

Infection Control: Preparation and Risk Prevention for Hearing Healthcare Professionals

Michele Hurley, Au.D. Senior Education and Training Audiologist



Hear better. Live better.

Infection Control & Prevention in Hearing Healthcare

Webinar FAQs

How to Ask a Question

Click Q & A, type your question, click Send.

Where to get the Handout

- A PDF handout for this presentation may be accessed through your Pending Courses on Audiology Online or by clicking on the link in Chat within the classroom.

How to Earn CEUs

CEUs are available with a paid Audiology Online Unlimited CEU Access membership. After completing the course, go to your Pending Courses on Audiology Online and pass the multiple-choice exam.

Assistance or Tech Support

- Call Audiology Online at 800-753-2160
- customerexperience@continued.com
- Use the Q & A window

Learner Outcomes

1

Be able to identify the most effective way to prevent infection spread

2

Be able to outline potential routes of disease transmission

3

Be able to identify strategies for the ongoing prevention of disease spread in the hearing healthcare practice

slido

Please download and install the Slido app on all computers you use



**Join at slido.com
#7833485**

① Start presenting to display the joining instructions on this slide.



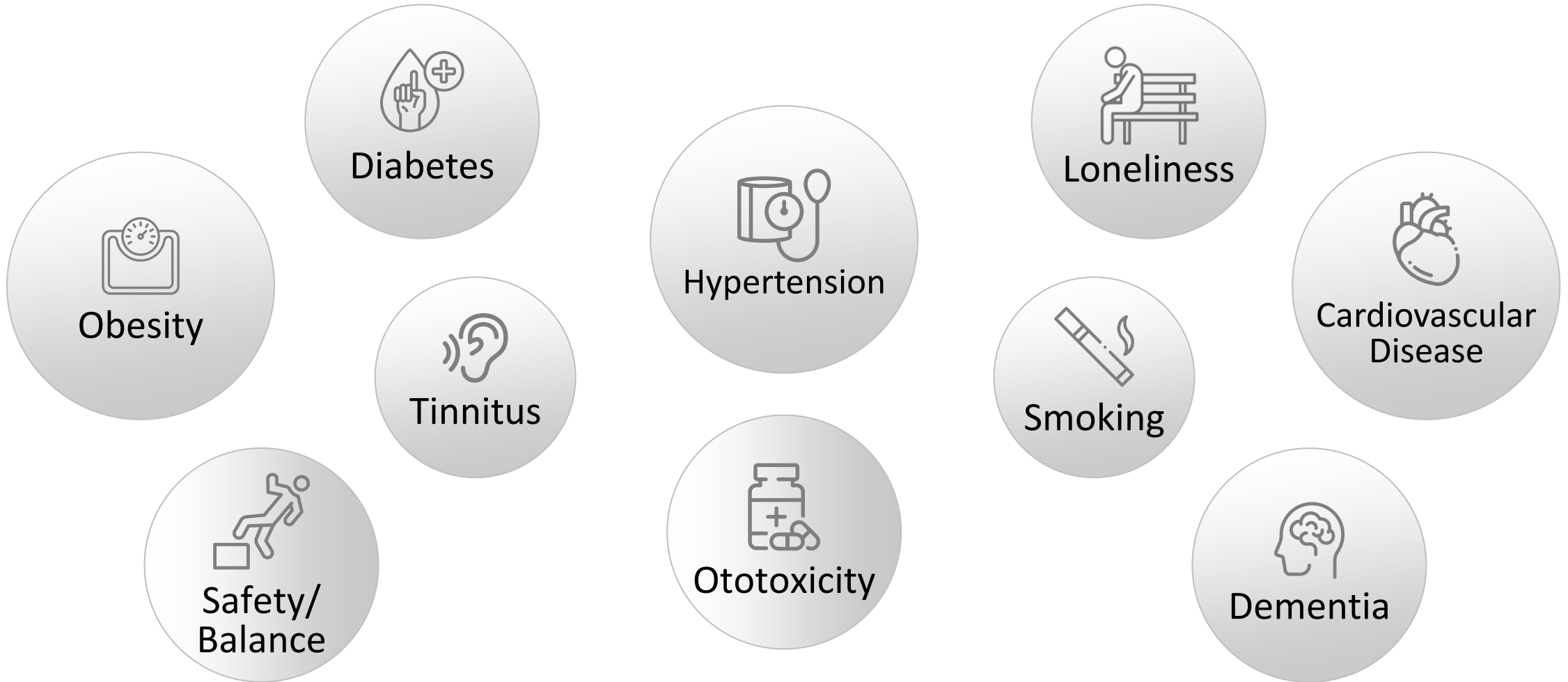
Practice Routines



Hearing is Essential

Can you deliver exceptional, yet safe
patient care?

Comorbidities of Hearing Loss



Infection Control and The Elderly

Contributing Factors

Anatomic
changes



Functional
changes



Degree of
exposure
to infection





The Foundations of Infection Control



Hear better. Live better.

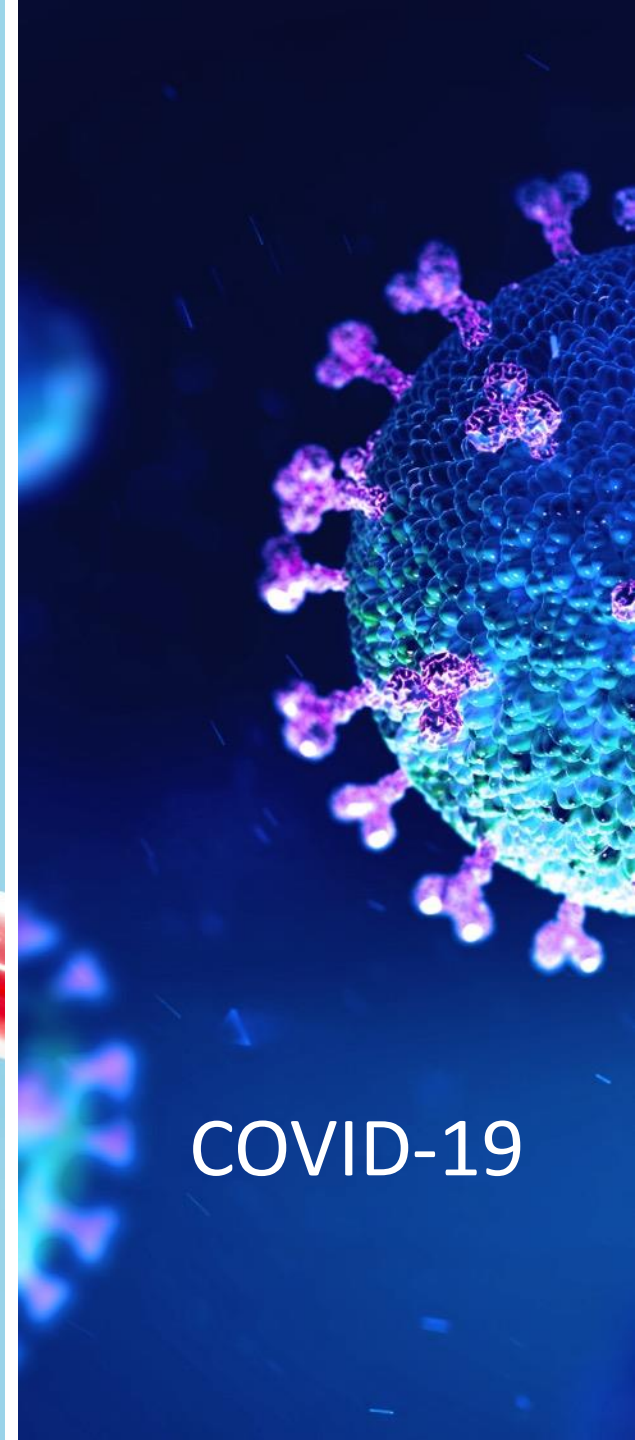
What is Infection Control?

‘...conscious management of the clinical environment for purposes of minimizing or eliminating the potential spread of disease’

Bankaitis & Kemp, 2003, 2004

A Global Concern





COVID-19

December 12, 2019

A cluster of individuals begin to experience shortness of breath and fever

January 20, 2020

CDC confirms the first U.S. laboratory confirmed case of COVID 19 in the U.S. from samples taken on Jan. 18th in Washington state

January 21, 2020

CDC artists Alissa Eckert and Dan Higgins create “an identity” for the novel coronavirus by designing the iconic red and white virus image

