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Hospital-Acquired Pneumonia Prevention by Engaging Nurses (HAPPEN)

VA Implementation Guide

6 steps to implementing oral care for non-ventilated patients to prevent pneumonia in your hospital or Community Living Center (CLC) long-term care unit

Updated October 6, 2021

About this Guide

This implementation guide is a toolkit for VA facilities interested in providing oral care assistance to prevent non-ventilator associated hospital-acquired pneumonia (NV-HAP) for Veterans who are hospitalized or residing in long-term care.

VA and other health care facilities may use the educational materials, references, tools, and resources to develop a standard of care for hospitalized patients and long-term care residents.

> **VA employees may obtain intranet links for VA use (only) from the HAPPEN team and may learn more on the internal HAPPEN SharePoint**

The guide includes an introduction and overview, and outlines **six steps for implementing the practice of inpatient or CLC oral care for non-ventilated patients:**

- **Step 1:** Prepare Foundation
- **Step 2:** Obtain and Organize Supplies
- **Step 3:** Adopt Templates, Tools, and Patient Education Materials
- **Step 4:** Customize and Conduct Nursing Staff Trainings
- **Step 5:** Implement
- **Step 6:** Monitor and Iterate/Scale

Adopting the oral care practice requires coordination by a designated **facility champion(s)** along with a team of interdisciplinary colleagues for support. We recommend selecting a nurse manager, nursing staff member, or quality improvement expert with a nursing background with a) dedicated time to lead the practice with the support of dental professionals (when available) and b) the ability to hold staff accountable as well as recognize exceptional work (see more information in **Step 1**: Prepare Foundation). This guide provides resources to assist the facility champion(s) with engaging nursing staff to complete oral care for patients in the inpatient or long-term care setting to prevent NV-HAP.

Oral Care is Essential Infection Control

Oral care is an essential infection control practice that is often missed; research has shown that very few patients receive oral care assistance during their hospital or long-term care stay. The bacteria (germs) found in plaque and biofilm on the teeth increase rapidly in the absence of

consistent oral care. These bacteria multiply five times every 24 hours and patients can aspirate (swallow) them into their lungs during sleep, which can lead to pneumonia. Simple but effective ways to reduce the bacterial burden in the mouth include consistent tooth-brushing 2-3 times daily and nightly denture/ partial care. Doing so can save lives by preventing pneumonia.

Kaneoka et al (2015) found that tooth brushing alone reduces the relative risk of pneumonia and reduced the risk of fatal pneumonia in their meta-analysis of randomized controlled trials (RRfixed, 0.61; 95% CI (0.40–0.92), p=.02; RRfixed, 0.41; 95% CI (0.23–0.71); p=.002 respectively).

Note: citations and recommended reading are located at the end of the toolkit and are located on the HAPPEN SharePoint which is accessible to VA employees.

Did You Know?

- During sleep, bacteria in the mouth are frequently **aspirated into the lungs** and may cause pneumonia
- Brushing teeth **lowers patients' chances** of developing hospital-acquired pneumonia by 40-60%
- Brushing teeth **at least twice a day** will keep patients healthier and help them leave the hospital sooner by preventing pneumonia

Non-ventilator associated hospital-acquired pneumonia (NV-HAP) is the number one complication in the U.S. and yet it is not formally tracked as of October 2021 (Munro et al ICHE, 2021; Joint Commission Safety briefing 2021). The VA is leading the way in preventing and voluntarily monitoring NV-HAP in every VA medical facility in the nation through the VA Inpatient Evaluation Center (IPEC) using 2021 CDC NHSN criteria: https://www.cdc.gov/nhsn/pdfs/pscmanual/6pscvapcurrent.pdf

Challenges

NV-HAP occurs more than 48 hours after admission (hospital day 3 for VA IPEC data submission) and is challenging to track as it is not a device related infection. Documentation may be missing information to clearly delineate between community acquired and hospital acquired (or long-term care acquired) pneumonia cases thus necessitating manual chart reviews. When the history of pneumonia is clearly recorded by the hospitalist in the medical record including present on admission status, this reduces the number of possible NV-HAP cases that must be reviewed and confirmed. Lastly, Standard Operating Procedures (SOPs) and Medical Center Memorandums (MCMs) may not address pneumonia prevention measures like oral care provided to non-ventilated patients.

Health Outcomes

Hospitalized Veterans and CLC residents who develop NV-HAP experience serious outcomes including:

a) decreased quality of life and health
b) 4 times longer length of stay
c) greater need for intensive care unit admission and post-acute/extended care

d) increased risk of developing sepsis (a deadly complication of pneumonia)
e) higher associated healthcare costs
f) and increased risk of death up to a year after the illness.

Given the devastating burden of NV-HAP on the patient, healthcare system, and society at large, we recommend nurses lead the way in making NV-HAP prevention a top priority at their healthcare facility.

