To view an archived recording of this presentation please click the following link:

https://www.youtube.com/watch?v=eQVS_3YIuyw

Please scroll down this file to view a copy of the slides from the session.

Don't Know Where to Start?
Try an Organizational Risk Assessment!

Rohit Garg, IPAC Specialist

October 17, 2024

National Infection Control Week

Which Do You Prefer: Scenario A?

Nurse calls infection control: "We have a patient with respiratory symptoms who recently returned from a country experiencing an outbreak of a novel respiratory virus, we immediately triaged them to a private room with Contact and Droplet Precautions in place. Everyone is wearing a full PPE with N95, and a respiratory virus panel testing including COVID-19 has been requested. Anything else?"

Which Do You Prefer: Scenario B?

Nurse calls infection control: "We have a patient with respiratory symptoms sitting in the waiting room for an hour, going to give them a mask now. We don't have any private room available. I don't know what to do? I don't want to get COVID-19, I have little ones at home."
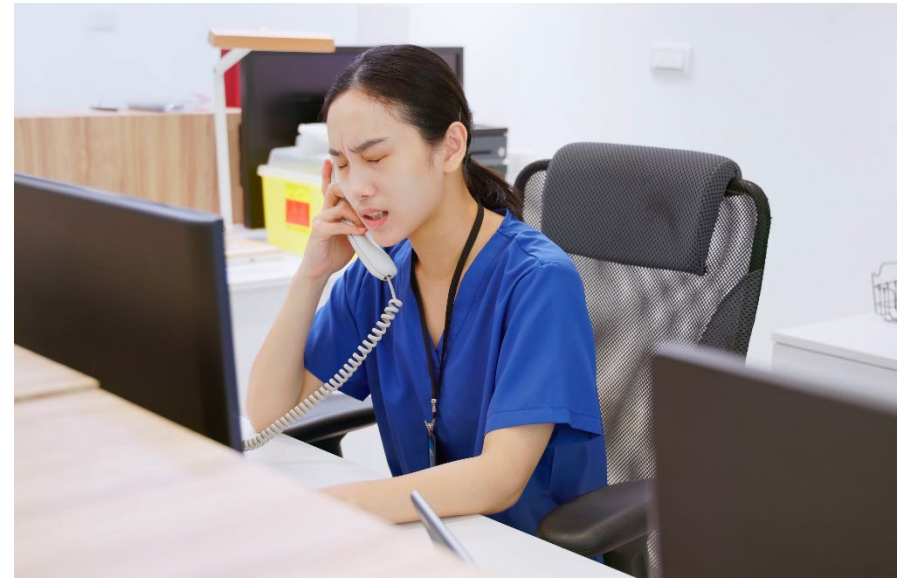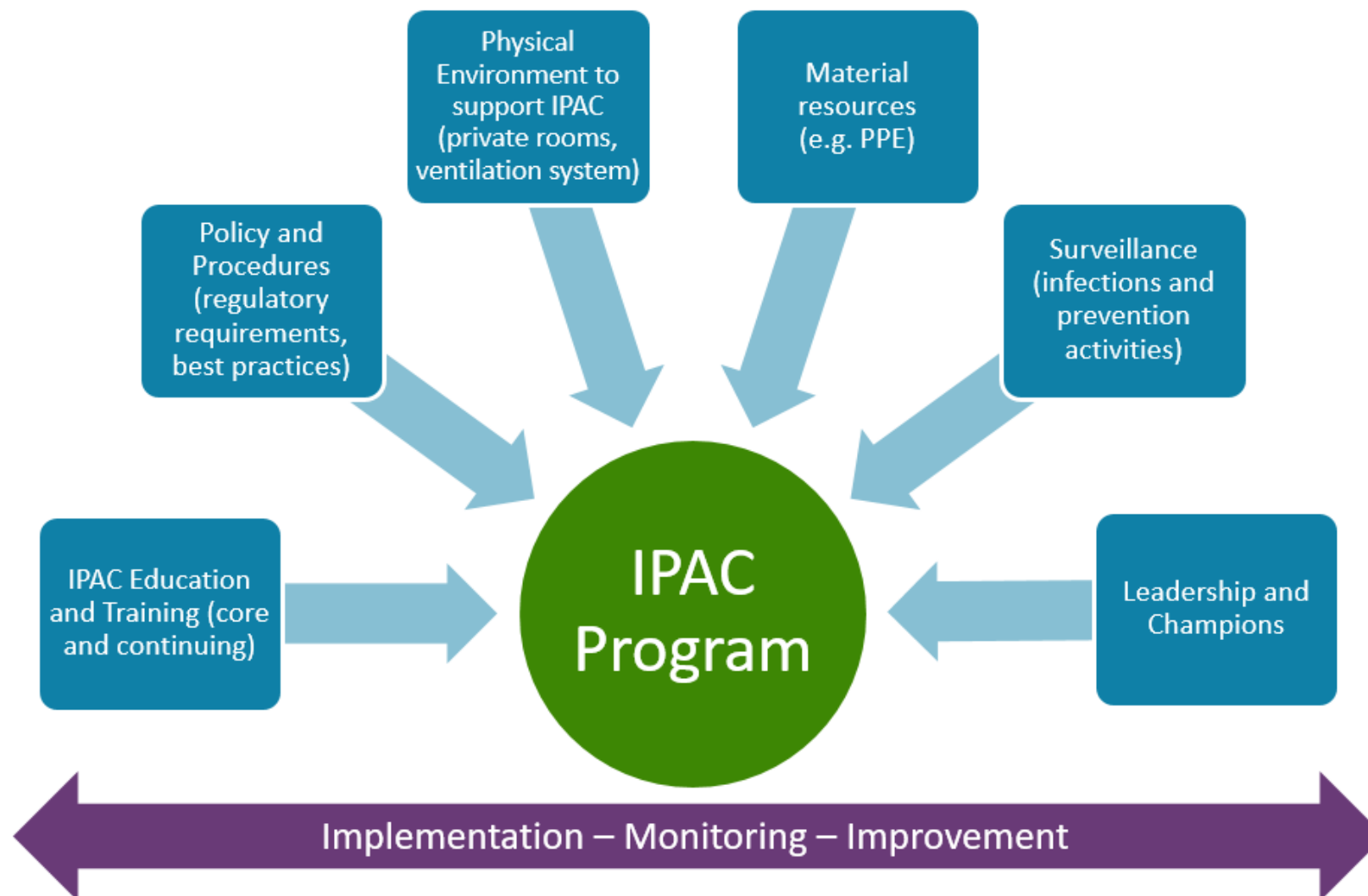
Objectives

