Auditing and Feedback of PPE Use

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Learning Objectives

Summarize why auditing and providing feedback are essential to ensuring personal protective equipment (PPE) adherence

Identify ways in which to audit PPE use

Describe strategies to use audit and feedback to improve staff PPE performance

Why audit PPE use?

In order to improve practice it is important that the correct use of PPE be rigorously and consistently applied

A recent study demonstrated that only half of healthcare personnel removed PPE correctly under normal conditions

Audits can provide immediate feedback and identify gaps in practice

(Zellmer C et al., AJIC, 2015)

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Who Should Be Audited?

Anyone who has to use PPE in the course of their job duties. This includes:

- All licensed health care personnel
- All unlicensed health care personnel
- Physicians
- Volunteers
- Trainees

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What does the audit process involve?

Starts with competency based training

Demonstration of selection of appropriate PPE

Ability to locate PPE

Demonstration of correct donning and doffing

Trainee demonstration of correct donning and doffing

Regular audits for adherence

Frequency of Audit and Re-Education

Audit should take place at regular intervals as defined by the organization

It is also important to re-educate and audit whenever there is a change in equipment or supplies and if rates of HAIs are high or increasing.

Planned vs. Random Observations

PLANNED OBSERVATIONS	
PROS	**CONS**
Can be scheduled to ensure that all individuals demonstrate regular competency	Unable to determine behavior during the routine course of duties
Scenarios can provide feedback on individual's ability to choose PPE appropriate for the situation	

RANDOM OBSERVATIONS	
PROS	**CONS**
Ability to assess adherence during normal work	Requires large number of observations on all shifts

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Direct Observation Checklist

Donning Issues	Y	No	comments
Performed Hand Hygiene			
Tied gown and fastened at the neck and waist			
Selected appropriate mask or respirator			
Applied mask appropriately			
Selected Eye Protection if appropriate			
Applied gloves to cover cuffs			
Doffing Issues			
Used proper glove in glove technique for removal			
Performed hand hygiene			
Removed face shield or googles without touching face			
Removed gown using appropriate rolling technique			
Took care not to have inside of gown touch clothing			
Performed hand hygiene			
Observation			
Took care not to touch unprotected areas of the body or clothing			
Did not adjust mask or clothing			

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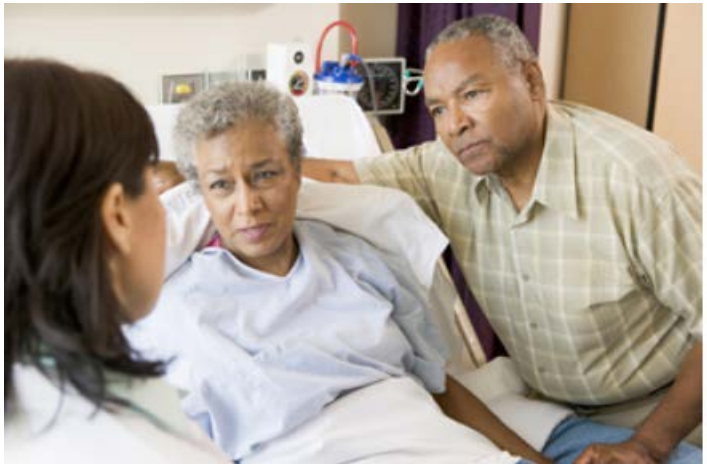
Family Members

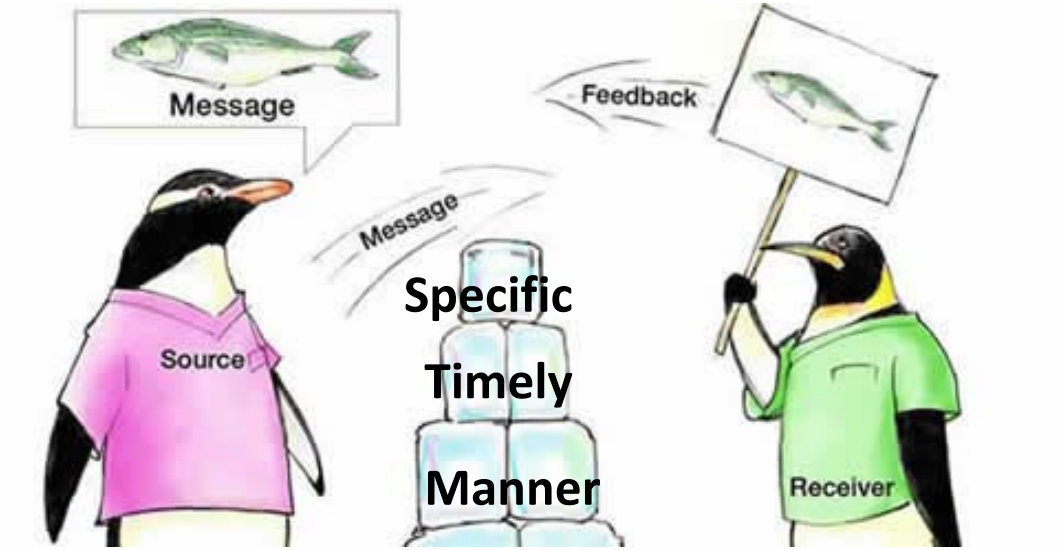
There are no standards for auditing family members

