

# Forensic Audiology

## *An Emerging Field in our Profession*

- **What is Forensic Audiology?**
- **Expert witnesses in our legal system.**
- **How audiologists can assist in criminal or civil cases.**
- **Sample litigation cases.**
- **The litigation process.**
- **A word about malpractice.**



***Dr. Tom Thunder, AuD, INCE***  
***Audiologist & Acoustical Engineer***  
*tom@AcousticAssociates.com*

***Acoustic Associates, Ltd.***

*Adjunct Professor (Emeritus) – Northwestern University, Rush  
University, Northern Illinois University, Salas University*

# Forensic Audiology



NCIS and Law and Order episodes  
all begin with a dead body!



Audiologists are always  
“investigating.”

Forensic Audiology:

*“The application of the principles of audiology to legal issues.”*

**Forensic audiology is NOT a specialized field, but rather a willingness to work in the legal arena and apply your knowledge and expertise to cases in law.**

# Forensic Audiology

## Issues

- Hearing loss
- Audibility of events
- Hearing aid use
- Hearing damage
- Communicative ability
- Speech Intelligibility

## Areas for the Audiologist

- Workers Compensation (NIHL, AT)
- Administrative Law (EPA)
- Constitutional Law (OSHA, FRA, ADA)
- Tort Law (injury, death, product liability)
- Criminal Matters (audibility, intelligibility)
- Professional Negligence (malpractice)



# The need for expert witnesses has never been greater.

Under the Federal Rules of Evidence:

- ✓ **Accountants** – *calculating damages*
- ✓ **Economists** – *determining loss of earnings*
- ✓ **Real Estate Appraisers** – *assessing property value*
- ✓ **Safety Specialists** – *examining the potential for injury*
- ✓ **Computer Technicians** – *tracking activity on a computer*  
etc, etc, etc .....

***Litigants rely on experts in the vast majority of all civil cases.***

# Expert

*... a person who possess special knowledge, skill, training, or experience, in a vocation or occupation.*



*Note: this does not mean you have to have a PhD degree or have written a book or lots of articles.*



“a friend of the court”

... an expert who is qualified to provide testimony to aid the fact-finder in matters that exceed the common knowledge of ordinary people.

*Expert witnesses are endowed with the power to render opinions and provide information far exceeding personal observations.*

*A forensic expert witness uses scientific knowledge in resolving a legal issue.*

*More than 35% of trials entail the use of a forensic expert.*

# When are Experts Used?

## Federal Rules of Evidence

### ***(Rule 702):***

*Expert testimony is permitted whenever it would be helpful to the fact-finder in understanding the case.*

### **The Judge decides if:**

- 1. the witness qualifies as an expert,*
- 2. field and methodology is reliable and valid, and*
- 3. the testimony will assist the jury in understanding the case or in determining the issues.*





# An Expert's Opinion

If the judge qualifies an expert, then her opinion is to be considered fact by the jury.



*However, the jury can consider her level of qualification when weighting her opinion.*



# Lay Witness

*... a person who can give a firsthand account of something seen, heard, or experienced and, therefore, offers evidence.*



## **Material Witness**

*... whose testimony is necessary for trial and whose presence may sometimes be secured by subpoena.*

## **Alibi Witness**

*... a criminal defendant relies on in establishing an alibi.*

## **Character Witness**

*... testifies as to the character or reputation of a plaintiff or defendant.*

## **Adverse Witness**

*... called by the opposing party because he can help their case even though the witness (by statement, conduct, or relationship) is biased against his client.*

# “Consultation” Expert in Litigation

- Educate the attorney.
- Generate questions for the opposition.
- Help respond to the opposition’s interrogatories.
- Conduct experiments or tests to support the attorney’s thinking.



# “Consultation” Expert in Litigation

- Attend a deposition to guide the attorney’s line of questioning.
- Observe the examination of a patient by another audiologist.
- Testify at trial about general principles (but not to offer or defend an opinion).