Overview

Historically, inpatient and long-term care oral care provision has been inconsistent due to inaccessible or unavailable oral care supplies, perceived low priority among nursing staff, and a lack of a standard of care for providing oral care assistance. Providing consistent oral care, 2-3 times daily, can reduce the incidence of NV-HAP. **This nurse-led initiative addresses the education, resources, documentation, and practice of oral care in the inpatient or CLC setting with the support of dental professionals and other team members.**

Inpatient and CLC oral care should be completed at least twice a day, or every 12 hours, either by the patient or by trained nursing staff (if the patient is not able to do so independently), to reduce the chances of developing pneumonia. It is essential that nurses and nursing assistants document oral care in the patient chart each time it is completed and educate patients on consistent oral care and its association with reduction in hospital acquired pneumonia. All units that adopt a standard procurement and stocking process for oral care supplies and distribute oral care supplies to each admitted patient facilitate the implementation of this initiative.

Step 1: Prepare Foundation of this guide outlines how to prepare for implementation, including identifying a facility champion and selecting an implementation method.

The steps for implementation include preparing the foundation (including reviewing baseline information), obtaining resources and organizing supplies; customizing tools and patient education materials; tailoring and conducting nursing staff trainings, and monitoring progress to iterate/scale as necessary. Under the leadership of a **nurse champion**, each facility can accomplish all of the steps in less than six months.

Implementing the oral care practice ensures all hospitalized Veterans or long-term care residents receive oral care by:

- Providing training on oral care provision for nurses and nursing assistants
- Engaging staff in providing and documenting consistent oral care
- Educating patients on oral care and its association with hospital acquired pneumonia
- Standardizing the procurement, storage, and distribution process of oral care supplies

Impact

Shannon Munro, PhD, APRN, NP-C, Researcher at the Salem VA Medical Center (VAMC), developed and led the VA HAPPEN initiative in collaboration with a team of researchers also studying NV-HAP in civilian hospitals. Dr. Munro and her team (see page 28*) completed the research on the Salem VAMC Community Living Center (CLC) units followed by the medical surgical units (4H and 4J). From there the practice spread to all of the facilities in VISN 6 (Virginia and North Carolina) as well as Houston, Texas as quality improvement (QI).

> "The incidence rate of NV-HAP on the [Salem] CLC units decreased from 105 to 8.3 cases per 1,000 patient days (by 92%) in year one with an estimated cost avoidance of $1.76M and 8 Veteran lives saved. Likewise, the incidence rate of NV-HAP on 4H and 4J decreased from 1.2 to 0.9 cases per 1,000 patient days (by 38.6%) in year one with an estimated cost avoidance of $360,000 and 2 Veteran lives saved." (Munro et al, NAQ 2018, p. 363)

In 2016, HAPPEN was selected for national VA dissemination as QI and by July 2021 the initiative had spread to every single VA Medical Center in the nation as standard of care. HAPPEN was recognized as one of the innovative evidence-based practices in the 2020 Gears of Government President's Award for Innovation.

This practice is low cost to implement ($3-5 per patient for oral care supplies depending on product choice). **Preventing a single case of NV-HAP among Veterans yields a median direct cost savings of over $58,000.** This low-cost intervention improves health outcomes and enhances quality of care. Most sites see decreases of 40-60% in NV-HAP cases following a regimen of consistent oral care, 2-3 times per day.

Impact to Patients/ CLC Residents	Impact to Facilities
• Consistent oral care improves health and quality of life • Improved patient knowledge and engagement • Reduced risk of NV-HAP and related complications like sepsis • Shorter length of stay and increased chance of returning home after discharge	• Enhanced patient safety and reduced incidence of NV-HAP and associated sepsis • Improved antibiotic stewardship lowering the risk of multidrug resistant infections • Increased access to care due to shorter length of stays • Healthcare cost savings • Lower need for intensive care or post-acute/ long-term care

6 Step Implementation Process

HAPPEN

1

Prepare foundation: identify champions, determine approach, develop project charter, engage stakeholders

2

Obtain, organize, distribute ADA approved oral care supplies

3

Adopt templates, audit tools, patient education materials

4

Customize and conduct nursing staff training

5

Implementation: ensure readiness to launch and mitigate challenges

6

Monitor, scale & sustain practice: submit IPEC data, monitor oral care, evaluate impact, spread to all units

Step 1: Prepare Foundation

Core actions include:

- **Action 1:** Identify Facility Champion(s)
- **Action 2:** Determine Implementation Approach
- **Action 3:** Develop Project Charter
- **Action 4:** Engage Stakeholders

Action 1: Identify Facility Champion(s)

Identify 1-2 **facility champions** who will engage other nursing staff as the leader of practice implementation. The facility champion should be a nurse manager, bedside nurse with **dedicated time** for this initiative, or a quality improvement expert with a nursing background who will assume ongoing responsibility for the **implementation, coordination, tracking of cases, maintenance, and evaluation** of the practice. Promoting the value of this essential infection control practice among staff and patients helps facilitate successful implementation. The facility champion educates, advocates, and addresses challenges and involves dental professionals (when available) in the process.

Action 2: Determine Implementation Approach

Sites may opt to implement the initiative via a **phased approach** (1-2 units at a time), or a **hospital-wide approach**. Consider factors such as the current **NV-HAP incidence rate**, **nursing staff engagement**, and **logistics for procuring, storing, and distributing oral care supplies to patients.** Involve facility leadership in this decision. These important baseline considerations will help you determine if your facility should implement the practice via a phased approach or a hospital-wide approach. The following paragraphs provide tools you can use to assess these factors prior to implementation.

