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Learning Objectives:

- Define asynchronous and synchronous models for remote delivery of hearing health care services
- Define minimal skills and knowledge required by patient extenders who are contributing to remote delivery of hearing health care services
- Explain how automated technology contributes to accessibility, efficiency, and outcome of audiologic care

- Overview of Human and Non-Human Options for Extending Patient Services
- Audiology Assistants in Clinical Practice Today
- Roles of Facilitators and Hearing Health Care Technicians
- Automated Technology: Time Has Come
- Wrap Up/Questions & Answers









- Overview of Human and Non-Human Options for Extending Patient Services
- Audiology Assistants in Clinical Practice Today
- Roles of Facilitators and Hearing Health Care Technicians
- Automated Technology: Time Has Come
- Wrap Up/Questions & Answers





Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care *Audiology Assistants in Clinical Practice Today*

- Support Staff in Selected Health Professions
- Licensure and Regulation
- Education and Training
- Roles and Responsibilities
- Revenue Enhancement
- Ethical Considerations and Professional Liability Concerns



Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care Support Staff in Selected Health Professions

- edia Type: Vector IDental assistant
 - Medical assistant
 - Nurse anesthetist
 - Nurse midwife
 - Nurse practitioners
 - Occupational therapy assistants
 - Physical therapy assistants
 - Physical therapy aids
 - Speech pathology assistant
 - Physician assistant
 - Ophthalmic medical technicians



Patient Extenders In Efficiency, and Outcol Support Staff in Selected Health Professions

- Dentistry (<u>www.ada.org</u>)
 - Dental hygienists
 - Dental assistant
 - Dental laboratory technician
- Optometry (www.aoa.org)
 - Receptionist and billing specialist
 - Optical assistant
 - Optician
 - Optometric technician
 - Eye care advisor





Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care *Audiology Assistants in Clinical Practice Today*

- Support Staff in Selected Health Professions
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Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care Audiology Assistants: Licensure and Regulation

AUDIOLOGY ASSISTANTS AND STATE REGULATION: WHAT'S BEST FOR AUDIOLOGY?



Author: Carolyn Smaka, Au.D.

https://www.audiologypractices.org/audiology-assistants-and-state-regulation Page 1 of 10

Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care Audiology Assistants: Licensure and Regulation

- Regulation of AA's is increasing
- Regulation and licensure requirements vary greatly from one state to another
 - 6 states and DC require licensure for AA's
 - 11 states require registration for AA's
 - 14 states don't require licensure or registration, but there are guidelines or some form of regulation
 - 2 states (NY and NM) do not appear to permit AA's and/or the term cannot be used (Smaka, 2022)
 - 17 states do not mention AA's in rules or laws

Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care Audiology Assistant Licensure and Regulation

9/5/22, 9:14 AM

Pathways: Audiology Assistant Certification

ASHA Assistants Program (/)

BECOME A CERTIFIED AUDIOLOGY ASSISTANT

Follow the step-by-step guide to apply for ASHA audiology assistants certification (C-AA) (https://www.asha.org/certification/apply-for-audiology-assistantscertification/), which includes submitting a completed application and supporting documents, and paying the appropriate certification fee (https://www.asha.org/certification/about-assistantscertification/#Asst%20Fees). American Academy of Audiology Position Statement

Audiology Assistants

March 2021



Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care Audiology Assistants in Clinical Practice Today

- Support Staff in Selected Health Professions
- Licensure and Regulation
- Education and Training
 - Education and training requirements vary among states
 - Minimum requirement is high school diploma
 - Some states (e.g., TX) require bachelors degree in CSD plus OTJ training
- Roles and Responsibilities
- Ethical Considerations and Professional Liability Concerns

Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care Audiology Assistant Education: Nova Southeastern University (audassist@nova.edu)



Course Syllabus

Audiologist's Assistant Program Diagnostics Course

- Basic sound and acoustics
- Types of hearing loss
- Infection control procedures
- Otoscopy
- Pure tone audiometry
- Screening tympanometry
- Hearing inventories
- Patient history
- Prep for ABR assessment
- Prep for VNG assessment

Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care Audiology Assistant Education: Nova Southeastern University (audassist@nova.edu)



Course Syllabus

Audiologist's Assistant Program Amplification Course

- Basic ear anatomy
- Otoscopy
- Understanding audiogram
- Equipment and tool sterilization
- Recognize types of hearing aids
- Battery knowledge, testing, insertion, etc.
- Patient hearing aid education
- Making earmold impressions
- Trouble shoot hearing aid problems
- Hearing aid electroacoustic testing

Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care Audiology Assistant Education: Audiology Academy (info@audiologyacademy.com)

9/5/22, 9:15 AM

10 Things You Didn't Know About Audiology Assisting

10 Things You Didn't Know About Audiology Assisting



We believe in Audiology Assistants at Audiology Academy. We helped train the first Audiology Assistant in Washington State in 2007 and in 2017, we're proud to offer the most affordable, most wellrounded on-line, self-paced Audiology Assistant training program available. Since the idea of hiring an Audiology Assistant is relatively new to the field of Audiology, there are some misconceptions about what an Audiology Assistant actually is, not to mention what to call them. If you're interested in becoming an Audiology Assistant, here are 10 things you probably didn't know.

1. Audiology Assisting is a career.

- Audiology assisting (AA) is a career
- AA specialties are limitless
- There are many career tracks
- AA's work under an AuD
- AA's run the office
- The field is changing
- AA's don't sell hearing aids
- The work is meaningful
- AA's are the front line of patient care
- Education matters

Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care Audiology Assistant Education: Audiology Academy (info@audiologyacademy.com)



Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care *Audiology Assistants in Clinical Practice Today*

- Support Staff in Selected Health Professions
- Licensure and Regulation
- Education and Training
- Roles and Responsibilities
- Revenue Enhancement
- Ethical Considerations and Professional Liability Concerns

Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care Audiology Assistants: Roles and Responsibilities (1)

- Assist patient with completion of history and inventories
 - Telephone conferences
 - Zoom meetings
 - Clinic review of history and specialized inventories (e.g., TFI)
- Patient preparation for electrophysiological procedures, e.g.,
 - Auditory brainstem response (ABR)
 - Videonystagmography (VNG)
- Perform selected diagnostic test procedures under audiologist supervision, e.g.,
 - Tympanometry and acoustic reflex measurement
 - Otoacoustic emissions

Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care Audiology Assistants: Roles and Responsibilities (2)

- Remote hearing screening and baseline or annual tests with automated technology, e.g.,
 - Preschool and school children
 - Nursing home residents
 - Employees in businesses and industry
- Enhancement of overall clinical revenue by assisting with time consuming and non-revenue generating support tasks such as
 - Daily listening checks
 - Regular clinic equipment cleaning and disinfecting
 - Many varied hearing aid related tasks, e.g., new user education, troubleshooting, follow-up, etc.

Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care *Audiology Assistants in Clinical Practice Today*

- Support Staff in Selected Health Professions
- Licensure and Regulation
- Education and Training
- Roles and Responsibilities
- Revenue Enhancement
- Ethical Considerations and Professional Liability Concerns

Audiology Assistants: Clinic Expansion and Enhanced Revenue

9/11/22, 7:34 AM

New Sources of Revenue for the Audiology Practice - The American Acad

Audiology Assistants: The Key to Efficiency in the Audiology Practice

9/5/22, 9:31 AM



New Sources of Revenue for the Audiology Practice

Audiology Today

Over-the-Counter Hearing Aids

Business and Office Management Practice Management

Audiologists

For the recent AAA 2021 Virtual conference, held April 14–16, 2021, we hosted a roundtable that explored ways in which private clinics can maximize revenue. This article reviews those insights solicited from our colleagues' best ideas and takes examples from our sister professions of dentistry and optics to replicate efficiencies and create an enhanced patient experience with a wider range of services and product offerings.