March 11, 2020

The World Health Organization declares COVID-19 as a Pandemic

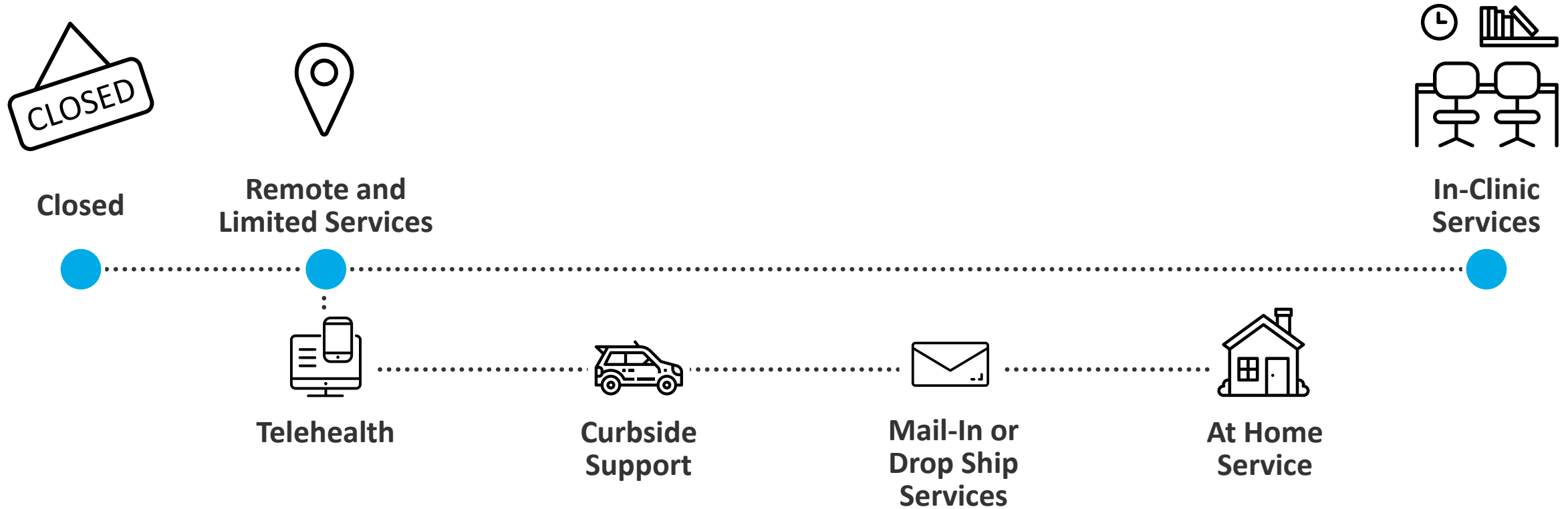


“Has Hearing
Healthcare changed?”





Pandemic Pivot

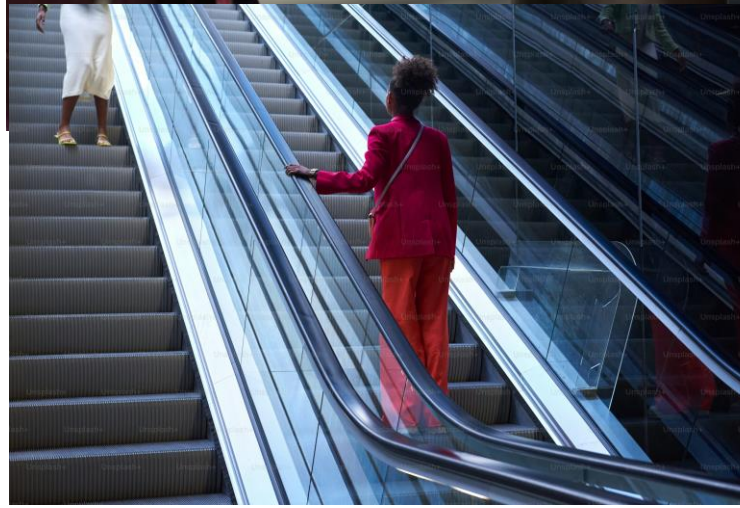




How did your practice change procedures during the COVID 19 pandemic?

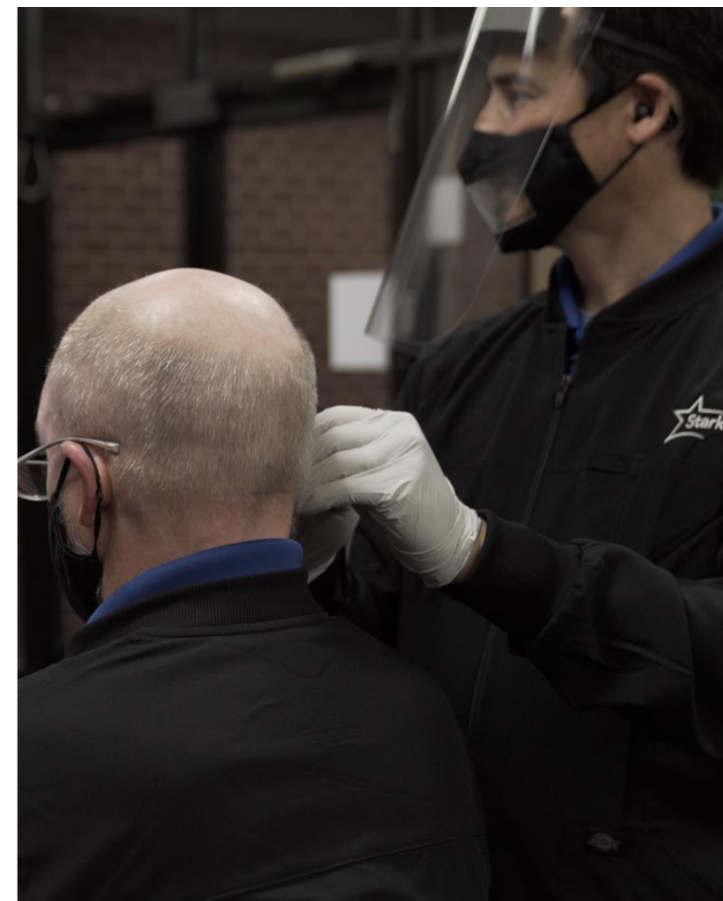
① Start presenting to display the poll results on this slide.

Taking a risk



A typical day at the hospital...

Hearing Healthcare Environment



Modes of Disease Transmission



Contact



Vehicle



Airborne



Vectorborne



Direct Contact

without intervening persons, barriers or conditions



Indirect Contact

Infectious microbes transferred from a secondary surface



Droplet Transmission

Transmission through particles expelled via coughing, sneezing or talking that land on a surface



Vehicle Transmission

Through contaminated
food, water or bodily
substances such as cerumen



Airborne Transmission

Through the air via
dust particles



Vectorborne Transmission

Insects or animals transfer
pathogenic agents

“Can talking be hazardous to our health?”

NIH Published on May 13th, 2020

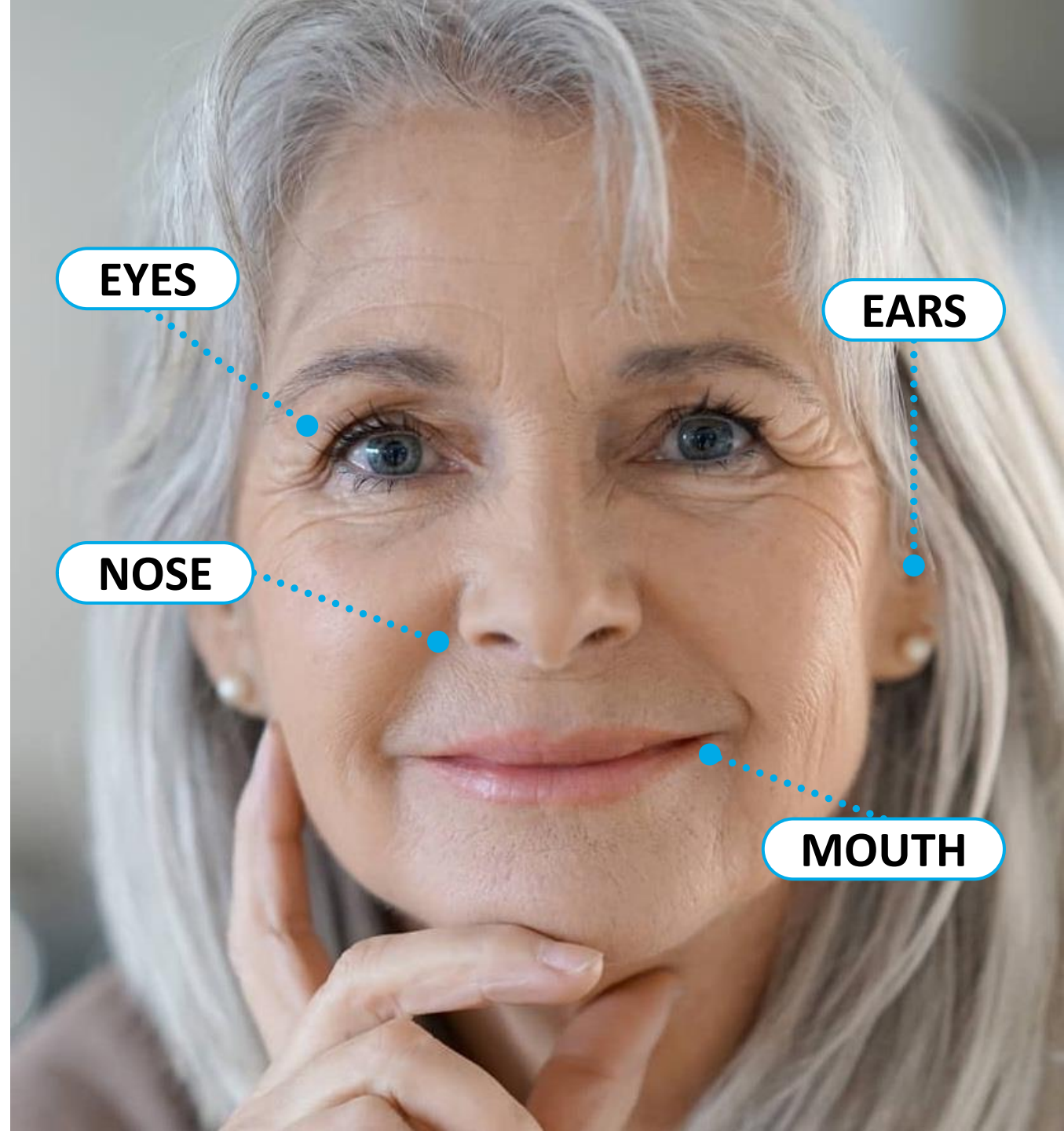
“Loud talking” in close proximity* could leave coronavirus droplets in the air for up to 14 minutes

