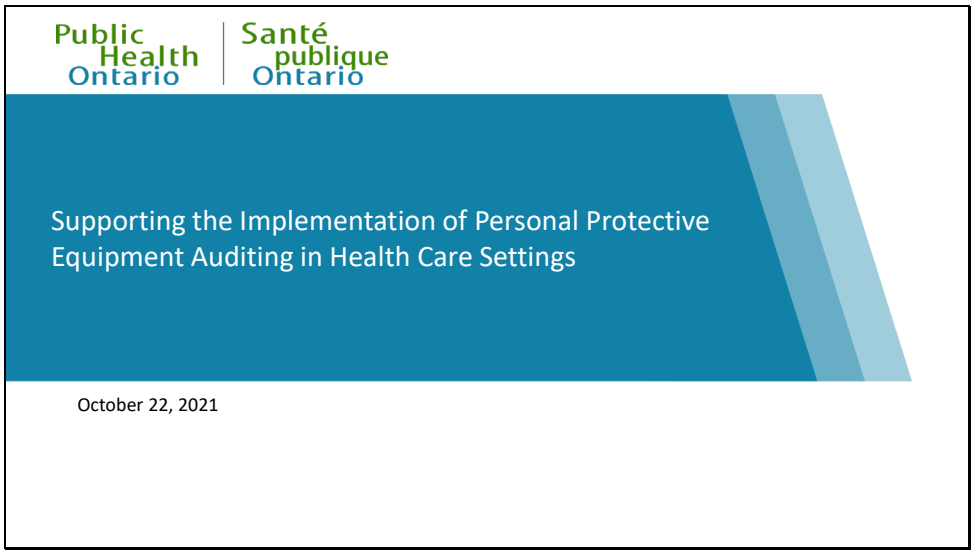
Public Health Ontario | Santé publique Ontario

Supporting the Implementation of Personal Protective Equipment Auditing in Health Care Settings

Transcript

September 2021

Slide 1



Personal Protective Equipment auditing is one strategy organizations can use to improve their Infection Prevention and Control practices. The following presentation will provide information to support the implementation of Personal Protective Equipment auditing in Health Care Settings.

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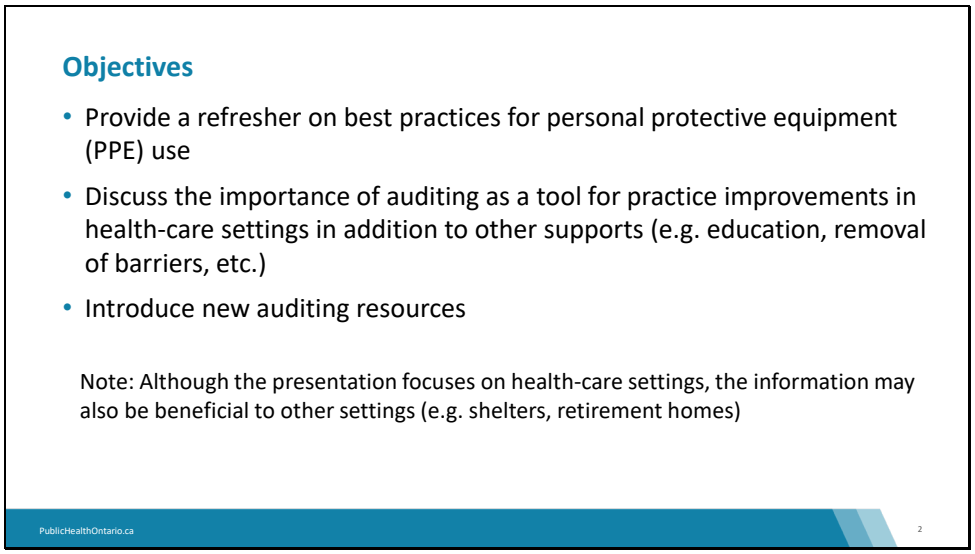

This webinar will provide you with a refresher on best practices for personal protective equipment or PPE use. You are probably using more PPE now than ever before so we can just quickly review the proper use of PPE. We will be discussing the importance of auditing as a tool for practice improvements in health care settings. Auditing is a really important strategy to support long-term improvement in your practices so it should be integrated as a regular part of your infection prevention and control program but of course we acknowledge that you are very busy, always but especially right now, so you can consider what you have capacity to do at the time. In addition, we will introduce new resources to support PPE auditing in your organization.

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There are several key steps to implement auditing in your organization and they can be organized using the following 5 steps, as identified in the At a Glance: Implementing Personal Protective Equipment (PPE) Audits resource:

Step 1.Plan

Step 2. Audit,

Step 3.Evaluate and Strategize,

Step 4.Implement Strategies and

Step 5.Improve and Sustain

This presentation will provide considerations to take during each step.

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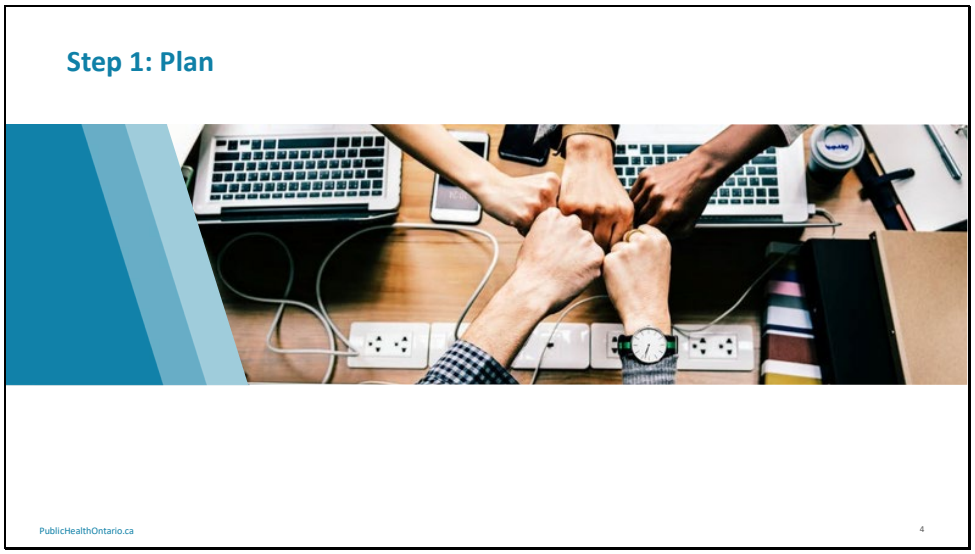

The first step in implementing PPE auditing in your organization is to plan your approach.

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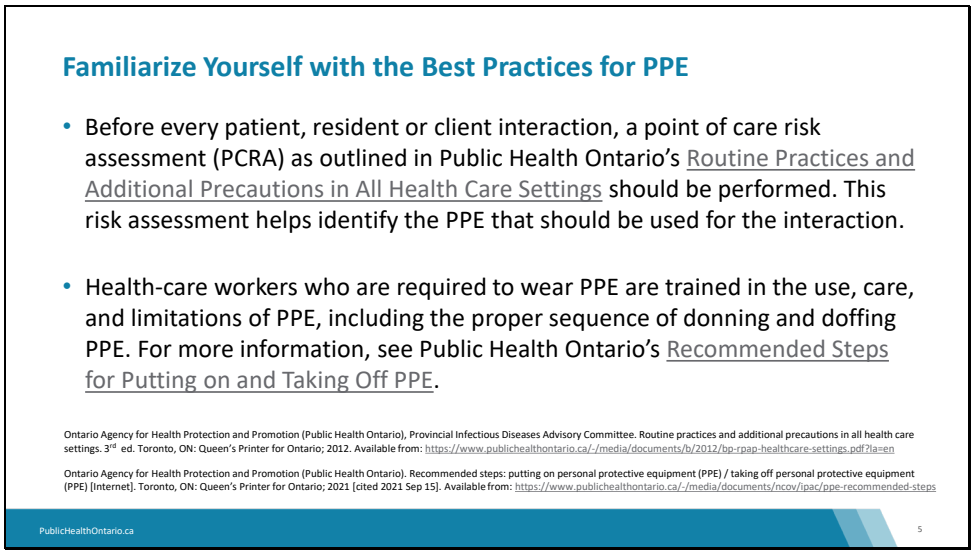

What resources are there to support health care workers and leadership to gain the knowledge and skills they need regarding PPE use? There is one essential step that everyone must take before we choose our PPE. This step is the Personal Risk Assessment, or the Point-of-care-risk assessment.