By the end of this session, participants will be able to:

- Outline the components of an effective infection prevention and control (IPAC) program

- Understand the importance of organizational risk assessment (ORA) and the steps of conducting an ORA

- Describe how to access and utilize PHO resources that can assist with conducting an ORA

Goals of an IPAC Program

- To protect patients/residents/clients from getting infections in their care setting, resulting in improved survival rates, reduced morbidity associated with infections, and a quicker return to good health.

- To prevent the spread of infections between patients/residents/clients, staff, visitors and others.

Components of an Effective IPAC Program

Physical Environment to support IPAC (private rooms, ventilation system)

Material resources (e.g. PPE)

Policy and Procedures (regulatory requirements, best practices)

Surveillance (infections and prevention activities)

IPAC Education and Training (core and continuing)

IPAC Program

Leadership and Champions

Implementation – Monitoring – Improvement

What is an Organizational Risk Assessment (ORA)?

- Systematic approach to identify potential internal and external infection risks in order to implement controls to mitigate the transmission of infections in the health care setting

Source: Ontario Agency for Health Protection and Promotion (Public Health Ontario). Infection prevention and control organizational risk assessment for clinical office practice. Toronto, ON: King's Printer for Ontario; 2024. Available: https://www.publichealthontario.ca/-/media/Documents/I/24/ipac-organization-risk-assessment-clinical-office-practice.pdf?rev=47f4c1303b6e42898e62c95adb13669e&sc_lang=en&hash=F2C2BA0B469C6DA841A0A9C29E8C93A8
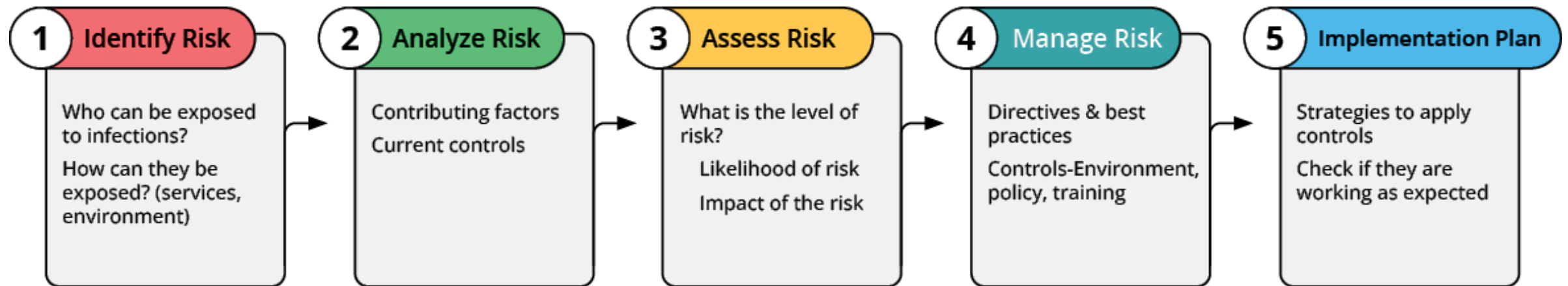
Importance of Organizational Risk Assessment

ORA forms the foundation of an effective IPAC program and leads to:

1. Prevention of health care associated infections (HAIs)

2. Improved patient and staff safety

3. Compliance with regulatory standards

4. Resource optimization

5. Customized infection control strategies

6. Effective emergency preparedness

How to Conduct Organizational Risk Assessment

An ORA should be performed on an annual basis or as needed (e.g., when new threats emerge)

1 Identify Risk

Who can be exposed to infections?

How can they be exposed? (services, environment)

2 Analyze Risk

Contributing factors

Current controls

3 Assess Risk

What is the level of risk?

Likelihood of risk

Impact of the risk

4 Manage Risk

Directives & best practices

Controls-Environment, policy, training

5 Implementation Plan

Strategies to apply controls

Check if they are working as expected

Establish Context

- Where is your setting located?

- What services do you provide?

- Who are your patients/residents/clients or populations served?

- Do you have an IPAC Program?

- Current policies and procedures?

- How do you liaise with the local Public Health Unit?

- Are you short-staffed?

Sources: Ontario Agency for Health Protection and Promotion (Public Health Ontario). Prevention and management of COVID-19 in long-term care and retirement homes [Internet]. 4th ed. Toronto, ON: King's Printer for Ontario; 2023 [cited 2024 Oct 07]. Available from: https://www.publichealthontario.ca/-/media/documents/ncov/ltcrh/2020/06/covid-19-prevention-management-ltcrh.pdf?la=en

Ontario Agency for Health Protection and Promotion (Public Health Ontario). Infection prevention and control organizational risk assessment for clinical office practice [Internet]. Toronto, ON: King's Printer for Ontario; 2024 [cited 2024 Oct 07]. Available from: https://www.publichealthontario.ca/-/media/Documents/I/24/ipac-organization-risk-assessment-clinical-office-practice.pdf?rev=47f4c1303b6e42898e62c95adb13669e&sc_lang=en&hash=F2C2BA0B469C6DA841A0A9C29E8C93A8

Gather Data

- What were your infection rate trends?

- What were the results of your IPAC audits?

- Has your staff identified any gaps in infection control practices?

- Which regulations and standards apply to your organization?

Gather Multidisciplinary Team

- Internal:
  - Committees: IPAC, joint health and safety, patient safety
  - Key people: Health professionals, support services leads, front line staff
- External:
  - Local Public Health Unit
  - PHO IPAC Specialists
  - IPAC Hubs (for Long-term Care and Congregate)
  - Peers from similar settings
  - IPAC Canada Chapter (https://ipac-canada.org/)

Chain of Transmission - How The Germs Spread

1. Germs: viruses, bacteria, fungi

2. Reservoir: germs can live and grow in humans, animals, food or water

3. Portal of exit: nose, mouth, cuts/wounds

4. Mode of transmission: through air, contact (direct or indirect) or both

5. Portal of entry: eyes, nose, mouth, cuts/wounds

6. Susceptible host: elderly, young, people with other illnesses

Step 1: Identify Risk

Infection transmission risks can be categorized based on:

- Healthcare worker practices (failure to perform IPAC activities)

- Shared equipment cleaning and disinfection (failure to disinfect/ sterilize after use)

- Clinical environments (exam rooms, operating rooms, ICUs)

- High-risk procedures (invasive devices, surgeries)

- Facility infrastructure (airflow not following standards, shared rooms)

- Specific infections (e.g., *Clostridioides difficile*, methicillin resistant Staphylococcus aureus (MRSA))

Step 2: Analyze Risk

Contributing Factors

Existing Controls
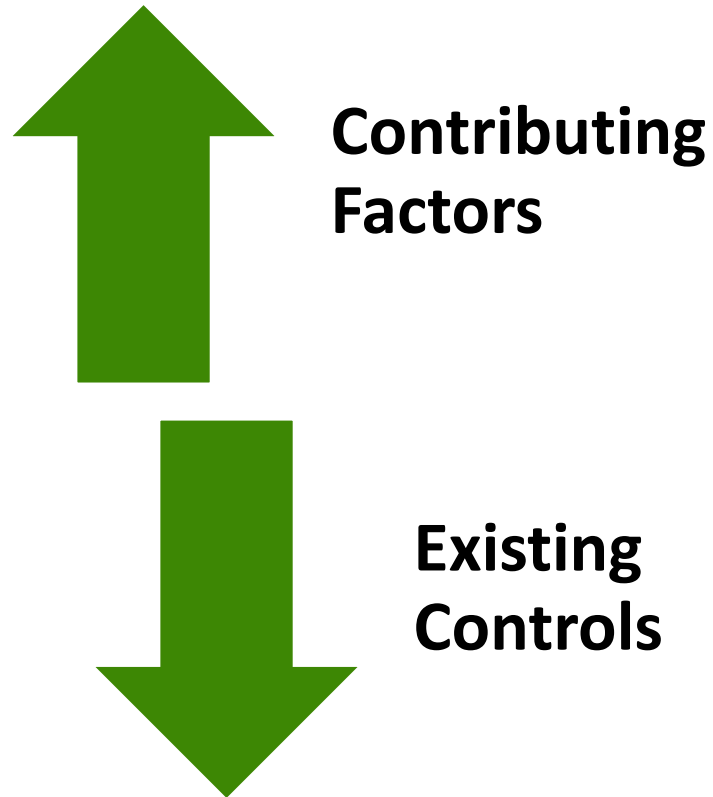
- **Certain factors can increase risk:**
  - High community transmission rates
  - Low immunization rates
  - High staff turnover or short staffing

- **Existing IPAC measures that reduce risk:**
  - High staff adherence to IPAC practices
  - Staff/resident/client immunizations rates are high

Step 3: Assess Risk

- The level of risk depends on the likelihood of each risk occurring and its potential severity/effect/impact to staff and patient(s)

Likelihood and Impact	Priority Level	Action
High likelihood and high severity	High	Immediate action required
Either likelihood or severity is high	Medium	Make efforts to further reduce the risk
Low likelihood and low severity	Low	Monitor and reduce the risk when feasible

Step 4: Manage Risk - Key Considerations

- Focus on high level risks first

- Smaller goals and objectives that are specific to your setting

- Planning achievable and realistic actions

- Using multiple control strategies offer greater success

Step 4: Manage Risk

Types of control measures:

- Elimination: Immunization

- Engineering Controls: Ventilation, air filtration systems, physical barriers

- Administrative Controls: Policies, training, infection control audits

- Personal Protective Equipment (PPE): Guidelines for appropriate use

- Work Practices: Hand hygiene, cleaning protocols, safe injection practices

Step 5: Implementation Plan

- All the objectives are stated to meet the goal

- Goals need to be time bound

- Ensure responsibilities for each step are clearly assigned

- Assign indicators to measure change

- Monitor and periodically evaluate

- Share feedback with staff and leadership

ACTION PLAN

Organizational Risk Assessment Scenarios

Scenario 1: Organizational Risk Assessment in Acute Care

- An ICP at an acute care facility reviews last year's surveillance data and identifies an increase in central line-associated bloodstream infections (CLABSI) in their medical unit.

