



AGENCY FOR HEALTHCARE RESEARCH AND QUALITY



USER GUIDE: Personal Protective Equipment (PPE) COVID-19 Observational Audit Data Tracking Tool for Use in Skilled Nursing Facilities

Introduction

This user guide provides step-by-step instructions for nursing home staff to use the *Personal Protective Equipment (PPE) COVID-19 Observational Audit Data Tracking Tool* to efficiently collect, record, analyze, review, and act on observational audit data to improve compliance with the steps in donning and removing PPE.

Implementing observational auditing and capturing data using the PPE COVID-19 Observational Audit Data Tracking Tool helps nursing homes collect and analyze data that can be used to support improvements in infection prevention. Specifically, the tracking tool allows nursing homes to:

- Assess PPE compliance at the individual, department, unit, and shift levels.
- Identify opportunities to improve PPE use: preparation, donning, and doffing (removal).
- Identify the specific steps in the PPE use process where improvement needs to be targeted.
- Measure improvement in PPE compliance over time and visualize it in a run chart that the tracking tool generates automatically as data are entered.

Built in Microsoft Excel, the tracking tool is designed to capture PPE observational audit data. It is also intended for use with the resource titled, [*Observational Audits: A Pathway to Improving Infection Prevention and Preventing the Spread of COVID-19*](#), which helps skilled nursing facilities establish and implement a process for observational auditing to provide a true assessment of staff performance in the actual work environment.



Entering Monthly Data

1) Instructions tab – setting the timeframe and goal

Before entering your monthly observational audit data, begin on the first tab, labeled Instructions, located in the lower left of the tracking tool. Once in this tab, select an option from each of the drop-down menus (click on the down arrow at the right of the field), which include:

- Nursing Home Name
- Tracking Year
- Tracking Start Date – the month and the year that you are beginning to enter observational audit data.
- Goal Compliance Rate – the PPE compliance goal your facility has established.

NOTE: Enter all the above information to obtain an accurate summary and reporting results with the tracking tool.

2) Month tab – recording employee and audit data

Select the month. In the tracking tool, select the appropriate Month tab to begin entering your audit data. The first month for which you record audit data is Month_1, the second is Month_2, etc. Do not rename the month tabs because any modification to these labels will affect the reporting functionality. Once the Tracking Start Date is entered on the Instructions tab (see Step 1, above), the specific month will be prepopulated in the first cell at the top of each monthly data collection page (Figure 1).

Figure 1 - Month label at the top of each data collection page.

The screenshot shows the top of a data collection page for March 2021. At the top center is the text "March 2021". Below it is a blue header bar with the text "Audit Information". Underneath the header bar is a table with five columns: "Employee Name", "Job Role", "Location (e.g. Room #, Unit,...)", "Audit Date (mm/dd/yyyy)", and "Audit Time Block". Each column has a small downward arrow at the bottom right, indicating a drop-down menu.

Enter the employee name. Enter the employee name (first name/last name) in Column B.

Select the employee job role. In the cell under the Job Role heading in Column C, click on the arrow to the right (Figure 2) to open the drop-down menu, which lists job roles. Table 1 defines each job role; identify the role that best matches the employee's position. Scroll through the list, if necessary, and click on the appropriate job role to populate the cell. Entering a room or area where transmission-based precautions are in effect requires appropriate PPE donning and removal. Accordingly, there is an extensive list of employee job roles available for the observational auditing tool.

Figure 2 - Job Role type drop-down menu.

The screenshot shows the "Job Role" column of the audit data collection page. The "Job Role" header is highlighted. Below it, the name "John Smith" is entered in the "Employee Name" column. The "Job Role" cell has a downward arrow at its bottom right. A yellow circle highlights this arrow. To the right of the circle, a drop-down menu is open, showing a list of job roles: "Admin", "RN", "LPN/LVN", "Med Aides", "CNA", "EVS", "Maintenance", and "Dietary".

