



# Current U.K Provision for Hyperacusis

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# Introduction

- Hyperacusis is defined as an unusual intolerance to ordinary environmental sounds (Vernon, 1987)
- Prevalence
- No current protocols for its management

# Hypotheses



- Experimental Hypothesis:
- Clinicians practising within the NHS in the UK will have different management strategies in different geographical locations.
- Null Hypothesis:
- There is no consistent variation in patient management strategies across different departments around the UK.

# Questionnaire Design



A questionnaire was devised to cover:

- Service Provision
- Patient load for adults and children
- Management strategies used
- Type/s of sound therapy used
- Associated symptoms
- Referral source of patients and percentage
- Time course of symptoms and rehabilitation
- Percentage of patients using ear protection in both long term (LTh) and short term hyperacusis (STh) patients.

# Questionnaire Design Cont.



- Clinicians's evaluation of:
  - Patient response to intervention
- How effective their management strategy is
  - How satisfied clinicians are with their training for hyperacusis
- Questionnaires were sent to 280 departments categorized according to the areas on the following map

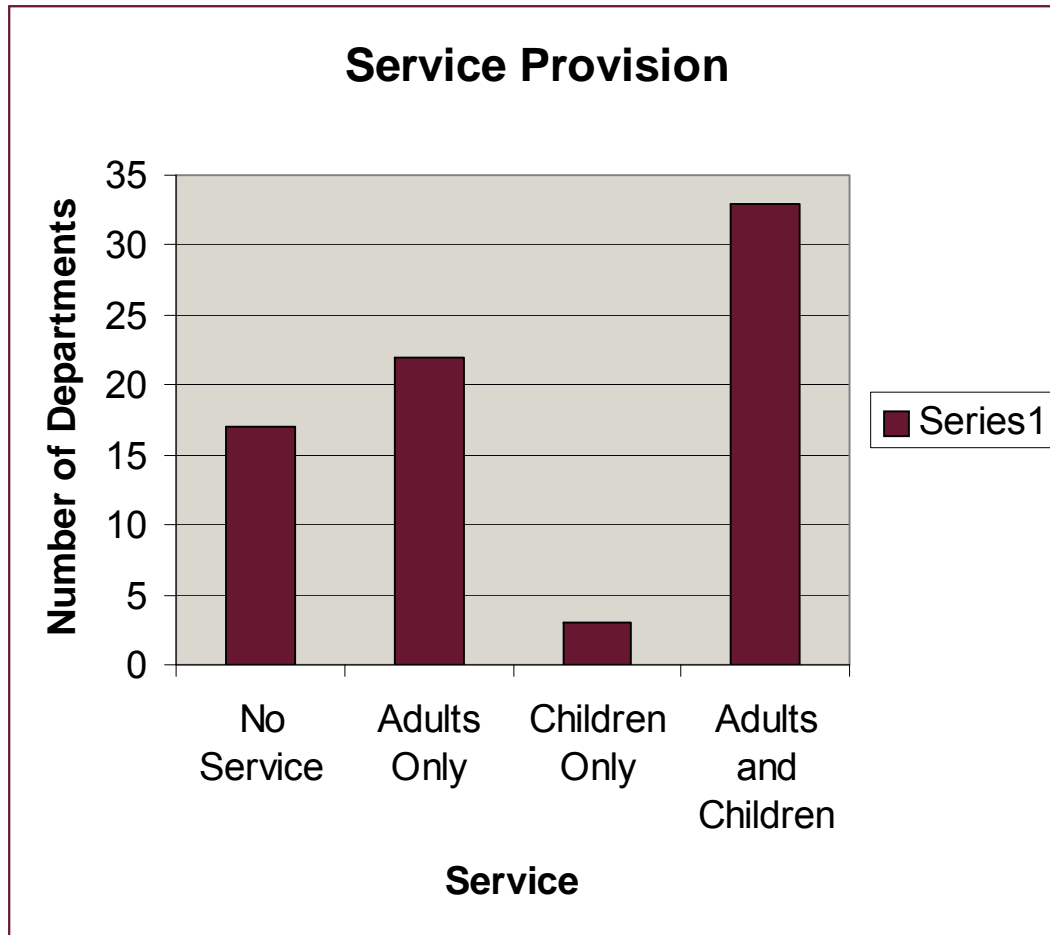


# Results – Quantitative Data

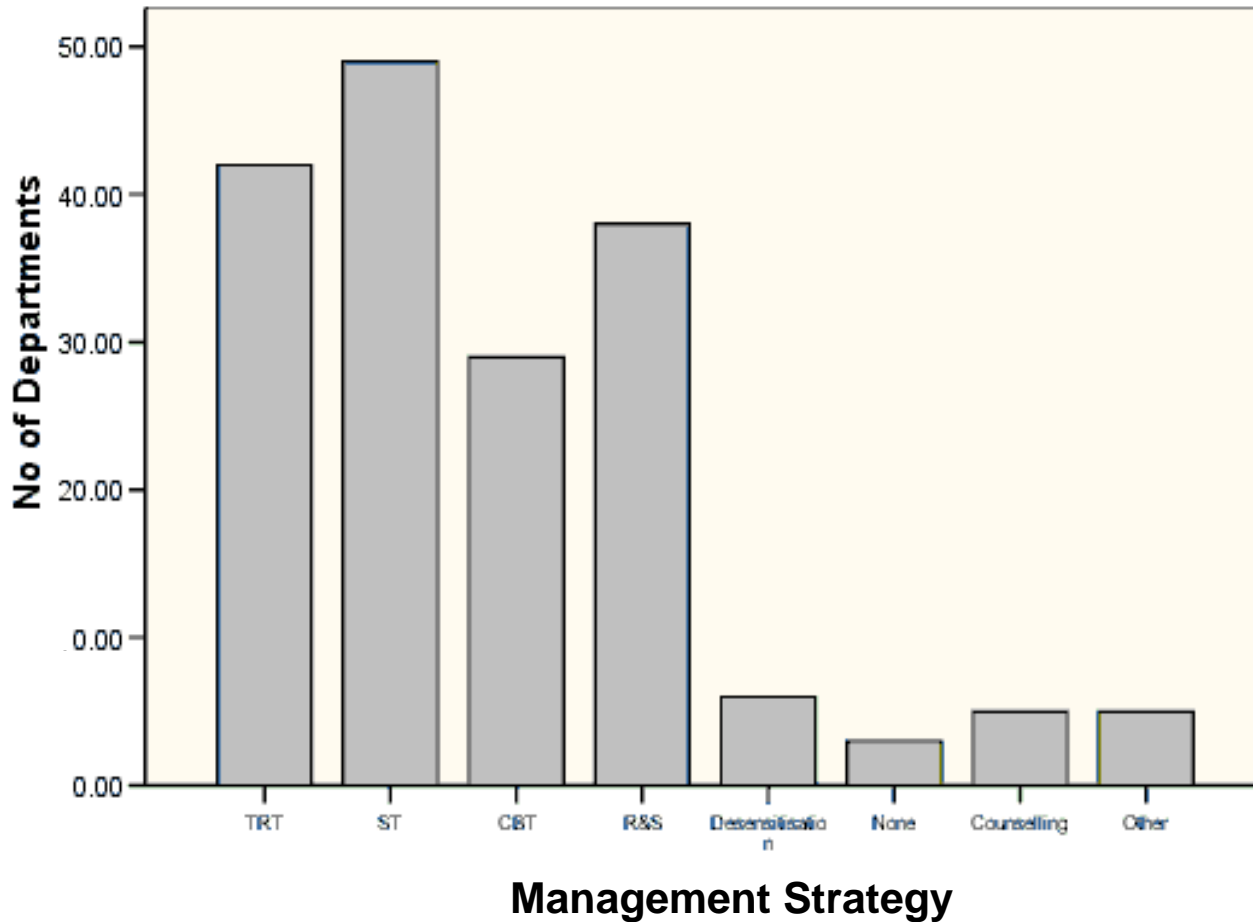


- Responses:
  - 280 questionnaires were sent
  - 76 responses received; 8 undelivered; 196 unreturned
  - Yielding 27.14% return rate