Baseline Considerations

- **NV-HAP incidence rate:** What is the current NV-HAP incidence at your facility? How many cases of NV-HAP are found monthly? By unit?
- **Nursing staff engagement:** What are nurses' current oral care practices for hospitalized patients or long-term care, non-ventilated residents? Are nursing staff receptive to standardizing the practice?
- **Procurement, storage, and distribution of supplies:** How can your facility streamline the process for procuring, storing, and distributing oral care supplies to patients?

To determine your VA facility's incidence rate of NV-HAP, you will need to conduct chart reviews of possible cases found in the VSSC data pull of encounter codes for pneumonia that were not present on admission. VA employeees may contact the HAPPEN team for the VSSC internal data pull link and additional information on how to track patients who develop pneumonia on hospital day three, >48 hours after admission. A full baseline review includes 12 months of data collected before implementation. Each NV-HAP case that meets IPEC guidelines and National Healthcare Safety Network (NHSN) Centers for Disease Control and Prevention's (CDC's) criteria is submitted to the VA inpatient evaluation center (IPEC, figure 1) by designated trained staff. Your facility's infection control and/or quality management staff are involved in these reviews. After the number of cases and the bed days of care are entered into the boxes shown below, an incidence rate is calculated for each unit.

NHSN CDC criteria and checklists are located here:

- https://www.cdc.gov/nhsn/pdfs/pscmanual/6pscvapcurrent.pdf
- https://www.cdc.gov/nhsn/pdfs/checklists/pneu-checklist-508.pdf

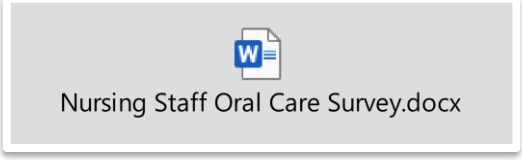
Note: Clearly documented aspiration pneumon**itis** (J69.0) due to aspiration of gastric contents/ food is a chemical pneumonia which is not considered infectious in origin, and is an IPEC exclusion for NV-HAP reporting. Veterans with cancer who are enrolled in hospice with a less than 6 months life expectancy are also excluded from IPEC reporting.

Figure 1. Image of VA IPEC NV-HAP reporting. Bed days of care (BDOC)= midnight census. Units marked as offline in the image above are currently closed.

Pneumonia International Classification of Disease (ICD) Diagnosis Codes		
Code Title	**ICD-10**	**ICD-9**
Bacterial pneumonia NOS	J15	482.89
Pneumonia due to Pseudomonas	J15.1	482.1
Pneumonia due to Staphylococcus	J15.2	482.4
Pneumonia due to Strep B	J15.3	
Pneumonia due to Other Strep	J15.4	482.3
Pneumonia due to E. Coli	J15.5	482.82
Pneumonia due to other gram-negative bacteria	J15.6	482.83
Other bacterial pneumonia	J15.8	
Bacterial pneumonia, unspecified	J15.9	482.9
Pneumonia organism, unspecified	J18	486
Bronchopneumonia, unspecified	J18.0	485
Lobar pneumonia	J18.1	
Hypostatic pneumonia, unspecified	J18.2	
Other pneumonia, organism unspecified	J18.8	
Pneumonia, unspecified	J18.9	483
Pneumococcal pneumonia		481.0
MSSA pneumonia		482.41
MRSA pneumonia		482.42

Table 1: Example of pneumonia diagnosis codes

For civilian hospitals, the provided ***NV-HAP Incidence Calculator*** can help you calculate baseline estimations with the pneumonia data you have collected. Once you have collected the number of NV-HAP cases for the past 12 months and confirmed they are true cases using the NHSN CDC criteria (links on page 9), collect the number of hospital admissions/ transfers to the implementing units (gains) for each of those months. Enter the data in their respective columns in the Baseline Worksheet (far left tab 1) to determine baseline incidence rate. Follow the instructions to use these estimations to generate a **problem/opportunity statement**, which you may include in a ***Project Charter*** (see **Step 1, Action 3**: Develop Project Charter). Upon launching the oral care practice, collect the same data for the post-intervention months in the Impact Worksheet (tab 2) to develop an **impact statement** (see more information in **Step 3, Action 2**: Tailor Documentation Audit Tand **Step 6, Action 1**: Conduct Audits).



Another factor to consider prior to determining implementation approach is **current nursing and nursing assistant oral care practices** and **engagement levels**. You may administer a pre-implementation ***Nursing Staff Oral Care Survey*** to assess current oral care practices. This optional quality improvement (QI) survey contains questions to gauge how frequently nursing staff provide oral care to inpatient or CLC non-ventilated patients, what supplies they use, whether

they experience any barriers to completing oral care, and how receptive they would be to standardizing the practice. You can customize the provided survey to fit your facility's needs. Reviewing the results of the survey can help you understand the currrent state of oral care provision for non-ventilated patients at your facility. You will need to obtain local facility and union approval to complete this QI survey.