In healthcare, the Personal risk assessment is the first step in the care process and is completed before every interaction with a patient/resident or client to determine if the situation poses a risk to you, or others, of being exposed to an infectious agent.

This assessment considers your patient, resident or client , the task you are performing, and the type interaction you will have, to identify appropriate precautions that you must take for the care activity.

We have hyperlinked some resources here so the first one is for recommendations for use of personal protective equipment for care of individuals with suspect or confirmed COVID-19. It discusses different types of risk assessments where strategies to protect healthcare workers can be implemented.

To safely provide care you want to make sure you have practiced properly putting on and taking off PPE and there is no shame is reviewing this process as many times and as often as you need to. Everyone should be aware of the limitations of PPE as well as how to care for it, especially if reusable PPE is being used.

We have linked to another PHO resource here, it's a really handy poster outlining the steps for putting on and taking off PPE.

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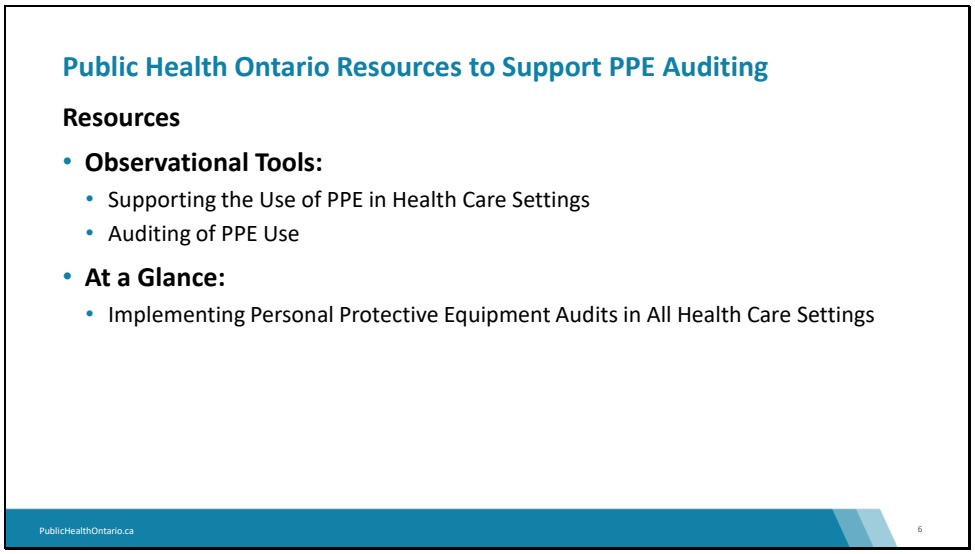

Now that you've reviewed the best practices for PPE and what PPE users need to know, we are going to discuss one way we can promote compliance and improvement with PPE best practices – that is with auditing.

Public Health Ontario has just published 3 documents to help implement or improve PPE auditing in your setting.

There are two observation tools:

- Supporting the Use of Personal Protective Equipment (PPE) in Health Care Settings
- Auditing of Personal Protective Equipment (PPE) Use

And a document to help guide the use of these observation tools to audit and improve PPE practice in your setting: Implementing Personal Protective Equipment Audits in All Health Care Settings

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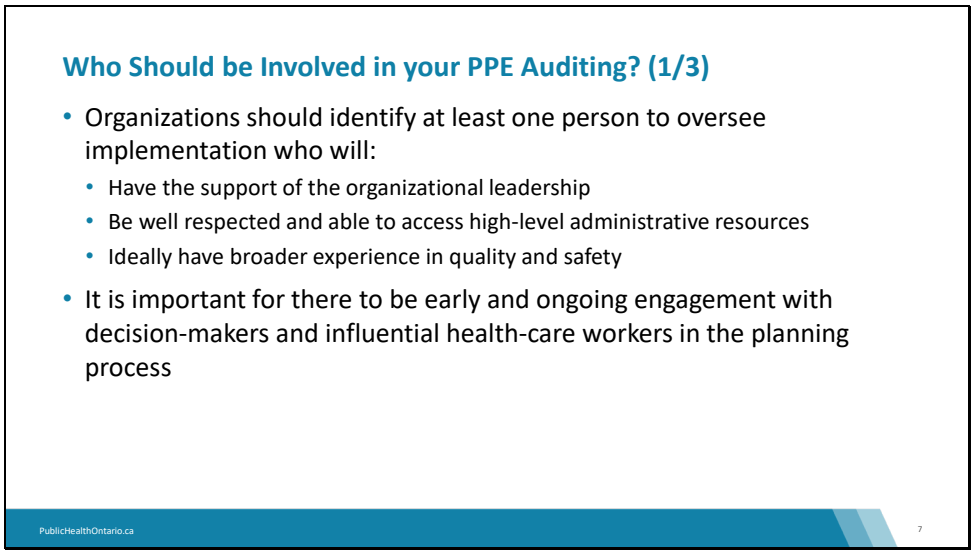

Your organization should identify at least one person to oversee implementation and the maintenance of the PPE auditing program. This person should have the support of the leadership within the organization such as the CEO, and middle and senior managers. They should also be well respected and able to access high-level administrative resources within the organization. Also, ideally, they would have appropriate clinical experience or broader experience in quality and safety. It's important to engage decision-makers and influential healthcare workers early in the planning process, at the earliest stage possible and maintain this engagement during implementation and beyond.

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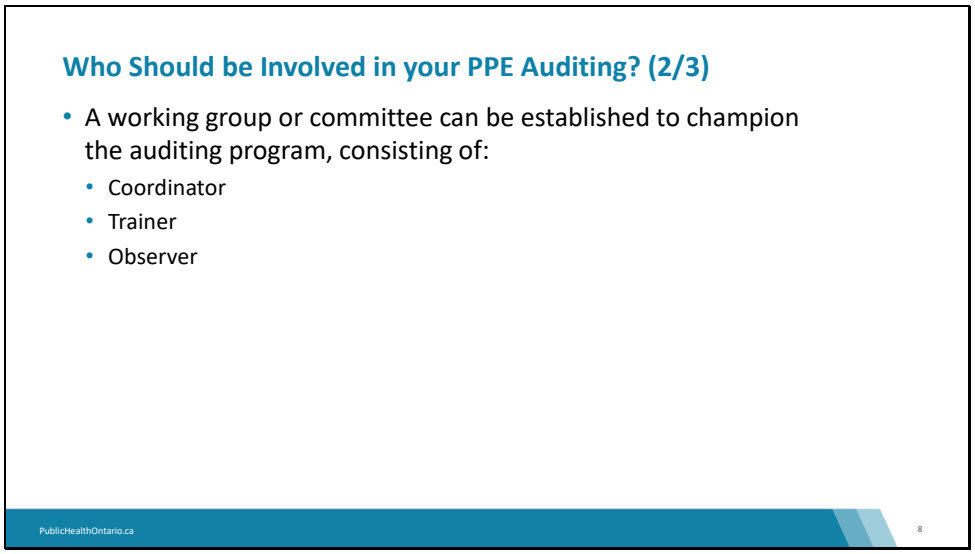

A working group or committee can be established to champion your PPE auditing program within your organization. This group can consist of a coordinator, or person responsible, who works with the management or committee to identify individuals or human resources within the organization to be trained as in-house trainers and observers.

The trainer is someone who should be influential within your organization and who would have basic knowledge of infection prevention and control and patient or resident safety.

The observer should be a health care worker with experience donning or putting on, doffing or taking off, using and working with PPE.