Family members/colleagues of those with untreated hearing loss often speak at elevated levels to “be heard”

**(85 dB at 30 cm /12 inches)*



Infection Transmission Routes

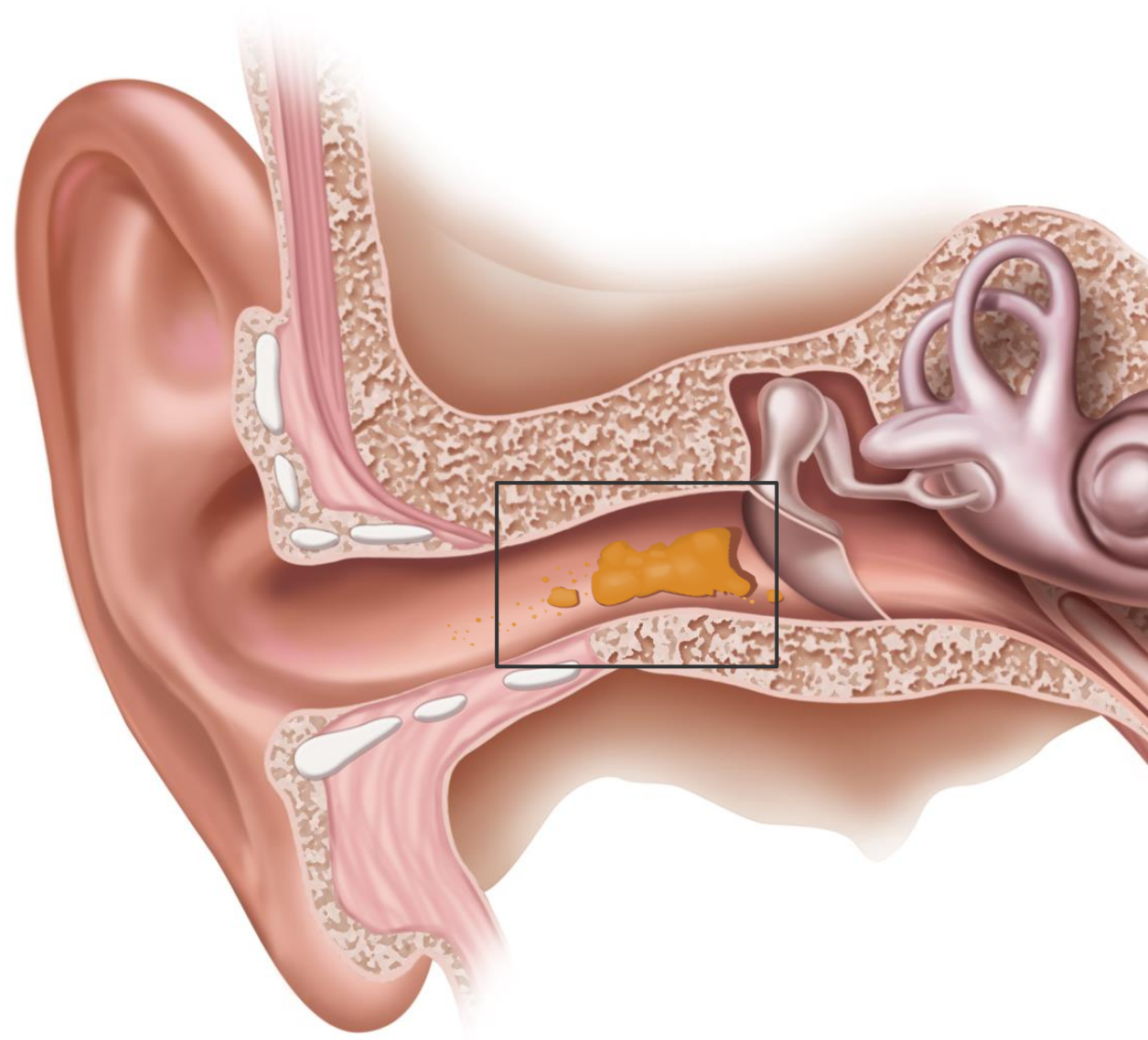


The External Auditory Canal

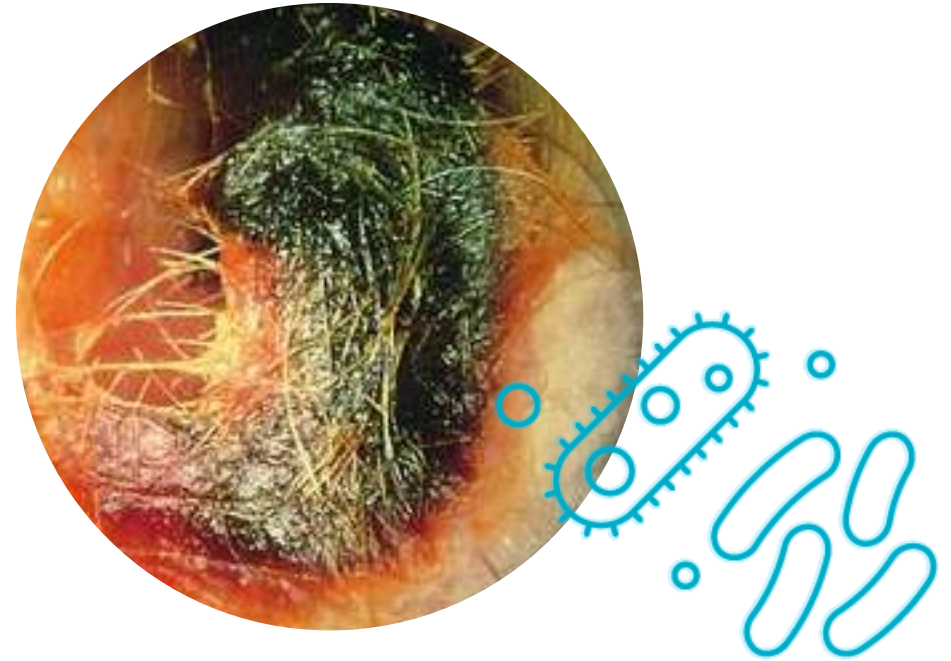
The External Ear Canal is more prone to infection than any other skin surface.

Jahn & Hawke (1992)

Cerumen should be treated as an infectious substance



Is Cerumen a Virus Transmission Risk?



Assessment of SARS-CoV-2 in the cerumen of COVID-19 positive patients. ENT-J. October 15. Islamoglu et al, (2020)

Can we assume that cerumen **cannot** transmit COVID-19?

Incidence (as a percentage) of the presence of the COVID-19 virus
in saliva, tears, and cerumen

SAMPLE FLUID	PERCENTAGE (N=38)
Saliva	76.3 (29)
Tears	55.3 (21)
Cerumen	39.5 (15)

SARS-CoV-2 presence in the saliva, tears and cerumen
of COVID-19 patients Laryngoscope 10.1002

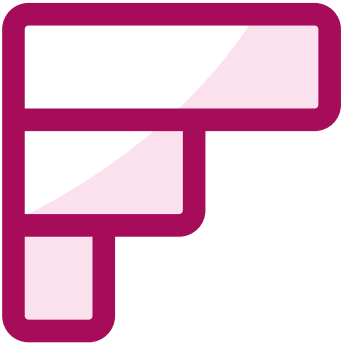
Cerumen Management Strategies in the era of COVID 19

How are hearing healthcare providers
disposing of a common material that
has the potential to carry disease?

DiSogra, 2021. COVID-19 Survey: Disposing of Cerumen from Patients with a Positive History of COVID-19. <https://www.audiology.org/news-and-publications/audiology-today/articles/online-feature-covid-19-survey-disposing-of-cerumen-from-patients-with-a-positive-history-of-covid-19/>

slido

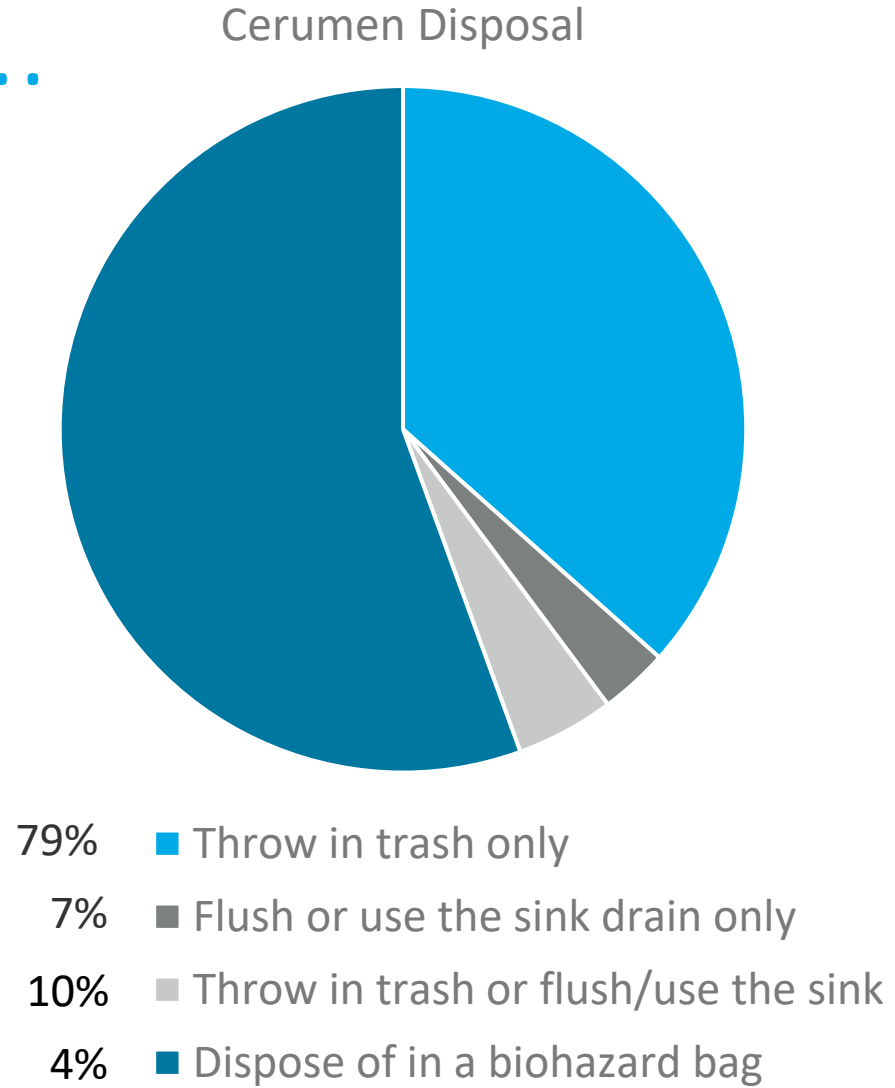
Please download and install the Slido app on all computers you use