Tip: Keep the surveys anonymous (no names or identifying employee information) so nursing staff feel comfortable providing honest and accurate information.

In addition to administering surveys, have conversations with nursing staff to gauge receptiveness and obtain buy-in for the practice. These conversations will help to **garner nursing staff support**, and help you determine who to engage as part of the implementation team (see **Step 1, Action 3**: Develop Project Charter and **Action 4: Engage** Stakeholders).

Finally, review the following **resource requirements** on page 12 and meet with your facility's Procurement & Logistics Office to **determine what oral care supplies your facility lacks, and investigate the current procurement, storage, and distribution process for oral care supplies**. Many medical facilities purchase oral care supplies, but may not have a consistent high quality supply or storage/distribution process.

Basic Resource Requirements: Oral Care Supplies

- **Soft American Dental Association (ADA) approved Toothbrushes**
- **Suction Toothbrushes** (for patients at high risk for aspiration)
- **Toothpaste** (any ADA approved brand)
- **Dental Floss and Mouthwash** (alcohol-free) optional
- **Denture Cleansing Liquid or Tablets, Denture Brushes, Cups, and Denture Adhesive**
- **Lip Moisturizer, Petroleum Free**

Figure 2: Basic Resource Requirements

Some questions to discuss with the Procurement & Logistics Office include:

- Does the facility currently procure these oral care supplies?
- Are oral care supplies stored on every unit?
- Where are they stored?
- Do nursing staff know where they are?
- Who monitors supplies?
- How does the supply get replenished when the units run out?

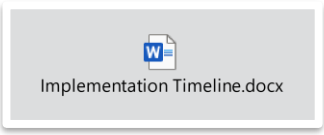
After considering these factors related to oral care supplies, determine which implementation approach will work best for your facility:

- **Phased Implementation:** A phased approach allows you to select a specific unit or units to pilot the practice. After reviewing baseline considerations, determine which unit(s)

you think will benefit most from this practice. Your baseline assessment may reveal that some units may not be ready to implement the practice, so consider this option if that is the case.

- **Hospital-Wide Implementation:** If after reviewing baseline considerations you determine all units in your facility have a need for the practice, you can implement this practice hospital-wide. You will need to work with nurse managers from each unit to promote the practice among nursing staff and hold staff accountable for completing and documenting oral care.

Tip: Implementing the practice in one or two units is a good way to gauge the success of facility wide implementation. Piloting the practice can allow you to troubleshoot and streamline to produce operational efficiencies on a small scale before scaling hospital wide.



Determine the timeline for implementing the practice. Consider using the provided ***Implementation Timeline*** template to build a schedule that corresponds with your chosen implementation approach and expected **launch date**. Included in this template are sample timelines for the phased implementation approach and hospital-wide implementation approach. Implementing the practice should take no longer than three to six months but determining when activities should take place will depend on the implementation approach you select. The sample timeline for the hospital-wide implementation approach includes a longer foundation stage because it may take more time to coordinate hospital-wide adoption of oral care documentation templates and nursing staff training. VA personnel in acute care areas use the VAAES acute inpatient shift assessment and frequent documentation templates which includes an oral care section that is pulled into a national report. VA employees may contact the HAPPEN team to obtain the internal link to this report if you cannot locate it in VSSC.

