ROLE OF ENGINEERING CONTROLS FOR COVID-19

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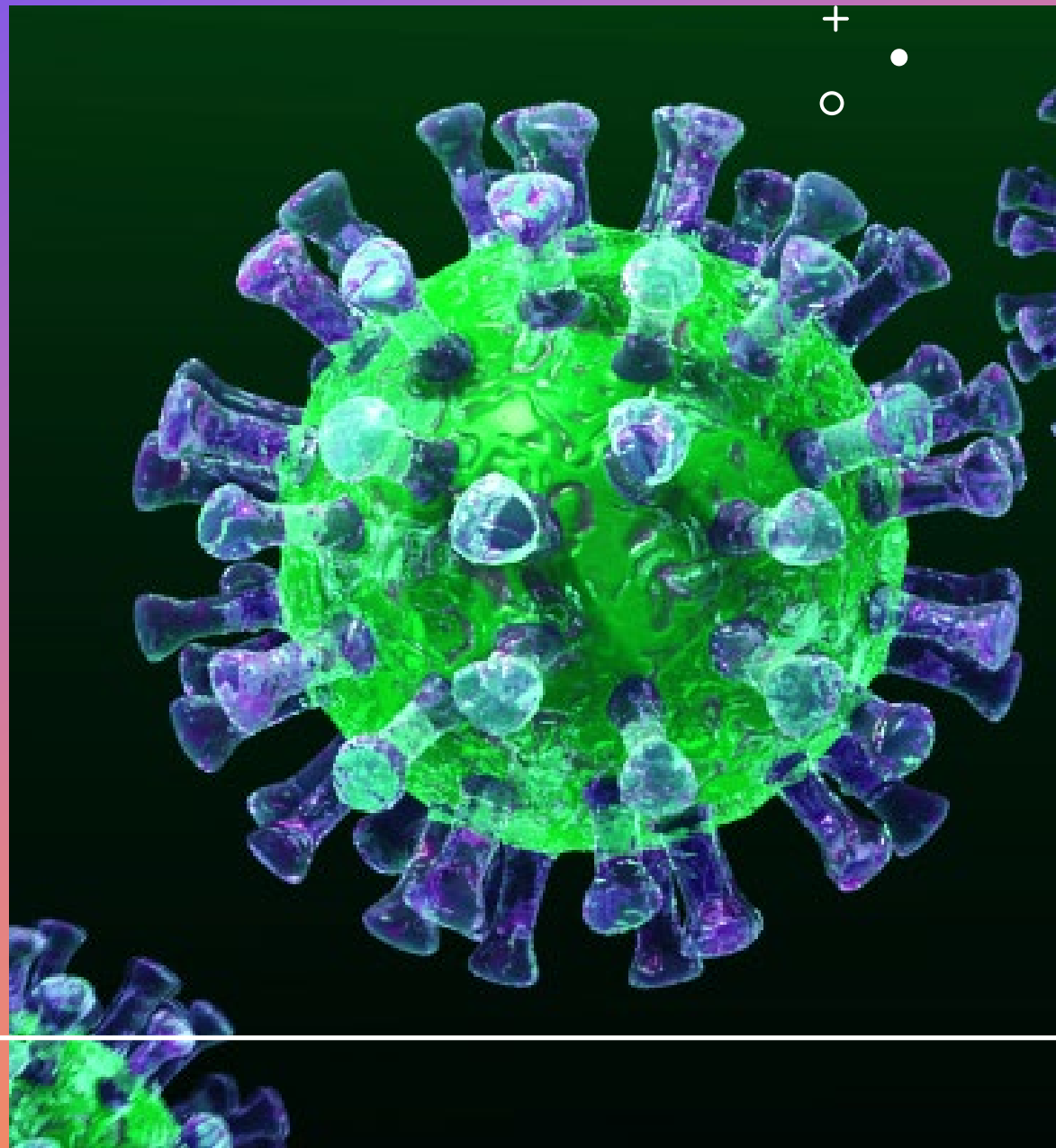

Control Methods Should Follow a Hierarchy

BEST

WORST

FIRST - Source Controls

- elimination (screening), isolation, job or workplace re-design (limit number of people or contacts or length of contacts)

NEXT - Pathway Controls

- local exhaust ventilation, increase physical distance, barriers

LAST-Receptor Controls

- personal protective equipment

Focus on Lowering the Exposure

Reduce exposure by selecting a combination of control strategies from the source and pathway categories to eliminate or reduce reliance on PPE

Band	Control Options
A	Source – Do these first! Pathway – May be prudent Receptor – Not necessary
B	Source – Do these first! May require multiple options Pathway – Do these next & may require multiple options Receptor – Only if source and pathway controls are not effective
C	Source – Do these first! May require multiple options Pathway – Do these next & may require multiple options Receptor - May be prudent

Sietsema, Margaret, et al. "A control banding framework for protecting the US workforce from aerosol transmissible infectious disease outbreaks with high public health consequences." *Health security* 17.2 (2019): 124-132.

Things We Need to Understand…

- Role of dilution and local exhaust ventilation in different workplace and public settings
- Role of other engineering controls - UV-C irradiation, physical distancing…
- Role of the built environment – new construction, retrofitting…
- Assessment methods – smoke tubes, fog machines, particle sampling instruments, etc.
- Can we model the impact of controls on SARS-CoV-2 aerosol exposures?

Speakers

- Duane Hammond, MS, PE, NIOSH Division of Field Studies and Engineering
- Jonathan Bach, PE, CIH, CSP, NIOSH Division of Science Integration
- Andrew Harte, AIA, A359 Partners in Architecture
- Brian Sherlock, Amalgamated Transit Union
- Andrew Comai, MS, United Auto Workers