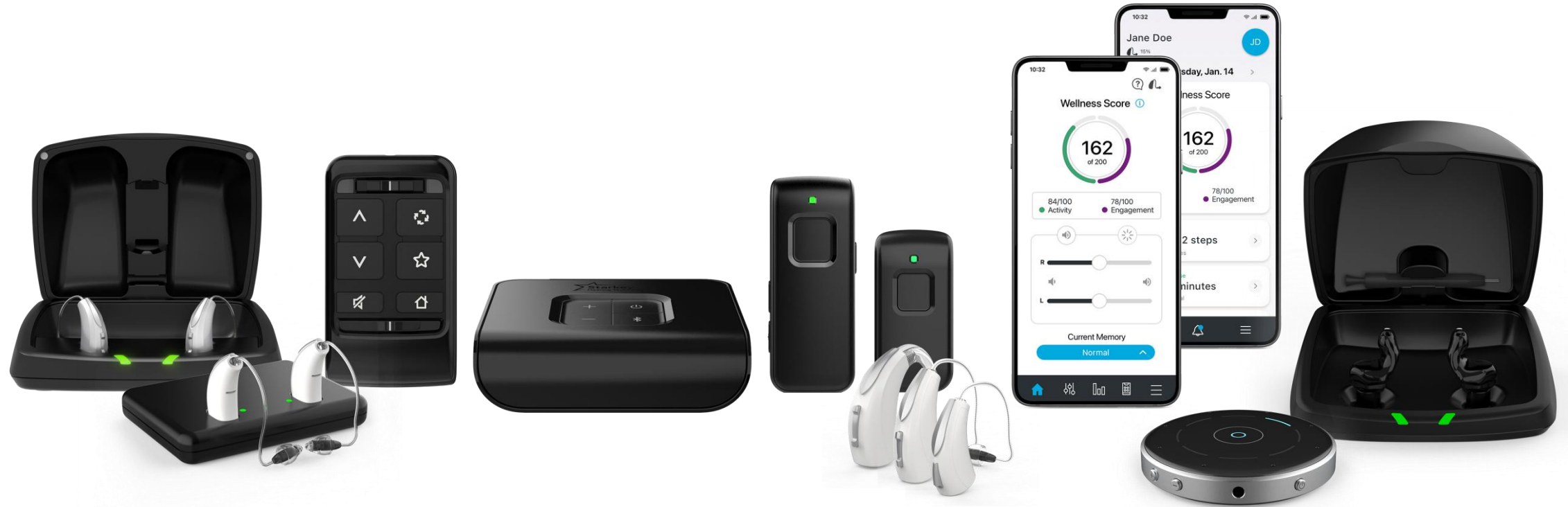
Survey-How cerumen is being disposed of in clinical practice

① Start presenting to display the poll results on this slide.

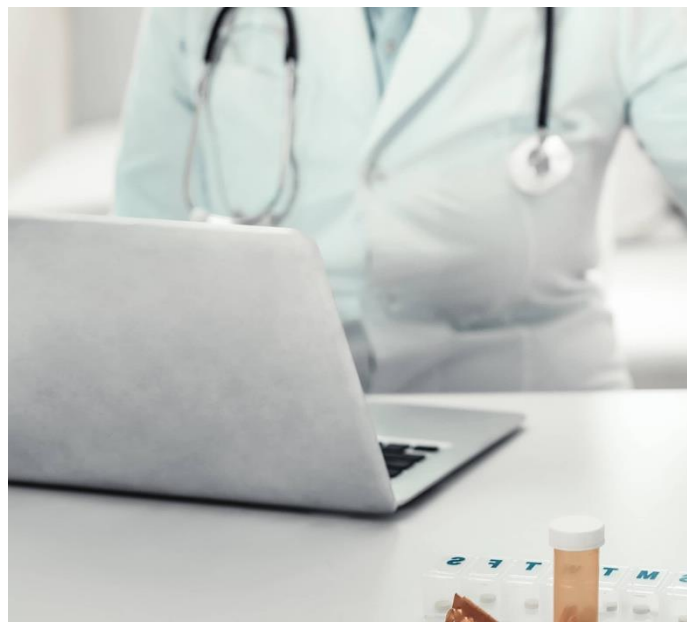
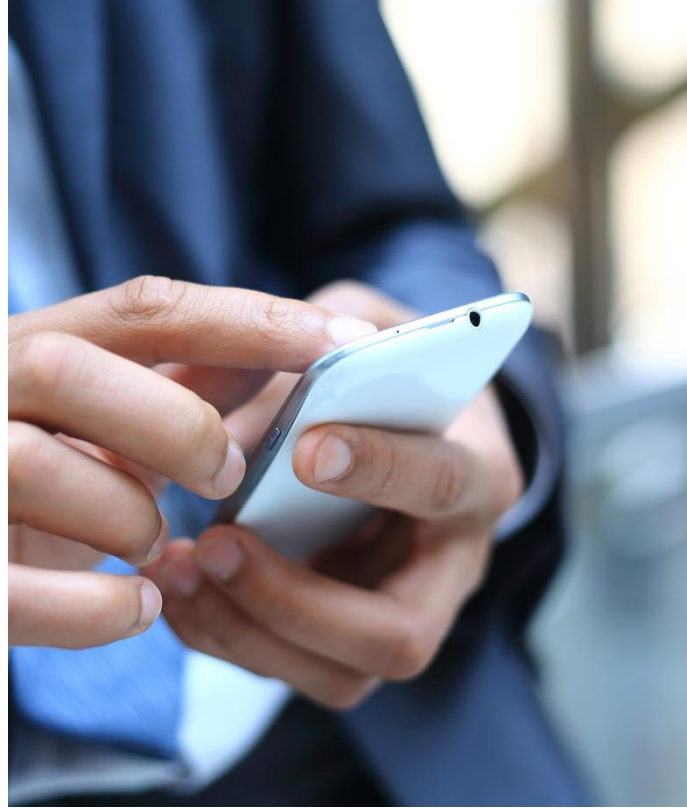
Survey says.....



The Impact of Hearing Products



Dangerous Surfaces Lurk Everywhere





Protecting Patients, Staff and Others in the Workplace Environment



Written Infection Control Plan



Categorization of Employees

Each employee is classified on the basis of potential exposure to blood and other infectious substances.



Work Practice Controls and Implementation Protocols

Outlines how a procedure will be performed for the specific purposes of minimizing the spread of disease



HBV Vaccination

Employees who have the potential to encounter blood or other infectious substances are to be offered the opportunity to receive a HBV vaccination.



Emergency Procedures

All infection control programs should plan for accidents/incidents.



Training Plan and Training Records

Conduct and document completion of annual training in infection control.



Post-exposure Evaluation and Follow Up

In the event of a medically treatable exposure occurs, the office must document the treatment that has taken place and the outcome



Category 1

Clinical Audiologists

Category 2

Clinical Audiologists, Dispensing Audiologists, Hearing Instrument Specialists, Student Intern, Clinical Supervisor, Patient Care Coordinator

Category 3

Administrative Staff

Category 1 & 2

Required to practice infection control procedures

Adjusting Profession-specific Procedures

ENGINEERING CONTROLS

Procedures that isolate or remove bloodborne pathogen hazards from the workplace.