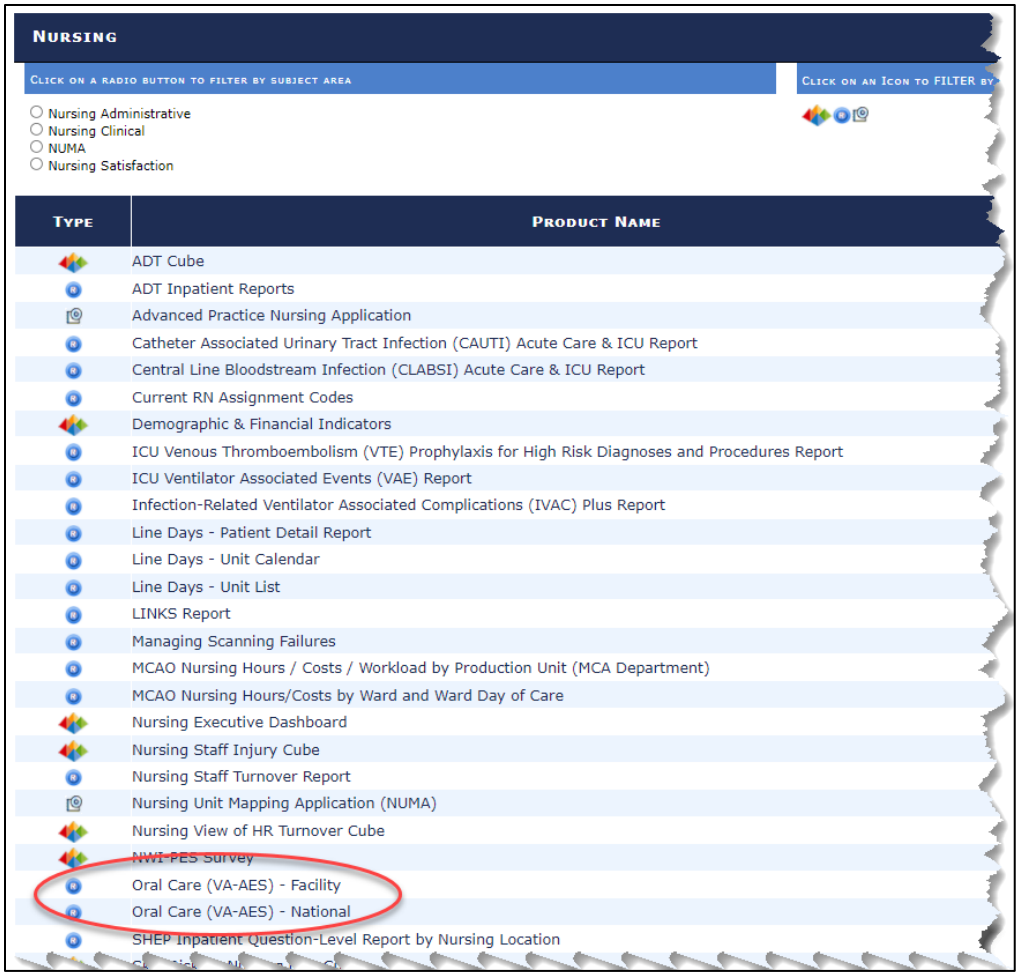


Image of VSSC oral care documentation health factor report landing page

Action 3: Develop Project Charter

Develop a ***Project Charter*** that will serve as a guide for implementing this practice at your facility. The charter should address the following:

- A general **project description**
- The **problem/opportunity statement** to be addressed by implementing the practice
- Your facility's **goals** for implementing the practice
- Your facility's **timeline** for implementing the practice
- The **scope** of implementing this practice
- The **resources** your facility will need to obtain
- The **team members and leadership** who will support implementation

Use this template as a framework for developing the ***Project Charter***. Include the problem/opportunity statement, timeline, list of resources, team members, and other information you have gathered from completing **Step 1, Action 2**: Determine Implementation Approach . You will also need to think through the scope and goal(s) for implementation. For reference, a sample Project Charter is included which you may adapt.

A major component of the Project Charter is identifying **team members and leadership who will support implementation**. Include these individuals in your Project Charter, along with their time commitment. As you determine the project scope and resources, you should also consider engaging other stakeholders such as dental professionals and speech and language pathologists who may support the practice. See recommended stakeholders in Figure 3.

Project Charter Template 10.6.21.do

Recommended Stakeholders to Engage

- **Nursing:** Registered nurses, licensed practical nurses, licensed vocational nurses, nursing assistants/certified nursing assistants and health care technicians who will assist patients with oral care and document the care in the electronic medical record.
- **Medical Center Director (MCD):** Leader and final decision-maker that approves implementation of the practice and resource requests at your facility
- **Chief Nursing Officer (CNO):** Nurse leader and final decision-maker for nursing care standards
- **Nurse Manager/ Assistant Nurse Manager:** Nurse responsible for nursing quality of care in a specific unit, participates in nursing staff oral care training and holds nursing staff accountable to standards of care
- **Logistics Office:** Department responsible for procuring, storing, and distributing oral care supplies
- **Clinical Informatics:** The team makes any necessary changes to documentation templates to capture oral care in the electronic health record
- **Decision Support Systems (DSS):** Department that assists with data capture related to NV-HAP
- **Infection Control and Quality Management:** Departments that identify positive NV-HAP cases and assist with tracking
- **Dental Services:** Department that can offer expert opinions on staff/patient education and selection of ADA approved oral care product purchases; may be consulted for patients with special needs at facilities that have these services
- **Speech and Language Pathology:** Department assists in identifying and treating patients at high risk for aspiration and teaching nursing staff how to better manage the needs of these patients.

Figure 3: Recommended Stakeholders (Munro et al 2018, NAQ)

Action 4: Engage Stakeholders (Leadership)

Stakeholder support will help ensure the success of initial implementation efforts. In **Step 1, Action 3**: Develop Project Charter, you will decide which stakeholders to approach for support. **Reach out to those stakeholders to provide them with background for the practice and request their support**.

Host a meeting with team members to present the Project Charter and provide background for implementing the practice. The meeting will be an opportunity for team members to ask questions, and for you to solicit their feedback on the charter and overall implementation approach and to obtain their buy-in for participating in practice implementation.

After meeting with team members and working with them to refine the Project Charter, **meet with medical center leadership to present the final Project Charter** to obtain their buy-in and approval. They may also be able to provide support for addressing potential challenges and obtaining resources.

Step 2: Obtain and Organize Supplies

Core actions include:

- **Action 1:** Procure Supplies
- **Action 2:** Determine Storage/Distribution Plan

Action 1: Procure Supplies

After determining what oral care supplies your facility lacks in **Step 1, Action 2: Determine Implementation Approach ,** work with the Procurement & Logistics Office to determine estimation of facility supply needs and procurement. The Office should determine the amount of oral care supplies to order by conducting a par level audit. Par level refers to the minimum quantity of supplies stocked, which the Office should reorder if they fall below the minimum level. Be sure to **account for expiration dates of some oral care supplies (e.g., toothpaste usually has a shelf life of 2-3 years) when determining amount and frequency of supply procurement.** Your facility should purchase American Dental Association (ADA) approved, high-quality toothbrushes, toothpaste, and other oral hygiene supplies such as alcohol-free mouthwash (optional), denture cleansers, denture adhesives and lip moisturizers (see figure 2). You can consult your facility's Dental Services department to determine types of product to procure. These supplies should cost $3-5 per patient depending on the products chosen.