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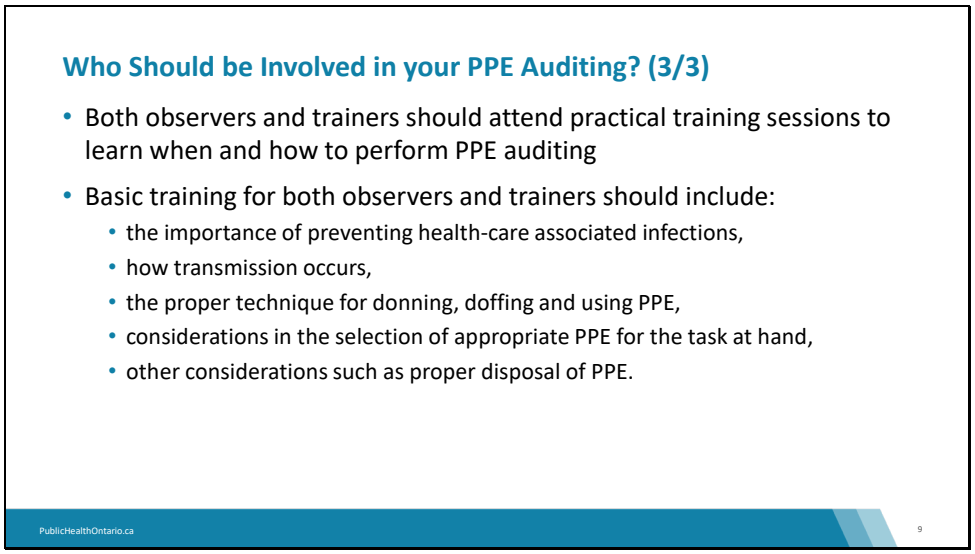

Both the observers and the trainers should attend training sessions to ensure they are knowledgeable in both when and how to perform PPE auditing. This basic training should include the importance of preventing health care-associated infections, how transmission can occur, the proper technique for donning, doffing and using PPE, how to select for the appropriate PPE needed for their task and other considerations such as the proper disposal and storage of PPE.

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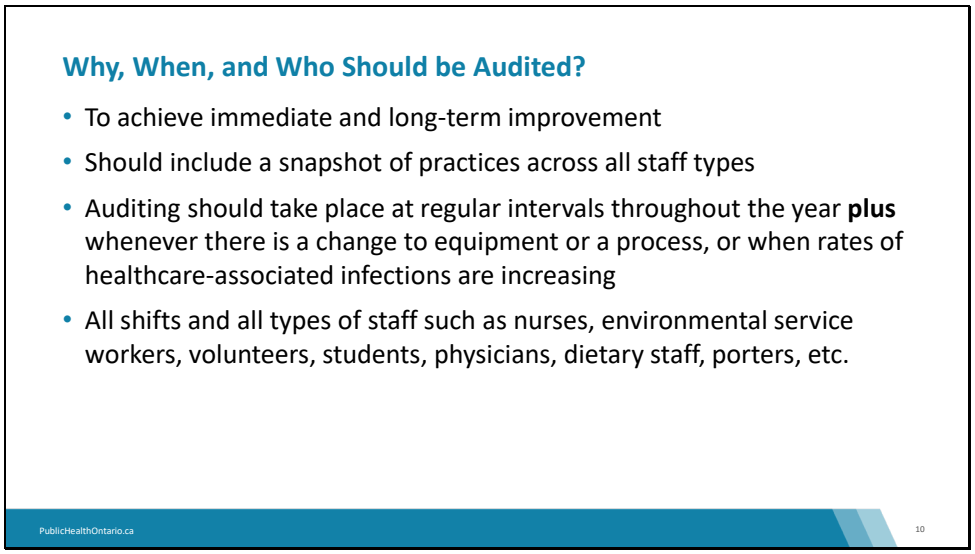

Auditing programs are important to help achieve long-term improvement in health care practices. Improving adherence to infection control practices requires a multifaceted approach that incorporates ongoing education and continuous assessment of both the individual and the work environment.

There are both immediate and long-term benefits of auditing. Long-term benefits include facility-wide improvements in infection prevention and control practices that can be achieved by consistent auditing and feedback of results over time. Auditing should also not end at the observation and reporting of results. The gaps identified during audits can be used to help inform improvement programs as we try to understand why these gaps are occurring to begin with. These improvement programs may involve education, skills practice, or culture change.

Immediate benefits can also occur through timely feedback of observations directly to health care workers – this can help staff identify gaps in their own practices that they may not recognize, and promote accountability for their own behaviours. Auditing should be conducted in a way that allows a snapshot of practices across all staff types, shifts, and times of year, as this will provide a more accurate representation of practices and will allow you to compare the data and focus resources where they are most essential.

Ongoing auditing at regular intervals plus whenever there is a change to equipment, a process or when healthcare associated infection rates are increasing to ensure that the benefits are achieved and maintained over time, and to capture issues or gaps as early as possible.

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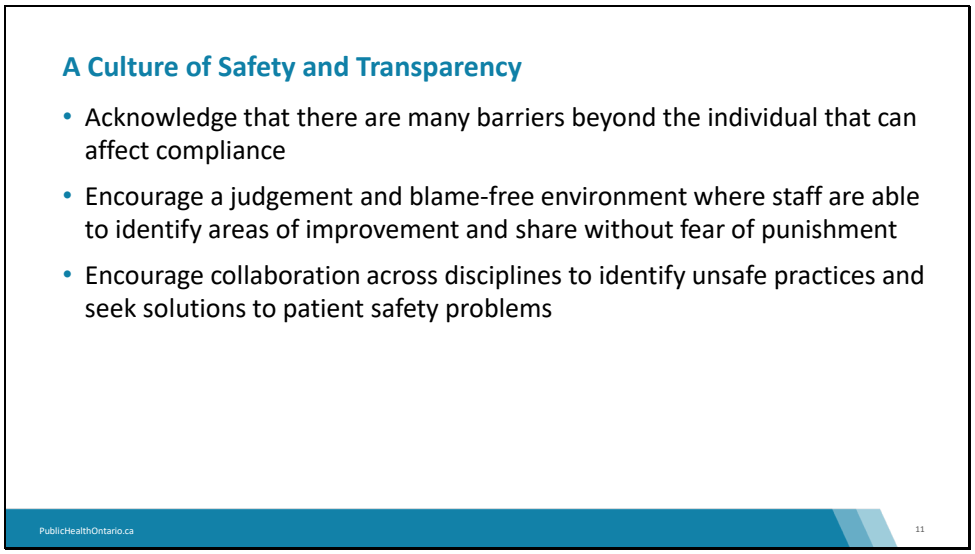

A culture of safety is critical for auditing to be effective and well-received by your staff members. Without this culture of safety, staff members are unlikely to accept the auditing process, feel they are being disciplined, and may reject feedback. This culture of safety and transparency can allow us to provide and receive feedback in an open and collaborative manner. There are a few key points that should be kept in mind as your organization works towards developing this culture of safety.

First - It should be acknowledged that there are many barriers beyond the individual that can affect compliance, such as time, workload, and PPE supply location and availability.

Second - We should all encourage a judgement and blame-free environment where staff are able to report errors or near misses without fear of punishment. We want to avoid staff feeling as if it is a disciplinary activity or for them to feel uncomfortable with receiving the feedback.

Third - We should also encourage collaboration across disciplines to ensure there is a spokesperson from each discipline to provide input into the program and also to advocate for the program to their colleagues.

As you can imagine, this is not a one day process. If you don't already have this open, transparent, judgment-free culture, it will take time and persistence, but you can start by being role models and educators on the benefits of it, and you can help identify other staff members that are highly respected by their colleagues to role model this culture as well.

