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Background

- Hearing loss and dementia become more prevalent with age, meaning many people with dementia will also have hearing difficulties.
- Unidentified and untreated hearing loss can lead to increased confusion, depression and social withdrawal in people with dementia [1].
- Many cases of hearing loss in people with dementia may be unidentified due to overlapping symptoms and difficulties in accessing audiology services [2].
- There is no current prevalence rate for hearing loss in people with dementia in the UK.
- Before a nationwide study can be conducted to determine the prevalence rate, several areas require feasibility testing.

Research Questions

- Is it feasible to estimate the prevalence of hearing loss in people with dementia living in the general community and in care homes?
- What are the barriers and facilitators to hearing assessments for people with dementia?

Method

Participants

- People with dementia (n=36) will be recruited from their local NHS Trust, care home GP practice or local dementia groups.
- We will include people with any severity or sub-type of dementia.
- Participants will be based in the North West of England.

Study design

- Baseline demographics will be collected via questionnaire.
- The Clinical Dementia Rating [3] will be administered to determine level of cognitive impairment.
- Hearing assessments will be conducted in participants' own homes, lasting 45 minutes. Including:

Case history discussion,

Otoscopy,

Wax removal (if required and accepted),

PTA (repeated 2 weeks after).

Feasibility testing

We will...

Assess the acceptability of hearing assessments for people with dementia:

- Using completion rates of each component of the hearing assessment: Otoscopy, earwax removal, Pure-Tone Audiometry (PTA).
- Using participant attrition rates and reasons for attrition.
- Using qualitative feedback on the hearing assessment from people with dementia and care partners.

Determine the feasibility of recruiting for a large-scale study:

- Using recruitment rates of people with dementia.
- Using participant attrition rates and reasons for attrition.
- By assessing the effectiveness of recruitment channels.
- By considering the representativeness of the recruited sample.

Inform a sample size calculation for a large-scale study:

- By estimating within-group variance of two PTA assessments to inform a sample size calculation for future study.
- We will then determine the test-retest reliability of PTA for people with dementia using interclass correlation coefficient.

Qualitative study

We will conduct semi-structured interviews with people with dementia and their care partners (n=30) and hearing healthcare professionals (n=15) to...

- Explore the barriers and facilitators to hearing assessments for people with dementia.
- Determine reasons for undetected and untreated hearing loss in people with dementia.
- Understand what adaptations can be helpful for people with dementia during hearing assessments.

Acknowledgments

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Patient & public involvement

- PPI has helped to establish the importance of the study, decide how to include people without mental capacity, inform study design, design easy access participant information sheets and develop interview schedules.

Future study

- We will use the results of this feasibility study to inform the potential for a nationwide study that estimates the prevalence of hearing loss in people with dementia in the UK.
- Feasibility findings will be used in the design of this large-scale study i.e. use of PTA, recruitment and retention strategies, need for targeted sampling.

Developing hearing healthcare pathways for people with dementia

- We will use the Behaviour Change Wheel [4] to make evidence based recommendations for more accessible hearing assessments and care for people with dementia.

Summary

- We expect the prevalence of hearing loss in people with dementia to be high.
- We will use mixed-methods to determine the feasibility of estimating the prevalence in a future nationwide study.
- Ultimately, understanding and addressing the hearing needs of people with dementia can benefit their quality of life and improve communication abilities [5].

References

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