Note: You need to reach out to your facility's medical center leadership and/or fiscal leadership to allocate and confirm funding for supplies.

Action 2: Determine Supply Storage and Distribution Plan

Store supplies in an easily accessible location for nursing staff. If implementing via a phased approach, the Procurement & Logistics Office can adjust the par level as needed after the pilot phase to scale the practice. If implementing via a hospital-wide approach, the Logistics Office should conduct par level audits for each unit and maintain a consistent process for re-ordering and re-stocking supplies. You or the nurse manager(s) communicate the plan to all nursing staff, so they know where supplies are stored, who to contact if supplies are low, and to provide oral care supplies to patients on their first day of admission.

Note: As nursing staff adopt a process for distributing oral care supplies to patients upon admission, ensure that this distribution process includes **labeling patient supplies to prevent risk of wrong-patient errors and infection**. All patients should have their oral care supplies properly labeled and located in a clean, dry, accessible location in their patient rooms.

Step 3: Adopt Templates, Tools, and Patient Education Materials

Core actions include:

- **Action 1:** Adopt VA-AES Templates (medical surgical areas)
- **Action 2:** Tailor Documentation Audit Tool
- **Action 3:** Customize Patient Education Materials

Action 1: Adopt Oral Care Documentation Template

VA medical surgical units should be using the nationally approved VA-AES templates which contain an oral care documentation section which connects to a health factor report. VA CLC unit staff should continue to chart in Caribou. Oral care data from Caribou and the intensive care unit electronic health records can be pulled locally. An aggregate VA national report on all activities of daily living including oral care for CLC users is forthcoming.

Civilian hospitals may find their existing nursing documentation templates do not address oral care. The attached ADL template example on the previous page may serve as a guide to improving oral care documentation.

Action 2: Tailor Documentation Audit Tool

You can customize the tools in Table 2 to use for manually tracking oral care documentation. Charge nurses and nurse managers on the unit(s) are accountable for oral care completion and documentation. On daily rounds, they verify with patients that they have completed oral care or that their nursing staff have assisted them with completing oral care. They can use the provided ***Oral Care Audit Tracker*** during the implementation phase to collect and organize audit data on oral care completion, staff documentation, and supply availability. The ***Patient Experience Survey*** (see more information in **Step 6, Action 2**: Administer Surveys) may also be used to track oral care provision. VA employees go to the HAPPEN SharePoint or c*ontact the HAPPEN team for more information (links are not included here as this toolkit is shared outside the VA).*

Data Collection Tools		
Oral Care Audit Tracker	Nursing staff can use this tool to organize information when conducting random audits on oral care completion, staff documentation, and supply availability. Oral care documentation tracking is automated for units that use CPRS. VA employees, contact the HAPPEN team for the VSSC oral care documentation health factor report link if you cannot find it.	Oral Care Audit Tracker.docx
NV-HAP Incidence Calculator	This spreadsheet (which you should have already started using in **Step 1, Action 2**: Determine Implementation Approach to calculate baseline NV-HAP incidence) includes built-in formulas in Tab 2 to help civilian hospitals monitor the impact. VA facilities see the IPEC report on NV-HAP to track your incidence.	See **Step 1, Action 2**: Determine Implementation Approach
Patient Experience Survey (quality improvement, optional)	You can customize and use this optional Patient Experience Survey to gain insight on inpatient or CLC oral care assistance. By collecting and analyzing this information throughout implementation (see **Step 6, Action**	Patient Experience Survey.docx

	2: Administer Surveys), you can improve the practice to provide better quality care for patients.	

Table 2: Data Collection Tools

Action 3: Customize Patient Education Materials

Patient education materials are critical for engaging Veterans in understanding the association between oral health and NV-HAP prevention. Consider tailoring the following patient education tools:

Brochure: This brochure serves as a bedside patient education tool for nursing staff to provide to each patient. Nursing staff should review the information briefly with each admitted patient, describing the importance of good oral health in preventing pneumonia. If the patient is not able to review this information, share it with their family members or loved ones. See the next page for the attached brochure and flyers. VA employees can find a MS word version of this brochure on the SharePoint.

Flyers (8 ½ x 11" posters): These flyers provide a visual reminder of the importance of preventing hospital acquired pneumonia by practicing consistent oral care. After you obtain any needed local approvals, you can reproduce and laminate the flyers and post in each patient room and strategically around the inpatient or CLC unit(s).

