

Action IPAC

Activities to Support Infection Prevention and Control Practices in Congregate Living Settings



Primer
August 2022

Public Health Ontario

Public Health Ontario is an agency of the Government of Ontario dedicated to protecting and promoting the health of all Ontarians and reducing inequities in health. Public Health Ontario links public health practitioners, frontline health workers and researchers to the best scientific intelligence and knowledge from around the world.

Public Health Ontario provides expert scientific and technical support to government, local public health units and health care providers relating to the following:

- communicable and infectious diseases
- infection prevention and control
- environmental and occupational health
- emergency preparedness
- health promotion, chronic disease and injury prevention
- public health laboratory services

Public Health Ontario's work also includes surveillance, epidemiology, research, professional development and knowledge services. For more information, visit publichealthontario.ca.

How to cite this document:

Ontario Agency for Health Protection and Promotion (Public Health Ontario). Action IPAC: Activities to support infection prevention and control practices in congregate living settings. Toronto, ON: Queen's Printer for Ontario; 2022.

©Queen's Printer for Ontario, 2022

Disclaimer

This document was developed by Public Health Ontario (PHO). PHO provides scientific and technical advice to Ontario's government, public health organizations and health care providers. PHO's work is guided by the current best available evidence at the time of publication. The application and use of this document is the responsibility of the user. PHO assumes no liability resulting from any such application or use. This document may be reproduced without permission for non-commercial purposes only and provided that appropriate credit is given to PHO. No changes and/or modifications may be made to this document without express written permission from PHO.

Contents

| | |
|--|----|
| Action IPAC Activities | 1 |
| Activity 1: Masking | 2 |
| Activity 2: Cleaning and Disinfecting..... | 4 |
| Activity 3: Physical Distancing..... | 6 |
| Activity 4: Indoor Air Quality..... | 9 |
| Activity 5: Health Care Signage | 11 |
| Activity 6: Healthy Hands | 13 |
| Activity 7: Declutter to Clean | 15 |
| Activity 8: Point of Care Risk Assessment (PCRA) | 17 |
| Activity 9: Protecting Your Skin..... | 20 |
| Activity 10: Elements of Design | 22 |
| Activity 11: Routine Auditing | 25 |
| Activity 12: Psychological Health and Safety in with Workplace | 27 |
| IPAC Resources..... | 30 |
| National IPAC Week Activities | 31 |
| References | 34 |

Action IPAC Activities

Introduction

The Action IPAC Series was a joint initiative of Ontario's Ministry of Health and Public Health Ontario launched in 2021. The activities in the series addressed basic IPAC concepts that are important for everyone in congregate settings (both healthcare and non-healthcare focussed) to follow, and were designed to be easily implemented by anyone, not just an IPAC Lead with years of experience. The series consisted of 15 activities that were sent out through email to those who responded to an invitation to sign up for the initiative.

All 14 activities have been combined into this document to provide a format that can easily be used in future efforts by both past participants as well as those who did not undertake the activities previously. They address key areas of IPAC practice, provide information about why the practice is important and practical ideas about how to strengthen IPAC culture. The final chapter includes helpful web-based and organizational resources to support you in your congregate living setting.

These activities are not designed to replace the role of regular audits that use more detailed tools and form a key part of any IPAC program. However, because these activities support the goal of continuous improvement, we encourage all employees to make use of them.

How to Use the Action IPAC Activities

These activities are examples that can be used as they're described here, or you can tailor them to the unique aspects of your setting. Either way, they're an engaging, hands-on way to support an overall goal of building a safe and healthy workplace for everyone.

Activity 1: Masking

What You'll Learn

This activity has two parts and provides a refresher on the best masking practices. While universal masking is not always a requirement, there may be times when it is a recommended or required practice in your organization (such as during the COVID-19 pandemic). As you observe your workplace, you'll learn how well your co-workers and others are following the best masking practices. You'll learn what works well and where practices can be improved. We also hope you'll share with your team what you learned.

Part 1. Monitor Mask Wearing in Different Areas

Visit a variety of areas in your workplace (e.g. clinical, administrative, recreational, screening and exit areas) and observe the mask use of 20 individuals.

Record their mask practices in the following ways:

Fit: mask fits over nose and mouth (Yes(Y)/No(N))

Clean: mask appears clean (Y/N)

Double: instances of unnecessary double masking (Y/N)

A simple table, like the example below, is an easy way to track your observations

| No. | Fit | Clean | Double | No. | Fit | Clean | Double | No. | Fit | Clean | Double | No. | Fit | Clean | Double |
|-----|-----|-------|--------|-----|-----|-------|--------|-----|-----|-------|--------|-----|-----|-------|--------|
| 1 | Y/N | | | 6 | | | | 11 | | | | 16 | | | |
| 2 | | | | 7 | | | | 12 | | | | 17 | | | |
| 3 | | | | 8 | | | | 13 | | | | 18 | | | |
| 4 | | | | 9 | | | | 14 | | | | 19 | | | |
| 5 | | | | 10 | | | | 15 | | | | 20 | | | |

Part 2. Monitor Mask Interactions and Storage

Select a specific area (e.g. Care station) and observe the individuals in this space for 10 minutes. Count each time they touch their face or their masks. (Tip: Use a smart phone counter app.)

Record your observations:

1. What type of area did you observe?
2. How many individuals did you observe?
3. What was the total number of times masks were touched?
4. How many stored their mask according to the organizational policy while eating?

Take Action to Improve IPAC Practices

Now that you've observed mask practices in your workplace, we encourage you to share what you learned. Provide examples of what's working well and examples where improvements can be made. Feel free to share with your manager and team.

Best Practices for Masking

- Masks should fit snugly over the nose and mouth
- Clean hands before putting on your mask
- Avoid touching your face and the outside of your mask
- Clean hands before touching your face and if you touch the outside of your mask
- Avoid hanging your mask under your chin
- Double masking is not advised. Use one mask that fits well

Resources

- [Public Health Ontario. Universal mask use in health care.](#)¹
- [Public Health Ontario. Universal mask use in health care settings and retirement homes](#)²

Activity 2: Cleaning and Disinfecting

What You'll Learn

'How' and the 'how often' we clean and disinfect in healthcare settings is important. The increased risk of infection transmission in these settings means that cleaning and disinfecting surfaces, items and equipment correctly is an important way to protect everyone. Cleaning and disinfecting is important in non-healthcare settings too.