# Service Provision

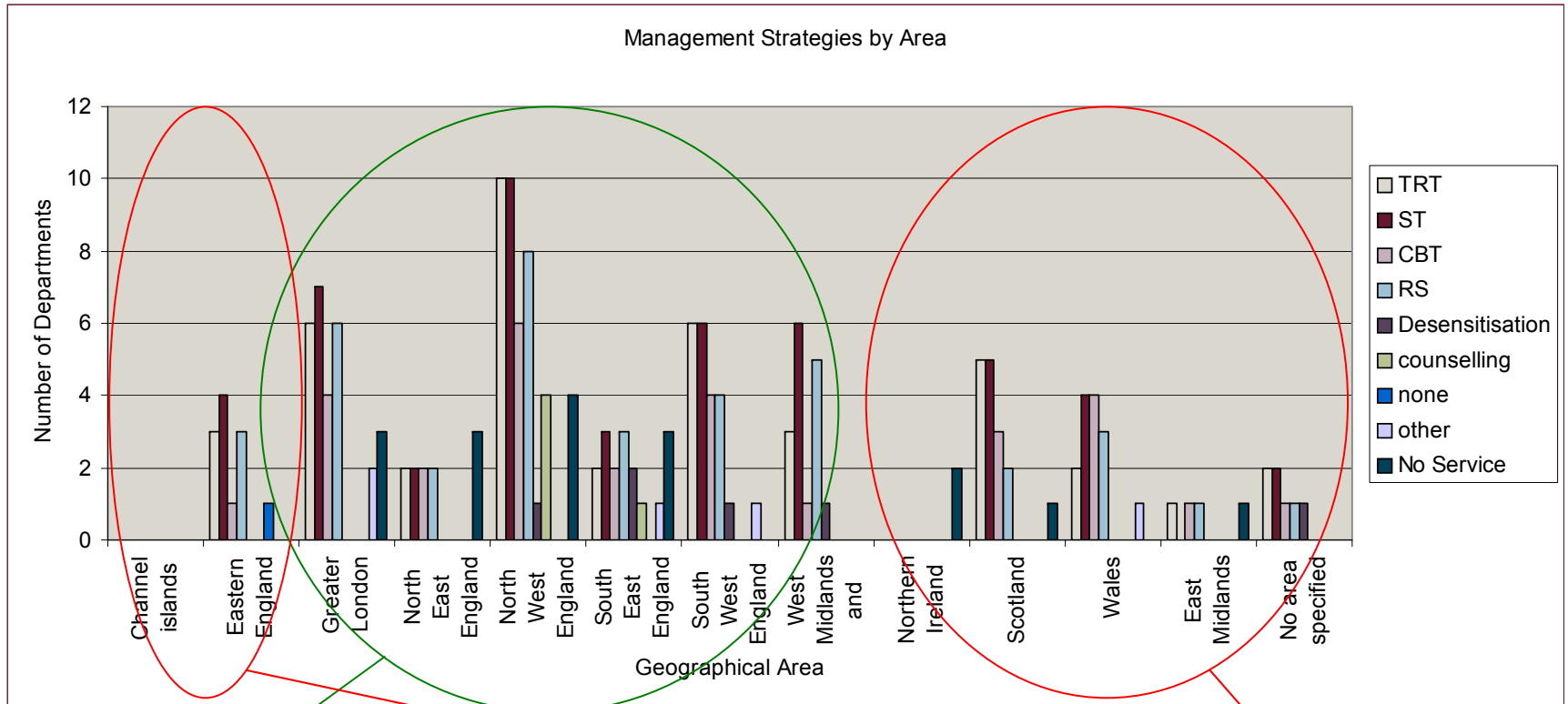


# Management Strategies



Legend (Order as in graph)  
TRT – Tinnitus retraining Therapy  
ST – Sound Therapy  
CBT – Cognitive Behavioural Therapy  
R&S – Relaxation and Symptom Control  
Desensitisation  
None  
Counselling  
Other