- Storage of re-usable instruments that will be sterilized at the end of the day
- Specific room for sterilization procedures
- Labeling area as hazardous

WORK PRACTICE CONTROLS

Profession specific procedures performed to reduce the risk of cross contamination

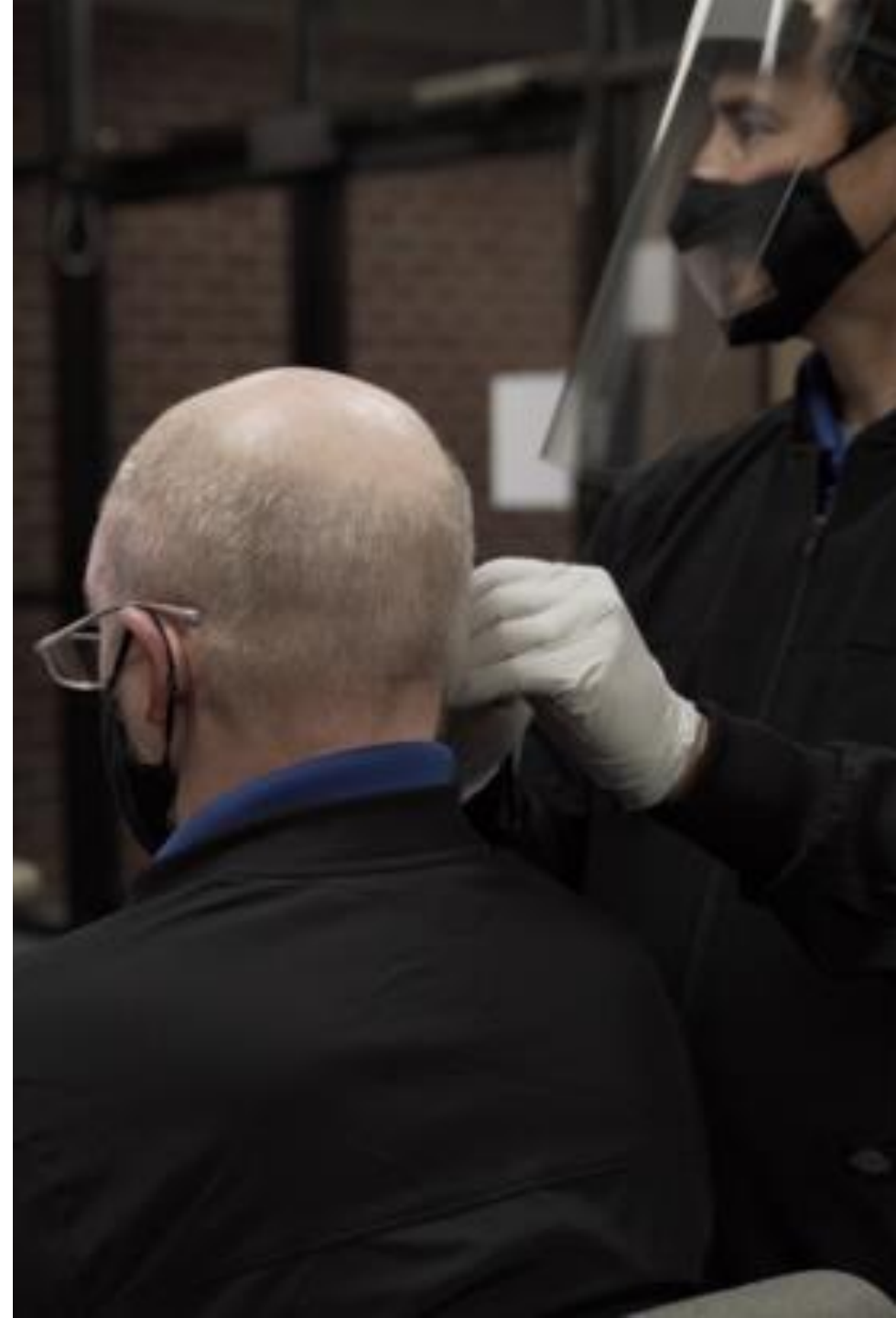
- Wearing appropriate barriers like gloves
- Altering the manner in which procedures are performed such as cerumen management to reduce risk



Hear better. Live better.

Work Practice Controls

- Consider all activities for your practice
- Identify steps for infection control for each activity
- Keep it manageable



Universal Precautions CDC Guidelines



Personal Protective Equipment



Hand Hygiene



Clean/Disinfect Surfaces

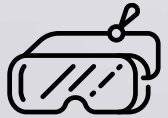


Sterilize Critical Instruments



Appropriate Waste Disposal

PERSONAL PROTECTIVE EQUIPMENT



Glasses



Masks



Gowns



Gloves





Cloth Mask



Surgical Mask

Source Control

Use of respirators, well-fitting facemasks or well-fitting cloth mask to cover a person's mouth and nose to prevent the spread of respiratory secretions when they are breathing, speaking, sneezing or coughing.

Facemasks

Defined by OSHA as a surgical medical procedure, dental or isolation mask that is FDA cleared.



KN95 Mask



N95 Respirator



Cloth Mask



Surgical Mask

Mask Quality Matters More Than Ever

Textile (cloth covers) are intended for source control in the community. **They are NOT PPE suitable for use by healthcare professionals.**

Current CDC Recommendations

KN95, N95 are **strongly** recommended



KN95 Mask



N95 Respirator

What's the difference?

N95 vs KN95



shop.projectn95.org



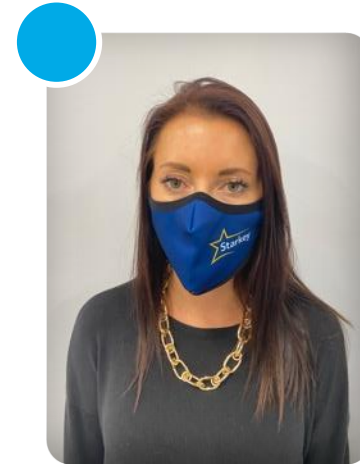
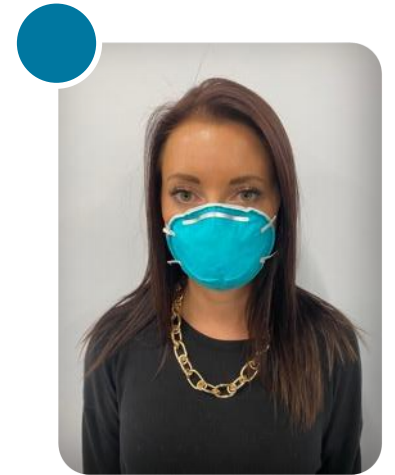
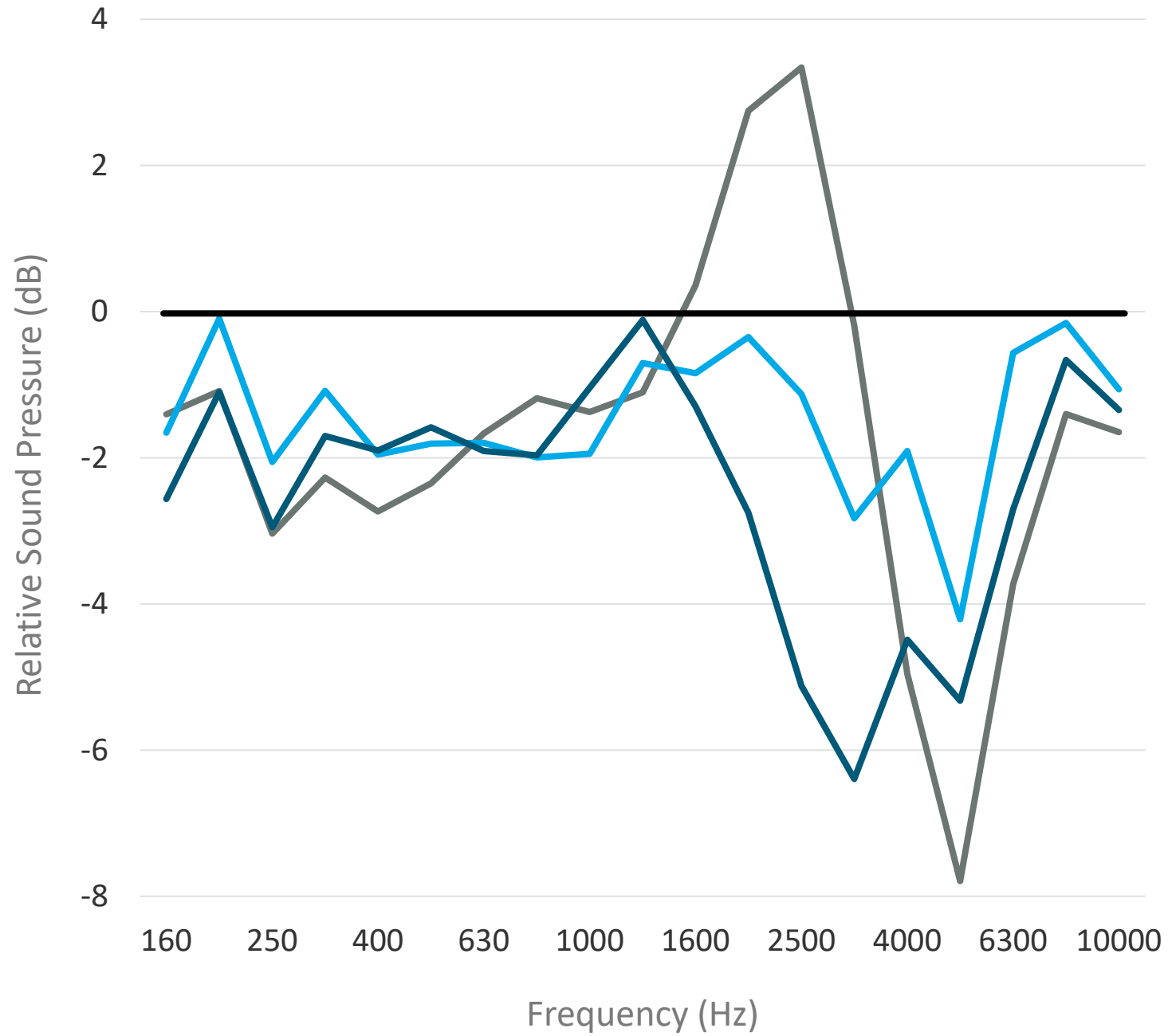
Hear better. Live better.