As you observe your workplace, you'll learn how well your co-workers and others are following the best cleaning and disinfecting practices. You'll learn what works well and where improvements can be made. We hope you'll share with your team what you learned.

Part 1. Record Cleaning Information

1. Select one of the following areas to perform this activity: clinical, administrative, recreational, screening or exit area.
2. Record your observations:
 - Look at all the containers of cleaner/disinfectant wipes and note the "contact time".
 - How many had the lids open?
 - Review the high touch surface cleaning log for the area and if there is a cleaning log:
 - If one is present, has it been completed as per organizational policy? (Y/N)

Part 2. Interview Ten Co-Workers

Ask 10 individuals the following questions and record your results as Yes or No.

1. What is the contact time of the disinfectant you use on your equipment? Were the individual responders correct? (Y/N)
2. Do you feel confident that all high touch surfaces in the organization are cleaned appropriately? (Y/N)
3. Can you easily find cleaning products when you need them? (Y/N)

Take Action to Improve IPAC Practices

Now that you've observed the cleaning and disinfecting practices in your workplace, we encourage you to share what you learned. Provide examples of what's working well and examples where improvements can be made. Feel free to share with your manager and team.

Best Practices for Cleaning and Disinfecting

- Remove and clean dirt and organic material (e.g. blood, secretions) from soiled surfaces.
- The surface must remain wet with the disinfectant for the recommended contact time (time the disinfectant must be in contact with the surface to be effective) and allowed to air dry.
- The appropriate contact time can be found on the label of the disinfectant.
- Prior to using any cleaners or disinfectants, review the label for instructions and safety.
- Ensure the product is in good condition (e.g., check expiry dates, make sure wipes are moist).

Resources

- [Public Health Ontario: Environmental cleaning toolkit](#)³
- [Public Health Ontario: Key elements of environmental cleaning in healthcare settings](#)⁴
- [Public Health Ontario: How to prevent skin damage from cleaning products](#)⁵

Activity 3: Physical Distancing

What You'll Learn

Physical distancing is a practice which adds a layer of prevention of disease transmission and was a key part of organizational practice during the COVID-19 pandemic. When in place it must be practiced in every area of your workplace. As you observe your workplace, you'll learn where physical distancing is easy to do and other areas where it's a constant challenge. We hope you'll share what you learned with your team.

Observe Physical Distancing

1. From the table below, pick two or more areas at their busiest times. For example, screening areas and elevators at shift changes, break areas at lunch, or a parking lot at the end of a shift.
2. Observe each area you've selected for at least 10 minutes.
3. Record your observations in the chart.

Table 1: Physical Distancing Observational Chart

| Observations | Screening area | Break room | Elevator (inside and outside) | Exit area | Parking lot |
|---|----------------|------------|-------------------------------|-----------|-------------|
| Is everyone physically distanced by at least 2 metres? | | | | | |
| Is there signage reminding people to physically distance? | | | | | |
| Is there signage showing maximum number of people allowed in the space? | | | | | |
| Are there markings showing where to sit or stand? | | | | | |
| Are there more chairs than how many people are allowed to be in the room? | | | | | |
| Is signage easily visible? | | | | | |
| Is signage easily understandable? | | | | | |
| Is signage posted in languages other than English? | | | | | |
| Are people sharing or touching common items? | | | | | |

Take Action to Improve IPAC Practices

Now that you've observed physical distancing in your workplace, we encourage you to share what you learned. Provide examples of what's working well and examples where improvements can be made. Feel free to share with your manager and team.

Best Practices for Physical Distancing

- Physical distancing means staying at least 2 metres away from others.
- Physical distancing works best when practiced in combination with wearing a mask, only touching your face with clean hands and cleaning your hands often. Physical distancing is especially important if you or others are not wearing a mask.
- Avoid spaces that are cramped, crowded and may involve close contact with others.
- Physical distancing will help stop the spread of illnesses including COVID-19, but it may leave you feeling isolated. Find new ways to connect with others while still keeping each other safe.

Group gatherings

When planning a group gathering, consider the risk of exposure to COVID-19 based on:

- Number of COVID-19 cases reported in the local community
- Setting – indoor poorly ventilated areas are more risky than outdoor events
- Duration of the event
- Number and crowding of people – the number of people should be based on whether people from different households can stay at least 2 metres apart.
- Behaviour of people – close interaction with people from other households, singing, shouting, exertion, not masking or distancing consistently, not cleaning hands can all increase risk.
- Level of cleaning and disinfection of the space to be used

Resources

- [Public Health Ontario: Archived - COVID- 19: physical distancing fact sheet](#) ⁶
- [Society for Human Resources Management. Physical distancing at work](#) ⁷

Activity 4: Indoor Air Quality

What You'll Learn

Indoor air quality can be improved by removing stale indoor air and supplying fresh (outdoor) air into a given space – also known as ventilation.

As you observe your workplace, you'll learn more about the air quality in your environment.

You'll learn where air quality meets the best practices and where improvements can be made. We also hope you'll share with your team what you learned.

Record Indoor Air Quality

Select an area in your workspace (e.g. clinical, administrative, recreational, screening and exit areas) and answer the following questions:

- Do you notice a problem with the air quality? (e.g., feels stuffy, lingering odours, drafts, doors don't shut properly)?
- Can you identify any air vents (grills or registers) in the area?
- Do you feel air coming from or returning to the vents? Note: ventilation systems usually cycle on and off (check again if you don't feel air movement at the vents).
- If there are no air vents, are there windows in the area that you can safely open?
- How many people can be in this area (maximum room occupancy)?
- How many people are typically in this area?
- Who would you contact in your organization if you saw ways to improve the indoor air quality?

Take Action to Improve IPAC Practices

Now that you've observed the air quality in your workplace, we encourage you to share what you learned. Provide examples of what's working well and examples where improvements can be made. Feel free to share with your co-workers.

