

LEAN – OUTBREAK PROCESS IMPROVEMENT

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OBJECTIVES

- 1. Recognize elements of LEAN methodology as a strategy for process improvement
- 2. Identify the purpose of value stream mapping
- 3. Acknowledge expected outcomes of quality improvement initiatives
- 4. Recognize factors that contribute to creating a culture of quality improvement
- 5. Encourage the initiation of continuous quality improvement project



QI PUBLIC HEALTH



Achieving quality improvement in public health



How can continuous improvement help to improve operations and achieve transformational change in Public Health?

This webinar provides an overview of what continuous quality improvement methodology is and how it can be used in public health settings to realize strategic and operational goals. The webinar will feature examples of quality improvement initiatives from local public health units across Ontario

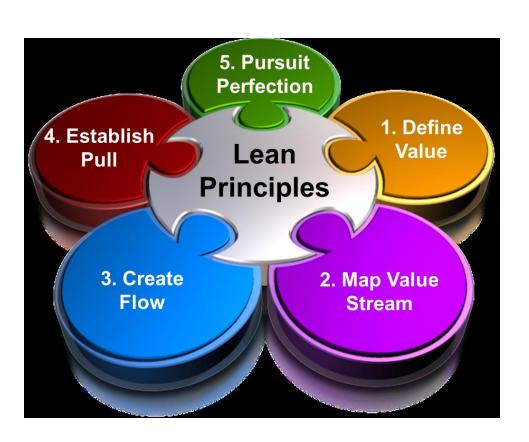


WHAT IS LEAN?

- A management philosophy and methodology for quality improvement
- Focused on value from the customer's perspective
- Better utilization of existing resources
- Continuous pursuit of the perfect process through waste elimination
- Empowerment of employees and key stakeholders in the contribution of making changes



PRINCIPLES OF LEAN



- Delivering service from a client perspective
- Streamlining processes to minimize duplication
- Reduce waste
- Ensure activities add value
- Including front line staff and clients as part of the process



MAXIMIZING VALUE IS KEY

The objective is to increase the share of value add activities by eliminating waste and reducing NVA

NNVA **NNVA NVA** Necessary non • Non Value Add value add Waste • Work that does not add value NVA VA VA • Value Add • Value creation activities that directly add value to the service



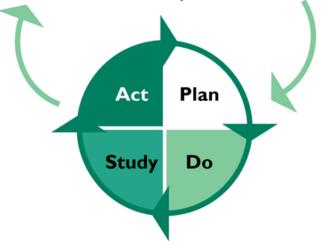
QUALITY IMPROVEMENT

Model for Improvement

What are we trying to accomplish?

How will we know that a change is an improvement?

What changes can we make that will result in improvement?



Model courtesy of Associates in Process Improvement





RESULTS

OUTCOMES

MEASURING SUCCESS

- Measurable outcomes
- Indicators
- Efficiency, effectiveness, performance, accountability

Improve client outcomes & the health of the community



ANSWERS

SOLUTIONS

CONCLUSIONS

VALUE STREAM MAPPING

- Visual planning tool
- Provides blue print enabling LEAN transformation
- Follows service from beginning to end
- Visualization of barriers/road blocks

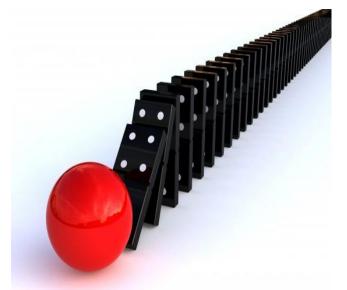
Current State Future State



EXAMPLES OF VSM



CATALYST FOR CHANGE







- Organizational change in response to OB
- GEMBA
- Not meeting ministry expectations- iPHIS data entry within 1 day and closed with 15
- Duplication and redundancy's
- Notification system labour intensive
- Inaccuracies with line lists & data completion
- Results of feedback survey

CALL TO ACTION

April 2017- WE- IPAC Committee meeting

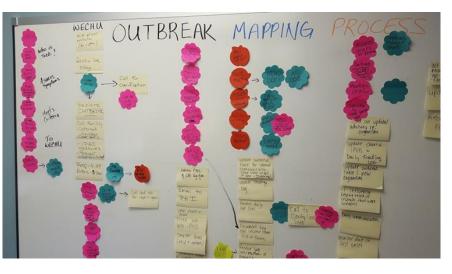




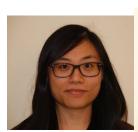
OB WORKING GROUP

First Meeting- May 10th

- LEAN presentation
- Value stream mapping exercise
- Parking lot













OB WORKING GROUP

- Michelle Campagnoni-PHN IDP- WECHU
- Rachael Oliver- PHN- IDP-WECHU
- Jenny Tan- PHI- WECHU
- Stefano Di Blasio- PHI- WECHU
- Dino Frasto- PHI- WECHU
- Darlene Rojek- ICP- IPAC West
- Olivia Neilipovitz- Village of Aspen Lake- LTCH
- Carol Annett/Bruna Llancari Huron Lodge- LTCH
- Mercedes Phalavong- Amica- Rest/Retirement home
- Nahed Boulbol- Chateau Park- LTCH
- Newest member- Michael Murphy- Riverside Place-