Identifying and Assessing Risk in Acute Care

- Identifying Risk: High rates of CLABSIs in the medical unit, analysis revealed improper catheter maintenance protocols is contributing

- Assessment: Since the number of patients with central line is high and the morbidity and mortality of CLABSI is high, ICP placed this risk at high priority

Managing Risk in Acute Care

- ICP sets up a goal to reduce CLABSIs by 70% over next 6 months by:
  - Reinforcing training on catheter insertion and care
  - Implementing stricter hand hygiene
  - Conducting audits of central line insertion and maintenance practices
- Implementation Plan: Working together with clinical educator and a few nurse champions, review protocols and update them if needed
- Outcome: Significant reduction in infection rates within six months

Scenario 2: Organizational Risk Assessment in Clinical Office Setting

An IPAC designate at a clinic during their walkthrough in waiting area identified the following risks:

- Patients can be exposed to infectious droplets of other patients with acute respiratory infections (ARI) through Droplet and Contact transmission.

- Non-immune patients can be exposed to respiratory particles from a case of measles through an airborne route

Analyzing Risk in Clinical Office Setting

Contributing Factors:

- Peak respiratory illness season and increase in number of measles cases in the community

- Clinic sees both elderly and pediatric patients, many children in the community are not up to date with their immunizations, and limited physical space

Control measures in place: Alcohol-based hand rub (ABHR) and medical mask available at the entrance

Assessing Risk in Clinical Office Setting

- Busy clinic with patients (including walk-ins)

- Number of respiratory illness and measles cases are on rise in the community, the likelihood of transmission is high

- Elderly patients with weakened immune system may get very sick if they contract ARI, so the impact of this risk is high

Priority: Overall level of risk of transmission is high and will require immediate attention

Managing Risk in Clinical Office Setting

1. Installing a physical barrier at the reception, for e.g. Plexiglas barrier

2. Screening patients for symptoms of communicable diseases, and booking patients with infectious symptoms towards the end of the day or first thing in the morning

3. Posting signage for hand hygiene, masking and respiratory etiquette at the entrance, that includes instructions when and how to use them

4. Immediately sending the infectious patient to the exam room and if possible using a separate exit after they are seen

5. Schedule preventive maintenance of the ventilation system, increase fresh air ventilation or use portable air filtration

Developing an Implementation Plan for Clinical Office Setting

Set a timeline for making all the planned changes:

1. Clinical office manager or healthcare provider develops a screening policy and a questionnaire for staff to follow when booking patients.

2. Consult with public health or a professional association if a standard screening questionnaire and signage are available.

3. Check standards (e.g., Canadian Standards Associations) and best practice recommendations for installing physical barrier and portable air filtration.

4. Periodically audit documentation to ensure all the patients are screened.

5. Contact building maintenance team or professionals regarding ventilation system preventive maintenance.

Scenario 3: Organizational Risk Assessment in Long-Term Care Home

- The "Excel Senior Living" facility recently expanded from 80 to 120 residents. With the increased population, the infection prevention and control (IPAC) team conducts an ORA to address potential infection risks from the facility's daily operations.

Identifying Risk in Long-Term Care Home

- Increased Resident Density: Higher risk of infection in shared spaces (e.g., dining halls, recreation areas)

- Environmental Factors: Strain on cleaning services leading to contaminated surfaces

- Staffing Levels: Overworked staff may not strictly follow hand hygiene and PPE protocols

- Medication Management: Potential overuse of antibiotics, increasing antimicrobial resistance risks

Analyzing Risk in Long-Term Care Home

Contributing Factors:

- In the past, gastrointestinal and respiratory outbreaks were prolonged due to staff's poor adherence with hand hygiene and cleaning practices

- Staff shortage

Existing Control Measures:

- Hand hygiene and cleaning policies and procedure are up to date
- Leadership supports IPAC program

Assessing Risk in Long-Term Care Home

- Likelihood: Close quarters and insufficient cleaning raise the likelihood of infections spreading

- Impact: Poor infection control practices could result in respiratory or gastrointestinal infections, especially for vulnerable residents