Pneumonia_Flyer-2019.pdf

PneumoniaTeeth_Brochure_Feb 2020 ne

Step 4: Customize and Conduct Nursing Staff Trainings

Core actions include:

- **Action 1:** Coordinate Scheduling of Nursing Staff Training
- **Action 2:** Customize Nursing Staff Training
- **Action 3:** Conduct Nursing Staff Training Sessions

Action 1: Coordinate Scheduling of Nursing Staff Training

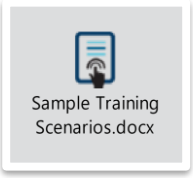
We recommend you offer multiple training sessions during different shifts so that all nursing staff can attend. Identify a nursing staff trainer who will conduct the trainings. The trainers should include a nurse, nurse manager, and/or staff developer with a nursing background. Reserve a space (e.g., conference room) to host the trainings based on the trainer's availability. Available dental professionals or speech and language pathologists may be able to assist in addition to serving as consultants. Some facilities are offering live virtual training sessions with mannikins (or staff playing the role of the patient) and other sites are offering practice sessions in their simulation lab.

Prepare an ***Introductory Training Email*** to send to nursing staff to attend the training session. The email includes an overview of the practice and promotes the importance of oral health for NV-HAP prevention. Include the expected date of implementation in the email. You can customize this email to send out to all inpatient and CLC nursing staff regarding training sessions and launch date.

Intro Training Email 10.1.21.docx

Action 2: Customize Nursing Staff Training

Work with the nursing staff trainer to customize the provided ***Nursing Staff Oral Care Training Presentation*** and design training sessions. Nursing staff trainings should provide education on oral care techniques, the importance and required frequency (minimum twice daily) of providing oral care, and documenting completion of oral care. Consider including materials for both didactic sessions (a classroom setting in which you introduce the practice and its importance) and practice-based sessions (e.g., nursing assistants shadowing nurses) in trainings. When designing trainings, consider the following training techniques:



Sample Training Scenarios.docx

- **Simulation/hands-on:** Make the training imitate real work experience, such as demonstrating oral care techniques in a patient encounter. Simulating employee training techniques keep employees engaged, which makes them more receptive to the information. Consider simulating encounters with scenarios such as those provided in the ***Sample Training Scenarios***, adapted from nursing staff trainings held for VISN 6 (use this as a starting point in discussion). If you have a simulation center, consider adding oral care as an annual and/or new hire competency check.
- **Interactive:** Consider a variety of multimedia elements, including using the oral care training presentation to train nursing staff. You can also utilize VA Learning University's

Healthy Smiles for Veterans (HSfV) training video in the Talent Management System (TMS).

Nursing Staff Oral Care Training Preser

- On the HAPPEN SharePoint, VA employees can download and customize the training PowerPoint and the competency check sheets from the HSfV course.

Tip: **You can locate the *Healthy Smiles for Veterans* training videos in VA Learning University's TMS under module #VA37674 or outside the VA on TRAIN.ORG**

Action 3: Conduct Nursing Staff Training Sessions

Training sessions are critical for equipping staff with the information and skills they need to provide and document oral care. Again, you may want to offer multiple sessions during different shifts so that all nursing staff can attend. Training sessions should engage staff and build enthusiasm. See training design ideas in **Step 4, Action 2**: Customize Nursing Staff Training.

Step 5: Implement

Core actions include:

- **Action 1:** Ensure Readiness for Launching the Practice
- **Action 2:** Launch Practice and Mitigate Challenges

Action 1: Ensure Readiness for Launching the Practice

Ensure your facility is prepared for launching the practice. It is imperative that you request all required resources in advance to ensure readiness for launching the practice. Prior to the launch date, be sure to:

- Finalize patient education materials
- Maintain all oral care supplies in a logical and accessible location, ready for use

- Post laminated flyers (posters) and brochures somewhere accessible like the nurse's station (in accordance with facility policy)

- Teach staff about oral care documentation: importance and completion

Send out a ***Launch Reminder Email*** to nursing staff with the launch date and any follow-up resources from training. This email serves as a reminder and addresses any questions that were of concern during the training sessions. You can customize this email to send out to nursing staff as the launch date approaches.

Launch Reminder Email 10.1.21.docx

Tip: In emails, be sure to include a contact person for nursing staff to reach out to for further questions or concerns. This can include you, the trainer, and/or the nurse manager for the unit(s), whom you should be working closely with to implement.

Action 2: Launch Practice and Mitigate Challenges

On the launch date, nursing staff should implement the inpatient or CLC oral care practice for all non-ventilated patients in the participating unit(s), starting with the first shift of the day. Patients should receive oral care at least twice per day, or every 12 hours.

As facility champion, you serve as the point person for mitigating and resolving challenges, and raising any issues to leadership if necessary. Be sure to communicate this role to other staff so no issues fall through the cracks. For tips on managing resistance, reference the provided ***Managing Resistance to Oral Care Training*** below.

Managing Resistance to Oral C

Step 6: Monitor and Iterate/Scale

Core actions include:

- **Action 1:** Conduct Audits
- **Action 2:** Administer Surveys
- **Action 3:** Analyze Data and Evaluate Impact

► **Action 4:** Scale and/or Sustain the Practice

Action 1: Conduct Audits

The nurse manager (or designated staff member) should **conduct random audits and/or track oral care documented in cprs with the VSSC national health factor report** during practice implementation. They can conduct random audits on patient rounds to monitor whether nursing staff completed oral care and documented it in the patient chart, who documented the oral care, and confirm oral care supply availability in each patient room. They can collect this information using the ***Oral Care Audit Tracker*** from **Step 3, Action 2:** Tailor Documentation Audit TNurse managers can conduct the initial audits daily (first week) and gradually decrease to once a month.