TIMELINES

Group met every 3 weeks

Review and revise all components of OB

October Outbreak 2.0 conference

Go LIVE

November 1st



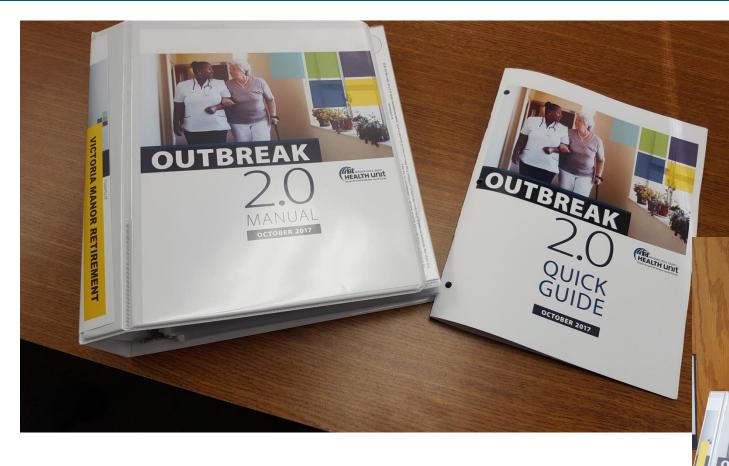
THE RESULTS

- Line lists- focus on case def'n
- Initial facility report
- Influenza documentation
- Summary report
- Anonymous electronic post outbreak survey
- OB Notification- email alert, web based table
- OB Manuals & resources
- Visitor pamphlet



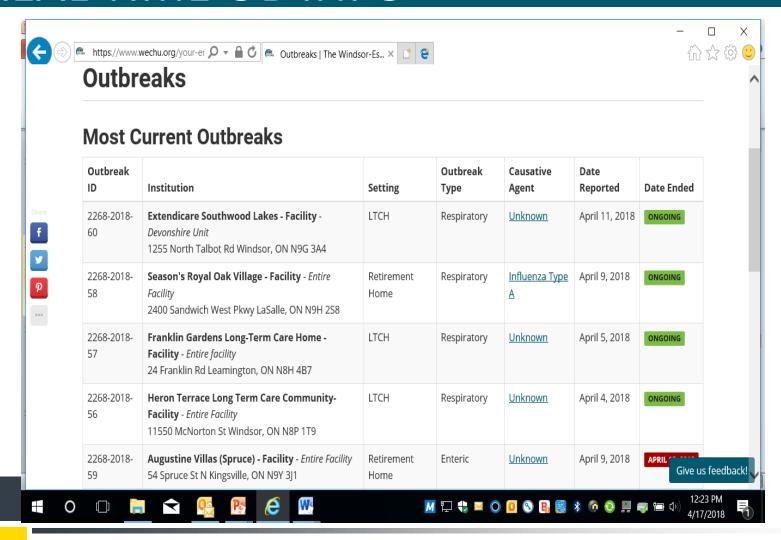


NEW MANUAL AND QUICK GUIDE





REAL TIME OB INFO





COMMUNCATING & SUSTAINING CHANGE

- Free Conference community partners
- Branded the Conference Outbreak 2.0
- Interactive case scenarios- Kahoot it



Communication throughout OB season





INFLUENZA UPDATE & AVAILABILITY OF QUADRIVALENT VACCINE FOR UNVACCINATED STAFF

The influenza season is well underway in Windsor-Essex county. To date, there have been a high number of laboratory-confirmed cases, hospitalizations and facility outbreaks reported. The number and proportion of Influenza B cases is higher than expected, with influenza B identified in approximately two-thirds of the reported cases and outbreaks.

The Windsor-Essex County Health Unit is working closely with acute partners to actively monitor influenza activity and support facilities in outbreak. Since September 1st, 2017, there have been:

- 63 influenza A and 105 influenza B lab-confirmed cases. Among these cases, there have been over 98 hospitalizations and 8 flu-related deaths.
- 7 influenza A outbreaks, 13 influenza B outbreaks and 2 outbreaks that were both influenza A & B. Please refer to our weekly FLU BULLETIN for the most current local statistics on the website @ this <u>link</u>

IMPORTANT: The Windsor-Essex County Health Unit is now recommending that unvaccinated staff at LTC homes and Retirement homes receive the quadrivalent influenza measure. The QIV, which provides protection against two strains of influenza B, is available free of charge to unvaccinated staff members. There are currently no new immunization recommendations regarding residents.

A reminder to all facilities to be vigilant with surveillance of resident signs and symptoms and to contact the Windsor-Essex County Health Unit with any suspect activity by sending in a line list as soon as symptoms are detected.





