

Germ Warfare:

An Innovative and Novel Approach
to Assess a Non-manual Room
Disinfection Technology

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Disclosure

- Neither of the authors has an actual or potential conflict of interest in relation to this topic or presentation.

Background

Alberta Health Services

- Vision
 - Healthy Albertans. Healthy Communities. Together.
- Mission
 - To provide a patient-focused, quality health system that is accessible and sustainable for all Albertans.

Infection Prevention and Control

- IPC Strategy
 - Develop progressive partnerships with key stakeholders to support their success in improving IPC practices across the province.

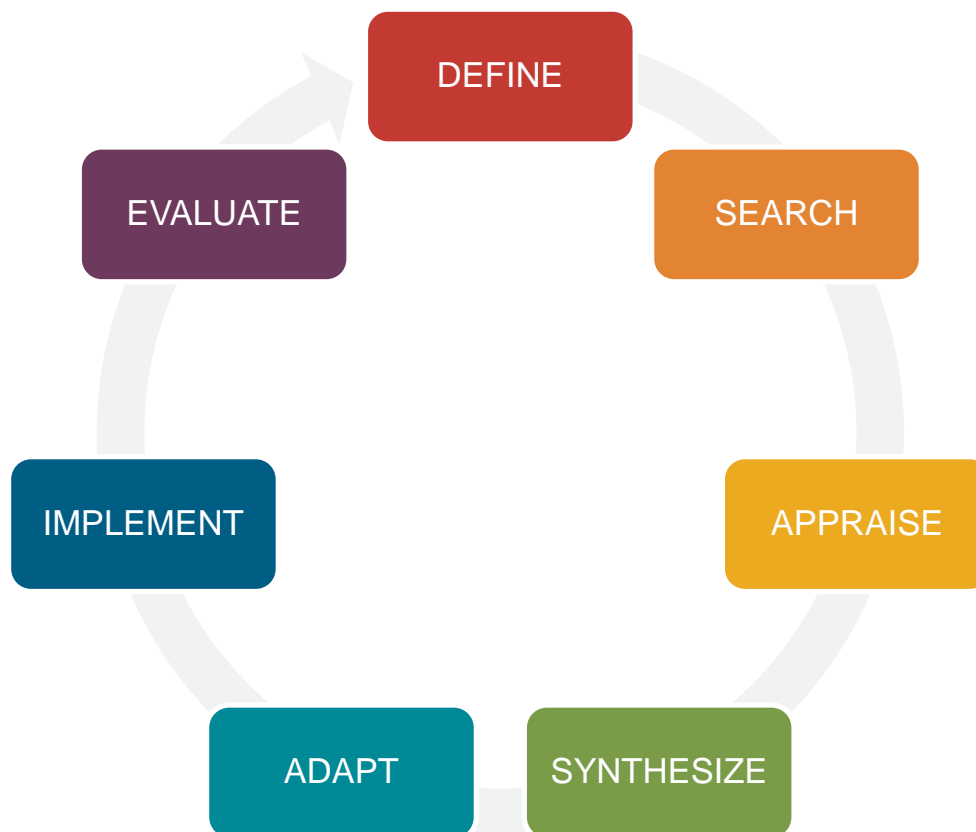
Introduction

- Surface contamination as a source of transmission of pathogens and healthcare-associated infections (CADTH, 2015)
- Subsequent occupancy of a room previously occupied by a patient colonized or infected increases the risk of acquiring pathogens by a factor of two or more (CADTH, 2015).
- A measure to minimize this risk is perform enhanced isolation cleaning and disinfection following the discharge of colonized or infected patients (CADTH, 2015).

Teams

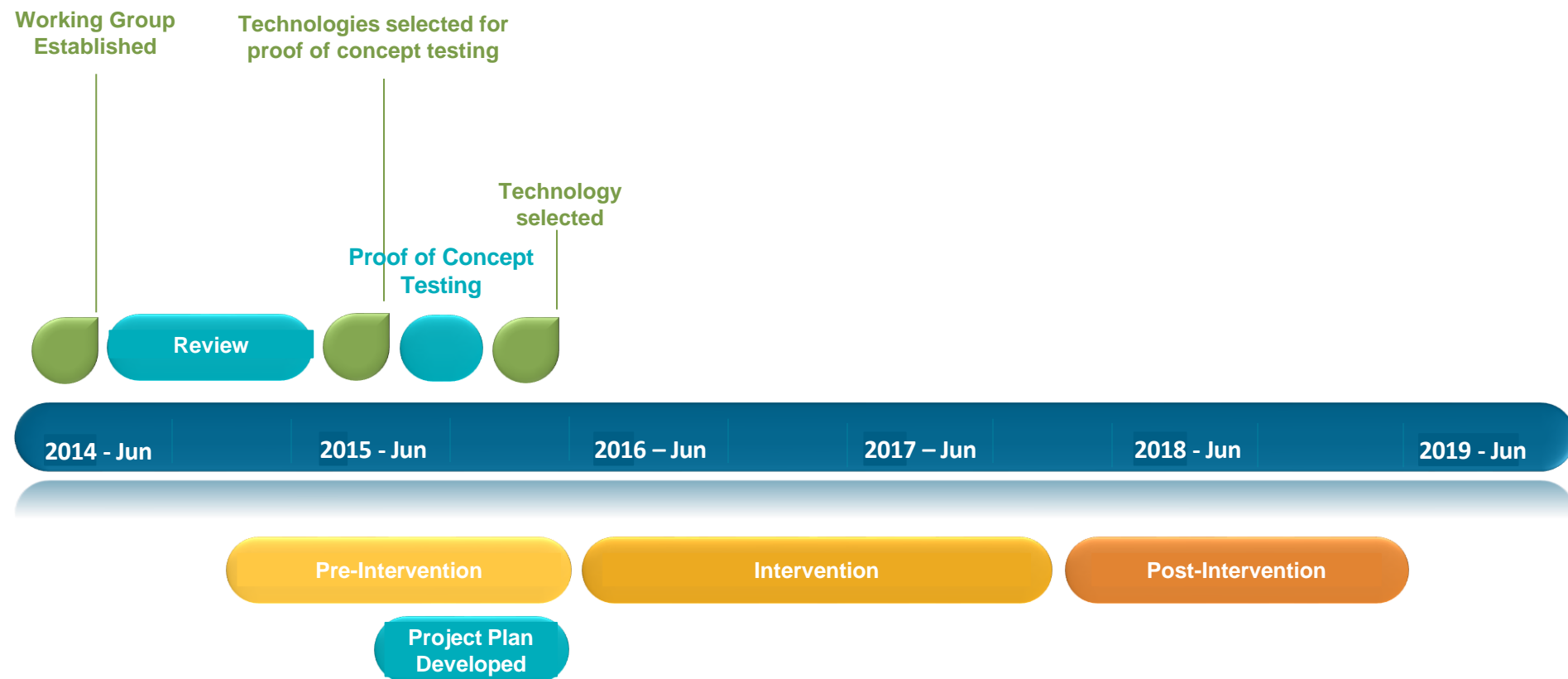
- Contract Procurement & Supply Management
- Facilities Maintenance & Engineering
- Health Technology Assessment & Innovation
- Infection Prevention & Control
- Linen & Environmental Services
- Site - Foothills Medical Centre – Unit-37 and Unit-57
- Site - Royal Alexandra Hospital – Unit-41 and Unit-43
- Site - University of Alberta Hospital – Unit-3C2 and Unit-3D4
- Workplace Health & Safety