Table 1 – Job Titles associated with Job Role in the tracking tool.

Role Type Category in Tracking Tool	Job Titles for Role Type
Admin	All Administration - Administrator, Administrative Assistants, Receptionist, Business office staff, greeters, Unit Clerks/Secretaries, Corporate Leaders (non-nursing)
RN	Director of Nursing (DON), Assistant Director of Nursing (ADON), Educator, Quality Nurse, Unit Staff, and Corporate Nurses
LPN/LVN	Licensed Practices Nurse (LPN)/Licensed Vocational Nurse (LVN) including LPN/LVN Applicants.
Med Aides	Medication Assistants including those working prior to testing
CNA	Certified Nursing Assistants and those working prior to testing; restorative assistants
EVS	Environmental Service Director, environmental services (EVS) staff, laundry attendants
Maintenance	Maintenance Director and maintenance staff
Diet	Dietary Director and dietary staff
SW-Rec	Directors and staff in the Social Work Department and Recreation/Activities/Community Life Department
Rehab	Directors and rehab staff – Physical Therapist (PT), Physical Therapist Assistant (PTA), Occupational Therapist (OT), Certified Occupational Therapy Assistant (COTA), and Therapy Assistants
Providers	Doctors, Nurse Practitioners, Physician Assistants, Clinical Nurse Specialist
Care Partners	Paid unlicensed staff who provide non-direct assistance (feeding assistant, hospitality assistant)
Volunteers	Volunteers
Vendors	Outside contractors: pharmacy, lab, x-ray, refill drink machines, deliver newspapers, lawn care, painters, electricians, etc.

Enter the audit location. Next, enter the location within your facility where the observational audit of the employee's PPE activity occurred in Column D (Figure 3). The location could include a resident's room, a unit floor, or other care area. Since location is unique and specific to each facility, these cells are open text fields, meaning you can enter data rather than select options from a preprogrammed list. In this open text field, consider including details such as room number or a specific unit to record your data. It is important to use consistency with entering locations to ensure accurate analysis. For example, entering Room #325 and Room No. 325 will result in two different categories for analysis.

Figure 3 - Example of Location entry.

Audit Information		
Employee Name	Job Role	Location (e.g. Room #, Unit,...)
John Smith	Dietary	Room #325

Enter the audit date. Next enter the date the audit occurred using the month/day/four-digit year format in Column E.

Enter the audit time. Under the Audit Time Block in Column F, click into the cell and select the drop-down arrow on the right (Figure 4). This preprogrammed cell provides four hour increments to allow for tracking and trending at various times of day (e.g., shift change, mealtime, etc.). Select the time block that aligns with the time the audit occurred for the employee observed.

Figure 4 - Example Time Block entry.

Month_2				
Audit Information				
Employee Name	Job Role	Location (e.g. Room #, Unit,...)	Audit Date (mm/dd/yyyy)	Audit Time Block
Sandra Johnson	RN	Room #4	2/2/2021	7a - 11a
				7a - 11a
				11a - 3p
				3p - 7p
				7p - 11p
				11p - 3a
				3a - 7a

Enter NO for each audit line item that the employee failed to pass. Once you have entered the employee-level information, you are ready to begin entering the observational data for each line item to the right of the tracking tool. Across the top of the tracking tool, the observational audit items are divided into sequenced categories: Procedure, Preparation, Donning of PPE, Removal of PPE with specific equipment listed, and Other. The tracking tool only extracts the failures in each category, so you are **only required to select "NO"** when an employee has "Not Met" the auditing standard for the specific activity (Refer to the [Observational Audits: A Pathway to Improving Infection Prevention and Preventing the Spread of COVID-19](#) for details on auditing and standards). If an employee met the goal, the cell may remain blank.

Like the Job Role and Audit Time Block cells, to record "Not Met" for a line item, click into the cell and select "NO" from the drop-down menu to the right of the cell (Figure 5). The tab will then automatically calculate how many "Not Met" observations or failures, were recorded from each audit. You will notice the number of "NO"/"Not Met" entries will be totaled automatically at the end of each employee line on the far right.