Best Practices for Indoor Air Quality

- When feasible, windows can be opened to help draw in fresh air or exhaust indoor air directly outside e.g., by pointing a fan outdoors
- Opening windows daily, even for a few minutes can improve indoor air quality

Resources

- [Public Health Ontario: Heating, ventilation and air conditioning \(HVAC\) systems in buildings and COVID-19](#)⁸
- [Eykelbosh A. Role of ventilation in influencing COVID-19 transmission risk](#)⁹
- [Health Canada. Maintain and improve indoor air quality](#)¹⁰

Activity 5: Health Care Signage

What You'll Learn

Signage in healthcare organizations should be laminated or in a plastic cover so that it's easy to clean and disinfect. As you observe your workplace, you'll learn how more about the health care signage in your environment. You'll learn where it meets best practices and where improvements can be made. We hope you'll share with your team what you learned.

Observe Workplace Signage

1. Review screening signage at the entrance to your building.

Is screening signage easily visible and legible for the following situations?

- If you are shorter or taller than average height?
- If you are approaching from various angles?
- If the doors are open and closed?
- If there are people in front of you?
- If you are over 6 feet away (i.e., letters are at least 1 inch tall for every 10 feet away)?

Is the message clear in the following situations?

- If you have less than 1 minute to read it?
- If the language on the sign is unfamiliar to you?

2. Review signage at a care station, workspace or team area for clutter.

- How many different signs do you see on one wall/door?
- How many are applicable to your work?
- Have you noticed and read these signs before?
- Are signs outdated?
- Can signs be combined or organized a different way?
- Is the amount of signage distracting or overwhelming?

3. Review signage at a hand-washing sink/station.

- Is there signage on the 4 moments of hand hygiene and how to clean hands?
- Review signage at a patient/client/resident room that is under Additional Precautions.
- Is there signage at the door visible prior to entry outlining the type of Additional
- Precautions and required PPE (e.g., Contact and Droplet)?
- Is the signage standard across the organization?
- Is the sign in Colour or Black and White?
- Is the signage laminated or in a plastic cover?
- Is there signage on PPE donning outside the door and PPE doffing inside the door by the garbage bin?

Having completed this exercise, do you feel that IPAC signage in your organization serves its intended purpose?

Take Action to Improve IPAC Practices

Now that you've observed signage in your workplace, we encourage you to share what you learned. Provide examples where signage works well and examples where improvements can be made. Feel free to share with your manager and team.

Best Practices for Health Care Signage

- Visible, easily recognizable and legible (i.e. at least 1 inch tall for every 10 feet of viewing distance).
- Clear message with pictures and few words - Less is more!
- Avoid clutter! If there are too many signs, they may be overlooked, which increases the chances of an incident
- Available in multiple languages
- Consistent across all areas without mixed messages
- Signage is close to the area, but visible before entering the area

Activity 6: Healthy Hands

What You'll Learn

Maintaining and encouraging healthy hands is important in avoiding outbreaks, preventing the spread of antimicrobial-resistant organisms, and reducing overall infection rates.

As you observe your workplace, you'll learn more about the health of hands in your environment. You'll learn where it meets best practices and where improvements can be made. We hope you'll share with your team what you learned.

Observe Workplace, Speak With Coworkers

1. Choose a setting to perform this activity (e.g. clinical, administrative, recreational, screening and exit areas)
2. Look around the following high-touch areas. Is hand sanitizer easily accessible? (Y/N)
 - Elevator:
 - Stairwell:
 - Entrances:
 - Keyboards:
 - Phones:
 - Microwave:
3. Choose a few co-workers you know well. Ask them if you can talk to them about their hand washing training and inspect their hands. Then record their answers.

Did they receive training on how to protect and care for their hands? Do their hands have:

- Red/ Blotchy/ Rash?
- Dry, cracked or open areas?
- Itchiness, sore or burning areas?
- Fake nails?
- Hand or wrist jewelry (e.g. rings, bracelets, watches)?
- Were they wearing gloves outside of resident care or cleaning (e.g. in hallways, when typing, on the phone or charting)?

Take Action to Improve IPAC Practices

Now that you've observed hand sanitization and care in your workplace, we encourage you to share what you learned. Provide examples of what's working well and examples where improvements can be made. Feel free to share with your manager and team.

Best Practices for Healthy Hands

- Cleaning your hands reduces the risk of getting and passing on infections.
- People clean their hands more when sinks or hand sanitizer are easily accessible.
- Workers who have to clean their hands often are at high risk for damage to the skin.
- Avoid fake nails and hand and wrist jewelry as they can hide bacteria and viruses from the antiseptic action of alcohol. Alcohol and soap can get stuck under jewelry and cause skin irritation.
- Glove use:
 - Wear gloves only when necessary and for as short a time as possible.
 - If moisture builds up under the glove, it can lead to skin irritation.
 - Hands must be cleaned before and after glove use.
- Regular use of lotions and creams keeps skin healthy.
- Inspect your hands often for signs of irritation such as redness, dry/cracked skin and itchiness

Resources

- [Public Health Ontario: Just clean your hands: hand care program](#)¹¹
- [Public Health Ontario: Protecting your hands fact sheet for health care providers](#)¹²
- [Public Health Ontario: How to prevent skin damage from cleaning products](#)¹³

Activity 7: Declutter to Clean

What You'll Learn

Clutter increases the risk of healthcare acquired infections by impacting the ability to clean. Increased clutter means more items may become contaminated and transmit infection when touched.

As you observe your workplace, you'll learn more about clutter in your environment. You'll learn where it meets best practices and where improvements can be made. We also hope you'll share with your team what you learned.

Observe Your Workplace

Try this activity in different areas (e.g. clinical, administrative, recreational, entry and exit areas).

1. Trace the most common pathway you would take through a hallway in the building and note the following:
 - How many objects are in the hallway?
 - Are the surfaces beneath the objects clean?
 - Do you have to move yourself out of the way or move objects out of the way to proceed?
 - How many extra surfaces could a visitor/resident/client potentially touch due to clutter?
2. Survey a team room or care station where you work often:
 - Are there items stored on the floor, under desks and in corners?
 - How many items would need to be moved off a horizontal surface to clean appropriately?
 - Since your last shift, do you think items have been moved around to facilitate daily cleaning?
 - How many items are in the care station that have a home elsewhere? (e.g. dressing tray, bottle of saline, a kidney basin)?
3. Survey a patient/resident/client room (if applicable):
 - Is the bedside table free of clutter?
 - Is the meal tray table ready to receive a delivered meal tray?
 - Can the floor be cleaned without needing to move multiple items?
 - What proportion of horizontal surfaces are free of clutter to facilitate daily cleaning?