- High-Priority: Surface contamination in common areas and inconsistent hand hygiene by staff

- Medium-Priority: Overuse of antibiotics and insufficient staffing

Managing Risk in Long-Term Care Home

- Cleaning Protocols: Train staff, increase cleaning frequency, and audit cleaning processes

- Hand Hygiene: Install hand sanitizer stations and monitor compliance

- Staffing: Adjust shifts or hire additional staff to manage the increased workload

- Antibiotic Stewardship: Educate healthcare staff on proper antibiotic use

Developing an Implementation Plan for Long-Term Care Home

- Cleaning Protocols: Provide joint training with environment services manager and plan frequency of cleaning audits

- Hand Hygiene: Walkthrough the home and identify point of care locations to install ABHRs. Conduct hand hygiene refresher training for 100% staff over next month. Audit staff hand hygiene with support from champions.

- Staffing: Seek support from unit managers and home leadership

- Antibiotic Stewardship: Reach out to PHO for audit tools and resources to educate health care staff on judicious use of antibiotics

Outcome in Long-Term Care Home

- Proactive risk mitigation improves infection control and prevents healthcare-associated infections, ensuring the safety of both residents and staff in the expanded facility.

Challenges in Conducting Organizational Risk Assessment (ORA)

- Limited resources (time, personnel)

- Resistance to change

- Lack of data for risk analysis

- Managing competing priorities in healthcare settings

Solutions:

- Engaging leadership and staff

- Building a culture of safety and continuous improvement

- Leveraging technology for monitoring

PHO Resources to Support ORA

IPAC Best Practice Resources

- Routine Practices and Additional Precautions

- Surveillance

- Hand hygiene

- Environmental cleaning

- Acute respiratory infections (ARI)

- Antibiotic resistance organisms (ARO)

- Reprocessing of medical equipment

Source: Ontario Agency for Health Protection and Promotion (Public Health Ontario). Best practices in IPAC [Interne]. Toronto, ON: Queen's Printer for Ontario; 2021 [updated 2021 Mar 30; cited 2024 Oct 07]. Available from: https://www.publichealthontario.ca/en/Health-Topics/Infection-Prevention-Control/Best-Practices-IPAC

Organizational Risk Assessments for Clinical Office Practice

Sources: Ontario Agency for Health Protection and Promotion (Public Health Ontario). Infection prevention and control organizational risk assessment for clinical office practice [Internet]. Toronto, ON: King's Printer for Ontario; 2024 [cited 2024 Oct 07]. Available from: https://www.publichealthontario.ca/-/media/Documents/I/24/ipac-organization-risk-assessment-clinical-office-practice.pdf?rev=47f4c1303b6e42898e62c95adb13669e&sc_lang=en&hash=F2C2BA0B469C6DA841A0A9C29E8C93A8