From Retail to Details: Using Audiology Assistants to Boost Clinic Efficiency

a Continued family site

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Audiology Assistants: The Key to Efficiency in the Audiology Practice

Nichole Kingham, AuD

October 4, 2021

Editor's note: This text-based course is an edited transcript of the webinar, Audiology Assistants: The Key to Efficiency in the Audiology Practice, presented by Nichole Kingham, AuD.

Patient Extenders Improve Accessibility, Efficiency, and²Outcome of Audiologic⁴Care⁴⁴ *Audiology Assistants: Clinic Expansion and Enhanced Revenue*

UPMC Audiology Assistant Monthly Pay

Updated Jul 12, 2022

United States	~
Any Experience	~

Search





\$3,731/mo Base Pay

\$2 721 /---

What's the Salary of an Audiologist's Assistant?

Are you currently an audiologist's assistant or would you like to become one? Read on to find out more about the earning potential of this position and what you can expect to do on the job.

Salary Overview

The U.S. Bureau of Labor Statistics (BLS) categorizes audiologist assistants with hearing aid specialists (*www.bls.gov*). According to the BLS, the mean annual salary for hearing aid specialists was \$55,360 in May 2019. The median salary was \$53,420, with the 10th-90th percentile range earning between \$29,020 and \$85,260. Depending on your employer and geographical location, your earnings may be more or less than the national average.

Important Facts About This Occupation

Job Outlook (2019-2029)	6.6%
Key Skills	Ability to read, write, and speak effectively; reasoning, problem solving, and time management skills
Work Environment	Alongside audiologists in settings like hospitals, offices of physicians, and audiology healthcare centers
Similar Occupations	Hearing care practitioner, audio prosthologist, speech-language pathology assistant

Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care *Audiology Assistants: Clinic Expansion and Enhanced Revenue*

Private Practice:	Audiology	Assistants i	in Private	Practice -	PMC
	0,				

Hearing

<u>Semin Hear.</u> 2016 Nov; 37(4): 348–358. doi: 10.1055/s-0036-1593996

Private Practice

9/11/22, 10:53 AM

Guest Editor, Gyl Kasewurm, Au.D.

Audiology Assistants in Private Practice

Teri A. Hamill, Ph.D.¹ and Julia P. Andrews, Au.D.¹

 AA's perform technical components of procedures with Medicare reimbursement

- PMCID: PN PMIC • Employment of an AA can contribute to 3X increase in number of patients
 - ~ 50% of office visits may be with an AA alone
 - About half of the time required for a new HA fitting is handled by an AA
 - An AA contributes to > clinic revenue and < clinic expense</p>

Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care *Audiology Assistants in Clinical Practice Today*

- Support Staff in Selected Health Professions
- Advantages and Disadvantages
- Licensure and Regulation
- Education and Training
- Roles and Responsibilities
- Ethical Considerations and Professional Liability Concerns

Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care *Audiology Assistants: Ethical Considerations*

5/16/22, 4:21 PM



Issues in Ethics: Audiology Assistants

Issues in Ethics: Audiology Assistants

- About This Document
- Issues in Ethics Statements: Definition
- Introduction
- Discussion
- Guidance

Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care *Audiology Assistants: Ethical Considerations*

- Supervising audiologist (SA) remains responsible for the care and well-being of the patient, and he/she must intervene if the assistant's behavior puts the patient at risk when services are implemented inappropriately.
- SA must ensure that all services meet practice standards and are administered competently.
- SA is responsible for ensuring that there is no discrimination in service delivery.
- SA must inform patients of the title, role, and qualifications of the assistant. This is not a passive activity.

Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care *Audiology Assistants: Ethical Considerations*

- SA is responsible for providing appropriate and adequate direct and indirect supervision to ensure that services provided are appropriate and meet practice standards.
- SA is responsible for monitoring and limiting the role of the assistant in accordance with applicable licensure.
- SA is responsible for ensuring that assistant performs only activities and duties that are appropriate for level of training and experience. Correction is required when the assistant exceeds his/her appropriate practice role.