Take Action to Improve IPAC practices

Now that you've observed clutter in your workplace, we encourage you to share what you learned. Provide examples of what's working well and examples where improvements can be made. Feel free to share with your co-workers.

Best Practices to Declutter

- Reduce - things you take into patient/resident/client rooms- bring only what is needed.
- Remove - excess linens, meal trays, papers, equipment and anything not immediately needed or being used.
- Refresh - by re-arranging furniture, equipment, papers, to clean forgotten surfaces.
- Re-distribute - bulk storage items out of hallways and rooms

Activity 8: Point of Care Risk Assessment (PCRA)

Overview of PCRA

PCRA is a routine practice completed by the health-care worker (HCW) before every client/patient/resident interaction to assess risk of exposure to infection for the HCW and for others.

PCRA is a dynamic risk assessment, meaning it can change with every interaction as the client/patient/resident health status changes (e.g., develops fever, cough) or the tasks are different, requiring different PPE, or the environment is different (e.g., resident transfer, new admission).

Always consider:

- the resident/patient/client,
- the task
- the environment.

Risk assessment determines what actions are needed and what personal protective equipment (PPE) is right for the task(s).

Resident/Patient/Client(s)

- What are their symptoms (e.g., coughing, sneezing, or diarrhea)?
- Are Additional Precautions required (e.g., droplet/contact) for HCW protection?
- What is their health status (e.g., cognitively impaired, incontinent)?
- Can they perform respiratory etiquette and can they clean their own hands?

Task

- What type of task(s) to be carried out (e.g., providing direct care, potential contact with body fluids, wound dressing, continence care), or dropping off food tray?
- Do I have the training, equipment and confidence to perform the task?

Environment

- Where is the task being performed? Is the space or surface adequate?
- Is the patient in a separate or multi-bed room? Is the bathroom shared?
- What is required for proper cleaning and disinfection before and after the task?
- Since your last shift, do you think items have been moved around to facilitate daily cleaning?

What You'll Learn

As you perform this activity, you'll learn more about point of care risk assessments in your environment. You'll learn where they meet best practices and where improvements can be made. We also hope you'll share with your team what you learned.

Perform Two PCRA's

Incorporate the points below while performing your PCRA in two different areas, one resident/patient/client single room area and one multi-bedroom area.

Select two areas to perform this survey and consider specific resident/patient/client for this exercise.

1. Specific characteristics of each resident/patient/client need consideration:
 - Are they cognitively impaired? Consider best time of day or need for assistance.
 - Are they incontinent of urine or feces? Gloves and gown likely required.
 - Do they have open wounds (e.g., skin ulcers on their back or legs, or a rash)? Gloves and gown likely required.
 - Do they have any lines such as an I.V. that requires special care to keep clean? Follow organizational policy for any lines or catheters and use sterile gloves where appropriate.
2. How does hand hygiene fit into a PCRA?
 - Is there a difference if you are in a single or multi-bed room? Important to remember each resident's bed space is handled like a separate unit.
 - You will need to clean your hands regardless (e.g., before and after a task, before and after PPE use, before and after contact with the resident/patient/client).
 - Are there sufficient point-of-care alcohol-based hand rub (ABHR) containers?
 - How can you help a resident/patient/client with respiratory etiquette? Can you support them to cover their coughs with a tissue or their elbow then clean their hands?

3. What about resident placement and organization of tasks?
 - Are you responsible for the care of more than one person in a multi-bed room?
 - As part of the PCRA can you bundle tasks and ensure all equipment and PPE required for multiple activities is at hand and that clean space is available to perform the tasks?
 - Can you prioritize a resident/patient/client with risks for infection into a single occupancy room where possible?

4. What are the environmental cleaning considerations for a PCRA?
 - Is equipment being shared between residents/patients/clients? You will need to clean and disinfect re-usable equipment between each use and clean surfaces as appropriate.
 - Is there access to a point-of-care sharps container? You will need to ensure all sharps are placed immediately after use into the correct CSA approved container.
 - Do you have access to waste bins? PCRA includes assessment of proper waste disposal prior to performing the task(s).

Take Action to Improve IPAC Practices

Now that you've analyzed point of care risks assessments in your workplace, we encourage you to share what you learned. Provide examples of what's working well think and how PCRA's can be improved to decrease the risk of transmission.

Activity 9: Protecting Your Skin

What You'll Learn

After you perform this activity, you'll learn how your work and home activities may be affecting your skin. We hope you'll share with your manager and colleagues what you learned.

Answer questions about your job and your skin

How does my job affect my skin?

- Do I clean my hands many times during a work shift?
- Do I wear gloves for a significant part of the day (adding up to 2 hours)?
 - If so, I could be more likely to develop work-related contact dermatitis
- Do I get exposed to chemicals (e.g., cleaning and disinfecting products, rubber chemicals)?
 - If so, I could be more likely to develop work-related contact dermatitis
- Am I wearing the right glove for the task?
- Is it important to wear nitrile gloves for chemical exposures?

How do my home activities affect my skin?

- Do I have a child/children under the age of four?
- Do I do a lot of gardening, or household chores with my hands in water?
- Do I have hobbies that expose me to certain chemicals (e.g., making jewelry)?
 - If so, I could be more likely to develop contact dermatitis (non-occupational when not related to work)

Carefully read the skin descriptions below then look closely at your own skin.

Choose which sentence best describes your skin, then follow the suggestions provided.

- My skin is smooth and clear and soft without any breaks in it.
 - You have healthy skin. Keep up the good work and keep moisturizing!
- My skin is dry, red (chapped) and/or flaky but has no cracks or small blisters.
 - You may have mild dermatitis. It is important to moisturize at least 3 times daily.
 - You may need over the counter creams and should check with your pharmacist.