Organizations should develop policies to address specific PPE that family members are required to wear



(Image from AHRQ Module)

What about Feedback ?



Feedback should be: *(Image from AHRQ, TeamSTEPPS, Module 3. Communication)*

- **Specific** – When a break in protocol is identified, it should be specific
- **Timely** – immediate feedback is the most effective
- **Non-threatening** – the feedback should be given in a manner that is non-threatening

Types of Feedback

Type of Feedback	How it Works	Benefits
Immediate Feedback	Feedback given at the time of the occurrence	Can be given by anyone; including observers, managers, supervisors or peers
Planned Feedback	Feedback given at pre-determined intervals through a type of measurement system	Usually the responsibility of a designated department or assigned role

Culture of Safety

A "culture of safety" encompasses the following:

- Acknowledgment of the high-risk nature of an organization's activities and the determination to achieve consistently safe operations
- A blame-free environment where individuals are able to report errors or near misses without fear of reprimand or punishment
- Encouragement of collaboration across ranks and disciplines to identify unsafe practices and seek solutions to patient safety problems

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How do we use audit data?

Data on adherence should provide valuable information to drive improvement.

Aggregate information can identify gaps in practices which helps the organization set priorities and develop improvement plans

PPE Auditing Data

Month	Appropriate selection of PPE	Glove Donning	Glove Doffing Compliance	Gown Donning	Gown Doffing	Mask Donning	Mask Doffing
Jan 2016	49 /50 98%	45/50 90%	42/50 84%	44/50 88%	42/50 84%	22/24 92%	21/24 88%
Feb 2016	52/52 100%	50/52 96%	47/52 90%	49/52 94%	50/52 96%	18/19 95%	19/19 100%
Mar. 2016	59/60 98%	60/60 100%	58/60 97%	59/60 98%	59/60 98%	27/28 96%	27/28 96%
April 2016	61/61 100%	61/61 100%	59/60 98%	59/60 98%	59/60 98%	16/16 100%	15/16 94%

Initial gaps observed:

- Glove and gown donning and doffing
- Failure to wear gown if indicated
- Touching face when removing face mask

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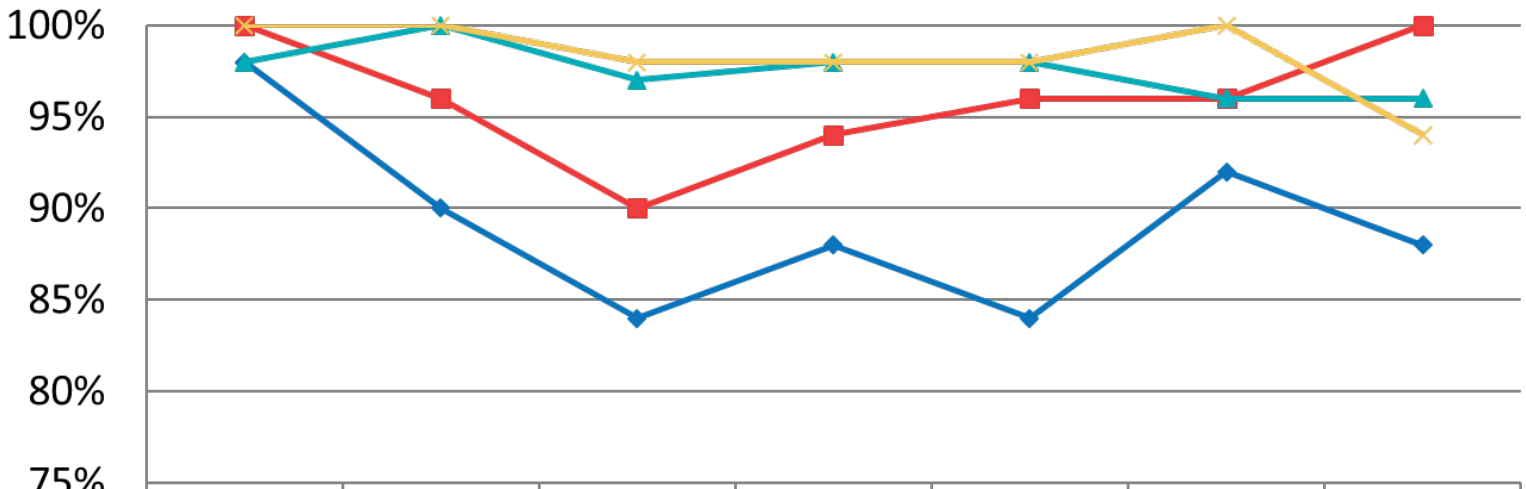
Aggregate Audit Data