Additionally, you or a designated staff member should **continue to conduct chart reviews** of patients with pneumonia diagnosis codes developed on hospital day 3 (>48 hours after admission) using NHSN CDC criteria and report VA data to IPEC following guidelines to determine the current NV-HAP incidence rate. See **Step 1, Action 2: Determine Implementation Approach** for the NHSN CDC guidelines on determining NV-HAP. Collect and include data from all units participating in the oral care initiative. The time required for this task will depend on the size of your facility and the selected implementation approach. Keep track of the data on Tab 2 of the ***NV-HAP Incidence Calculator***, which is provided in **Step 3, Action 2**: Tailor Documentation Audit T. **Track this data on a monthly basis and submit the data as instructed. Share your progress and challenges** with medical center leadership and participating inpatient and CLC unit staff.

Tip: One way to keep nursing staff engaged is to **send praise emails** each month to the nursing staff with the best documentation rates (according to audits). You can customize the ***Praise Email Samples***.

Praise Email Samples.docx

Action 2: Administer Surveys (optional)

During implementation, you may want to **survey patients on their oral care assistance experience** (see customizable ***Patient Experience Survey*** in **Step 3, Action 2**: **Tailor Documentation Audit** TAsking patients about their experience provides a valuable perspective on the care that nursing staff provide. This survey should be quick for patients to answer. Nursing staff can administer the quality improvement (QI) survey at various times during the patient's stay after the patient received assistance with oral care (and has feedback). Consider

administering it during rounding or discharge – whichever works best for the inpatient and CLC unit(s).

You may also **administer a QI post-implementation nursing staff survey three months after launching the practice**. This survey can help you assess the success of the oral care practice. You can customize the ***Nursing Staff Oral Care Survey*** in **Step 1, Action 2: Determine Implementation Approach** as desired. Similar to the pre-implementation nursing staff survey, the post-implementation nursing staff survey should be quick for staff to answer, and it is designed to gain insight on their practice experience. Review the results of this survey in comparison to the pre-implementation nursing staff survey.

Reviewing survey results will provide insight into what is working effectively, and what changes to make. By analyzing this information, you can improve the practice accordingly to provide better quality care for patients.

Action 3: Analyze Data and Evaluate Impact

Monitor and collect data on practice implementation for at least six months to gather enough information for determining scalability and/or sustainment. Analyze the data to evaluate the impact of the practice. Remember to use the data collection tools from **Step 3, Action 2**: Tailor Documentation Audit TEvaluating the impact requires comparing post-intervention data to baseline data and referencing goals.

When evaluating impact, consider the following questions:

- Did the incidence rate of NV-HAP decline? By how much?
- Are nurses more engaged in providing oral care? Has our facility addressed barriers that they previously faced?
- Which units were most successful and why?
- If there are no improvements, or unfavorable changes, why is this so?

Tip: Engage quality improvement staff to help interpret the data. While improvements may be apparent to you, it is important to verify and confirm the validity of these changes prior to communicating the success of the practice to staff and leadership.

When the evaluation is completed and verified, share the data and outcomes with staff and leadership. This will encourage nursing staff to provide insights as to whether the practice can be improved. Additionally, comparing data across inpatient and CLC units might generate friendly competition or the sharing of best practices.

Action 4: Scale and/or Sustain the Practice

Considerations for Scaling:

- Are nursing staff in the pilot unit(s) providing consistent oral care? Are they documenting the oral care provided?
- Do the templates meet unit needs for oral care documentation?
- Can the facility streamline a process for procuring, storing, and distributing oral care supplies to all hospitalized patients?

If implementing the practice via a phased implementation approach, you and medical center leadership should assess whether your facility is ready to scale the practice hospital-wide.

If you determine your facility is ready, repeat Steps 2-5 to scale the practice to all inpatient and CLC units by following the **hospital-wide implementation approach** as you carry out each action.

Once all units are successfully practicing oral care, you should take steps to ensure your facility sustains the practice by:

- Continuing to monitor and evaluate the practice
- Making adjustments as necessary
- Sharing best practices across inpatient and CLC units
- Following internal policy development procedures to develop and maintain a Standardized Operating Procedure (SOP) or Medical Center Memorandum. An example ***Oral Care SOP*** is provided as a reference. An ***ADA approved oral care protocol*** is also attached.

You can also designate certain stakeholders to serve as practice experts and champions. All nursing staff and leadership should play a role in sustaining the practice to ensure it becomes the standard of care at your facility.

ADA approved_Oral Care Protocol_ UPDAupdated

Oral Care SOP 10_6_21.pd

Do you have questions?

Do you have questions or need advice about implementing the care initiative to prevent NV-HAP at your facility? Please contact: VAHAPPEN@va.gov

Appendix

Recommended Reading and Citations

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NVHA Pneumonia FI

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