*Remember: When acting as a consultant, your work is covered by “privilege.”  
So you cannot be deposed or questioned by opposing counsel.*



# My First Case

Freq (Hz)	500	1000	2000	3000	4000	6000	8000
HL (dB)	15	25	35	50	75	65	55

**HL<sub>AMA59</sub>**

PTA (15,25,35) = 25 dB

25 dB – 25 dB = 0 dB

0 dB x 1.5% = **0%**

**HL<sub>ASHA</sub>**

PTA (25,35,50,75) = 46 dB

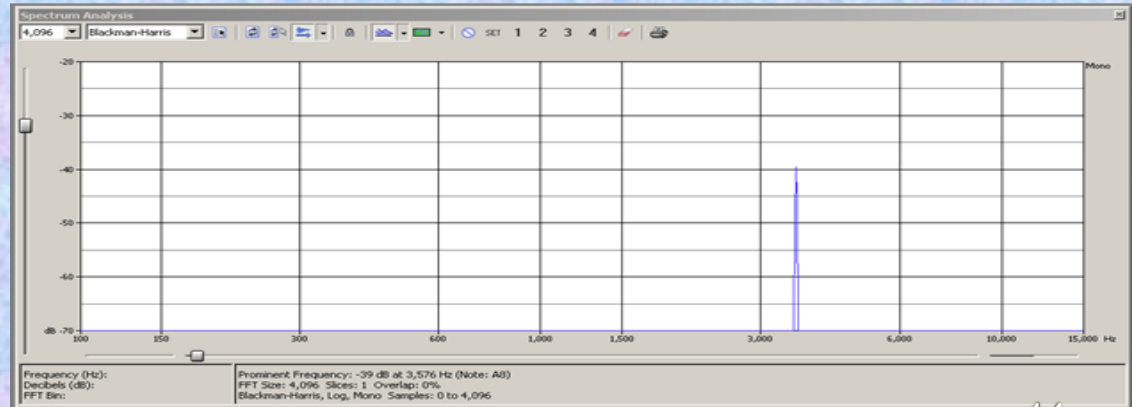
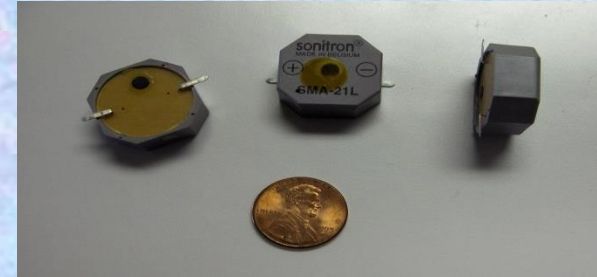
46 dB – 25 dB = 21 dB

21 dB x 2% = **42%**

# Green Bay Packer football player, Mark Chmura, is accused of rape during an after-prom sleepover.

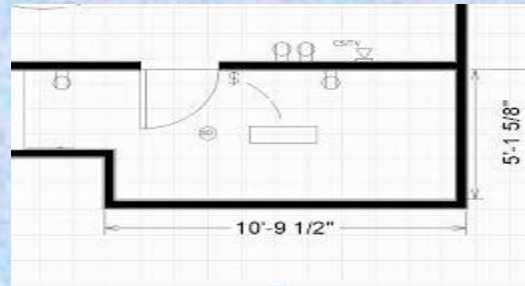


# A high-rise fire kills 6 people even though they used the stairwell emergency phones to call the security desk.





**Police search a home for drugs based on “probable cause” because of what they heard from outside the home on a busy street.**