	Selection	Gloves on	Gloves off	Gown on	Gown off	Mask on	Mask off
Jan	98%	90%	84%	88%	84%	92%	88%
Feb	100%	96%	90%	94%	96%	96%	100%
Mar	98%	100%	97%	98%	98%	96%	96%
April	100%	100%	98%	98%	98%	100%	94%

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What's the Bottom Line ?

Regular audits to monitor adherence to PPE should include:

- Appropriate selection
- Donning
- Doffing
- Hand hygiene
- Environmental contamination
- Evaluation of appropriate supplies and equipment
- Proximity of supplies to point of use

Aggregate data can be provided to identify opportunities for improvement.

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References

Farin A. Compliance with routine use of gowns by healthcare workers (HCWs) and non-HCW visitors on entry into the rooms of patients under contact precautions. *ICHE.* 2007; 28(3): 337-40.

Kilinc B. Isolation gowns in health care settings: Laboratory studies, regulations and standards, and potential barriers of gown selection and use. *AJIC.* 2016; 44;1: 104-111.

PPE use in Healthcare Settings. Centers for Disease Control and Prevention. http://www.cdc.gov/hicpac/pdf/isolation/Isolation2007.pd

Sequence for Donning and Removing Personal Protective Equipment. Centers for Disease Control and Prevention. http://www.cdc.gov/hai/pdfs/ppe/ppe-sequence.pdf

Speaker Notes

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Speaker Notes: Slide 1

Hello, and welcome to this module titled “Auditing and Feedback of PPE Use.” This is the fourth module of the Personal Protective Equipment, or PPE, course. We will review the critical role of auditing for effective PPE use and key strategies for providing feedback to prevent healthcare-associated infection.

Speaker Notes: Slide 2

This module was developed by nation infection prevention experts devoted to improving patient safety and infection prevention efforts.

Speaker Notes: Slide 3

There are three objectives for this module. The first is to be able to summarize why auditing and providing feedback are essential to ensuring personal protective equipment or PPE adherence. The second is to identify ways in which to audit PPE use; and the third is to describe strategies to use audit and feedback to improve staff PPE performance. Understanding these three core objectives will set the groundwork to improve the culture of safety related to infection prevention in your health care organization.

Speaker Notes: Slide 4

The Ebola crisis highlighted the need for meticulous attention to donning and doffing PPE. Though PPE is essential, it does have limitations that not only stem from being employed correctly, but also from being removed safely. A recent publication highlighted a systematic evaluation of health care worker removal of PPE for Contact Isolation . This publication demonstrated that only about half of health care personnel remove PPE correctly. What can we do about this? One important action is to conduct audits. Audits can provide immediate feedback to staff using PPE incorrectly and can also help identify gaps in practice and training.

Speaker Notes: Slide 5

So who should be audited?

Anyone who has to use PPE in the course of their duties. This includes all licensed health care personnel, all unlicensed health care personnel, physicians, volunteers and trainees.

Speaker Notes: Slide 6

The first two modules on Standard Precautions and Transmission-Based Precautions provide basic education on PPE. However, it is extremely important to audit and provide feedback to health care personnel on PPE use.

Speaker Notes: Slide 6 Continued

Audit and feedback are important foundational elements to ensure that health care personnel are competent to perform their duties. Competency-based training means that staff not only receive education, but can demonstrate adequate performance of their job duties. This training involves education regarding the selection and use of appropriate PPE followed by a step by step return demonstration of how to properly use it. It is also important that the step-by-step training mirror the organizational policy or procedure. In addition, there should be documentation of training and written confirmation that the person has demonstrated the ability to select, don and doff PPE correctly based on the situation.