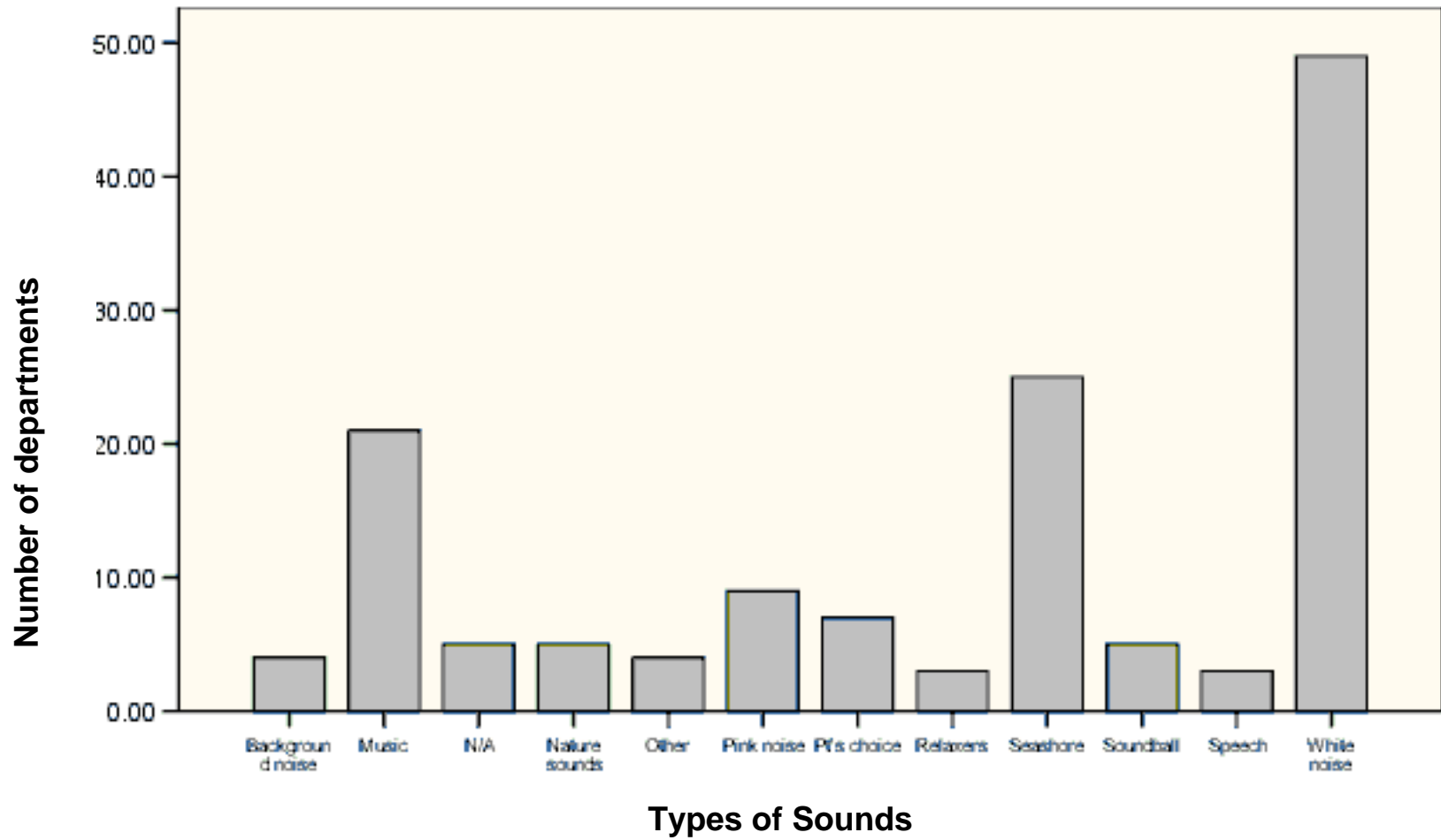
# Management Strategies



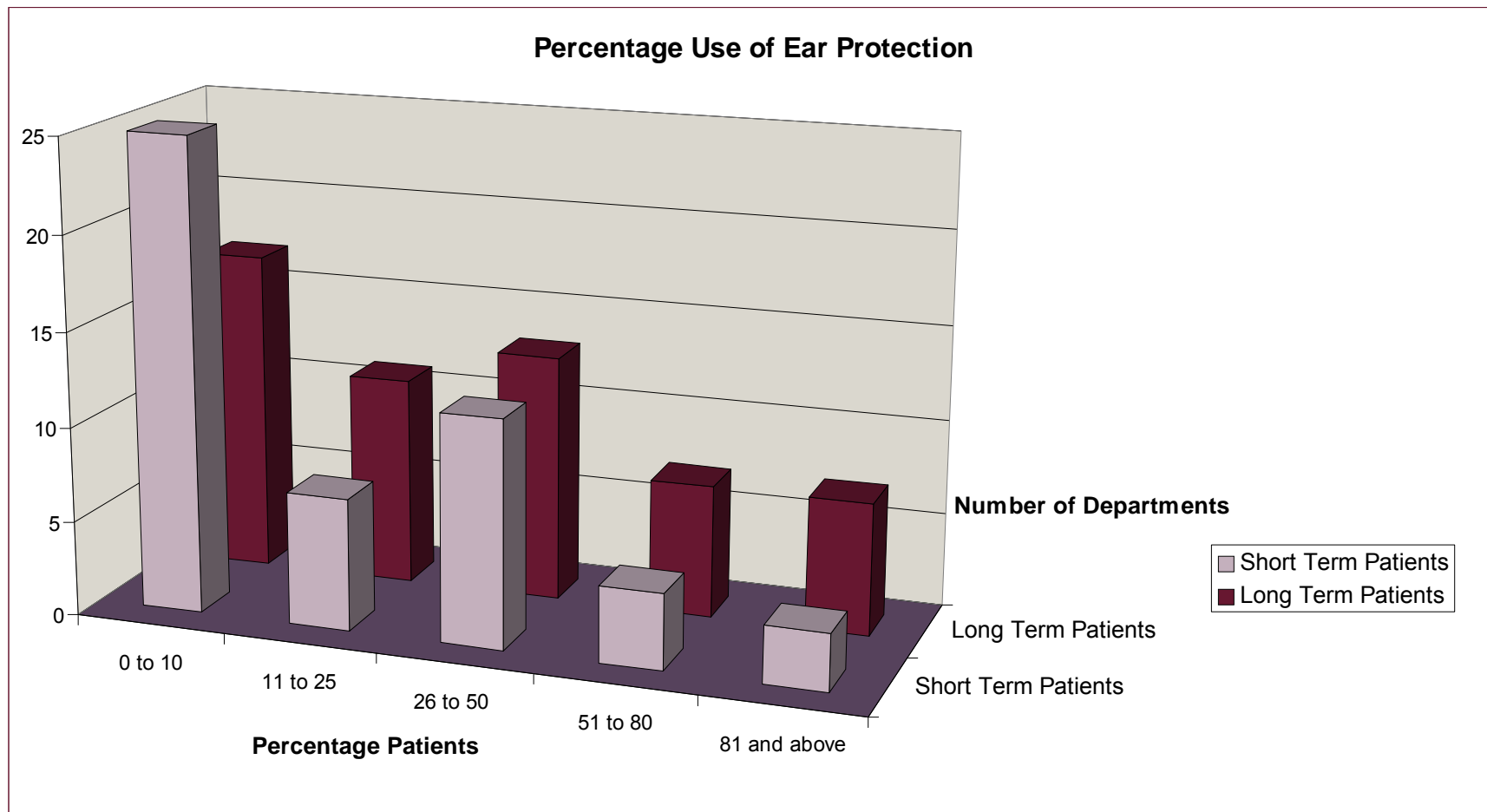
Wide range of Services provided in this area

Limited provision of services

# Provision of Sound Therapy



# Hyperacusis & Ear Protection



# Ear Protection



- One of the main issues related to hyperacusis patients – EAR PROTECTION
- Increased silence will make things worse as this increases the effects of the central auditory amplification (Hazell 2002).
- ‘The sound of a spoon against china. How loud small noises sound in silence.’ Inkheart, Cornelia Funke
- The perception of loudness is highly plastic and may be controlled by a central gain which depends on the mean level of the sensory environment around us (Norëna and Chery – Croze, 2007).
