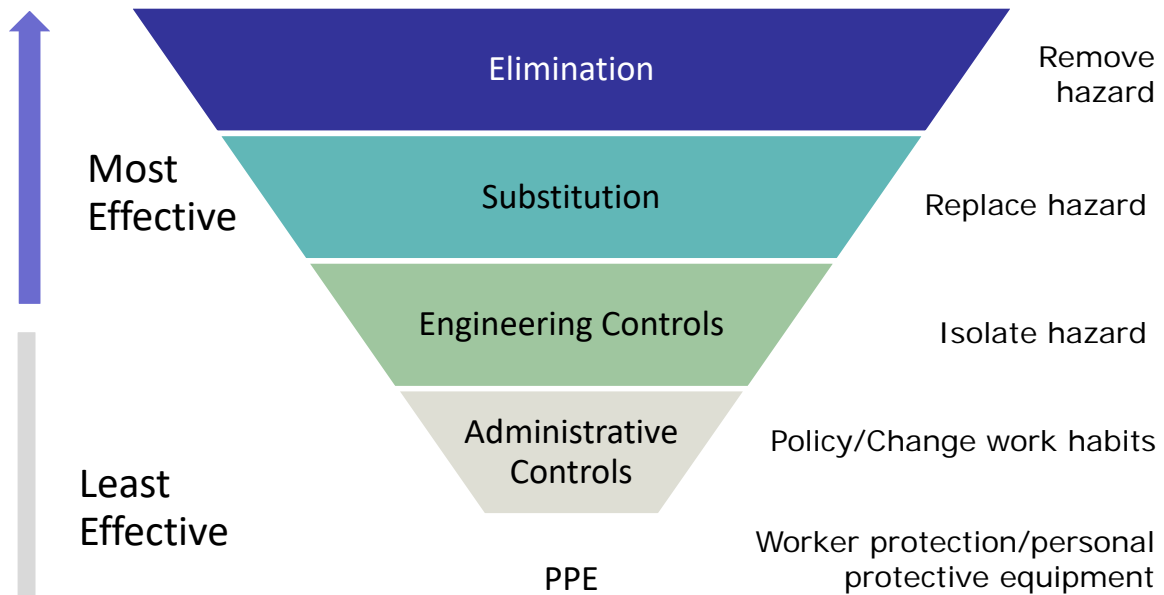
Serious risks should be avoided or mitigated when possible, even when risks are unlikely or uncertain.

Bartell (2010) Chapter 29 Risk Assessment, Environmental Health- Global to Local, Editor Frumkin, p1047



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Hierarchy of Controls

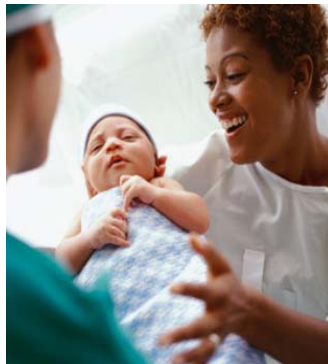


<https://www.cdc.gov/niosh/topics/hierarchy/default.html>

Does infection prevention / control matter to the client?



Case Study I



Case Study II



Case Study III

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Case Study I:

Acute Care Renovation of Patient Floor

- 450 bed hospital
- 2500 employees
- Leading regional healthcare system
- External construction debris shoot
- Heavy demolition over 3 month period
- Heliport on roof of adjacent building
- What happened?



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Case Study II

Labor and Delivery Unit

- Renovate and expand the existing unit
- Facility management lacked ICRA knowledge
- Owner insisted on maintaining existing operations while under construction
- Owner insisted on design drawings not showing temporary units or phased shut downs for HVAC or plumbing
- State agency for construction rejected the drawings
- What happened?



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Case Study III

28 bed Intensive Care Unit

- Expansion for 28 bed ICU floor on top of a 48 acute care nursing unit
- Maintain operations of bed unit below construction
- Two story courtyard to be filled in
- Detailed preliminary phasing drawings
- Plastic barricades used extensively around courtyard and other areas to isolate dust
- Negative pressure HEPA filtration units
- All plumbing lines on the lower level had to be cut, repositioned, and reconnected with multiple shut-downs
- 2 room shut downs (pairs) to minimize disruptions
- What Happened?

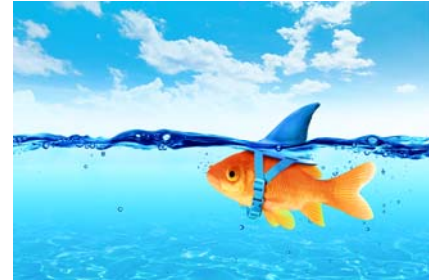


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Water Safety Plans

The Latest and Greatest

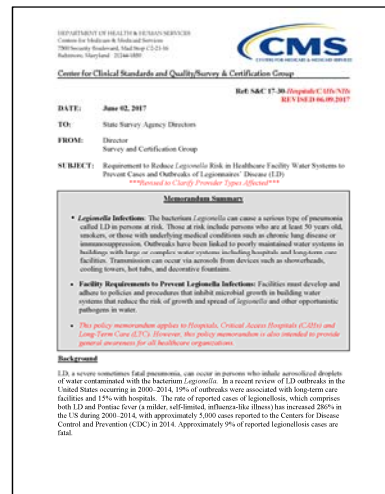
- “Profile of water safety” in facility management is on the rise
- Sustainability includes:
 - Water safety
 - Water efficiency
- ICRA for Water Safety
 - Impacts WMPs
 - Impacts to Construction procedures
 - Impacts to commissioning



Legionella Prevention and Response

Recent Regulations

- Prevent waterborne disease with regulations CMS Memo – June 9, 2017 – mandatory compliance with WMPs
- ASHRAE 188 committee voted to send the 2015 standard to ICC, FGI and other code governing organizations
- CDC On-Line training grant



UA Online Legionella Prevention & Response



esrac.arizona.edu/legionella

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What made the difference?

Construction Musts for Infection Control

- Infection Prevention/Control is **everyone's responsibility**
- High levels of **transparent** communication
- Bringing specific trades in **early and often** to examine practical implications of renovation for the specific project
- **Know when to walk away**; ignoring the potential of obvious injury, illness, or death(s) of patients, healthcare personnel, or construction workers are not worth ANY level of compensation



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Marketing to the Client

Getting the correct message across

- **Use terms or acronyms they understand**
- **Marketing materials** – re-shape to reflect infection prevention/control
- **“Walk you talk”**.....get training to protect your work force and to speak fluidly to your clients about protecting them.
- **“Put your Oxygen mask on first”**.....you cannot protect others unless you protect yourself first.
- **Value Added Actions**.....then do it.
- **General Conditions of the Contract**– talk to architects, owners, and engineering firms about specifying ASSE International 12000 training for complex renovation and expansion healthcare jobs



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Precautionary Principal & Public Health



Upstream = Prevention

Midstream = Maintenance / Protection

Downstream = After the accident occurs

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