Ontario Agency for Health Protection and Promotion (Public Health Ontario). Organizational risk assessment for clinical office practice [Internet]. Toronto, ON: King's Printer for Ontario; 2024 [cited 2024 Sept 18]. Available from: https://www.publichealthontario.ca/-/media/Documents/I/24/ipac-organization-risk-assessment-clinical-office-practice-form.pdf?rev=e30973f390044628ac5de76ef57d9c1d&sc_lang=en&hash=71A0827980B50780F975885D5918FC60
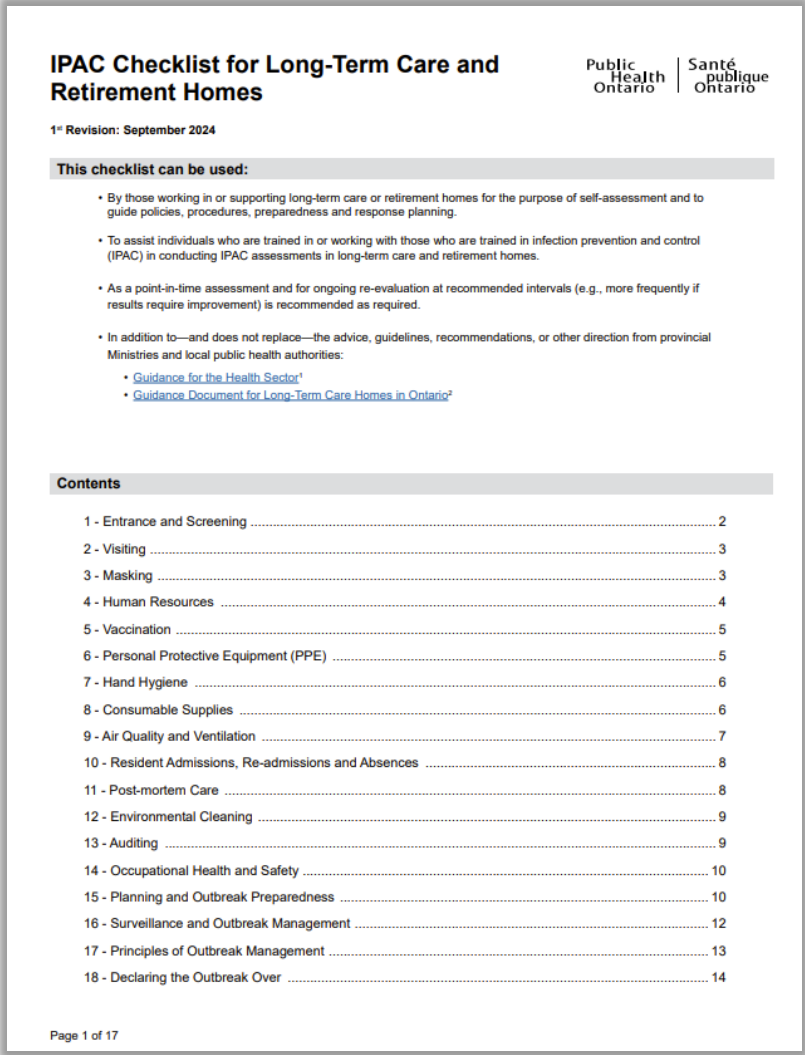