- Ear plugs is therefore not an option and patients using unnecessary ear protection should be counselled regarding this.

# Associated Conditions

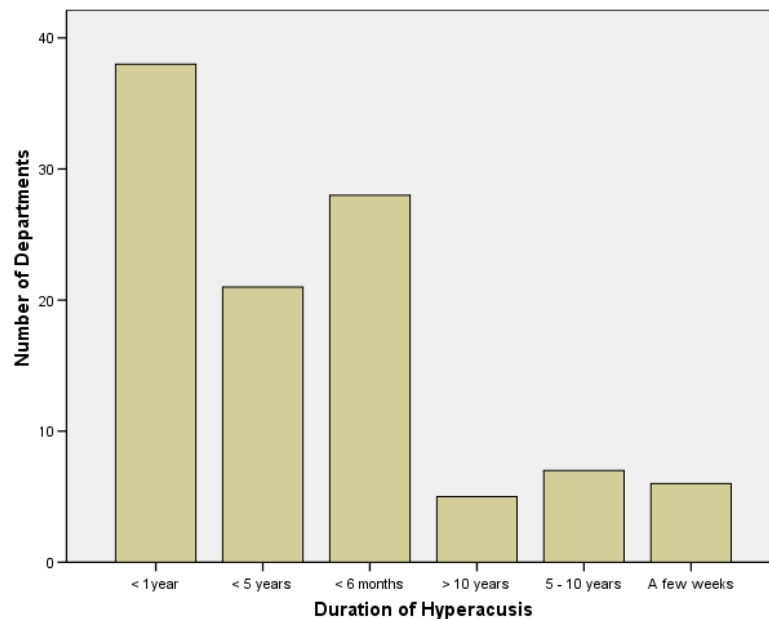


<b>Conditions with Short Term Hyperacusis</b>	<b>Conditions with Long Term Hyperacusis</b>	<b>Other Possible Associated Conditions not Reported by Clinicians</b>
Gas cylinder explosion	Tullio's Phenomenon	Meniere's Disease
Aerosol can bursting	Temperomandibular joint dysfunction	William's Syndrome
Acoustic shock following high frequency mobile phone tone	Myalgic encephalopathy	Lyme Disease
Bonfire Night	Central Neural pathology	Ramsay Hunt Syndrome
Night Clubbing	Post brain or head injury	Iatrogenic
School Disco		

