

# Tinnitus Treatment in a VA Setting

2006 AVAA Meeting

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# Tinnitus Treatment at CTVHCS

- March 2003 Training at Emory
- March 2003 Staff In-Service
- April 2003 Began Treatment
- June 2003 Training from J. Henry
- July 2004 Added Second Audiologist
- March 2006 Change in treatment model

# Tinnitus Retraining Therapy Components

- Informational Counseling
- Sound Therapy
  - Devices
  - Environmental enrichment
- Hyperacusis Protocol

# Treatment for TRT categories

(all with sound enrichment & counseling)

- 0 Abbreviated Counseling
- I Sound generators (SG) @ mixing point
- II Hearing aid or combination unit
- III SG set above threshold or combo unit
- IV SG set at threshold, very slow increase

# Patient Referrals

- 10 Audiologists from 3 sites referred to 2 Tinnitus Specialists
- 133 Referrals
- 111 Patients Seen
- Tinnitus Impact Screening Questionnaire & clinical judgment were used to determine need for referral.

# Original Treatment Model

## Tinnitus Retraining Therapy

- 30 min interview / overview to determine candidacy
- 90 min evaluation & educational counseling
- 30 min to issue bedside sound generator  
Discharge if category 0
- 60 min device fitting
- 30 min follow up @ 4-6 weeks for device
- 30 min follow up @ 3 month intervals
- Repeat TH1 at 6 month intervals

# TRT Evaluation

- Tinnitus Handicap Inventory
- Tinnitus/Hyperacusis Interview
- Loudness and pitch matching,  
UCL measures

.

# Revisions to Treatment Model

First (after 3-4 months)

Omit 30 minute interview as  
unnneeded

Second Revision (after 10-12 months)

Abbreviated counseling and no 92625  
assessment for category 0.

# Devices

(Based on 111 patients)

## Hearing Aids

- 3 Previous Users
- 7 New Fittings
- 10 Declined
- 2 RFC
- 7 Not recommended

## Combination Units

- 2 Previous Users
- 13 New Fittings
- 3 RFC

## Maskers

- 2 Previous User

## ITE Sound Generator (SG)

- 7 New Fitting

## Bedside Sound Generator

- 3 Previous Users
- 74 New Issues
- 5 No benefit for sleep (9.7%)
- 5 Rejected / returned
- 6 Declined
- 4 Self Purchased
- 33 Creative solutions

# Compounding Issues

- 27 PTSD
- 16 Depression
- 8 Substance Abuse
- 7 Sleep Disorder
- 5 Anxiety
- 5 Neurosis
- 5 Migraine
- 3 Meniere's
- 2 Tulio's
- 2 Closed Head
- 2 Bi Polar
- 2 Panic Attacks
- 2 Alzheimer's
- 1 Auditory  
Hallucinations
- 1 TMJ

# Professional Contact

Total Contact Hours

Total # of Visits

- 2003      148 hours      151
- 2004      225 hours      209
- 2005      35 hours      46
- 2006      22 hours      19
  
- Total      430 hours      425

# Missed Opportunities

(Based on 111 patients, seen for 425 visits)

## No Show

- 17 Initial Visit
- 21 Follow-up visits

## Cancellations by patient

- 5 Initial Visit
- 9 Later Visits

## Cancellations by clinic

- 2 Visit Not Needed
- 2 Other

# Patients

## New Patients

## Discharged Patients

- 2003      35
- 2004      53
- 2005      15
- 2006      8
  
- Total      111

- 25
- 30
- 9
- 2
  
- 66

# Patient Treatment

Length of Treatment  
(66 discharged pts.)

Average # of Visits  
(all 111 patients)

- 2003 8.6 months 4
- 2004 5.7 months 4
- 2005 2.4 months 3
- 2006 1 month 2

# Patient Treatment (cont.)

(Based on 111 patients)

Avg. Total Contact Time Per Patient	Average Length of Visit
--	-------------------------

- |        |             |            |
|--------|-------------|------------|
| • 2003 | 254 minutes | 59 minutes |
| • 2004 | 255 minutes | 65 minutes |
| • 2005 | 143 minutes | 47 minutes |
| • 2006 | 161 minutes | 68 minutes |

# Complexity of Treatment

(Based on 111 patients)

- 27 Counseling only
- 39 Counseling # Bedside SG
- 30 TRT
  - 9 With ITE SG/Combo
  - 21 With aids
- 8 Hyperacusis
- 8 Hyperacusis or Tinnitus?
- 2 Masking
- 6 Change from TRT to Masking

# Miscellaneous

(Based on 111 patients)

- 13 Declined Treatment
- 2 Intermittent Tinnitus
- 4 Female Vets
- 2 Inappropriate Referrals
- 1 Cure (Acoustic Neuroma Surgery)
- 2 Inappropriate Behavior
- 6 Compensation Issues
- 10 Normal Hearing

# Positive Outcomes

(Based on 29 patients with complete data sets)

- 92% reported better sleep
- 62% showed 20% or greater improvement on THI

# Positive Outcomes

Based on 29 patients with complete data

- 82% showed a 20% or greater reduction in % of time aware of tinnitus
- 79% showed a 20% or greater reduction in % of time bothered

# Positive Outcomes

Based on 29 patients with complete data

- 52% showed reduction of 2 or more points on 0-10 scale
- 52% reduction in annoyance
- 46% reduction in effect on life

# Problems

- PTSD or Hyperacusis?
- Knowing when to discharge for lack of progress
- Poor compliance with protocol
- Compensation issues
- Patients lost to follow-up
- Coordinating with colleagues
- Inefficient delivery model

# New Model

# Tinnitus Management

Based on:

- Model used Cleveland Clinic (Newman & Sandridge, 2005 AAA)
- Audiologic Tinnitus Management, James Henry, NCRAR

# New Model

## Tinnitus Management

Tinnitus class is initial treatment option for all.

Informational counseling

Basic management skills

Treatment options

Hearing protection

Self-referral for additional treatment if needed

# Case Studies

(see separate handout)

- Best Patients
- Worst Patients
- Confusing Patients
- Average Patients

# Conclusions

- 55% needed minimal treatment (SG and/or brief counseling) that could be done by staff with minimal training.
- Therefore, model is being changed to class enrollment. Veterans may request additional treatment if needed.

# Conclusions

- Bedside sound generators provided significant benefit. Trial should be offered to all tinnitus patients.
- Case Load was manageable. 10% of the TRT Specialists total case load and 1.3% of total clinic audiology visits for first 3 years.

# Conclusions

Tinnitus treatment provides significant benefit to veterans.

It is an important and feasible addition to a VA Audiology Clinic.

# References

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Newman et al, (1996). Devel. Of the THI. Arch Otolaryngol Head Neck Surg 122: 143-148.

Henry, JA, et al, (2002). Assessment of patients for treatment with TRT. *JAAA*13: 523-544.

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