

Improving Care of Hospitalized Patients with Hearing Impairment: Addressing Health Inequities, Patient-Provider Communication, and Clinical Outcomes

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Patient Story

COVID Service

96 year old patient with COVID pneumonia

History of hypertension, atrial fibrillation, hearing loss

Unable to get hearing aids from home

No assistive devices available during admission

Rapid response for tachycardia

Challenges during COVID

1. Masking
2. Social distancing
3. Increased background noise (air purifiers)
4. Hospital: isolation, unfamiliar environment



Importance

Why does this project matter?

Hearing Impairment or Loss

- Worldwide: 1.6 billion, 3rd most common cause of disability
- Associated with readmission, falls, surgical complications
- Health systems lack coordinated strategies for care



UNC Health Patient Rights

B. Communication, Information and Participation in Care Decisions

1. A patient has the right to effective communication in understandable terms concerning his/her diagnosis, treatment and prognosis, including information about alternative treatments and possible complications, in order to make informed decisions about his/her care plan. An interpreter, or **appropriate auxiliary aids and services, will be provided free of charge when necessary so that a patient can effectively communicate with his/her health care providers.**

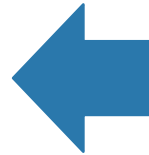
<https://www.unccmedicalcenter.org/unccmc/patients-visitors/patient-rights-responsibilities/>

Global Aim and Primary Drivers

What changes can we make that will result in improvement?

Global Aim: To develop, optimize and implement a prototype system on a single hospital unit that addresses the needs of hearing impaired patients and ultimately improves outcomes

SMART Aim: To increase the percent of patients with hearing loss hospitalized on a general medicine and geriatrics unit at UNC Medical Center who agree or strongly agree they are able to adequately hear their medical care team members' speech from x% to y% over a 6 month period.



Primary Drivers

Standardized and consistent hearing loss Epic documentation

Care team members awareness of patients' hearing loss status

Easy access to hearing assist devices

Care team identification of patients that would benefit from a hearing assist device

Utilization of hearing assist devices to improve communication with medical care team

Measures

How will we know a change is an improvement?

Measure Name	Type
Percent positive screens documented in Epic	Process
Provider and nurse communication with patients with hearing loss	Process
Patient perception of ability to adequately hear medical care team members' speech	Outcome
Provider perceptions of workload added by implementation of new system of caring for patients with hearing loss	Balancing