Clear Face Covering Considerations

<https://www.theclearmask.com/>

<https://www.thehearingspot.com/>

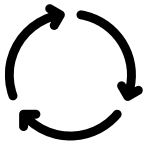




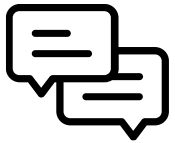
Face Shields



Face Shields alone are not recommended for Source Control



Reusable (after cleaning/
disinfecting) unless damaged



Effective for communication with
a large clear area for better visuals
for lip reading and facial
expressions

**Consider a mask with a face shield
for direct patient contact**

Perencevich, E., Diekema, D., Edmond, M., Moving Personal Protective Equipment into the Community: JAMA, 2020. Published online 4/29/20



Gowns and Clothing



Short sleeve attire is preferred to facilitate effective hand washing



Clothing worn in office should be removed before entering the home after work



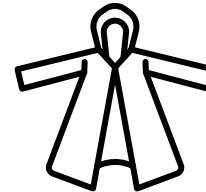
Ties, Neck Scarves **are not recommended**



Shoes worn in office should be **left outside the home to air out or wash**



Jewelry such as rings, watches and bracelets are **not recommended**



Consider disposable gowns for direct patient contact



Gloves

Gloves should be worn when

Open wounds or visible blood is present

Cleaning or disinfecting instruments
contaminated with bodily substances

Submersion or removal of instruments
into or from cold sterilant

Contamination with **potentially infectious materials (including cerumen)** is likely







Gloves in the Hearing Healthcare Space

Nitrile gloves can be used safely with impression material but latex gloves can keep impression material from setting up.

To avoid latex allergies, non-latex vinyl or nitrile gloves are preferred.

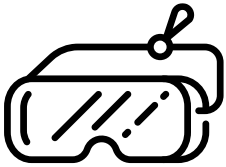


Hear better. Live better.

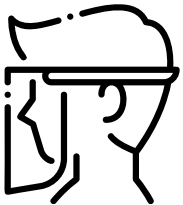
Clean and Disinfect PPE



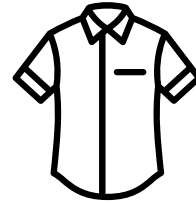
Gloves should be **disposable for single use**



Eye protection should be **cleaned/disinfected between uses**



Masks and face shields should be **replaced when damaged, soiled or usage period has expired**



Clothing worn in office should be changed/ washed daily and kept separate from other clothes



Use **EPA-registered disinfectants** and **CDC-recommended protocols**

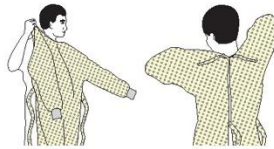
Properly Wear PPE

SEQUENCE FOR PUTTING ON PERSONAL PROTECTIVE EQUIPMENT (PPE)

The type of PPE used will vary based on the level of precautions required, such as standard and contact, droplet or airborne infection isolation precautions. The procedure for putting on and removing PPE should be tailored to the specific type of PPE.

1. GOWN

- Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back
- Fasten in back of neck and waist



2. MASK OR RESPIRATOR

- Secure ties or elastic bands at middle of head and neck
- Fit flexible band to nose bridge
- Fit snug to face and below chin
- Fit-check respirator



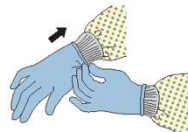
3. GOGGLES OR FACE SHIELD

- Place over face and eyes and adjust to fit



4. GLOVES

- Extend to cover wrist of isolation gown



USE SAFE WORK PRACTICES TO PROTECT YOURSELF AND LIMIT THE SPREAD OF CONTAMINATION

- Keep hands away from face
- Limit surfaces touched
- Change gloves when torn or heavily contaminated
- Perform hand hygiene



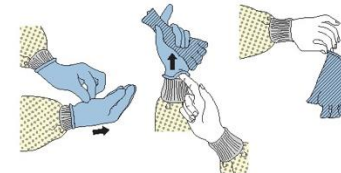
C 5250072.6

HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE) EXAMPLE 1

There are a variety of ways to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. Here is one example. **Remove all PPE before exiting the patient room** except a respirator, if worn. Remove the respirator **after** leaving the patient room and closing the door. Remove PPE in the following sequence:

1. GLOVES

- Outside of gloves are contaminated!
- If your hands get contaminated during glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Using a gloved hand, grasp the palm area of the other gloved hand and peel off first glove
- Hold removed glove in gloved hand
- Slide fingers of ungloved hand under remaining glove at wrist and peel off second glove over first glove
- Discard gloves in a waste container



2. GOGGLES OR FACE SHIELD

- Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band or ear pieces
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in a waste container



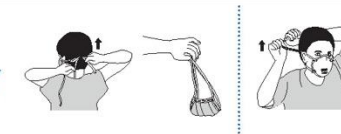
3. GOWN

- Gown front and sleeves are contaminated!
- If your hands get contaminated during gown removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Unfasten gown ties, taking care that sleeves don't contact your body when reaching for ties
- Pull gown away from neck and shoulders, touching inside of gown only
- Turn gown inside out
- Fold or roll into a bundle and discard in a waste container

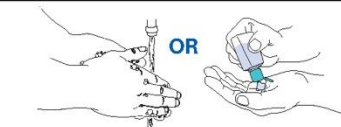


4. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated — DO NOT TOUCH!
- If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
- Discard in a waste container



5. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE



PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS BECOME CONTAMINATED AND IMMEDIATELY AFTER REMOVING ALL PPE



C 5250072.6

Hand Sanitization Solutions



VS



Think before
you touch



**Clean,
Disinfect
Surfaces**





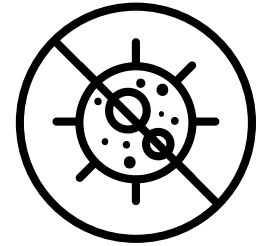
CLEANING

Removal of gross contamination



DISINFECTION

Kills a percentage of the germs



STERILIZATION

Involves killing 100% of the germs

Always follow the manufacturers' guidelines for effective use

<https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>

Disinfectants

Disinfect “NON-CRITICAL” Items

- Headphones
- Earmolds
- Instruments and surfaces not contaminated with blood, ear drainage, cerumen or bodily fluids

Disinfectants

- Liquid
- Earmolds
- Towelette



Disinfecting Office Surfaces

Important to clean gross contamination with soap and water prior to disinfecting

Hard (Non-porous) Surfaces

UV Light Sanitizers: effective for surfaces such as desktops, door handles, sinks, toilets or even phones. Follow manufacturer instructions for equipment.

Most common EPA-registered disinfectants should be effective

Soft (Porous) Surfaces

Launder items as appropriate following manufacturer instructions (warm water if possible), dry completely.



Sterilize
Critical
Instruments

Managing Hearing Aids and Earmolds



Wear gloves and **wipe** hearing aid, earmold, and accessory surfaces



Disinfect the item with a **non-alcohol-based disinfectant** such as Cavicide or possibly UV-C



Accept/return products to patient in a receptacle that is lined with a disposable material

Hearing Product Cleaning/Disinfecting



Wipe hearing aid,
earmold, accessory
surfaces with a tissue



Disinfect the item
with a **non-alcohol
based disinfectant
towelette**



Accept/return products
to patient in a receptacle
that is lined with a
disposable towel

Should I use UV?

THE ANSWER

It Depends.

*UVC is most effective in killing germs
when combined with traditional
disinfecting methods.*

Bankaitis and Zitelli, 2020





Waste Disposal

Regular Waste Receptacle

- Cerumen
- Used (disposable PPE)
- Cleaning/disinfecting materials that are not excessively contaminated with bodily fluids

Impermeable bag, puncture-resistant packaging

- Materials contaminated with excessive cerumen, discharge, or mucus
- Disposables that can cause injury (needles, electrodes etc.)