Figure 5 - Selection of "Not Met" entry or NO.

Month_2					Procedure		Preparation	
Audit Information								
Employee Name	Job Role	Location (e.g. Room #, Unit,...)	Audit Date (mm/dd/yyyy)	Audit Time Block	All facility staff are wearing face covering (no cloth masks)	All facility staff are wearing PPE consistent with current guidance and COVID-19 status in facility	1. Determine and assemble appropriate PPE	2. Perform Hand Hygiene
Sandra Johnson	RN	Room #4	2/2/2021	7a - 11a			NO	
							YES	
							NO	

As you conduct your observational audits each month, continue adding employee-level information and the results from each employee's audit (Figure 6). Transition to the next tab once you begin a new month and begin recording your data employee by employee.

Figure 6 - Sample employee audit data.

Month_2					Preparation		Donning of Personal Protective Equipment						
Audit Information													
Employee Name	Job Role	Location (e.g. Room #, Unit,...)	Audit Date (mm/dd/yyyy)	Audit Time Block	1. Determine and assemble appropriate PPE	2. Perform Hand Hygiene	1. Don gown first and tie at waist and neck	2. Don mask or N95 respirator	3. Secure nose piece with both hands	4. Secure elastic bands or ties securely	5. Mask or N95 fits snug to face and below chin	6. Don goggles or face shield	7. Put on gloves
Sandra Johnson	RN	Room #4	2/2/2021	7a - 11a	NO								
John Smith	Rehab	Room #212	2/14/2021	11a - 3p								NO	
Deb Jones	Dietary	Room #122	2/15/2021	11a - 3p									
Kevin Miller	Maintenance	Therapy	2/18/2021	11p - 3a		NO			NO		NO		
Linda Smith	Dietary	Room #300	2/18/2021	7a - 11a	NO								
Susan Davis	CNA	Room #110	2/24/2021	7a - 11a									
Joe Harris	Maintenance	Room #121	2/28/2021	3p - 7p				NO					
Mary Jones	CNA	Room #281	2/28/2021	11a - 3p									

Analyzing PPE Compliance Rates

Summary Rates Tab

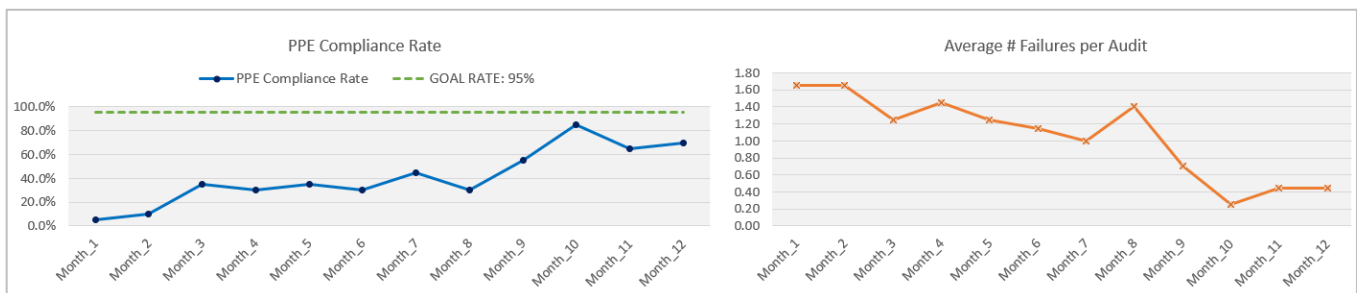
All the data entered in each month is rolled up into the Summary Rates tab, located at the lower left of the tracking tool. This tab provides a high-level summary of the audit data for your facility, including and the average number of failures (NO/Not Met) per audit, and a breakdown of where the failures are occurring by both line item and category (Figure 7).