- My skin is dry, red, flaky, and also has cracks and/or small blisters.
 - You may have moderate or severe dermatitis.
 - You should report to occupational health or delegate and contact your health care provider.
 - You may need to see a specialist for special skin testing or prescription creams.
 - You may need modified duties and/or cotton glove liner.
- I have a skin condition unrelated to work. I have eczema, psoriasis, hives or another skin condition.
 - If it seem to get worse when I am working I should tell my health care provider.

Take Action to Improve IPAC practices

Now that you've assessed the impact of work and home on your skin, please note areas where you see room for improvement. We encourage you to share your findings with your co-workers.

Resources

- [Public Health Ontario: Infection prevention and control practices for occupational contact dermatitis](#)¹⁴
- [Centre for Research Expertise in Occupational Disease. Skin health resources](#)¹⁵
- [Occupational dermatitis to facial personal protective equipment in health care workers: a systematic review](#)¹⁶

Activity 10: Elements of Design

What You'll Learn

How we function in our work environment has a lot to do with how we interact with the physical and organizational environment around us, and how we use the tools and technologies at hand to perform our tasks. The technical term for this is human factors engineering (HFE). In infection prevention and control (IPAC) it means focusing on important human factors that can increase or decrease the risk of spreading infections to other staff, clients, residents or patients. We can promote and maintain a healthy and safe work environment by always keeping IPAC principles top of mind.

After you perform this activity, you'll learn about some of the important human factors that can impact the spread of infections to other staff, clients, residents and patients. We hope you'll share with your team what you learned.

Observe Areas in Your Workplace

Perform this activity in both the resident/patient/client care area and in one staff break area.

In the resident/patient/client care area:

- Are the hallways clear of excess clutter such as extra carts and furniture?
- Are the people who are visible to you all necessary for the activities being performed?
- Is there a dedicated hand hygiene (hand washing sink) close at hand and/or are there alcohol-based hand rubs ABHR available at point of care?
- Are there sharp containers available at point of care?
- Are the sharps containers all below the fill line?
- Are healthcare workers (HCWs) bringing in only the items required to care for the resident/patient/client?
- Are HCWs organizing their work so they can perform several activities at one visit (e.g., bringing in needed medication, providing personal hygiene care, changing linens)?
- Are bed space areas clearly outlined (e.g., area taped on the floor)
- Are clean and contaminated pieces of equipment clearly marked and separated?

In the break area:

- Are staff following the capacity limits?
- Is there a hand hygiene sink and/or easily accessible ABHR?
- Can staff remain 2 metres apart while eating or drinking?
- Is there a clear pathway to any appliances such as the microwave and refrigerator?
- Are the eating areas free of excess clutter such as magazines, empty coffee cups and water bottles?
- Are there any trip hazards such as electrical cords or boxes on the floor?
- Are there wipes to clean the table and counters when staff are finished their lunch?
- Are staff wearing gloves for this task and cleaning their hands after glove removal?
- Is the waste receptacle (garbage can) close at hand?
- Is the waste receptacle hands-free in design?

Take Action to Improve IPAC Practices

Now that you've assessed some of the human factors that can increase or decrease the spread of infection, please note the areas that work well, and areas that can be improved. We encourage you to share your findings with your co-workers.

Best Practices for Human Factor Engineering

When planning your work set-up consider:

- The layout of the work/break space (e.g., entry/exit, personal protective equipment [PPE] and hand hygiene)
- Control of clutter to avoid contamination of supplies (e.g., carts in hallways, extra furniture in rooms)
- Easy access to clean supplies and proper clean and dry storage (i.e.) not near sink counters, cabinets under sinks or bathrooms
- Separation of clean and contaminated (dirty) supplies and equipment
- PPE set up to be put on in the right order and taken off in the right order
- Safe disposal of used items (e.g., gloves, gowns, wound dressings, sharps)

We can promote and maintain a healthy work environment by ensuring smooth work flow and being thoughtful in how we organize our work each day:

- Pause to imagine each task or group of tasks from beginning to end, thinking of how to streamline or bundle tasks, think of all required supplies and equipment and also cleaning and safe disposal practices
- Think through the 4 moments of hand hygiene and where the alcohol-based hand rub (ABHR) and hand hygiene sinks are located to ensure no moments are missed
- Be intentional in considering your work flow (e.g., working from clean to contaminated)
- Consider taping the floor of each bed space in a multi-bedded room as a visual reminder that each bed space is to be treated as a separate 'room' with individual needs for hand hygiene moments, environmental and equipment cleaning and appropriate use of PPE

Resources

- [Role of human factors engineering in infection prevention: gaps and opportunities](#)¹⁷
- [Preventing healthcare- associated infections through human factors engineering](#)¹⁸
- [Infection Prevention and Control Canada. Infection prevention and control \(IPAC\) program standard](#)²²

Activity 11: Routine Auditing

An audit is an on-site review of our practices. Providing feedback and sharing the audit results is an important part of any IPAC program. Auditing various aspects of IPAC practice can help everyone know where they are doing well and where to focus efforts on improvement

Audits often focus on particular individual actions such as how we clean our hands or how we put on our mask or gloves. Audits can also assess the organizational processes or systems in place that help us carry out practices safely, such as accessibility of alcohol based hand rub, and can lead to overall improvements

Nothing can change without feedback. Feedback on a specific activity is best given while the individual is being observed. Feedback about IPAC processes and systems should also be given to those who are in a position to make an organizational change

Sometimes audits can cover a number of areas, and at other times a single practice can be the focus of an audit:

- Large scale audits use tools such as the [PHO COVID-19 Checklist](#). For smaller, more frequent audits, a more streamlined audit tool can be used such as the [Self-Assessment Audit Tool for Long Term Care and Retirement Homes](#)
- Single practice audits can be done using simple observation tools such as the hand hygiene audit tool or the PPE audit tool

What You'll Learn

After you perform these audit activities, you'll learn more about how to reduce the spread of infections to other staff, clients, residents and patients. We hope you'll share with your manager and colleagues what you learned.

Introduce Auditing in Three Simple Ways

1. Every two weeks perform a routine audit of your COVID-19 protocols using a simple tool such as the Public Health Ontario IPAC Self-Assessment Audit Tool.