**A worker is crushed to death by a moving cutting machine in a sheet steel plant.**





# **A hospital contemplates terminating a hearing impaired nurse working in a pediatric ICU.**

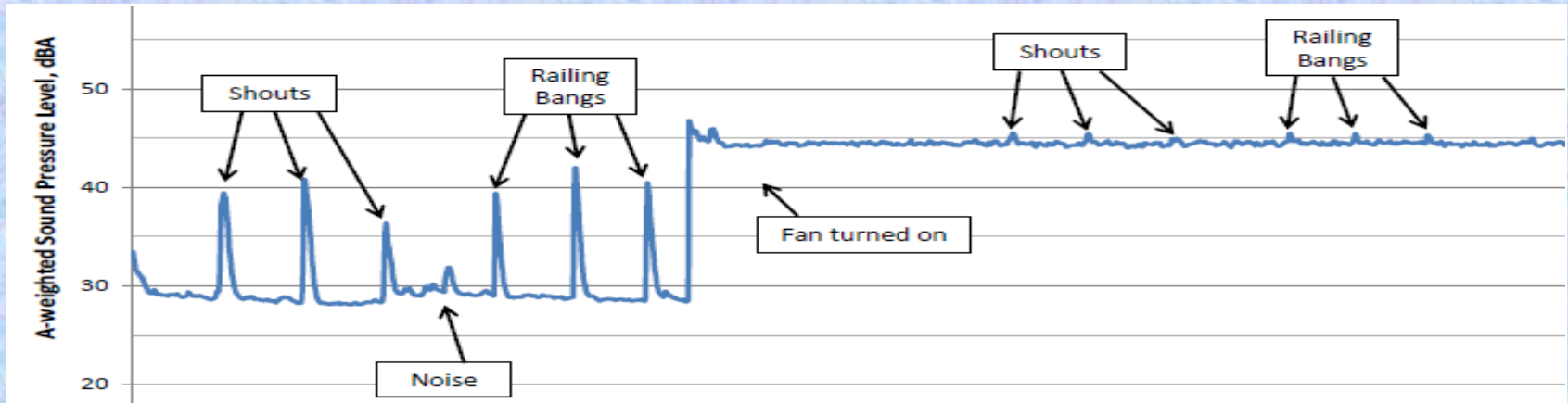




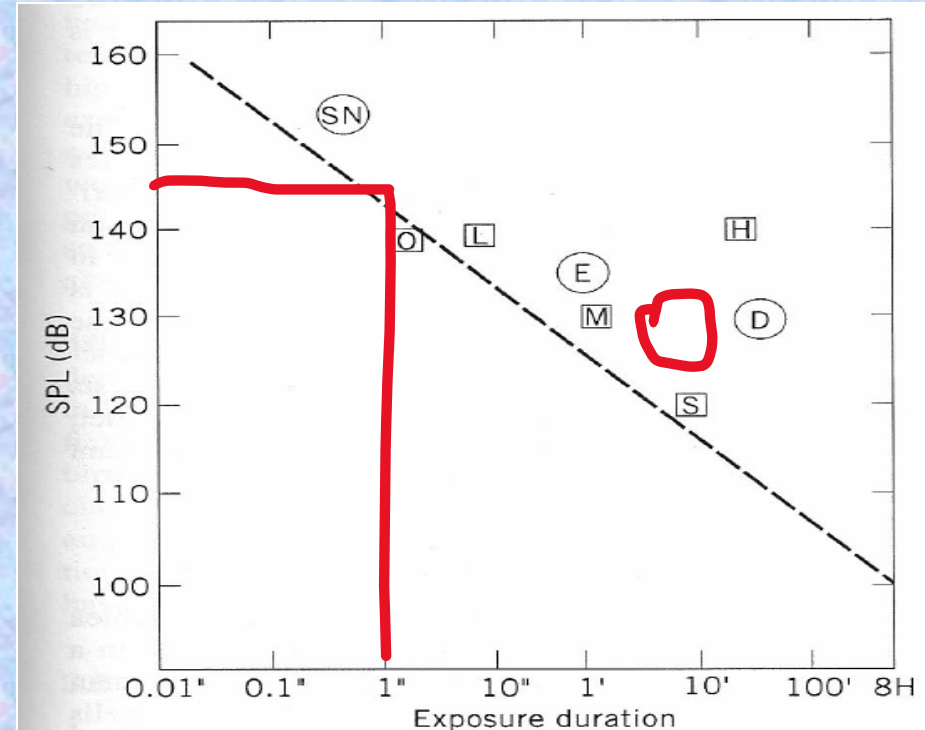
# A snowmobile is struck by a train at an intersection and its driver is killed.