Dispose according with manufacturer's specifications

- Cold disinfectants, sterilants





Preparation

Prepare Your Clinical Environment
and Patient Experience for safety
and success

Prepare and Plan



Review/Understand the current Covid-19 CDC recommendations

<https://www.cdc.gov/coronavirus/2019-ncov/index.html>

<https://www.cdc.gov/infectioncontrol/basics/standard-precautions.html>



Monitor and adhere to local, state and federal guidelines



Update your infection control plan to include CURRENT Covid-19 protocols

<https://www.osha.gov/publications/OSHA3990.pdf>



Ensure you, your staff, and patients follow the plan

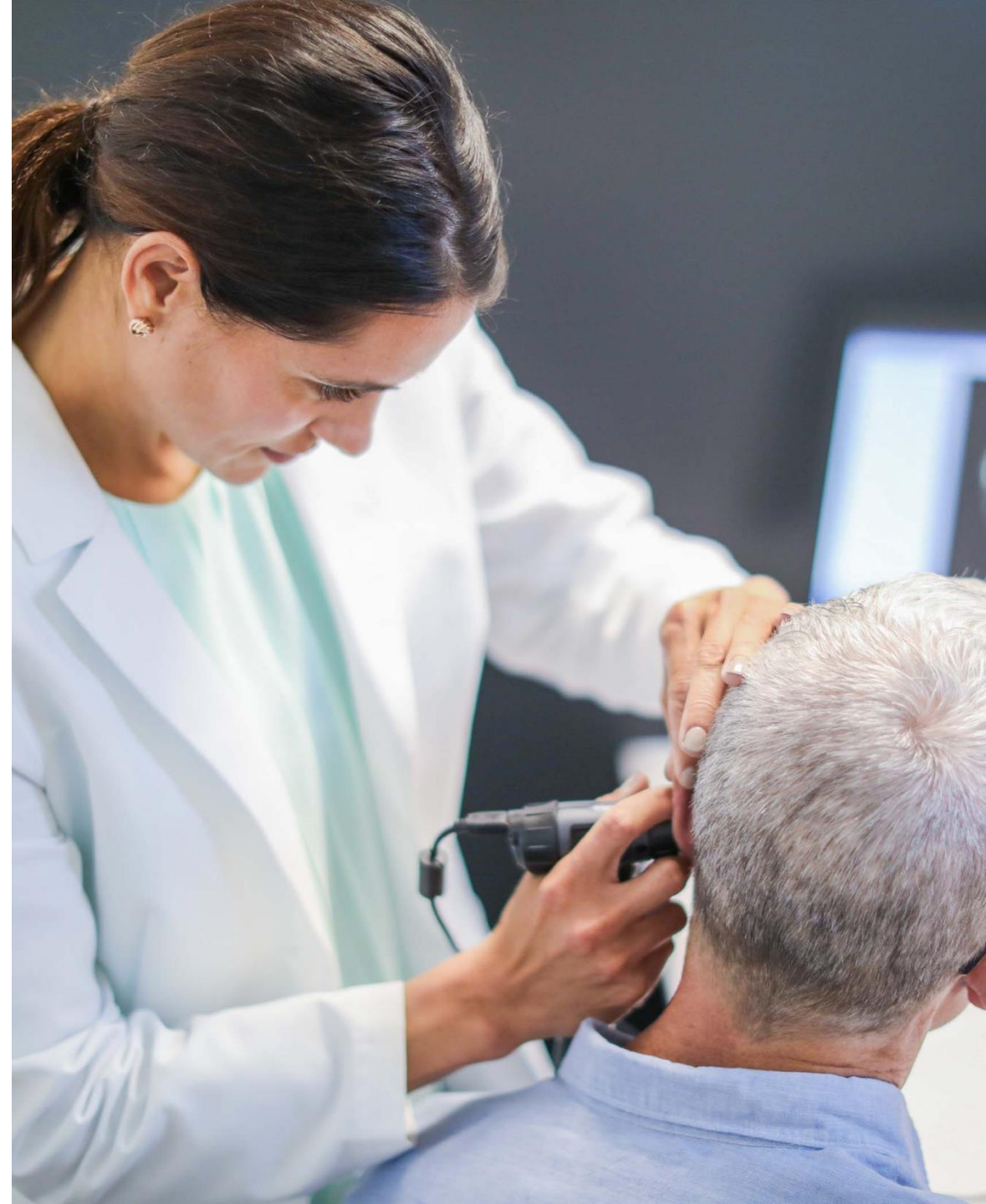


Hear better. Live better.

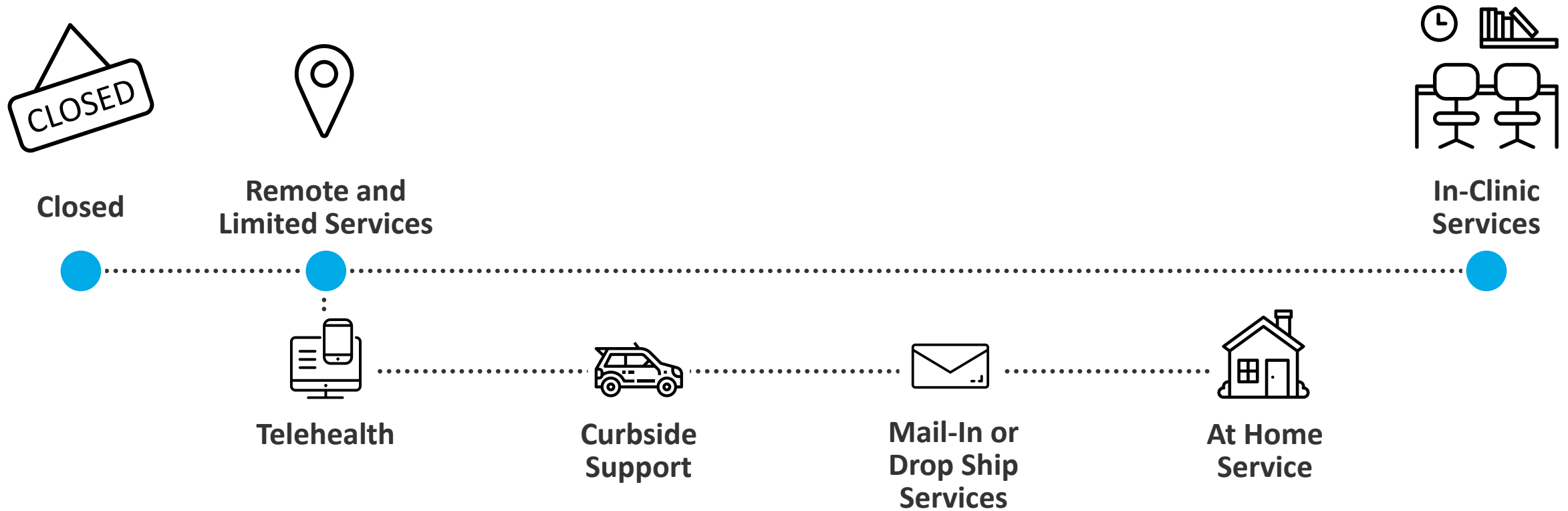
For Every Service Ask...

How can we make the entire service experience safe and positive?

How do we need to communicate and follow the specific safety precautions for this service?



Preparedness for Each Phase of Care





Telephone Triage

Prior to an in-person visit:

1. Is an **in-person clinic visit** necessary
2. For those who need/request to be seen in person, screen using the latest CDC guidelines.
NOTE: Mobile phone apps (pictured at right) can be a useful tool as guidelines are updated regularly.
3. Adjust scheduling to **allow time for telephone triage** and patient follow up.

It is equally important to screen yourself and staff with these same guidelines.





Curbside Support

Use a separate receptacle to accept and/or drop off hearing aids, batteries and other items

- Cover the receptacle with a **disposable sheet**

Provider wears appropriate **PPE**

Maintain social distancing when possible with patient contact

Wash hands before/after contact with patient and product

Clean/disinfect used receptacle and dispose of sheeting after each use





At Home Services

Develop a “Go Kit”, including:

- Necessary programming tools
- Hearing aid supplies
- Disinfecting and disposal materials
- PPE, including masks, gloves, gowns

Modify your stance when working in the patient's ears

When services are complete, remove PPE, dispose of onsite or bag and tie securely for transport

Clean/disinfect equipment before placing in the car



View Your Practice Through a **INFECTION CONTROL PREPAREDNESS LENS**



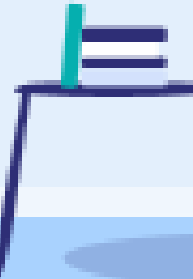
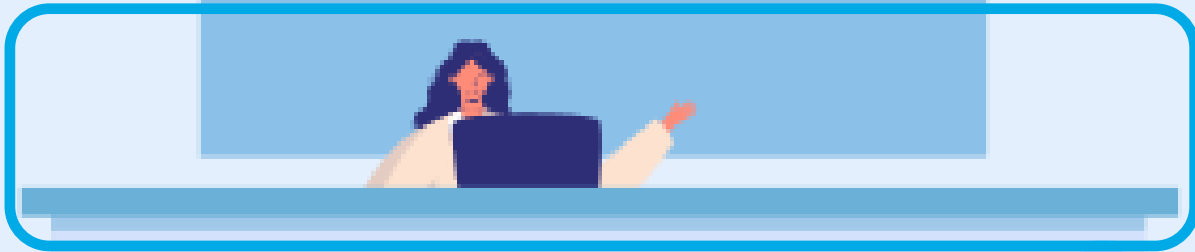
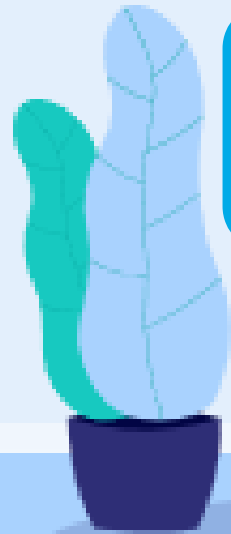
Offer patients a variety of
pick up options



The Waiting Area

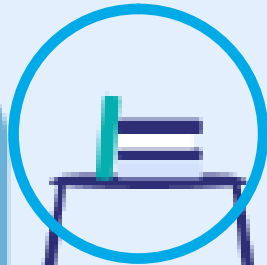
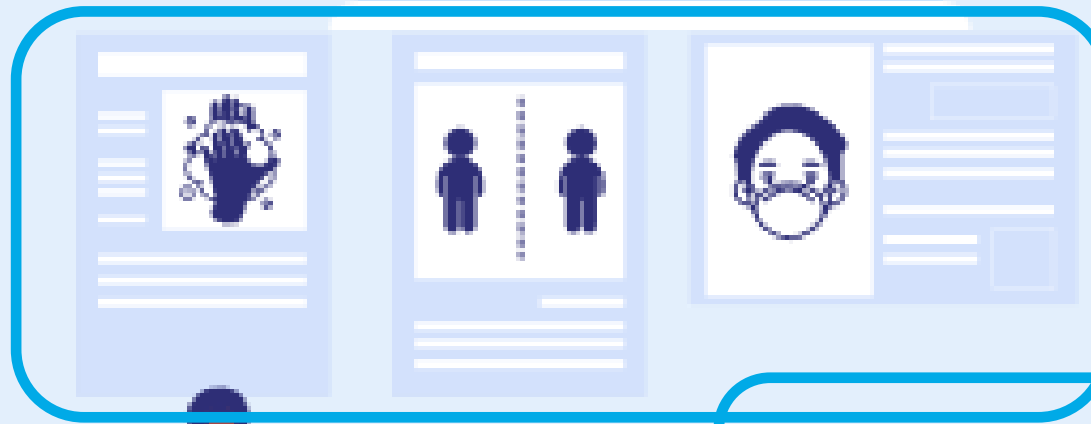
Minimize sign-in materials, use of community objects such as pens, and use contactless payment methods. Change forms to online.