This tool was designed for Long Term Care and Retirement Home settings but can easily be adapted to other settings by applying the same approach and modifying the setting-specific elements. There may be other tools that you can use that may be better suited to your setting.

2. Identify an element of IPAC practice in your setting to perform a more focused audit and feedback exercise which can be performed more often. This could include [hand hygiene](#), [PPE use](#), or others. There are videos and links to helpful tools on the [PHO website](#), or through [IPAC Canada](#).
3. Create a process to give feedback to individuals, supervisors and others who are in a position to make changes and advocate for change!

Take Action to Improve IPAC practices

Now that you've carried out a few workplace audits, please note areas where you see room for improvement. We encourage you to share your findings with your manager and team!

Best Practices for Auditing

Everyone can be involved in IPAC audit and feedback! The key to a good IPAC program is to get many members of the team involved.

Before starting an audit routine in your setting, meet with your co-workers to:

- Explain the benefit of IPAC-related audits
- Encourage everyone to get involved either in the role of observer or the one being observed
- Create an environment where giving and receiving feedback is encouraged
- Coach each other on how to give and accept feedback in an effective way

Resources

- [Public Health Ontario: COVID-19 self- assessment audit tool](#)¹⁹
- [Public Health Ontario: Audit training for long term care homes \[video recording\]](#)²⁰
- [Public Health Ontario Personal protective equipment \(PPE\) auditing](#)²¹

Activity 12: Psychological Health and Safety in with Workplace

Psychological health and safety is an important consideration in how people interact with one another on a daily basis and includes the way working conditions and management practices are structured in the workplace.

The Canadian Standards Association (CSA) has developed a Psychological Health and Safety Standard for workplaces that focuses on identifying and reducing hazards that can affect employee psychological health and safety.

The two main goals of the Standard are the prevention of mental illness and the promotion of mental health in the workplace.

There are 13 factors of psychological health and safety recognized in the workplace in the Standard and each can have a positive and/or negative impact.

What You'll Learn

After you perform these activities, you'll learn more about psychological health and safety in the workplace. We hope you'll share what you learned with your team.

Match Questions with Workplace Factors

We've provided some workplace questions below. For each question, think about which of the factors from the 13 Psychological Health and Safety Factors table that match the question.

Are the factors Positive and/or Negative at your workplace?

1. Have you been experiencing a stressful time at work and finding it difficult some days to come into work? Do you feel comfortable to share your struggles with your supervisor/manager or co-worker(s)?
2. Do you feel that you have access to adequate and correct PPE to support your point of care risk assessment (PCRA) and safely provide care?
3. When you volunteer for a special project or make yourself available for extra shifts to help support the team, do you feel appreciated or acknowledged for your effort?
4. When dealing with various team members, regardless of what role or responsibilities you have in the organization, are individuals courteous to each other? If you make a medication error do you feel you can speak freely with your supervisor/manager?

- Based on the psychological and emotional demands in the job and your skill set do you feel that you have a good fit in your job?

Table 2: 13 Factors of Psychological Health and Safety in the Workplace

| Psychological Health and Safety Factor | When Factor is Positive in the Work place, employees experience... | When Factor is Negative in the Work place, employees experience... |
|--|--|--|
| Psychological and social support | Support from co-workers and supervisors for psychological and mental health concerns | Increased absenteeism, conflict, burnout, lost productivity and increased risk of accidents and job turnover |
| Organizational culture | An environment of trust, honesty and fairness that sets the tone for the workplace | Stress, lower well-being which undermines programs and services intended to support workers |
| Clear Leadership and Expectations | Clarity of roles, responsibilities, and recognition of their work value and increased morale, resiliency and trust | Decrease in morale, increase in irritability, anxiety, and fear of change |
| Civility and respect | Respectful and considerate behaviours in interactions with supervisors, co-workers, and residents/patients/clients | Emotional exhaustion, conflict, aggression, and exposure to bullying or other threatening behaviour |
| Psychological job demands | Interpersonal and emotional competencies that fit with the requirements of the position | Job strain, emotional distress, defensiveness, low energy, and mood, and may leave their job |
| Growth and development | Encouragement and support in developing interpersonal, emotional and job skills that enhance career development and well-being | Boredom, disengagement, lack of well-being and drop in work performance |
| Recognition and reward | appropriate acknowledgement, reward, and appreciation of their efforts in a fair and timely manner | demoralization and lack of appreciation resulting in emotional distress and burnout |

| Psychological Health and Safety Factor | When Factor is Positive in the Work place, employees experience... | When Factor is Negative in the Work place, employees experience... |
|--|--|---|
| Involvement and influence | inclusion in discussion about how their work is done and how important work decisions are made | indifference, helplessness, job alienation, cynicism, burnout, and greater job turnover |
| Workload Management | ability to accomplish tasks and responsibilities in the allotted time | lack of control over demands resulting in physical, psychological, and emotional fatigue and strain |
| Protection of Physical Safety | feel safe from physical harm in their work environment | increased risk of illness or injury and feel less secure and engaged |
| Engagement | motivated, connected to work, energized, have a positive job outlook | disengagement, apathy, loss of productivity, job dissatisfaction |
| Balance | Balance between demands of work, family, and personal life | high job stress, dissatisfaction, and absenteeism |
| Psychological Protection | psychological safety in the environment where they can speak freely and where errors can be used as a learning opportunity | demoralization, a sense of threat, disengagement, and strain |

Resources

- [CSA Group Psychological Health and Safety in the Workplace](#) ²³
- [Canadian Centre for Occupational Health and Safety. Mental health - psychological risk factors in the workplace](#) ²⁴
- [Mental Health Commission of Canada. National standard](#) ²⁵
- [Ottawa Public Health. For workplaces](#) ²⁶

IPAC Resources

In this final module of the Action IPAC series, we're providing a list of web-based and organizational resources to support you in your congregate living organization.

These resources are intended to help you implement IPAC best practices, identify opportunities for improvement and respond to emerging issues e.g. outbreaks.

Web-based resources:

Public Health Ontario has developed evidence-based tools, resources, checklists and recorded webinars on the IPAC related topics for [congregate settings](#) and [long-term care and retirement homes](#)

Additionally, the Ministry of Children, Community and Social Services (MCCSS) has [COVID-19 guidance for congregate settings](#) and [Ministry of Long-Term Care resources](#) may be accessed via login.