- Overview of Human and Non-Human Options for Extending Patient Services
- Audiology Assistants in Clinical Practice Today
- Facilitators and Hearing Health Care Technicians
- Automated Technology
- Wrap Up/Questions & Answers

AJA

Review Article

The Role of Patient-Site Facilitators in Teleaudiology: A Scoping Review

Laura Coco,^a Alyssa Davidson,^a and Nicole Marrone^a

Purpose: Teleaudiology helps improve access to hearing health care by overcoming the geographic gap between providers and patients. In many teleaudiology encounters, a facilitator is needed at the patient site to help with handson aspects of procedures. The aim of this study was to review the scope and nature of research around patient-site facilitators in teleaudiology. We focused on identifying the facilitators' background, training, and responsibilities. Method: To conduct this scoping review, we searched PubMed, CINAHL, and Embase. To be included, studies needed to address teleaudiology; be experimental/quasiexperimental, correlational/predictive, or descriptive; be published in English; and include the use of a facilitator at the patient location.

Results: A total of 82 studies met the inclusion criteria. The available literature described a number of different individuals in the role of the patient-site facilitator, including audiologists,

students, and local aides. Fifty-seven unique tasks were identified, including orienting the client to the space, assisting with technology, and assisting with audiology procedures. The largest number of studies (n = 42) did not describe the facilitators' training. When reported, the facilitators' training was heterogenous in terms of who delivered the training, the length of the training, and the training content.

Conclusions: Across studies, the range of duties performed by patient-site facilitators indicates they may have an important role in teleaudiology. However, details are still needed surrounding their background, responsibilities, and training. Future research is warranted exploring the role of the patient-site facilitator, including their impact on teleaudiology service delivery.

Supplemental Material: https://doi.org/10.23641/asha. 12475796

- Technicians versus Audiology Assistants
 - Less formal education
 - Restricted knowledge and skills
 - More limited and/or focused tasks, e.g.,
 - ✓ Routine hearing aid maintenance
 - ✓ Preparation for specific tests (e.g., ABR and/or vestibular tests)
 - Less direct contact with patients
 - Important role in remote delivery of services via teleaudiology



Hierarchy of personnel in the audiology clinic.

https://hearinghealthmatters.org/hearingvi ews/2014/case-enhanced-audiologyassistant-part-2/ 7/11 Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care Roles of Hearing Health Care Facilitators or Technicians (1)

- Review of patient history and chief complaint
- Review (onsite or remote) of risk factors for hearing loss and related disorders, e.g.,
 - Tinnitus
 - Disorders of decreased sound tolerance
 - Vestibular/balance disorders
- Screening for hearing loss and related disorders, e.g.,
 - Newborn hearing screening
 - Preschool and school age screening
 - Industrial hearing screening
 - Hearing screening of residents in skilled nursing facilities
 - Hearing screening of potential clinic patients (remote or onsite)

Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care Roles of Hearing Health Care Facilitators or Technicians (2)

- Assist in the audiology clinic with technologically simple semiautomated or automated clinical procedures, e.g.,
 - Tympanometry and acoustic reflex measurement
 - Otoacoustic emissions
 - Automated pure tone audiometry (air- and bone conduction)
 - Tablet or computer-based speech audiometry
- Hearing aid related tasks, e.g.,
 - Ordering hearing aids
 - Checking in hearing aids
 - Scheduling patients for hearing aid fitting
 - Trouble shooting hearing aid problems
 - Real ear hearing aid measurements

Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care: *Options for Extending Patient Services*

- Human Resources for Extending Patient Services
 - Audiology assistants
 - Hearing health care facilitators and technicians
 - Doctoral level audiology students in training
- Automated Technology
 - Identification of hearing loss
 - Diagnosis of hearing loss and related disorders
 - Rehabilitation (management) of hearing loss and related disorder
- Facilitators and Patient-Directed Clinical Services
 - Patient history and specialized inventories
 - Online risk identification and hearing screening
 - Low touch and no touch teleaudiology models for service delivery

Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care *Role of Faciiltators and Technicians in Teleaudiology*