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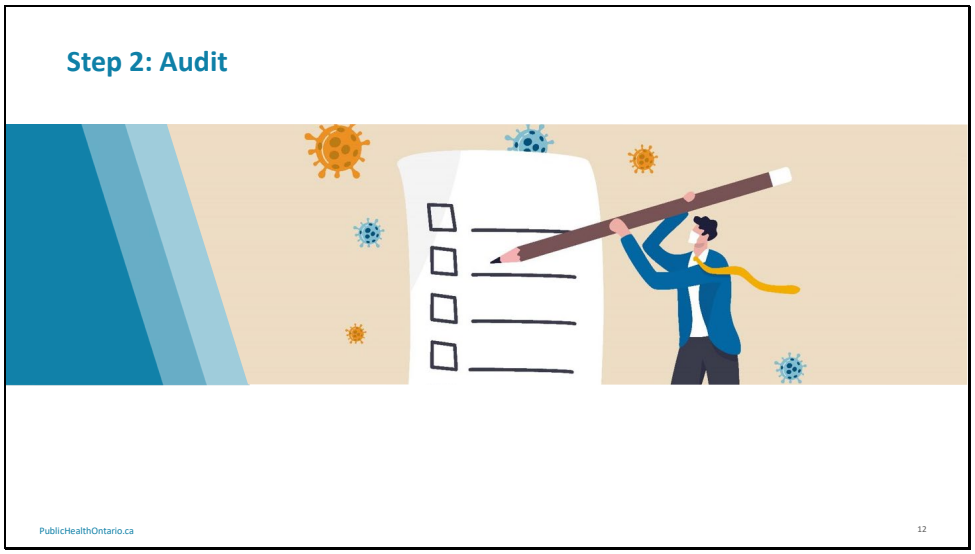

Moving on to step 2: How and what should we audit

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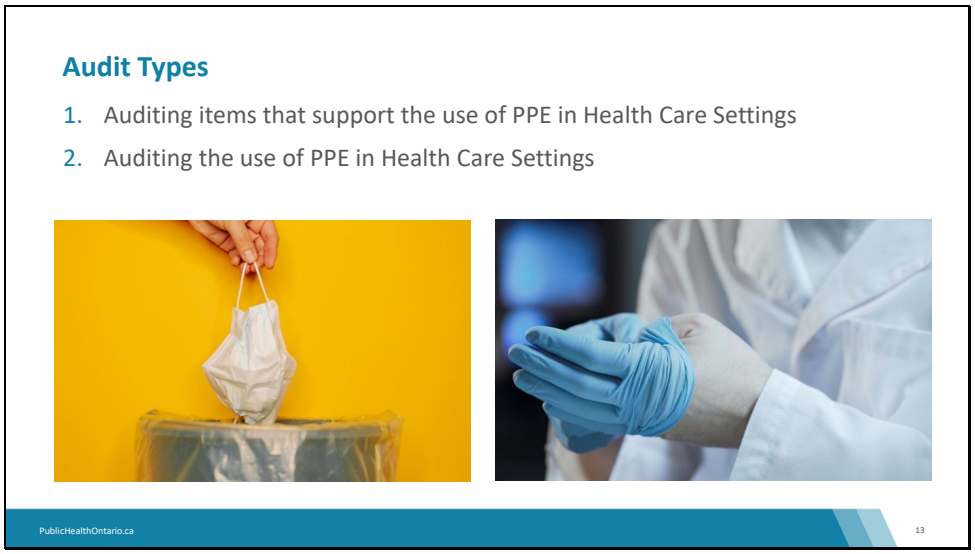

As mentioned previously, PHO has two new audit tools, including one for Supporting the Use of Personal Protective Equipment (PPE) in Health Care Settings and one for Auditing of Personal Protective Equipment (PPE) Use.

- The first type is conducted on a regular, but occasional basis, to identify compliance with those factors that help support the use of PPE best practices in health care settings - including observations on policies and procedures, training and supplies. For example, you may conduct this audit on a monthly basis if there are frequent concerns, or on an annual basis if there are no noted issues.
- The second type of audit is identifying compliance with the actual use of PPE by staff in the clinical settings. This is the actual observation of staff donning and doffing their PPE prior to engaging with a patient/resident or client.

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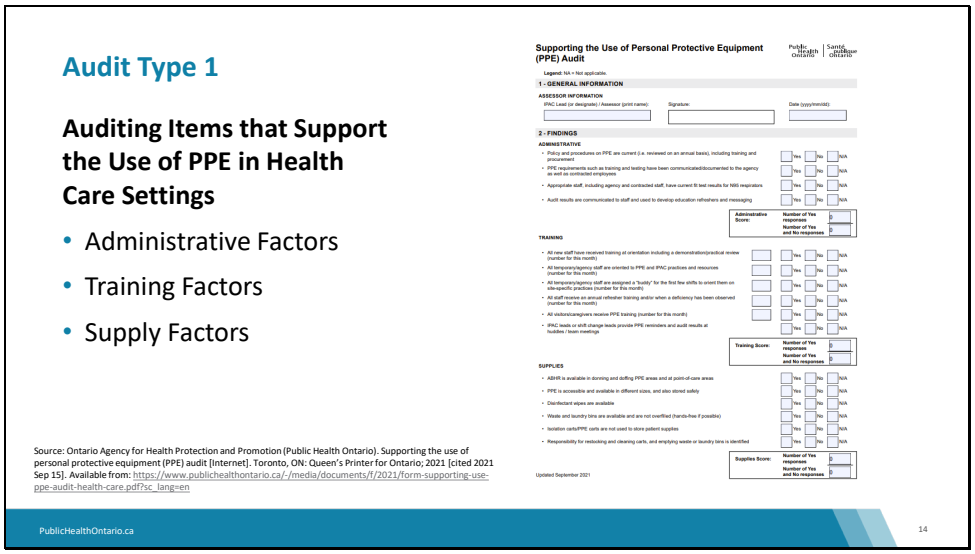

The first audit type is used to assess items that support the use of PPE and identifies three factors that should be audited on a regular, but occasional basis, including administrative, training and supply factors.

ADMINISTRATIVE factors include such things as policies and procedures, communication, and fit-testing for respirators.

TRAINING factors include such things as providing orientation training and training on an ongoing basis for staff, and training of visitors and caregivers on IPAC principles.

SUPPLY factors include such things as the availability and accessibility of ABHR, PPE, disinfectant wipes, and waste and laundry bins.

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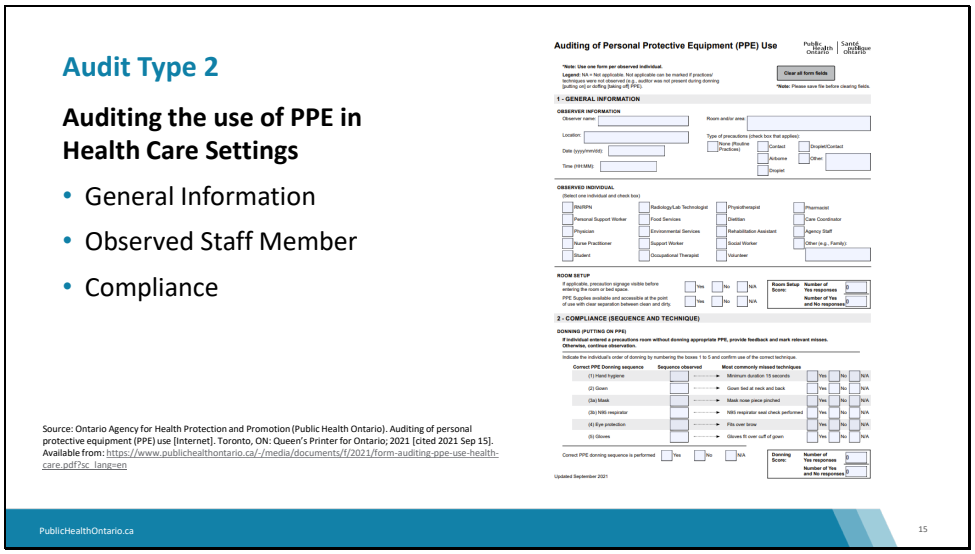

The second audit tool: Auditing of PPE Use, includes three parts:

- General Information
- Observing the Staff Member and
- Compliance

General Information includes the collection of data that can be broken down to create more specific comparisons – this includes the location, the date and time, and the type of precautions. Information like this will allow you to provide PPE compliance results specific to a unit/location, the type of precautions, and the type of shift – such as day versus night shift.

Indicating the staff member being observed will allow you to compare different group types of staff members or identify where strengths or concerns are within different staff groups.

Finally, the compliance section looks at sequence and technique. This section includes the room set-up – including appropriate placement of precaution signage, accessibility of PPE supplies at point of use, and distinction between clean and dirty. It also includes observations on the appropriate sequence for Donning and Doffing of PPE and other safe practices including doffing location, disposal of PPE, appropriate disinfection of PPE, and safe removal techniques.