Reduce surfaces that need to be touched. Clean and disinfect often. Consider sneeze shields for reception area.



Remove clutter
(magazines, brochures,
beverage service).

Consider signage to provide
infection control protocols
to be observed.



Arrange reception area and all furniture
with social distancing in mind.



Limit the number of patients in
the office and only have them
bring critical companions.

The Treatment Area

Evaluate traffic pattern areas such as hallways to ensure social distancing spacing when possible.



Maintain proper air flow,
change air filters if needed
or use advanced HEPA filters.



Consider a Room-to-Room
or Remote combination
of services on site.



The Treatment Area

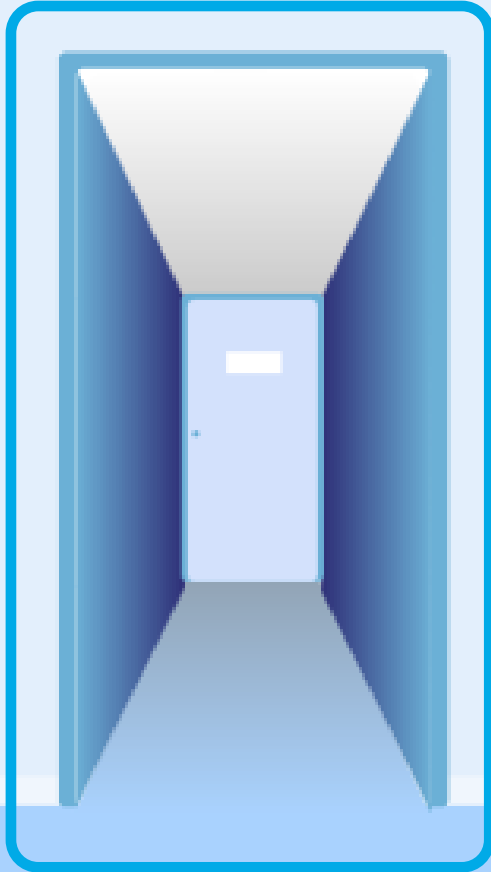


Modify your stance when working in the patient's ears.

Leave doors that CAN be opened, opened to reduce touched surfaces.

Refrain from having staff share phones, desks, offices, computers or other work tools and equipment.

Disinfect all touch surfaces, equipment and product after each use.





“We’re constantly concerned that something will be around the corner, and we’re living on a street full of corners”

-David Arnoff, M.D. Director of the Division of Infectious Diseases, Vanderbilt University





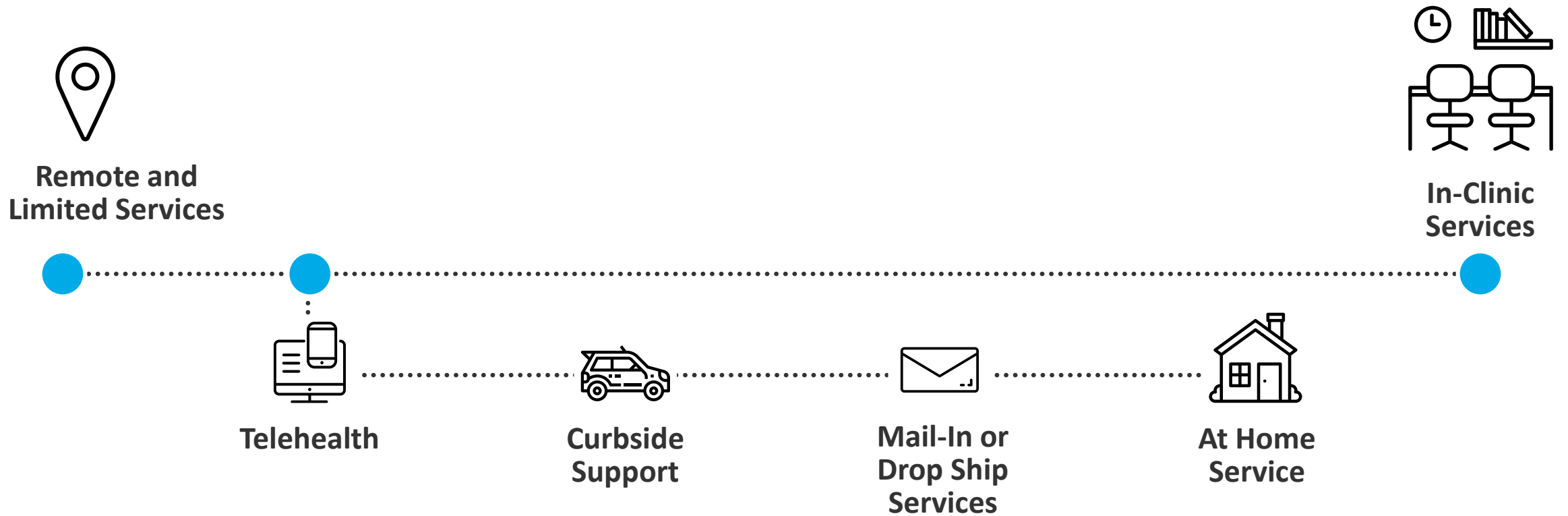


Navigating the Path Forward



Hear better. Live better.

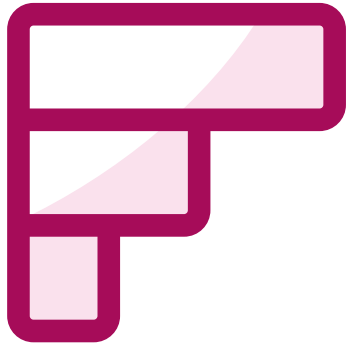
Permanent Protocol Changes



Hear better. Live better.



Please download and install the Slido app on all computers you use



What Service Delivery Methods do you see your practice continuing to offer long term?

① Start presenting to display the poll results on this slide.

Communicate with your patients

Add/update Infection Control message on your website and other platforms

List the positive measures your practice is taking to ensure safety

Be specific about the services being offered and expectations



Establish Trust

Visibly demonstrate your safety precautions to patients

Provide PPE supplies for **patient** use if needed





COLORADO

**Department of
Regulatory Agencies**

Division of Professions and Occupations

Complaints Prompt Reminder on Infection Control Measures

With Colorado experiencing an uptick in COVID-19 cases, it is important that clinical offices/settings adhere to all public health and executive orders and infection prevention recommendations from the Centers for Disease Control (CDC) and Colorado Department of Public Health and Environment (CDPHE) in order to keep patients and clinical staff safe and free from exposure.

Patients have consistently expressed concern that during routine appointments, staff have been lax in adhering to proper protocols regarding face coverings, hand washing and social distancing. These patients are worried about COVID-19 exposure and whether a failure to adhere to proper protocols by staff will necessitate their having to quarantine.

Public health agencies are reporting an increase of complaints in these outpatient settings and are experiencing difficulty responding to the volume of these reports in light of recent outbreaks.

Outpatient settings are responsible for maintaining [all infection control measures](#) to ensure patient safety, including making sure that all individuals involved in receiving and providing patient care wear face coverings or masks, maintain proper social distance, and comply with [hand hygiene practices at all times](#). Please refer to [CDC guidance by sector](#) and [CDPHE's Safer at Home website](#) for more information on these protocols.

Do not reply to this email – this is not a monitored inbox



COLORADO

**Department of
Regulatory Agencies**

Division of Professions and Occupations



Update your Case History



Detail COVID-19 experiences

Dates of hospitalization

Medications prescribed

Comorbidities and prior COVID-19 management should be evaluated, because of potential impact on pre-existing conditions



Hear better. Live better.

COVID-19 and Hearing Health: What We Know

AUTHOR	TYPE OF STUDY	N	AUDITORY/VESTIBULAR SYMPTOMS
Asaaf et al, 2020	Survey	640	Earaches (32 %) Vertigo (60%) Hearing Loss (0.15%)
Ciu et al, 2020	Case Report	20	Tinnitus (N=1) Otitis media (N=1)
Fiden, 2020	Case Report	1	Tinnitus Otitis media
Han et al, 2019	Case Report	1	Vertigo
Lechien et al, 2019	Cross Sectional	1420	Ear pain (N=358 or 25%) Rotary vertigo (N=6 or 0.4%) Tinnitus (N=5 or 0.3%)
Mustafa, 2020	Cross Sectional	20	Sensorineural HL
Sriwijitalai and Wiwanitkit, 2020	Case Report	82	Sensorineural HL (N=1 or 1.2%)
Sun et al, 2020	Case Report	1	Sensorineural HL

Summary of published case reports and cross-sectional research that identified some type of auditory/vestibular problems (adapted from Almufarrij et al, 2020, Intl J Audiol 59 (7) 487-491)



2025
2024
2023
2022

Thank you



Hear better. Live better.