System-Level Data – Documentation of Hearing Loss

Nursing Documentation, Hearing Loss is Common

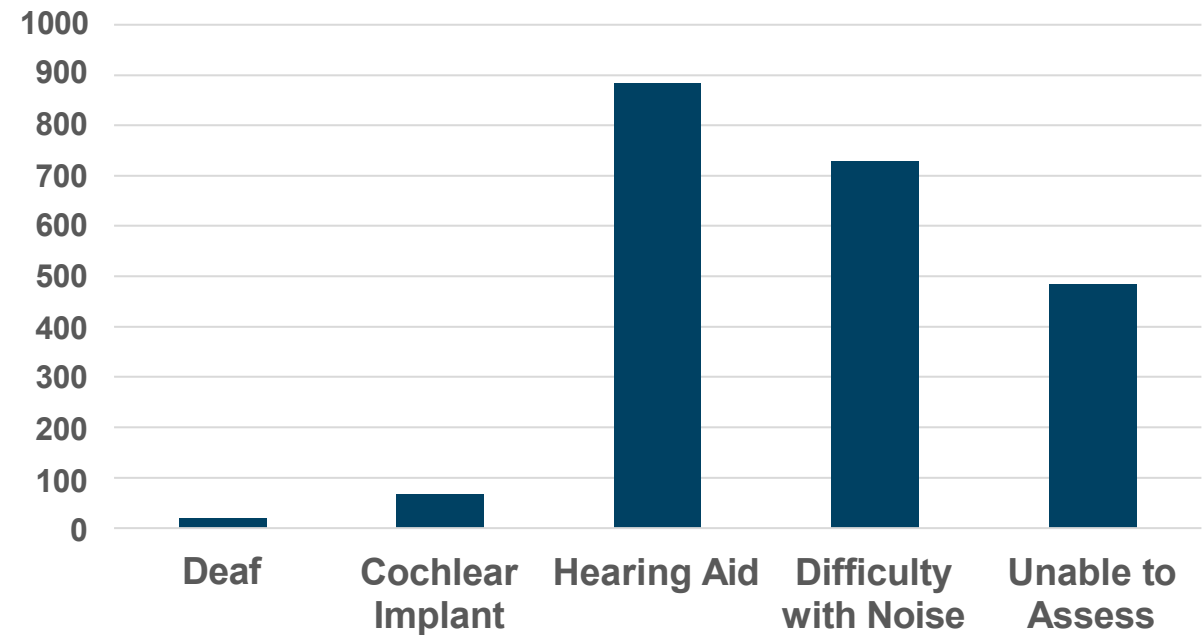
ADL Screening on Admission by Nursing

Abnormal in ~15% of adult patients

ADL Screening	
Patient's Vision Adequate to Safely Complete Daily Activities	
Patient's Judgement Adequate to Safely Complete Daily Activities	
Patient's Memory Adequate to Safely Complete Daily Activities	
Patient Able to Express Needs/Desires	
Patient has speech problem	
Dressing - Ability to perform	
Grooming - Ability to perform	
Feeding - Ability to perform	
Oral Care - Ability to perform	
Bathing - Ability to perform	
Toileting - Ability to perform	
Continence	
Transferring/In-Out Bed	
Mobility/Walking	
Weakness of Legs	
Weakness of Arms/Hands	
Hearing - Right Ear	Difficulty with noise
Hearing - Left Ear	Hearing aid
Which is your dominant hand?	

Total Number of Patients by Category

Nov 2022 to Sept 2023



Awareness of Hearing Status

Optimization in Epic



- **New Epic Column for Hearing Impairment**
- **Flags:**
 - **ADA Accommodation**
 - **ADL Flowsheet**
 - **Hearing Assessment**
 - **Problem List**
 - **Patient Advisory**

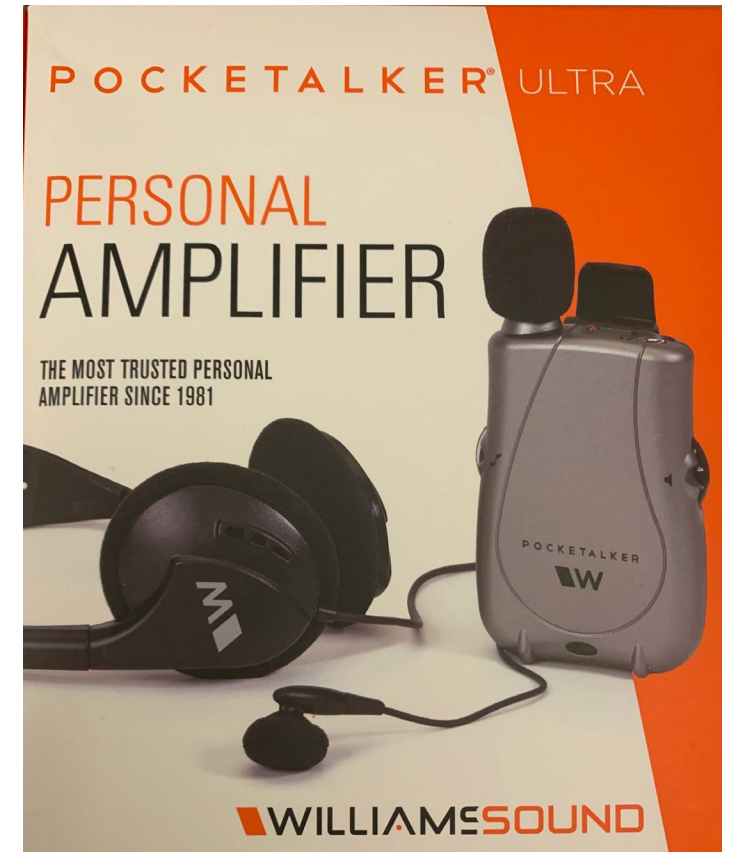
Column easily added to physician/provider and nursing patient lists