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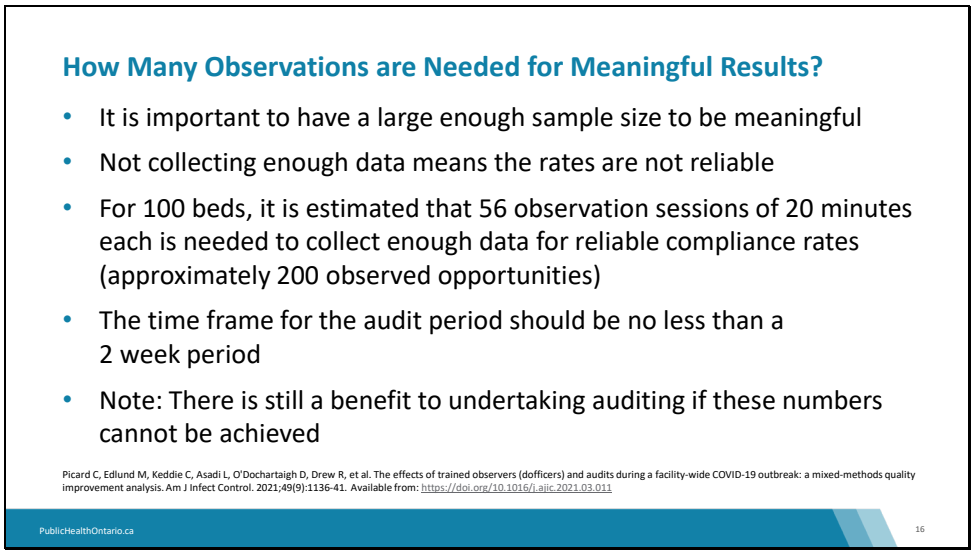

When determining how many observations to make to produce meaningful results, it is important to keep a few considerations in mind:

- It is important to have a large enough sample size to be meaningful
- Not collecting enough data means the rates are not reliable as any changes could be due to chance alone rather than the effect of the intervention
- For 100 beds it is estimated that 56 observation sessions of 20 minutes each is needed to collect enough data for reliable compliance rates. This provides for approximately 200 observed opportunities.
- The time frame for the audit period should be no less than a 2-week period to capture a large enough number of random observations.

Note: There is still a benefit to undertaking auditing if these numbers cannot be achieved – it can allow you to observe for common barriers or issues, and also provide some on the spot education and an opportunity to highlight the importance of appropriate use of PPE.

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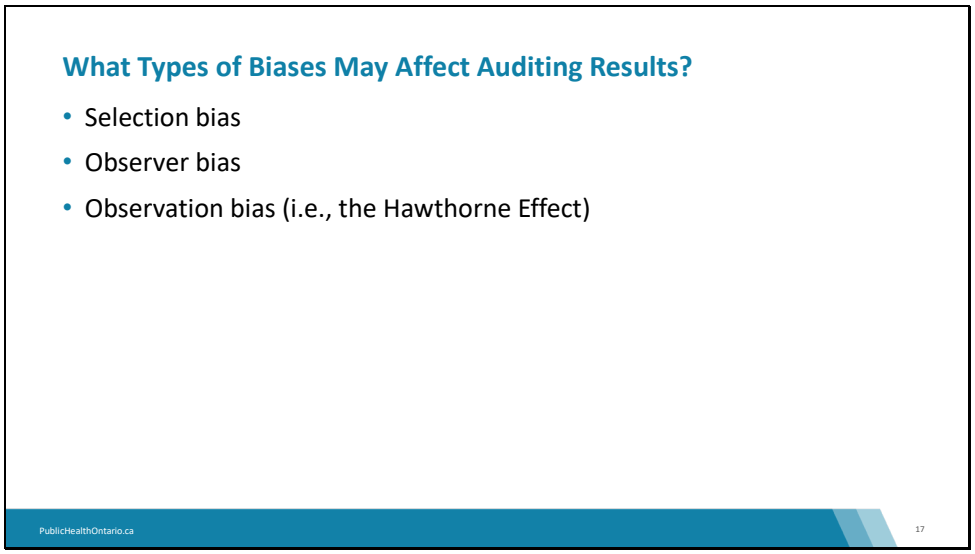

In the process of auditing, you may accidently introduce bias which can adversely affect your auditing results and the quality of your data. Bias is defined simply as an error, and it can be in the design, collection, analysis or interpretation of data.

Selection bias refers to an error introduced when the study population does not represent the target population. Some strategies to avoid this include randomly distributing audits throughout the day, so performing them in the morning, afternoon and evening shifts, including holidays and weekends, or selecting rooms to monitor, rather than specific health care workers.

Observer bias refers to a bias introduced during the process of observing and recording information which includes systematic discrepancies from the truth. For example – inadequate training on the use of the tool could introduce errors into your data, or recording of subjective data (e.g. how long did they conduct HH, how closely did they follow safe removal techniques)

Strategies to overcome observer bias include the use of a standardized observation tool with clear instructions, adequate training for observers in how to record findings, identifying any potential conflicts before recordings commence and clearly defining the methods, tools and time frames for collecting data, be aware of prejudices and habits, quality control checks of data entry, and periodic inter-rater reliability testing

Observation bias (also known as the Hawthorne Effect) – this type of bias refers to the change in behavior due to a subjects' awareness of being observed.

Some strategies to overcome this include not identifying what you are observing for, switching up auditors so the auditors are less known to staff, and using covert observers.

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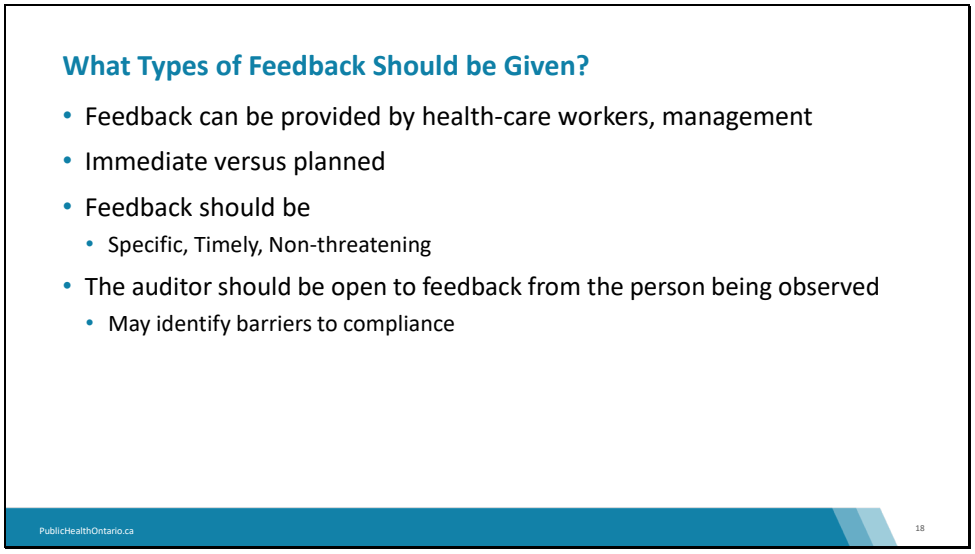

Auditing information that is collected can be provided as immediate feedback or planned feedback.

Immediate feedback is given at the time of the occurrence and can be given by anyone; including observers, managers, supervisors or peers. This may be offered verbally or an on-the-spot feedback card that provides information on both hits and misses to provide both positive encouragement, and areas for improvement.

Planned Feedback is given at pre-determined intervals - for example year end audit results or performance feedback. It is usually more setting-wide results versus individual results and is usually the responsibility of a designated department or assigned role such as the manager, or IPAC person.

Feedback should be specific, timely and non-threatening:

- Specific details are important to be able to recall specific gaps or strengths that you observe.
- Immediate feedback is often considered the most effective form of feedback – this is given right after the interaction when the behaviour is fresh in the practitioner's mind. Providing this feedback allows the practitioner to actively think about their specific behaviour and compare it to the best practice which may translate into changes to this behaviour going forward.