# Hyperacusis Awareness



- Most departments have reported that patients report less than one year of having hyperacusis whilst others see new patients who report less than five years or even less than 6 months.
- The variability of patient awareness of their symptoms can be seen.
- Therefore an increase in the awareness of hyperacusis amongst patients may be necessary to empower them to seek help in the right place and at the right time.
- Clinicians were asked to evaluate how they felt their training for hyperacusis management was in relation to the management of other disorders Eg: Tinnitus
- Variability in clinician's responses seen



# Patient's and Parent's Perspective



- Issues raised by patients and parents:
  - GPs are not very helpful with regard to hyperacusis
  - Patient awareness regarding hyperacusis is poor
  - Parent told son is too young to do anything about the hyperacusis and he might grow out of it
- How to tackle these issues:
  - Patients need to be made more aware of hyperacusis through leaflets, posters etc at clinics
  - Professionals need to receive more training regarding the management of hyperacusis patients



# Conclusion

- There is great variability in the service provision for hyperacusis across the UK
- Patients need to be made more aware of hyperacusis to empower them to seek appropriate help
- Clinicians need to receive more training for hyperacusis to establish a more reliable service
- Hyperacusis patients face problems just as other patients do – they need to know they can get help for it !

# Josephine Marriage Management Strategy



1. Profile of the problem
2. Impact of problem
3. Understanding of condition by all carers
4. Behavioural desensitisation
5. Auditory desensitisation
6. Re-assessment and follow up



# History

## Profile of problems

- Types of sound
- Location of sounds
- Frequency of occurrence

Very important to be aware that hyperacusis behaviours are sustained and exacerbated by anxiety about sound-exposure.

# Impact of Aversion Behaviour



## Behavioural Reaction

- Effect on child
- Effect on others

## Coping strategies used

- How effective are these

Use of a single week diary to get incident  
form baseline of aversion behaviours

# Associated Symptoms



- Tinnitus
- Balance
- Sleep pattern/ routine
- Headaches
- Photophobia (reading ability)
- Hearing ability in noise
- Other sensory modality responsivity

# Aetiology Clues



- Onset
- Progression – worsening / improving
- Others in family
- General development
- Meningitis

# Step 1. Information giving



- To parents
- To school
- To professionals

Confirming hyperacusis as a condition, explaining the things that are recognised about it. Association with anxiety about situations and need for consistency in management. (Written information)

Tentatively draw together the aspects of behaviour that may be associated with hyperacusis.

# Programme of Behaviour Modification



- Need to break down the learned association of fear with anticipated sound exposure
- Assume that sound exposure causes pain
- Break down the avoidance patterns that have become established

Clinical psychologist may be helpful  
in designing this

# Auditory Desensitisation



## Components of Hyperacusis Masking Programme:

- Medium to long term plan (approx 18 months)

## Aiming to improve:

- Tolerance immediately
- Improve sensitivity of hearing mechanism over time
- Reduction in anxiety and fear potentiated hyperacusis



# Need to have:

- Open moulds (usually bilateral)
- Tinnitus maskers “sound generators”
- Initially set at just audible level
- Build up use of maskers to 6 hours+ per day Monitor for about 6 weeks
- Increase the level of the noise generator
- Or encourage individual to change volume as necessary

# Check speech discrimination ability with masker

- Increase noise level very slowly over time until child is able to tolerate all daily situations without difficulty
- Fill in a weekly diary to check this
- Slowly reduce the level of the noise over time, while checking that situations remain tolerable.
- Reduce hours of use as possible until no longer used routinely



# Re-do incident form diary assessment to check progress

Allow parents to keep maskers in case  
necessary for specific situations.

ULLs not helpful for most paediatric patients

Ask about tinnitus as possible

Re-evaluate service provision in line with  
demonstrated effective components

Questions? Handouts available