Speaker Notes: Slide 7

The health care organization should define the process and time frame for PPE audits. In order to assess adherence, it's ideal to conduct random audits during actual provision of care. However, it is also possible to obtain important information during an activity and demonstration of selection and use of PPE.

Speaker Notes: Slide 8

There are two different types of auditing called random and planned observation. The pros and cons of each observation strategy are highlighted on this slide. One method of planned observation is to conduct regularly scheduled assessments of all persons who may use PPE. This method may be supplemented by random observations, which provide valuable information regarding real life practice and the ability to provide feedback and teaching in the moment. Ideally, an organization should use a combination of both of these strategies.

Speaker Notes: Slide 9

This slide shows a planned observation checklist which can be used to audit adherence of PPE. This form is adapted from similar tools developed by the CDC. Tools and checklists are very helpful during audits. You may wish to consider using and adapting a similar checklist to match your hospitals' policies and procedures.

Speaker Notes: Slide 10

When family members are required to use PPE, health care personnel should provide education and training on hand hygiene and appropriate donning and doffing. Auditing and feedback for this group should be immediate and non-threatening. For example you may say something like:

- "Mrs. Smith, let me stop and show you how to apply that face mask correctly….Now, let me see you apply it like I demonstrated. We just want to make sure we keep you and Mr. Smith safe."

Speaker Notes: Slide 11

Let's now move on to talk about strategies for providing effective feedback, if you notice errors in PPE use or your auditing reveals user gaps. This slide identifies the three essential components of feedback: it must be specific, it must be timely and it must be given in a non-threatening manner.

Health care personnel should be given feedback as soon as possible and the specific issue should be addressed. For example, you might say something like, "Hi Sally, when you removed your face mask, you accidently touched your face and contaminated yourself. I just want to make sure we keep you safe." Feedback should also be given in a manner that will help improve performance. And often, this provides a coaching opportunity.

Speaker Notes: Slide 12

Let's now talk about some of the different types of feedback.

First type, is immediate feedback. Information is identified and shared as soon as it's directly noticed during a patient care activity.

The second category of feedback is planned feedback and it is designed to be given at regular intervals through a measurement system. For example, a hospital's overall adherence with appropriate PPE for the quarter or that the most common PPE error occurred during glove removal.

Speaker Notes: Slide 12 Continued

As indicated on the slide, immediate feedback can be given by anyone. In organizations with a robust safety culture, peer feedback is very effective. For example, any individual would feel free to speak up when they witness someone about to perform an unsafe act. Planned feedback on the other hand, is usually in the form of a regular report, which might go to your infection prevention, quality or safety committee.

Speaker Notes: Slide 13

Ideally, we want feedback to become part of an organization's safety culture. So, what is a culture of safety? Well, a "culture of safety" encompasses the following:

- Acknowledgment of the high-risk nature of an organization's activities and the determination to achieve consistently safe operations;
- A blame-free environment where individuals are able to report errors or near misses without fear of reprimand or punishment; and
- Encouragement of collaboration across ranks and disciplines to remind each other when unsafe practices are identified and to seek solutions to patient safety problems.

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Speaker Notes: Slide 14

Problem identification through the use of audits may provide information which can identify specific risks. Using these data on adherence can provide valuable information and should be used to drive improvement. In addition, aggregate information can identify gaps in practices, which can help the organization set priorities and develop improvement. Further analysis of these risks may help identify solutions to the problem. For example, when looking at PPE use, there may be a need to re-educate or a need to re-evaluate a particular PPE item that may be difficult to use or apply.

Speaker Notes: Slide 15

This is an example of an aggregate analysis, and it's taken from my own experience. As I previously mentioned, this type of aggregate information may be helpful in identifying gaps and opportunities for improvement.

Speaker Notes: Slide 16

Here is another example from my experience which graphically displays the information collected from PPE audits. Graphically displaying the data can be a powerful tool to drive improvement.

Speaker Notes: Slide 17

To ensure effective PPE use and that staff and patients are safe, it is important to conduct audits on a regularly scheduled basis. It is important that these regular audits to monitor PPE adherence include:

- Appropriate Selection of PPE,
- Donning,
- Doffing,
- Hand Hygiene,
- Environmental contamination,
- An evaluation of appropriate supplies and equipment,
- The proximity of supplies to point of use, and
- Aggregate data can be provided to identify opportunities for improvement.

Speaker Notes: Slide 18

No notes.