Finally, you should aim to keep the feedback non-threatening by providing it in a safe place, and in manner where the staff member does not feel they are being judged or punished.

It is also important to seek feedback from the health care worker being observed as they may actually be able to identify barriers that can help with the development of future improvement programs.

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Now we will discuss the evaluation of the audit data and how it can be used to make practice improvements.

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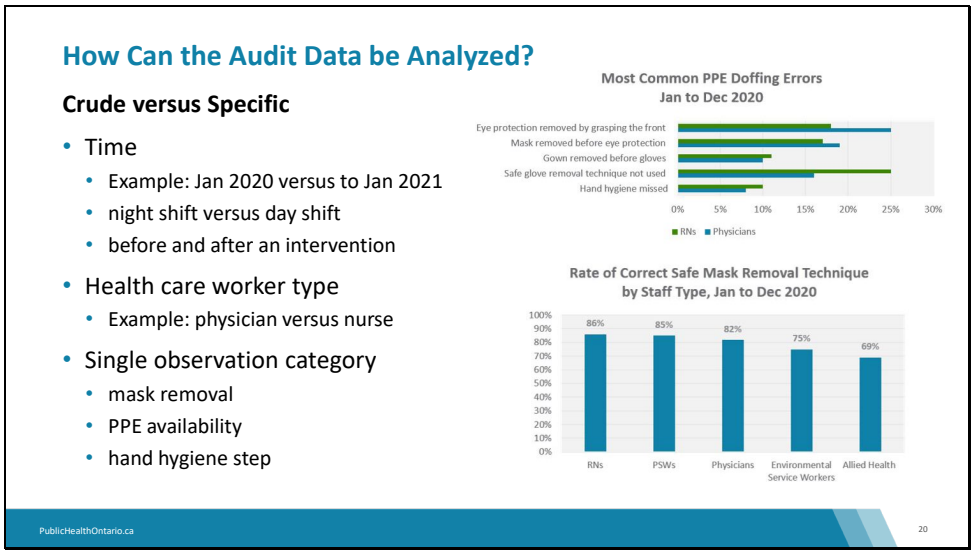

How you analyze your results will depend on the types of information that will be valuable to your organization.

Crude data lumps all of the data together to get an overall compliance rate. For example total compliance for all observations of the correct PPE donning order. A crude number may help to show where issues may lie or compare changes over time across the organization, however, it may not be as useful when trying to identifying where you should apply efforts into creating improvements.

In order to determine where the issues are really occurring and where your resources would be best used, you will want to calculate more specific compliance rates. These rates may be based on time of year (for example winter versus summer), night shift versus day shift, or by health care worker type – for example - what are the compliance rates for PSWs, versus physicians, versus nurses.

If you are specifically concerned about one aspect of the donning or doffing process, you may also calculate a rate for that particular step. For example how often is the mask being removed using the safe removal technique.

The graphs on this slide provide information on particular aspects of the auditing data. This specific information will allow you to drill down and focus your time and energy on improvement projects in the most needed areas.

As an example the top graph identifies that the most common PPE doffing error by physicians is removal of the eye protection by grasping the front portion, while the most common error by nurses is not removing gloves using the safe removal technique. Based on this information you may then choose to develop separate strategies for these different professions.

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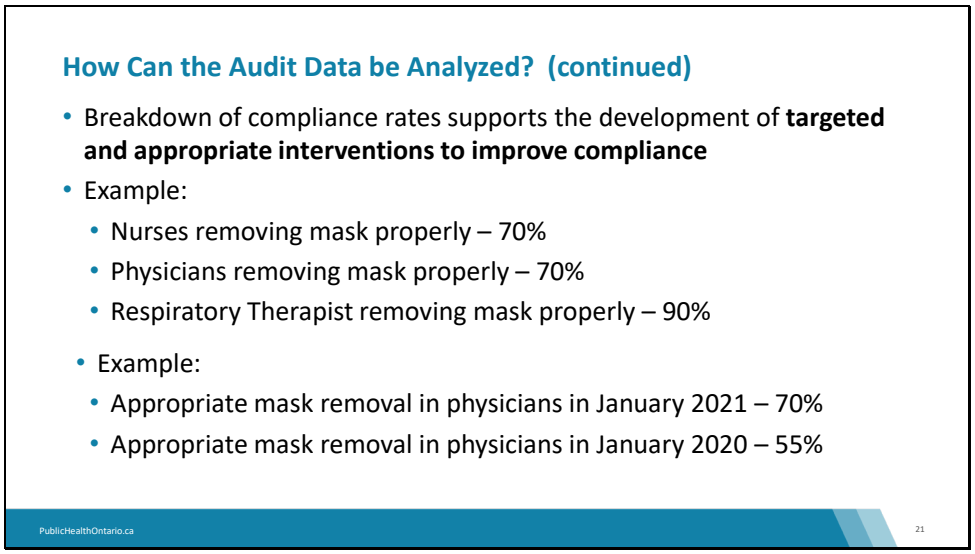

Here is an example of how you can approach analyzing your audit data. You can break down compliance rates to determine targeted and appropriate interventions to improve compliance.

In the first example, you are interested in looking at the compliance rates between different healthcare worker and staff category type and removing their mask using the proper technique. Both nurses and physicians have compliance rates of 70% but respiratory therapists have a compliance rate of 90%. You can consider why the RTs seem to be more compliant in using proper technique for mask removal. Have they received different education and training? Is there anything you can learn that can be used to improve the compliance rates of the nurses and physicians.

In the second example, appropriate mask removal compliance rates for physicians are compared across years. So in 2020 the compliance rate was only 55% compared to 70% in 2021. You can investigate what contributed to the change in compliance rate and consider how you can sustain the trend of increasing compliance.

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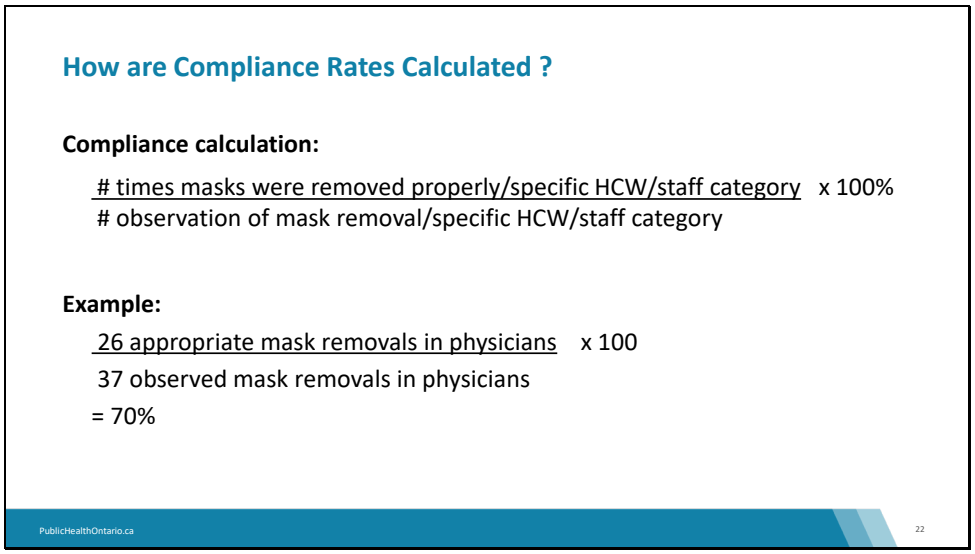

Here is an example showing how to calculate compliance rates. Compliance rates refer to the percentage of observations where the correct practice was being observed. This can be calculated for a particular type of healthcare worker or staff member and/or a particular category of practice (for example proper technique for mask removal).

In the example here, you would divide the total number of times that proper removal technique for masks was observed for a particular healthcare worker or staff category by the total number of observation of that practice for that healthcare worker or staff category and this would include both the observations where it was done properly plus observations where it wasn't and multiply by 100 to get a percentage.

If 26 physicians were observed removing their masks using the proper technique out of a total of 37 observations of physicians removing their masks, the compliance rate would be 70%.