BIWEEKLY BULLETIN

NOROVIRUS

Norovirus is the leading cause of gastroenteritis outbreaks in Long-term care homes & retirement/rest home and affects both residents and staff members, especially during the winter months when incidence rates are high. About 300-400 outbreaks of norovirus are reported to the National Enteric Surveillance Program at the Public Health Agency of Canada each year. Only the common cold occurs more often. 1

Examples of how an outbreak starts:

- An infected person with unclean hands or gloves contaminating commonly-touched surfaces
- An infected staff or family member with unclean hands or gloves providing care to residents
- Inadequate cleanup of body fluids (diarrhea or vomit) with subsequent contamination of the environment
- Spreading of virus, through droplets sprayed in the air (either vomit or uncontrolled diarrhea)
- The sharing of resident equipment, such as a commode, that is not properly cleaned and disinfected between use
- An infected food handler contaminating resident's food

Infected individuals typically shed millions of viral particles, however only a few of these particles are needed to cause infection. Norovirus is able to survive for days on a variety of surfaces making it extremely difficult to manage and control the spread of infection.

An outbreak cannot be declared over until the facility has gone 5 days without new symptom onset.

INFECTION PREVENTION AND CONTROL IS KEY

- Hand hygiene is the single most important practice in preventing the transmission of infections.
- Personal protective equipment- which includes eye or face protection if care activity is at risk of splashes/sprays
- Increase frequency of environmental cleaning with high level/broad spectrum disinfectants adhering to the contact time on the manufacturer's label

WINDSOR-ESSEX COUNTY HEALTH UNIT

For more IPAC measures, refer to the Windsor-Essex County Health Unit Enteric Outbreak Control Measures (attached)



http://www.phac-aspc.gc.ca/fs-sa/fs-fi/norovirus-eng.php

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CQI

Formal debrief

- Data and metrics analyzed
- Lens of CQI

OB Working Group

- Reviewed conference feedback
- Analyzed partner feedback surveys
- Evaluated revised line lists/documents
- Additional changes made





EVIDENCE

PHU'S that create a culture of QI

- More likely to
 - Employ evidence based decision making
 - Robust data collection systems
 - Performance measurement standards that are aligned to mission, vision & values



WHAT IT TAKES

SUCCESSFUL QI

- Teamwork
- Supportive senior leadership
- Engaged front line staff
- Client and stakeholder participation essential

Outcome

- Satisfied end users
- Champions
- Measurable improvement

EMBRACING QI

- Look for opportunities
- Ask the 5 Whys?
- Go to the GEMBA
- What is your catalyst for change & call to action?



References

- 1. Dilley, J., Bekemeier, B., & Harris, J. (2012). Quality Improvement Interventions in public health systems: a systematic review. *American Journal of Preventive Medicine*, 42(S), 58-71
- 2. Lee, T., (2016). Lean and six sigma. Contemporary OB/GYN, 61(6), 28-42
- 3. Riley, W., Moran, J., Corso, L., Beitsch, L., Bialek, R., & Cofsky, A. (2010). Defining quality improvement in public health. *Journal of Public Health Management & Practice*, 16(1), 5-7.
- 4. Tews, D. S., Heany, J., Jones, J., VanDerMoere, R., & Madamala, K. (2012). Embracing quality in public health: A sequel to embracing quality in local public health, Michigan's quality improvement guidebook (2nd ed.). Retrieved from https://www.mphiaccredandqi.org/embracing-quality-in-public-health/qi-guidebook/
- 5. Davis, M.V., Mahanna, E., Joy, B., Zele, M., Riley, W., Verma, P., & Solomon Fisher, J. (2014). Creating quality improvement culture in public health agencies. *American Journal of Public Health*, 104(1), e98-e104.doi:10.2015/AJPH.2013.301413
- 6. Livingood, W. C., Sabbagh, R., Spitzfaden, S., Hicks, A., Well, L., Pulgdomenech, S., & ...Wood, D. L., (2013). A quality improvement evaluation case study: impact on public health outcomes and agency culture. *American Journal of Preventive Medicine*, 44(5), 445-452. doi:10.1016/j.amepre.2013.01.011
- 7. McLees, A. W., Nawaz, S., Thomas, C., & Young, A. (2015). Defining and assessing quality improvement outcomes: a framework for public health. *American Journal of Public Health*, 105(S2), 167-173. doi:10.2105/AJPH/2014.302533
- 8. Price, A. Schwartz, R., Cohen, J., Manson, H., & Scott, F. (2017) Assessing continuous quality improvement in public health: adapting lessons from healthcare. *Healthcare Policy*, 12(3), 34-49
- 9. Ontario Public Health Association (Producer). (2016, May 25). Achieving continuous quality improvement in public health. How can continuous improvement help to improve operations and achieve transformational change in public health 2 Podcast retrieved from http://opha.on.ca/Events/Achieving-continuous-quality-improvement-in-public.aspx



THANK YOU



"To improve is to change. To be perfect is to change often."

Winston Churchill