# A lady jumps from a 2<sup>nd</sup> floor hotel balcony and claims the staff and guests ignored her yells for help.



**A passenger on a flight claims hearing loss after the door he sat next to opened on take-off.**

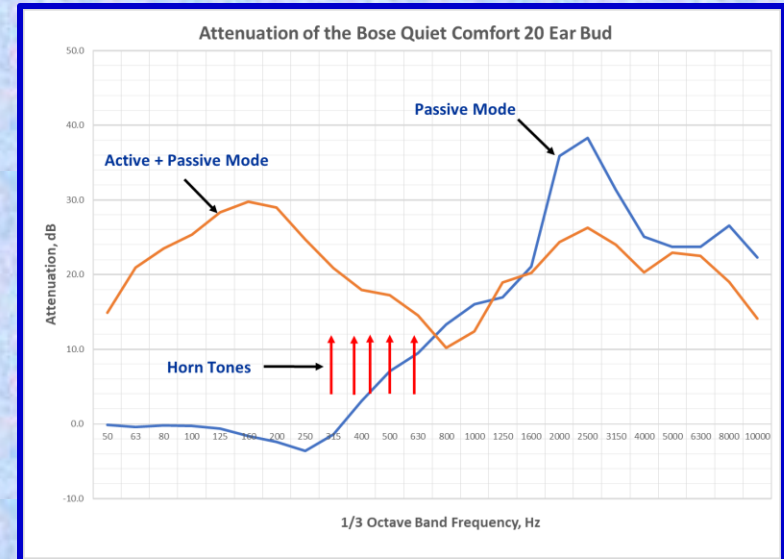




# Teenage boy wearing ANC earbuds is struck by a train.



**Nathan Air Chime**  
Five air horns  
generating tones at  
311, 370, 415, 494,  
and 622 Hz



No system as diverse as American Jurisprudence could survive without a precise set of rules.

## 1. The Complaint

*...a call for action brought within the legal system.*



- A. Administrative Forum** – controlled by administrative procedures (i.e., welfare rights, Medicare claim, zoning matter, licensure, environmental noise, etc.)
- B. Judicial Forum** – Claims that do not require the involvement of administrative procedures are controlled by the Federal Rules of Civil/Criminal Procedures (i.e., litigation, lawsuit)

## 2. The Notification

*Once the matter has been filed in the proper jurisdiction and venue, the court sends notification to the defendant.*



- a) The complaint is included in the notification.
- b) The defendant is given a time limit to respond.
- c) The rules of the court (procedure) take control and moves the issue forward in a predictable course.



### 3. Discovery

*A process used by attorneys to determine the facts and circumstances of the case to be tried before the court.*



- **Subpoena** – a request for documents that may be relevant to the case.
- **Interrogatories** – written questions directed to the parties with a time frame to answer.
- **Examinations** – a call to inspect the evidence or examine the plaintiff (e.g. Independent Medical Exam or IME).
- **Depositions** – oral examinations of the parties and witnesses placed into record by a court reporter.

# The Discovery Process

The process is rather liberal and designed to:

1. Eliminate surprise at trial, and
2. Encourage a settlement.



*Sometimes this means attorneys go on a "fishing expedition."  
Nonetheless it must work, because nearly 90% of cases settle before trial.*

# Subpoena - for documents

... a legal document requiring the person on whom it is served to provide specified documents.

- Opposing attorneys use this method to gain access to documents from audiologists.
- You can charge a reasonable fee for reviewing, copying, and delivering. (Note: the fee is negotiable!)



*Failure to comply can result in sanctions against you.  
If you feel the information requested is confidential or protected,  
contact your attorney.*



# Depositions

... the most powerful form of discovery.

1. **Discovery deposition** – to allow both parties to know what evidence will be presented at trial.
2. **Evidence deposition** – to present to the jury as evidence (e.g., you are sick and cannot attend the trial).



*Recorded by a court reporter. Sometimes it is video recorded.*

- *You are allowed to review and correct the deposition by "requesting signature."*
- *When you "waive signature" you are telling the court reporter that you do not need to review the transcript.*

## 4. Records Review

*All records and materials produced by both sides are exchanged for review.*



**Experts** review records and develop opinions to support a case. These opinions are produced and then exchanged. Each side may call for the depositions of each other's experts to learn more about the expert and explore her opinions.

**Pretrial orders.** These are orders issued by the court that set the trial date as well as dates by which all experts must be named, all documents exchanged, and all depositions completed.

# The Basis for your Opinion

You can rely on facts or data “perceived or made known to you” before your report or testimony.

- Need not have conducted your own test or personally collected your own data.
- May reasonably rely on self-reported patient histories.
- Can rely on opinions of other experts in other fields as background material.