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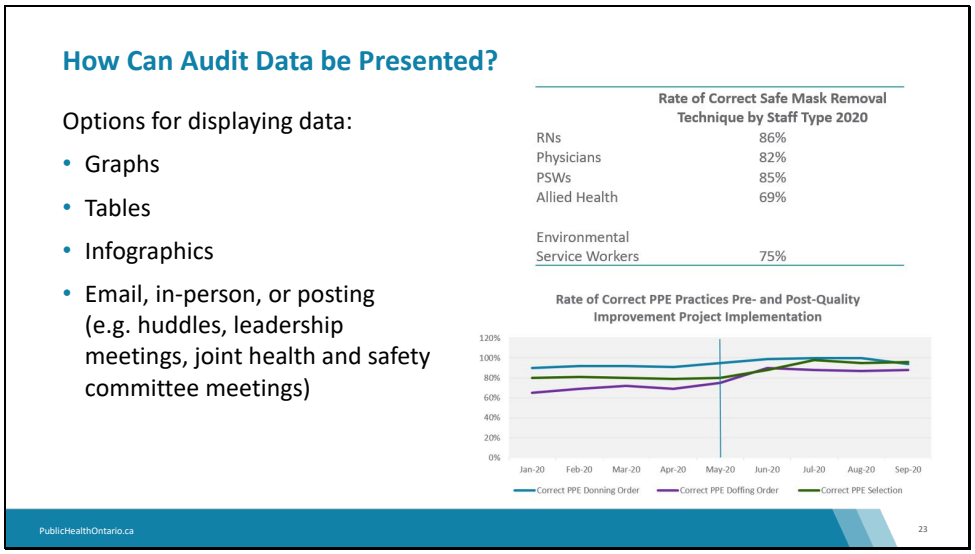

There are several different options for you to visually display and present your audit data and these may depend on exactly what you are presenting and who you are presenting to. You can use graphs or tables, such as the examples shown in the slide, or even develop an infographic that can help present the most important data in a concise, visually appealing, eye-catching manner.

Depending on your organization, you may wish to email the data, or present it in person. It can be posted in the facility, presented during huddles or at leadership meetings, or joint health and safety committee meetings or if you have infection control committee meetings. Consider who needs to see the data and how to best get it to them. Be sure to not overwhelm your audience with too much data, cluttered or chaotic designs, or information that is irrelevant to them.

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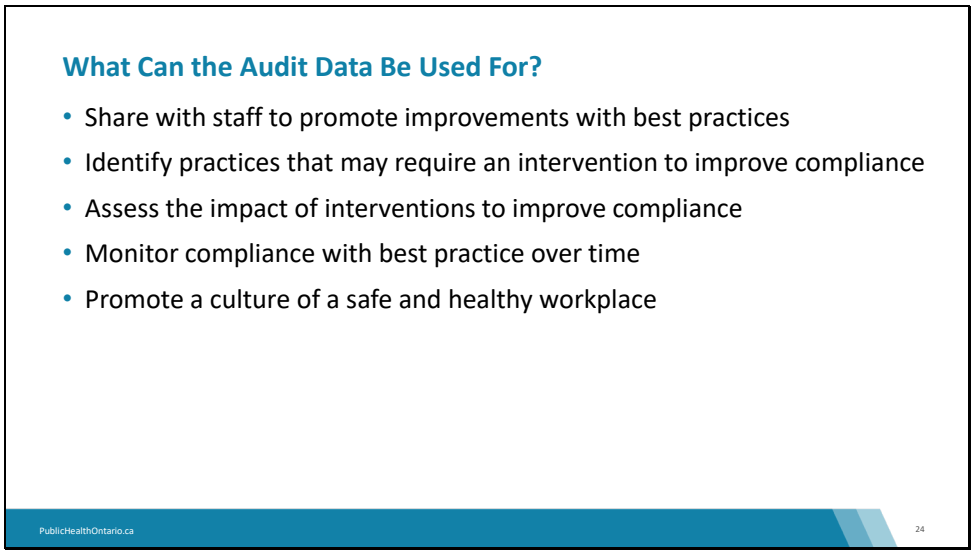

There are many different benefits to having an auditing program, some of which we already spoke to a bit:

- You can share immediate feedback with staff to promote compliance with best practices going forward
- You can identify practice gaps that may require an intervention to improve compliance, and also get feedback from staff members on why these gaps may be occurring.
- You can assess the impact of interventions that you have put into place to improve compliance, by looking at audit data before and after the intervention was implemented and
- You can also monitor compliance with best practices over time and identify early if best practices are declining. Identifying these changes early on can ensure that timely action is taken to address it.

Finally, sharing audit data can help promote a culture of safety and a healthy workplace by getting everyone involved and promoting a collaborative partnership between IPAC, leadership and front-line staff to improve practices.

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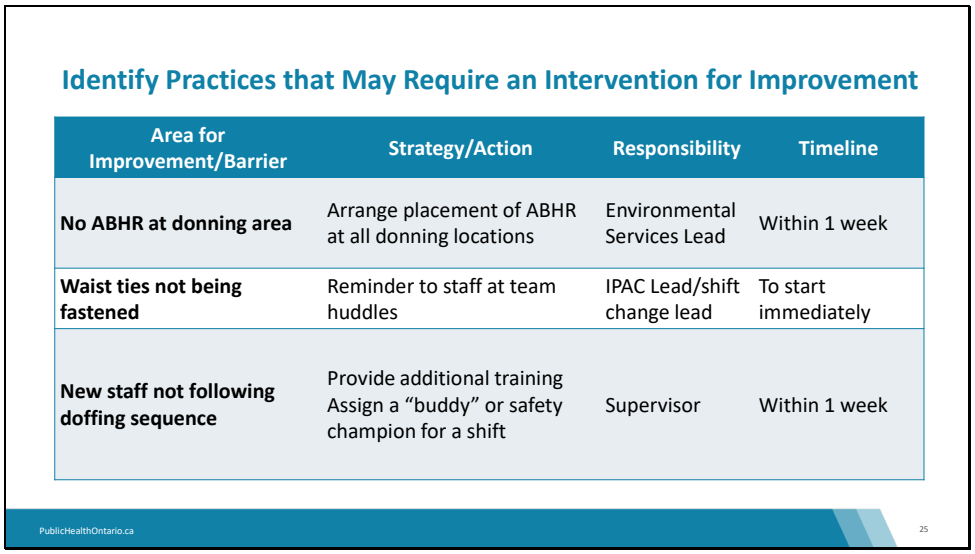

Once you have analyzed the data you may become aware of gaps or barriers to best practice that are occurring. The next steps will be to identify actions to help correct the issues or to address the barriers.

This slide provides an example of an action plan to help organize the gaps and barriers, how these may be addressed, who is most responsible for the actions, and a timeline for completion. Keep in mind that different barriers require different strategies and theories like the **COM-B or the theory of planned behavior can be helpful for mapping barriers to the barrier type (for example – are they communication, opportunity, or motivation barriers)** and then to potential strategies for improvement.

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The second last step, Step 4, is to implement those strategies you have chosen to address issues.

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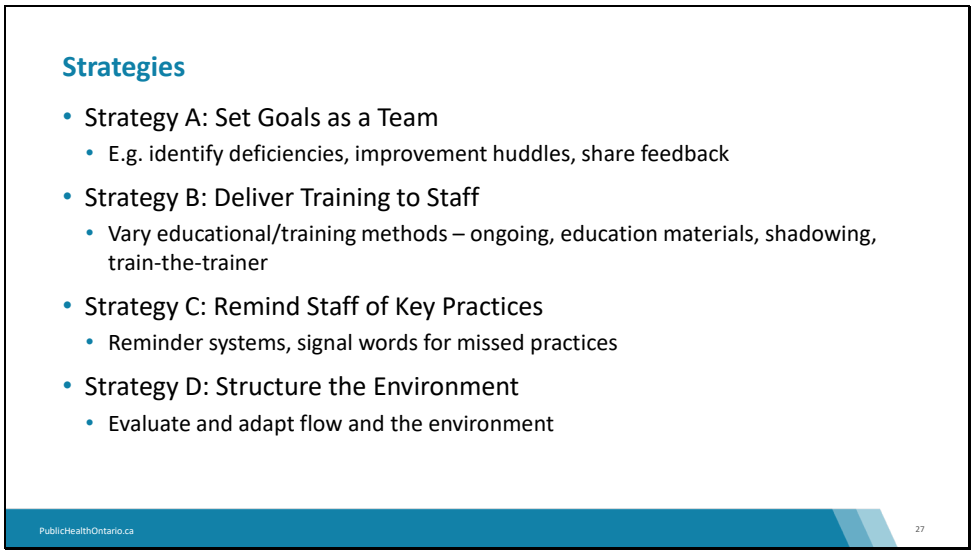

The At a Glance Resource can provide examples for each of these strategies.