Allergies Reviewed	Height/Weight Entered	Home Meds Reviewed?	Nonmed Orders Complete?	Med Orders Complete?	Final Review Complete	Line Days	CIWA-Ar Score	Service	Last CHG Treatment (Encounter)	VTE RISK	Hearing Impairment						
✗	✗	✗	✗	✗	✗	—	—	Neonatology (PDZ)	—	—	—						
✓	✗	✓	✗	✗	✗	—	—	Med Hosp J (MDJ)	—	—	—						
✓	✗	✗	✗	✗	✗	25	—	Med Hosp H (MDH)	—	↑	⚠						
✓	<div style="border: 1px solid #ccc; padding: 5px;"> <p>Hearing Impairment</p> <p>ADA Accommodations:</p> <p>Hard of Hearing?:</p> <p>Deaf?:</p> <hr/> <p>Hearing Assessment</p> <table border="0"> <tr> <td>Flowsheet Row</td> <td>Most Recent Value</td> </tr> <tr> <td>Hearing - Right Ear</td> <td>Functional filed at 03/29/2023 0800</td> </tr> <tr> <td>Hearing - Left Ear</td> <td>Hearing aid filed at 03/29/2023 0800</td> </tr> </table> </div>										Flowsheet Row	Most Recent Value	Hearing - Right Ear	Functional filed at 03/29/2023 0800	Hearing - Left Ear	Hearing aid filed at 03/29/2023 0800	⚠
Flowsheet Row	Most Recent Value																
Hearing - Right Ear	Functional filed at 03/29/2023 0800																
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Access to Pocketalkers

PDSAs

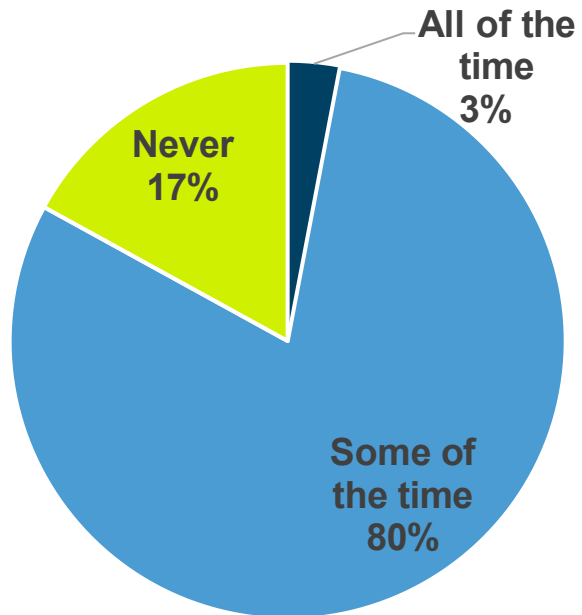
- **Initiation on 8BT Unit at UNC main campus**
 - Pocketalkers available since late February
 - Nurses on unit involved in optimizing distribution
 - Signs on doors, “grab and go” packs
- **Expansion to Geriatrics Unit at Hillsborough**
 - Optimized implementation based on lessons learned
 - Increased awareness on unit for patients/families
- **Engagement of Physicians/Providers**
 - Front line physician and nurse leaders
 - Access to Pocketalkers in provider work areas



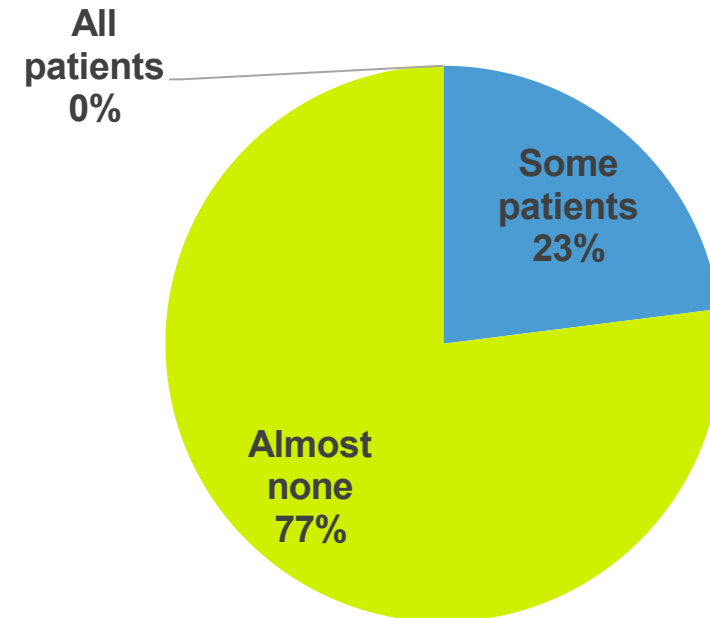
Project-Level Data

Provider Surveys (30 Hospital Medicine providers and Internal Medicine residents)

How often have patients who use hearing aids had them available for use?