Figure 7 - Overview data from Summary Rates tab.

NURSING HOME RATES													
Reporting Month		Month_1	Month_2	Month_3	Month_4	Month_5	Month_6	Month_7	Month_8	Month_9	Month_10	Month_11	Month_12
PPE COMPLIANCE	# of Employees Audited	20	20	20	20	20	20	20	20	20	20	20	20
	# of Perfect Audits	1	2	7	6	7	6	9	6	11	17	13	14
	PPE Compliance Rate	5.0%	10.0%	35.0%	30.0%	35.0%	30.0%	45.0%	30.0%	55.0%	85.0%	65.0%	70.0%
	Average # Failures per Audit	1.65	1.65	1.25	1.45	1.25	1.15	1.00	1.40	0.70	0.25	0.45	0.45
Procedure	All facility staff are wearing face covering (no cloth masks)	0	0	0	0	0	0	0	0	0	0	0	0
	All facility staff are wearing PPE consistent with current guidance and COVID-19 status in facility	2	2	0	2	2	1	2	2	2	0	1	1
Preparation	1. Determine and assemble appropriate PPE	2	1	1	0	1	0	1	1	0	0	1	1
	2. Perform Hand Hygiene	1	1	1	1	1	0	1	1	1	0	1	1
Donning of Personal Protective Equipment	1. Gown is donned first and tied at waist and neck	1	1	1	1	1	0	0	1	0	0	1	1
	2. Don mask or N95 respirator	0	0	0	0	1	1	0	1	1	0	0	0
	3. Secure nosepiece with both hands	0	1	0	0	1	1	0	0	0	0	0	0
	4. Secure elastic bands or ties securely	0	0	0	0	1	2	0	1	0	0	0	0
	5. Mask or N95 fits snug to face and below chin	0	0	0	0	1	0	0	0	0	0	1	0
	6. Goggles or face shield is donned	0	0	1	1	0	0	0	0	0	0	1	0
	7. Put on gloves	1	1	1	2	0	1	1	1	0	0	0	0
	8. Extend gloves to cover wrist/cuff of gown	1	1	1	1	1	0	1	1	0	0	0	0

The Summary Rates tab provides graphs outlining the average number of failures per audit and the PPE compliance rate comparison to the overall compliance goal (% of total audits considered to have perfect competency, i.e. no "Not Mets") (Figure 8). This information is based on all of the audit data entered during the tracking year.

Figure 8 – PPE compliance reporting graphs.



In addition, the Summary Rates tab provides the ability to compare two months of data along with a week-to-week comparison of each month to further pinpoint and analyze deficiencies and identify improvement opportunities. (Figure 9).

Figure 9 - Month-to-month data comparison in the Summary Rates tab.

NURSING HOME RATES											
SELECT TWO MONTHS OF TRACKING →		Jan-21					Mar-21				
WEEKLY (Su - Sa) RATES	Start of Week	1/1/2021	1/3/2021	1/9/2021	1/15/2021	1/21/2021	3/1/2021	3/7/2021	3/13/2021	3/19/2021	3/25/2021
	End of Week	1/2/2021	1/8/2021	1/14/2021	1/20/2021	1/31/2021	3/6/2021	3/12/2021	3/18/2021	3/24/2021	3/31/2021
PPE COMPLIANCE	# of Employees Audited	1	6	6	2	5	4	6	5	3	2
	# of Perfect Audits	0	0	0	0	1	3	3	0	1	0
	PPE Compliance Rate	0.0%	0.0%	0.0%	0.0%	20.0%	75.0%	50.0%	0.0%	33.3%	0.0%
	Average # Failures per Audit	5.00	1.50	1.50	1.50	1.40	0.75	1.00	1.80	1.00	2.00
Procedure	All facility staff are wearing face covering (no cloth masks)	0	0	0	0	0	0	0	0	0	0
	All facility staff are wearing PPE consistent with current guidance and COVID-19 status in facility	1	0	1	0	0	0	0	0	0	0
Preparation	1. Determine and assemble appropriate PPE	1	0	0	1	0	1	0	0	0	0
	2. Perform Hand Hygiene	1	0	0	0	0	1	0	0	0	0
Donning of Personal Protective Equipment	1. Gown is donned first and tied at waist and neck	0	0	1	0	0	0	0	1	0	0
	2. Don mask or N95 respirator	0	0	0	0	0	0	0	0	0	0
	3. Secure nosepiece with both hands	0	0	0	0	0	0	0	0	0	0
	4. Secure elastic bands or ties securely	0	0	0	0	0	0	0	0	0	0
	5. Mask or N95 fits snug to face and below chin	0	0	0	0	0	0	0	0	0	0
	6. Goggles or face shield is donned	0	0	0	0	0	0	0	0	1	0
	7. Put on gloves	0	0	1	0	0	0	0	1	0	0
	8. Extend gloves to cover wrist/cuff of gown	0	0	1	0	0	0	0	1	0	0