Evidence-informed Public Health Process



Adapted from National Collaborating Centre for Methods and Tools (2019) Evidence-informed Public Health

Methodology



Intervention

- Used as an enhancement to current cleaning practices and protocols.
- Application, when feasible,
 - Isolation discharge or transfer out of private patient rooms.
 - Semi-private or ward rooms.
 - Identified medical equipment could be included in rooms.
 - Washrooms in semi-private or ward rooms at least once per week.

Clinical effectiveness

Primary outcome

- Hospital-acquired *Clostridioides difficile* infection rates

Secondary outcomes

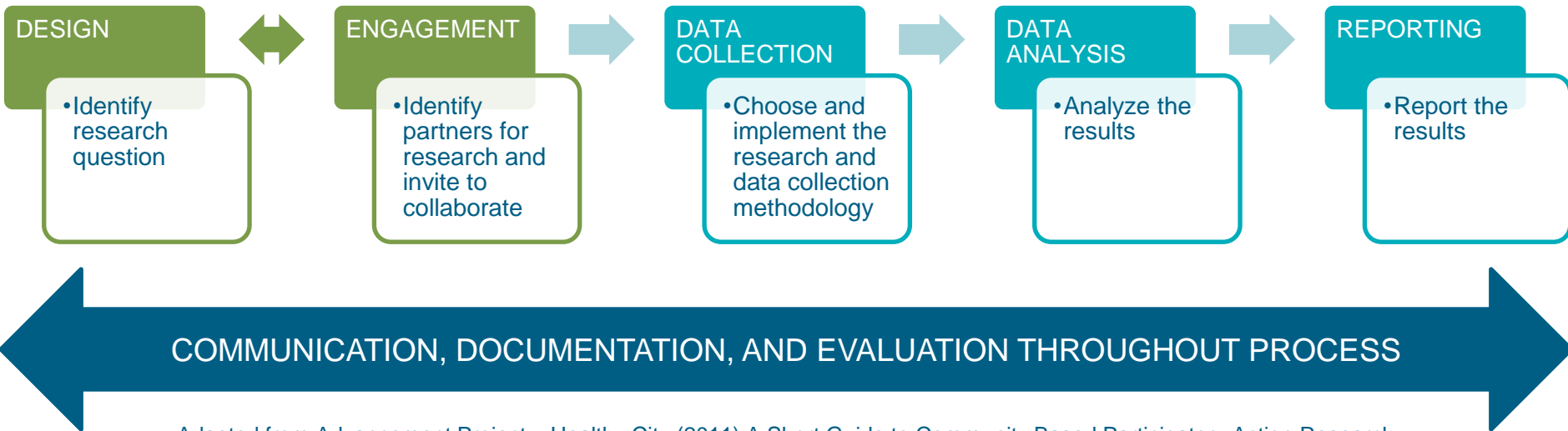
- Hospital-acquired Methicillin resistant *Staphylococcus aureus* rates
- Hospital-acquired gram negative organism rates
- Hospital-acquired bloodstream infection rates
- Hand hygiene compliance
- Antibiotic utilization

Operational feasibility

Primary outcomes

- Cleaning turnaround time
- Time to operate technology
- Document interruptions in the use of technology
- Qualitative evaluation of the use of technology

Participatory Research Framework



Adapted from Advancement Project – Healthy City (2011) A Short Guide to Community Based Participatory Action Research

Results

- Enhancing communication, training frontline staff, and improving patient flow and workflow processes.
 - Applicability and buy-in.
 - Importance of ongoing meetings.
 - Importance of defined outcomes and processes and the use of existing data .
 - Understanding the benefits and challenges of implementing the technology.
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Conclusion

- The use of a collaborative, systematic approach was essential in exploring the use of a technology for implementation within a complex healthcare system.

Next steps

- Complete a final analysis on the clinical effectiveness and operational feasibility of the technology after the completion of the post-intervention period.
- Continue to share the results with the teams.
- Submit a manuscript for publication.

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Question?

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