- Asynchronous (store-and-forward) teleaudiology
- Synchronous (real time) teleaudiology
- Video-otoscopy
- Aural immittance measurements
- Otoacoustic emissions
- Automated pure tone audiometry
- Auditory brainstem response
- Audiologist's "hands" for other procedures

AJA

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Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Innovative Models for Hearing Health Care (From Swanepoel & Hall, 2020)

Guided hearing

Table 2. Conventional and alternative point-of-care for adult hearing assessments

	Conventional clinic (high- touch)	Alternative points of care (low- or no-touch)
Primary purpose	Assessment for diagnostic purposes Possible medical treatment	Assessment towards hearing aid fitting Referral for ear disease risk
Test environment	Sound-treated room/booth	Home, office, counter-side, drive- through, primary care facility
COVID-19 risk	Medium to high risk	Low to medium
Pure tone audiometry	Air and bone-conduction Minimum -10 dB 125 - 8000 Hz	Air conduction Minimum 20 or 25 dB 500 - 8000 Hz
Speech audiometry	Essential	Self-test options e.g. digits-in-noise
Tympanometry	Essential	Optional and unlikely pending tech advances
Otoacoustic emissions	Essential	Optional and unlikely pending tech advances
Otoscopy	Essential	Optional
Ear disease risk	Using test battery results Air-bone gap Case history	Test findings to screen (E.g. Asymmetry hearing loss; speech-in-noise) CEDRA FDA waiver option
Operation	Audiologist	Self-test (remote assistance option) Facilitator or assistant



audiologist

Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care: Innovative Models for Hearing Health Care (From Swanepoel & Hall, 2020)



NO-TOUCH

Figure 1.

Swanepoel D & Hall JW III (2019). Making audiology work during COVID-19 and beyond. The Hearing Journal (online and in press)

Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care (www.nlm.nih.gov/PubMed)

- Overview of Human and Non-Human Options for Extending Patient Services
- Audiology Assistants in Clinical Practice Today
- Roles of Facilitators and Hearing Health Care Technicians
- Automated Technology
- Wrap Up/Questions & Answers

Search query: automated audiometry	
Year	Count
2022	20
2021	19
2020	25
2019	21
2018	23
2017	16
2016	28
2015	20
2014	18
2013	29
2012	16
2011	20
2010	9

Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care Automated Technology for Hearing Screening or Diagnosis

- Pure tone audiometry
 - Masked air conduction
 - Masked bone conduction
- Speech audiometry
 - Speech reception threshold
 - Word recognition
- Distortion product otoacoustic emissions (DPOAEs)
- Aural immittance measures
 - Tympanometry classification
 - Acoustic reflex detection
- Auditory brainstem response (AABR)
- Auditory steady state response (ASSR)

Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care *Automated Pure Tone Audiometry ... KUDUwave*



KUDUwave automated audiometer in rural public clinic in South Africa

Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care GSI AudioStar Pro with AMTAS Automated Audiometry





Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care GSI AudioStar Pro with AMTAS Automated Audiometry



metry	
Asummetric	
-	



- Automated air- and bone conduction pure tone thresholds
- Masking of non-test ear when indicated
- Quality indicators for test accuracy, e.g.,
 - Overall quality (Good, Fair, Poor)
 - Trial time
 - False alarm
- Detection of significant asymmetry
- Automated audiogram classification
 - Severity of hearing loss
 - Degree of hearing loss
 - Type of hearing loss

Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care Shoebox Automated Audiometry



Patient Extenders Improve Accessibility, Efficiency, and Outcome of Audiologic Care: *Advantages of Automated Audiometry*

- Multiple options for FDA-approved devices
- Appropriate for infants, older children. and adults
- Multiple automated test procedures
- Can be administered by a technician or facilitator
- Does not require a sound-treated test room
- Automated
 - Documentation of test quality and accuracy
 - Determination of significant inter-aural asymmetry
 - Analysis and report of findings
- Evidence based (clinical validation in > 300 peer reviewed publications)



Remote care kio

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Hearing Test

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