*However, the data must be sufficient and of the type reasonably relied upon by audiologists (otherwise it can be excluded and a summary judgment made!)*



## 5. Pretrial Phase

*...before the trial, attorneys prepare exhibits, demonstrations, and witnesses for trial.*

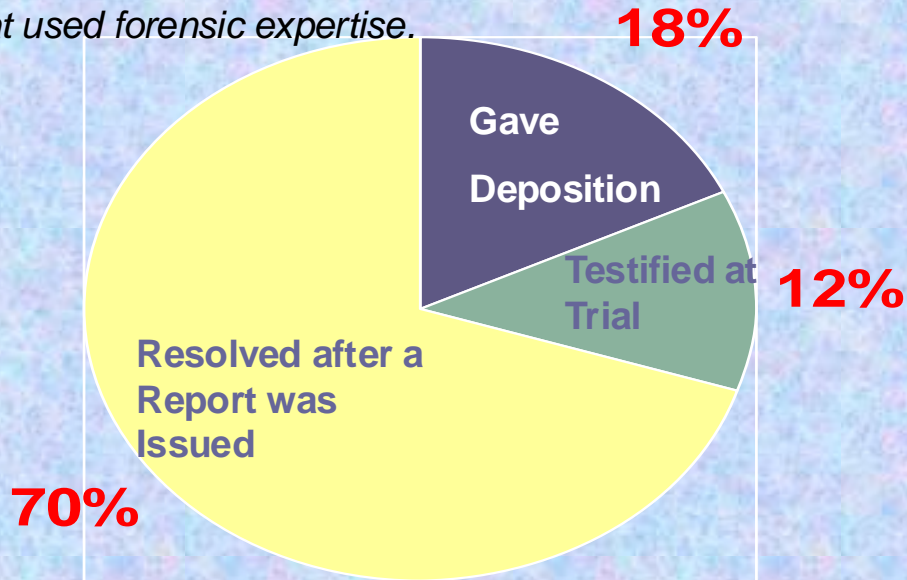


- **Trial Briefs** – a review of the facts sought to be proven and a summary of relevant law and cases.
- **Motions Filed** - In Limine (ĕn lĭ' mĭ nā). These can limit the scope of material covered by a witness or call for a Summary Judgment to end the trial.
- **Expert Preparation** - time spent with your attorney to review your opinions and “rehearse” for your testimony.
- **Jury Selection** – prospective jurors are questioned and impaneled.

## 6. Trial

*...the presentation of the case before a jury (or a judge in a “bench” trial) to render a decision or verdict.*

*Based on 445 sampled cases that used forensic expertise.*



**How many time does an expert go to trial?**

Settlement can occur ANYTIME up to the verdict.

# Burden of Proof

... civil trials are not like criminal trials where the criterion is "beyond a reasonable doubt."

For a civil trial, the criterion is:  
"a preponderance of evidence  
that it was more likely than not."

*Note: in some cases, a judge may  
instruct the jury to a higher  
standard: i.e., that there is clear and  
convincing evidence."*



*Experts normally give opinions "based upon a reasonable  
degree of scientific (audiological) certainty. "*



# Medical (Audiological) Malpractice

## Medical malpractice is ...

*any treatment, lack of treatment, departure from accepted standards of care or safety by a health care provider that causes harm to a patient.*

## Malpractice includes ...

- misdiagnosis,*
- delay in diagnosis,*
- delay in treatment, or*
- failure to perform appropriate follow-up.*

# Elements that must be proved in professional negligence.

## 1. A duty of reasonable care

*...an obligation based on what a reasonable audiologist would do to protect patients from harm.*

## 2. Breach of that duty of care

*...a failure to exercise the skill and care ordinarily practiced by audiologists according to the profession's standard of care.*

## 3. Injury caused by that breach of duty

*...liability can only be established if it can be shown that the audiologist caused the harm.*

## 4. Damages are sustained by the plaintiff

*...the plaintiff must have incurred a permanent reduction in quality of life and/or ability to sustain his livelihood.*

# Standard of Care

A written statement  
describing ...

*the rules, actions, and conditions  
that direct patient care.*



*Standards of care guide our practice and usually surpass  
government regulations. They may be used to evaluate our  
performance.*



*Always communicate with your patient what procedure you will be  
doing and the reason you are doing it. Show a caring attitude.*



# Helpful Resources

## Books

[Succeeding as an Expert Witness](#),” Harold Feder, Tagey Press, Glenwood Springs, CO (2000).

## Distance Learning

Take an on-line course.

## Local Law School

Call and ask to participate in a mock trial as an expert.

## Websites

[www.kramerslaw.com](http://www.kramerslaw.com) (Kramer & Connolly, Maryland)

[www.expertlaw.com](http://www.expertlaw.com) (free expert finder site)

[www.lectlaw.com](http://www.lectlaw.com) (privately developed resource site)