Rates by Job Role, Location, and Time Block

In addition to the Summary Rates tab, the data entered each month is also rolled into multiple Rate tabs along the lower left of the tracking tool. These tabs include: Rates by Job Role, Rates by Location, and Rates by Time Block. Using the same reporting functionality as the Summary Rates tab, you can segment your facility data for more specific reporting. For example, to review the PPE compliance rate by the CNA Job Role, select the Rates by Job Role tab. Once the tab is selected, scroll to the top row and select CNA from the drop-down list (Figure 10). Follow the same process in the other rate tabs to review data based on a specific location or four-hour time block.

The Rates by Job Roles, Location, and Time Block tabs offer the same graphing, summary information, and month-to-month comparison options as the Summary Rates tab, providing a more detailed and segmented analysis of your facility's overall observational audit data.

Figure 10 - PPE compliance rates by job title.

NURSING HOME RATES BY JOB ROLE: CNA													
Reporting Month		Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12
		Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
PPE COMPLIANCE	# of Employees Audited	8	8	8	8	8	8	8	8	8	8	8	8
	# of Perfect Audits	0	1	2	3	3	2	4	3	5	5	5	5
	PPE Compliance Rate	0.0%	12.5%	25.0%	37.5%	37.5%	25.0%	50.0%	37.5%	62.5%	62.5%	62.5%	62.5%
	Average # Failures per Audit	1.38	1.38	1.00	1.13	1.25	1.00	1.25	1.25	0.63	0.38	0.38	0.38
Procedure	All facility staff are wearing face covering (no cloth masks)	0	0	0	0	0	0	0	0	0	0	0	0
	All facility staff are wearing PPE consistent with current guidance and COVID-19 status in facility	1	1	0	1	1	0	1	1	1	0	0	0
Preparation	1. Determine and assemble appropriate PPE	0	0	1	0	0	0	0	0	0	0	0	0
	2. Perform Hand Hygiene	0	0	1	0	0	0	0	0	0	1	0	0
Donning of Personal Protective Equipment	1. Gown is donned first and tied at waist and neck	0	0	0	0	0	1	0	0	0	0	0	0
	2. Don mask or N95 respirator	0	0	0	0	0	0	0	1	0	0	0	0
	3. Secure nosepiece with both hands	0	0	0	0	1	1	0	0	0	0	0	0
	4. Secure elastic bands or ties securely	0	0	0	0	1	3	0	1	0	0	0	0
	5. Mask or N95 fits snug to face and below chin	0	0	0	0	1	0	0	0	0	0	0	0
	6. Goggles or face shield is donned	0	0	1	0	0	0	0	0	0	0	1	0
	7. Put on gloves	0	0	0	0	0	0	2	0	0	0	0	0
	8. Extend gloves to cover wrist/cuff of gown	0	0	0	0	0	0	1	0	0	0	0	0



AHRQ Pub No. 21-0027-EF
April 2021

www.ahrq.gov