Organizational Risk Assessment for Long-Term Care Homes
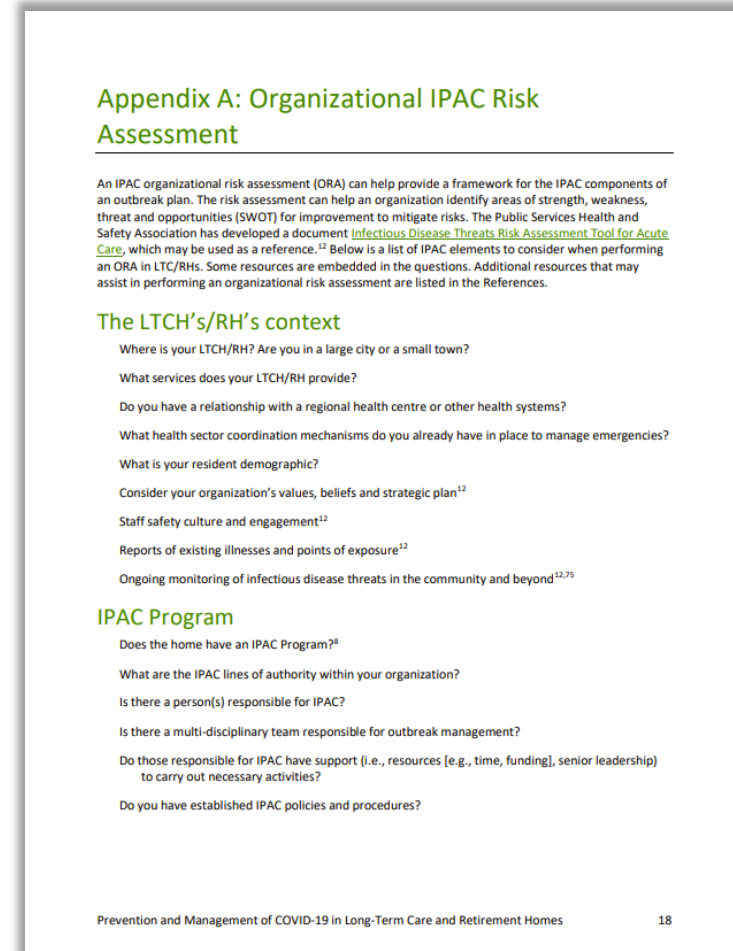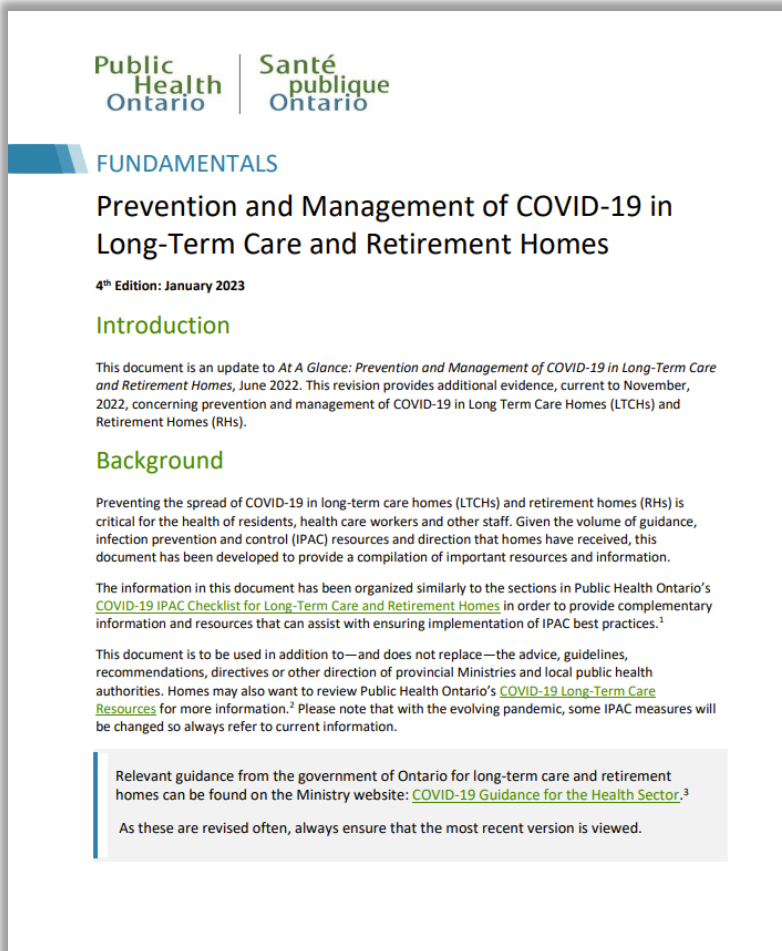
Source: Ontario Agency for Health Protection and Promotion (Public Health Ontario). Prevention and management of COVID-19 in long-term care and retirement homes [Internet]. 4th ed. Toronto, ON: King's Printer for Ontario; 2023 [cited 2024 Oct 07]. Available from: https://www.publichealthontario.ca/-/media/documents/ncov/ltcrh/2020/06/covid-19-prevention-management-ltcrh.pdf?la=en