There are a few important things to keep in mind when you are developing these strategies.

Strategy A: Set Goals as a Team

- Facilitate improvement huddles where teams can discuss the barriers and challenges to best practices e.g. Health Care Huddles: IPAC Checkpoints
- Develop team goals and actions to address deficiencies shared from the audits
- Monitor practices and staff and give each other feedback

Strategy B: Deliver Training to Staff

- Hold educational meetings to review best practices
- Distribute educational materials
- Plan for and make training available in an ongoing way
- Vary the information delivery methods to cater to different learning styles and work contexts, and shape the training to be interactive
- Provide ways for individuals to directly observe or shadow experienced people
- Use a train-the-trainer approach

Strategy C: Remind Staff of Key Practices

- Develop reminder systems or prompts designed to help individuals recall information and/or prompt them to follow a practice such as posters on PPE donning and doffing or lanyard cards.
- If staff are open to feedback or reminders, identify a signal word that one staff could say to another to remind them of missed or incorrect practices

Strategy D: Structure the Environment

Evaluate current configurations/flow and adapt, as needed, the environment to facilitate use of PPE e.g., supplies at point of care, designated areas for donning and doffing

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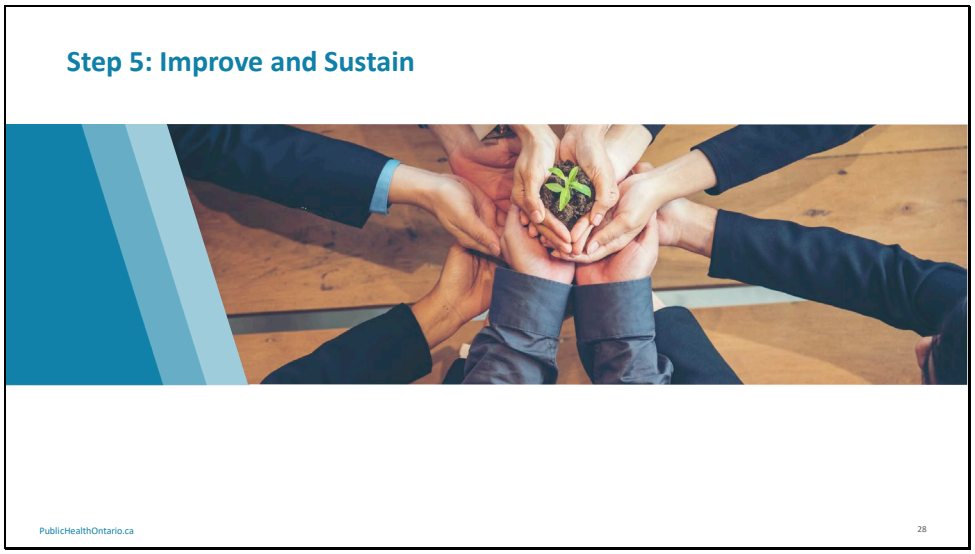

Finally, as you are aware, creating improvements in healthcare is an ongoing process. Step 5, is continuing to improve and sustain the changes you have created.

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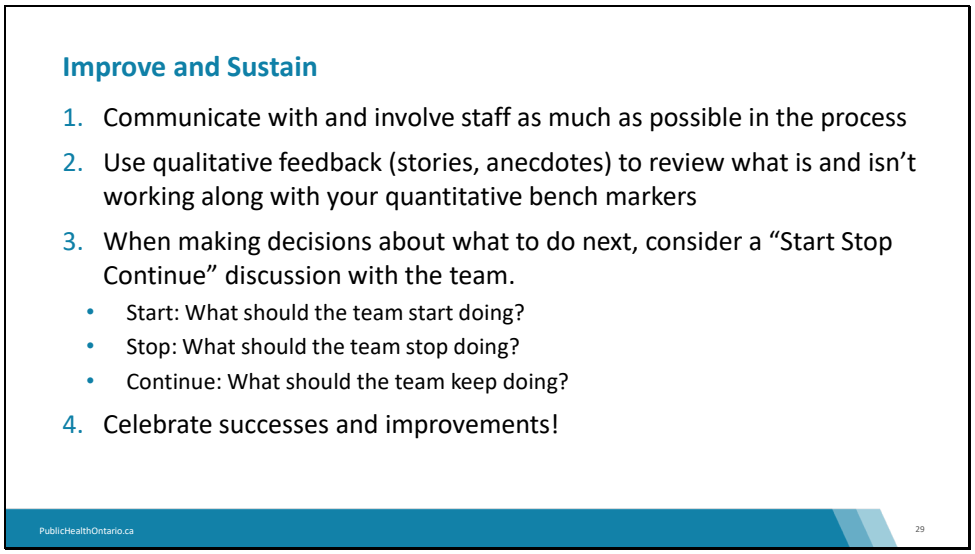


There are 4 key points we will highlight that we encourage you to consider to help support the sustainment over time of any changes you have implemented:

- Communicate with and involve staff as much as possible in the process - this communication should be bi-directional and include providing information on such topics as practice changes and successes while receiving feedback from staff on such things as feasibility of changes, and barriers.

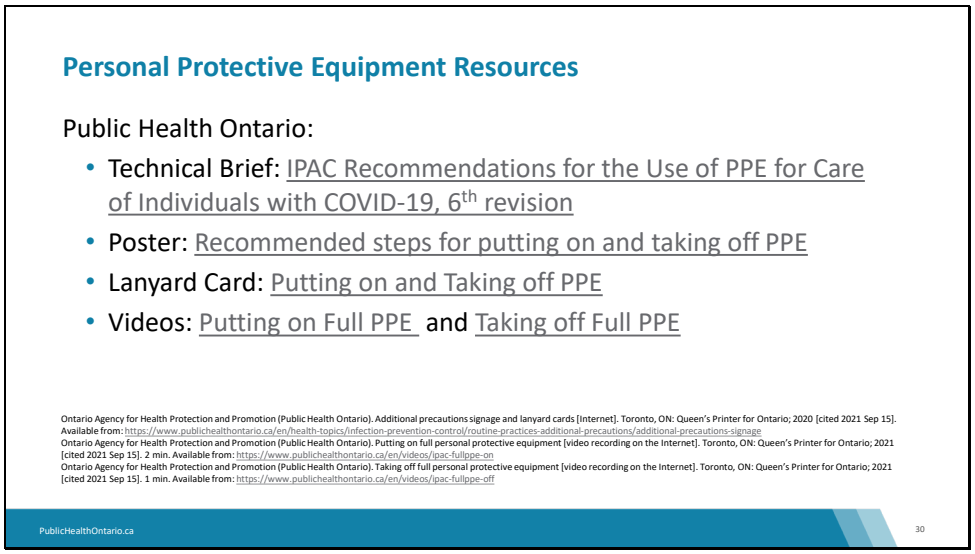
- Use qualitative feedback (stories, anecdotes) to review what is and isn't working along with your quantitative bench markers

- When making decisions about what to do next, consider a "Start Stop Continue" discussion with the team. "Start: What should the team start doing? (aka new ideas to try out)", "Stop: What should the team stop doing? (aka what isn't working so well)", and "Continue: What should the team keep doing? (aka what's going well?).

- Celebrate successes and improvements! Talk with the team to understand what's leading to these successes and if there were any barriers to getting there that could be planned for differently next time

The At a Glance: PPE Auditing can provide some further guidance on sustaining your improvement projects.

Slide 30



Public Health Ontario has many resources to help educate staff on how to properly put on and take off PPE - including videos, posters, and lanyard cards.

Slide 31

Thank you and for more information you may contact your local IPAC team at Public Health Ontario.