Organizations that offer IPAC support and services:

Your local IPAC Hub is a great resource for answers to your questions and support for your IPAC program. Contact your Program Supervisor/IPAC Champion (for MCCSS-funded organizations) or your local [Public Health Unit](#) for information.

[IPAC Canada](#) is a national association that has local IPAC Chapters across Ontario. It offers excellent resources as well as opportunities to network with others interested in IPAC.

Training and education:

IPAC is everyone's responsibility not just that of a designated IPAC lead. The above links can help everyone to assess and improve on your IPAC practices. For anyone wishing to learn more about IPAC, there are many training opportunities - from [topic-related training resources](#) available through Public Health Ontario, to [courses offered by IPAC Canada](#).

National IPAC Week Activities

National Infection Control Week in the third week of October every year offers an opportunity to engage in some extra promotion of IPAC. Provincial, national, and international efforts are made during this week to highlight the importance of IPAC. [Public Health Ontario](#) often hosts webinars and other activities can be found by searching IPAC Week on the PHO website.. IPAC Canada dedicates [a special webpage to IPAC Week](#) at where planning resources for your own IPAC Week promotion can be found.

The theme of National IPAC Week changes each year and it offers an opportunity for you to put a fresh approach on your planning each year. You can include engaging activities to raise awareness about the importance of IPAC practices. Some of the goals during the week include:

- Ensuring staff are aware of their IPAC team or practitioner lead and the role they play
- Promoting hand hygiene
- Encouraging influenza and COVID-19 vaccinations
- Creating enthusiasm for infection prevention and control
- Celebrating IPAC achievements from the past year
- Increasing awareness of infection prevention and control in patients/residents/clients

What You'll Learn

As you observe your workplace, you'll learn how infection prevention and control is taking place in your organization. You'll learn where it meets best practices and where improvements can be made.

We also hope you'll share with your team what you learned.

Photograph Staff Practicing IPAC Activities

For privacy reasons, make sure to get permission to take employee photos and ensure that patients are not in the photo.

- Take your phone/camera around with you for several days prior to your event. Capture images of people performing IPAC practices that show their effort to prevent and control the spread of infections.
- Make sure to get permission to take the photo. Create a poster collage of these images or post on the organization's intranet site. Create a collage or photo contest; challenge units to compete; give a prize for the best photo. Consider having patients/residents/clients choose the best photo.

Shine a Light on Clean Hands

Here's your chance to compete to see who has the cleanest hands.

Planning

- Advertise the hand washing contest and the chance to win a great prize!
- Obtain UV light kit and UV product indicator (e.g., powder, lotion, liquid or oil; Glo Germ® or Glitter Bug®; these products can be purchased through online retailers).
- Choose an area close to a sink and recruit volunteers.

The day of the event

- Have volunteers apply Glo Germ® or Glitter Bug® to their hands (as they would normally apply alcohol based hand rub (ABHR)).
- Facilitator will use the UV light to point out any areas where the product has not fully covered the skin. This will show areas they have missed "killing the germs" on their hands. It will also show cracks and crevices in their hands and demonstrates the importance of hand care.
- Participants are then asked to wash their hands with soap and water in their usual way. Facilitator will use the UV light to identify areas where the product is still visible.
- Each staff member is encouraged to note areas on their hands that are particularly hard to clean- e.g., rough skin, cuticles, around rings. They can be encouraged to focus on these in the future.
- Then the PHO Hand Hygiene Videos can be played to show the best practice for using ABHR and soap and water.

Variations

- Place people in a line.
- The activity lead places product on his/her hands and then shakes hands with the next person, who shakes hands with the next person and so on.
- Then, the lead tells participants that they had just sneezed into their hand prior to shaking hands. Shine the UV light on the hands of all those who participated and see how far the "germ" travelled. You will be amazed.
- Place UV product on a highly touched item such as a pen which people use to sign in.
- Shine your UV light and follow where hands have touched.

Take Action to Improve IPAC Practices

Now that you've participated in some fun activities, we encourage you to share what you learned. Provide examples of what's working well and where improvements can be made. Feel free to share with your co-workers.

References

1. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Universal mask use in health care [Internet]. Toronto, ON: Queen's Printer for Ontario; 2022 [cited 2022 May 31]. Available from: <https://www.publichealthontario.ca/-/media/documents/ncov/ipac/faq-covid-19-universal-mask-use-health-care.pdf?la=en#:~:text=Universal%20masking%20means%20wearing%20a,prevent%20the%20spread%20of%20infection>
2. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Universal mask use in health care settings and retirement homes [Internet]. 3rd revision. Toronto, ON: Queen's Printer for Ontario; 2022 [cited 2022 May 31]. <https://www.publichealthontario.ca/-/media/documents/ncov/ipac/report-covid-19-universal-mask-use-health-care-settings.pdf?la=en>
3. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Environmental cleaning toolkit [Internet]. Toronto, ON: Queen's Printer for Ontario; 2022 [cited 2022 May 31]. Available from: <https://www.publichealthontario.ca/en/health-topics/infection-prevention-control/environmental-cleaning/environmental-cleaning-toolkit?tab=2>
4. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Key elements of environmental cleaning in healthcare settings [Internet]. Toronto, ON: Queen's Printer for Ontario; 2022 [cited 2022 May 31]. Available from: <https://www.publichealthontario.ca/-/media/documents/ncov/ipac/2020/10/factsheet-covid-19-environmental-cleaning-hcs.pdf?la=en>
5. Ontario Agency for Health Protection and Promotion (Public Health Ontario). [How to prevent skin damage from cleaning products](#) [Internet]. Toronto, ON: Queen's Printer for Ontario; 2022 [cited 2022 May 31]. Available from: <https://www.publichealthontario.ca/-/media/documents/ncov/factsheet/2020/10/factsheet-covid-19-preventing-skin-damage.pdf?la=en>
6. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Archived - COVID-19: physical distancing [Internet]. Toronto, ON: Queen's Printer for Ontario; 2020 [cited 2022 May 31]. Available from: <https://www.publichealthontario.ca/-/media/documents/ncov/factsheet/factsheet-covid-19-guide-physical-distancing.pdf?la=en>
7. Society for Human Resources Management. Physical distancing at work [Internet]. Alexandria, VA: Society for Human Resources Management; [2022] [cited 2022 May 31]. Available from: <https://www.shrm.org/ResourcesAndTools/tools-and-samples/Documents/SocialDistancingGuidelines.pdf>

8. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Heating, ventilation and air conditioning (HVAC) systems in buildings and COVID-19 [Internet]. Toronto, ON: Queen's Printer for Ontario; 2021 [cited 2022 May 31]. Available from: <https://www.publichealthontario.ca/-/media/documents/ncov/ipac/2020/09/covid-19-hvac-systems-in-buildings.pdf?la=en>
9. Eykelbosh A. Role of ventilation in influencing COVID-19 transmission risk [Internet]. Vancouver, BC: National Collaborating Centre for Environmental Health; 2020 [cited 2022 May 31]. Available from: <https://ncceh.ca/content/blog/role-ventilation-influencing-covid-19-transmission-risk>
10. Health Canada. Maintain and improve indoor air quality [Internet]. Ottawa, ON: Government of Canada; 2018 [modified 2018 Nov 22; cited 2022 May 31]. Available from: <https://www.canada.ca/en/health-canada/services/publications/healthy-living/infographic-improve-indoor-air-quality.html>
11. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Just clean your hands: hand care program [Internet]. Toronto, ON: Queen's Printer for Ontario; 2009 [cited 2022 May 31]. Available from: <https://www.publichealthontario.ca/-/media/documents/J/2009/jcyh-hand-care-program.pdf?la=en>
12. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Protecting your hands fact sheet for health care providers [Internet]. Toronto, ON: Queen's Printer for Ontario; 2009 [cited 2022 May 31]. Available from: <https://www.publichealthontario.ca/-/media/documents/J/2009/jcyh-hand-care-assessment.pdf?la=en>
13. Ontario Agency for Health Protection and Promotion (Public Health Ontario). How to prevent skin damage from cleaning products [Internet]. Toronto, ON: Queen's Printer for Ontario; 2020 [cited 2022 May 31]. Available from: <https://www.publichealthontario.ca/-/media/documents/ncov/factsheet/2020/10/factsheet-covid-19-preventing-skin-damage.pdf?la=en>
14. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Infection prevention and control practices for occupational contact dermatitis [Internet]. Toronto, ON: Queen's Printer for Ontario; 2020 [cited 2022 May 31]. Available from: <https://www.publichealthontario.ca/-/media/documents/s/2020/summary-ipac-occupational-dermatitis.pdf?la=en>
15. Centre for Research Expertise in Occupational Disease. Skin health resources [Internet]. Toronto, ON: Centre for Research Expertise in Occupational Disease; 2022 [cited 2022 May 31]. Available from: <https://creod.on.ca/occupational-skin-disease/resources/>
16. Yu J, Chen JK, Mowad CM, Reeder M, Hylwa S, Chisolm S, et al. Occupational dermatitis to facial personal protective equipment in health care workers: a systematic review. *J Am Acad Dermatol*. 2021;84(2):486-94. Available from: <https://doi.org/10.1016/j.jaad.2020.09.074>

17. Pennathur PR, Herwaldt LA. Role of human factors engineering in infection prevention: gaps and opportunities. *Curr Treat Options Infect Dis*. 2017;9(2):230-49. Available from: <https://doi.org/10.1007/s40506-017-0123-y>
18. Jacob JT, Herwaldt LA, Durso FT, CDC Prevention Epicenters Program. Preventing healthcare-associated infections through human factors engineering. *Curr Opin Infect Dis*. 2018;31(4):383-8. Available from: <https://doi.org/10.1097/QCO.0000000000000463>
19. Ontario Agency for Health Protection and Promotion (Public Health Ontario). COVID-19 self-assessment audit tool [Internet]. Toronto, ON: Queen's Printer for Ontario; 2021 [cited 2022 May 31]. Available from: https://www.publichealthontario.ca/-/media/documents/ncov/ltrh/2021/12/covid-self-assessment-audit-tool-ltc.pdf?sc_lang=en
20. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Audit training for long term care homes [video recording]. Toronto, ON: Queen's Printer for Ontario; 2019 [cited 2022 May 31]. 15 sec. Available from: https://www.youtube.com/watch?v=OZcC-3ry_24
21. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Personal protective equipment (PPE) auditing [Internet]. Toronto, ON: Queen's Printer for Ontario; 2022 [cited 2022 May 31]. Available from: <https://www.publichealthontario.ca/en/health-topics/infection-prevention-control/ppe-auditing>
22. Infection Prevention and Control Canada. Infection prevention and control (IPAC) program standard [Internet]. Winnipeg, MB: Infection Prevention and Control Canada; 2016 [cited 2022 May 31]. Available from: http://ipac-canada.org/photos/custom/pdf/IPAC_PROGRAM_STANDARD_2016.pdf
23. CSA Group. CAN/CSA-Z1003-13/BNQ 9700-803/2013 – psychological health and safety in the workplace. Toronto, ON: CSA Group; 2013. Available from: <https://www.csagroup.org/article/cansca-z1003-13-bnq-9700-803-2013-r2018/>
24. Canadian Centre for Occupational Health and Safety. Mental health - psychological risk factors in the workplace [Internet]. Hamilton, ON: Canadian Centre for Occupational Health and Safety; 2022 [modified 2022 May 20; cited 2022 May 31]. Available from: https://www.ccohs.ca/oshanswers/psychosocial/mentalhealth_risk.html
25. Mental Health Commission of Canada. National standard [Internet]. Ottawa, ON: Mental Health Commission of Canada; 2022 [cited 2022 May 31]. Available from: <https://mentalhealthcommission.ca/national-standard/>
26. Ottawa Public Health. For workplaces [Internet]. Ottawa, ON: Ottawa Public Health; 2021 [cited 2022 May 31]. Available from: <https://www.ottawapublichealth.ca/en/public-health-services/ht-workplaces.asp>

Public Health Ontario

480 University Avenue, Suite 300

Toronto, Ontario

M5G 1V2

647.260.7100

communications@oahpp.ca

publichealthontario.ca