Self-Assessment Resources

- IPAC Self-Assessment Audit for Long-Term Care and Retirement Homes- Short tool (Sept 2023)

- IPAC Checklist for Long-Term Care and Retirement Homes - In detail for IPAC professionals (Sept 2024)

- IPAC Self-Assessment for Congregate Living Settings (April 2024)

- Outbreak Preparedness, Prevention and Management in Congregate Living Settings (Jan 2024)

- IPAC Checklist for Clinical Office Practice - Core Elements (Mar 2024)

Auditing for IPAC Practices

- Personal protective equipment use audits
  - Assess if necessary supports are in place for PPE usage
  - Reviews individual use of PPE

- Hand hygiene audits
  - Compliance monitoring
  - Technique assessment

- Environmental cleaning audits
  - Cleanliness assessment
  - Process review

Conclusion

- Conducting an ORA is essential for preventing HAIs

- Start today by reviewing your infection rates, audit results or conduct a walkthrough

Key Takeaways

- Systematically identify, evaluate, and mitigate infection risks

- Develop and enforce strong IPAC protocols

- Continuously monitor and update infection control strategies to protect patients and staff

For more information about this presentation, please contact:

ipac@oahpp.ca

Public Health Ontario keeps Ontarians safe and healthy. Find out more at **PublicHealthOntario.ca**

Ontario