How many patients have had easy access to a hearing assist device?

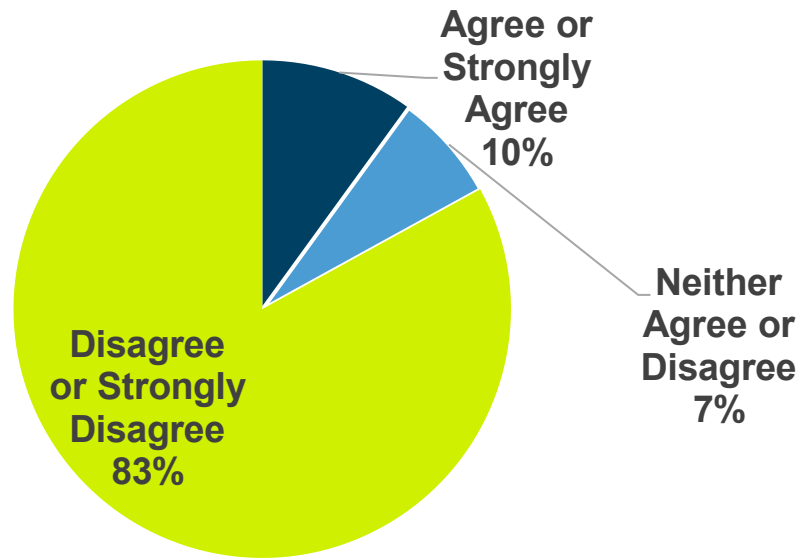


Project-Level Data

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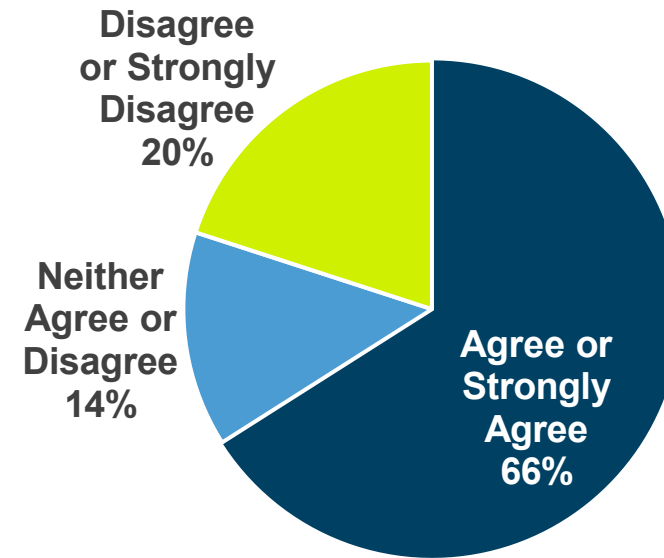
Percent respondent agreement:

*I am **satisfied with communication** with patients with hearing loss hospitalized at UNCCMC*



Percent respondent agreement:

*I find the additional **workload** in caring for patients with hearing loss **burdensome**.*



Challenges, Sustainment and Spread

Challenges

- Limited time and resources of front line caregivers
- Difficult to get feedback directly from patients

Short Term Goals

- Continued optimization on geriatrics unit
- Develop strategies for feedback from staff, patients

Long Term

- Promote awareness at **system level**
- Develop strategies for easy access to assistive devices **for all**
- Identify **stable source of funding** for assistive devices
- Promote **health equity** for this patient population

It would only take a few pocket talkers per unit to serve patients with hearing loss

I believe that UNC Main would greatly benefit from having more Pocketalkers available for patients. They are not easily found on Main campus (as a provider I have obtained some from patient relations and it was a very involved process).

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