UK National Screening Committee
Screening for Hearing Loss in Adults - an evidence review

Consultation comments pro-forma

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Organisation (if appropriate): Role:	British Academy of Audiology President		
	BAA is the largest association of professionals in hearing and balance in the UK. Our membership extends internationally and provides services in both the public and private sector. The BAA aims to help its members to develop in their professional skills, provide a benchmark for quality and professional standards and promote audiology as an autonomous profession. BAA's Vision on behalf of its membership, is to provide a clear and strong voice for professionals in audiology and to promote excellence in clinical knowledge and practice. Audiologists as Healthcare Practitioners and Scientists carry considerable responsibility requiring complex judgments and clinical decision making. They work with the most vulnerable in society in clinical practice, carry out clinical and scientific research and also work in higher education. Patients, colleagues and the public must have complete trust that each Healthcare Science Professional in Audiology acts with honesty, integrity and in the best interests of the patient and BAA represent the profession at a national level. Hearing loss has been shown to have major impacts on communication, health and quality of life which in turn can lead to		

	isolation, dementia, depression and have a negative impact on the management of other health conditions.

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Yes x No ☐

Section and / or page number	Text or issue to which comments relate	Comment *Please use a new row for each comment and add extra rows as required.*
Summary		We request that the summary reflect amendments to the main contents.
1 Introduction		The literature review is not up to date as was carried out in December 2012. The review has not taken account of the "Action Plan on Hearing Loss" which is UK Government strategy released in March 2015, which sets out the need for earlier identification and diagnosis of hearing loss. The Department of Health and NHS England (2015) The Action Plan on Hearing Loss. London: Department of Health and NHS England. Available from: http://www.england.nhs.uk/2015/03/23/hearing-loss/.
2.2	The condition health impact	This review has not included most of the evidence around the impacts of hearing loss, particularly on social isolation, depression and dementia Monzani et al (2008) Psychological profile and social behaviour of working adults with mild or moderate hearing loss. *Acta Otorhinolaryngologica Italica*. 28(2), 61-6; Barlow et al (2007) Living with late deafness: insight from between worlds. *International Journal of Audiology.* 46(8), 442-8; Gopinath et al (2012) Hearing-impaired adults are at increased risk of experiencing emotional distress and social engagement restrictions five years later. *Age and Ageing* 41(5), 618–623;

		Echalier (2010) In it together – the impact of hearing loss on personal relationships, London: Action on Hearing Loss. Available from: www.hearingloss.org.uk/~/media/Documents/Policy%20research%20and%20influencing/Research/Previous%20research%20reports/2010/In%20it%20together/In%20it%20Together.ashx; National Council on the Aging (2000) The consequences of untreated hearing loss in older persons. *Head & Neck Nursing* 18(1), 12-6; Pronk et al (2011) Prospective effects of hearing status on loneliness and depression in older persons: identification of subgroups. *International Journal of Audiology* 50(12), 887-96. Gopinath et al (2012) Hearing-impaired adults are at increased risk of experiencing emotional distress and social engagement restrictions five years later. *Age and Ageing* 41(5), 618–623. Gonzani et al (2008) Psychological profile and social behaviour of working adults with mild or moderate hearing loss. *Acta Otorhinolaryngologica Italica* 28(2), 61-6. Arlinger (2003) Negative consequences of uncorrected hearing loss – a review. *International Journal of Audiology* 42(2), 17-20.
2.3	'All the cost-effective primary prevention interventions should have been implemented as far as practical'	Legislation to help prevent noise induced hearing loss extends back to the Health & Safety at Work Act (1974), through to the Control of Noise at work Regulations of 2005. As controls have been in place for many years it is now less likely that any more stringent future legislation will yield a significant reduction in numbers of adults with hearing loss relevant to this review. The dominant feature of adult patients presenting with hearing difficulties is their age (and presbyacusis) rather than any history of notable noise exposure. The focus in this review is for the age groups over 50 and therefore prevention should not be a barrier to a screening programme being introduced.

3.1	'There should be a simple, safe, precise and validated screening test'	The conclusion of the health technology assessment, a major large scale study which found that the optimal cut off for screening was 35 dB HL, and that the most effective screening test was to ask two verified questions alongside pure tone audiometry, is also missing here[1]. Parving et al (2008) Evaluation of a hearing screener, *Audiological Medicine* 6(2), 115-9; Davis et al (2012) Diagnosing patients with age-related hearing loss and tinnitus: supporting GP clinical engagement through innovation and pathway redesign in audiology services, *International Journal of Otolaryngology.* Watson (2012) Telephone screening tests for functionally impaired hearing: current use in seven countries and development of a US version. *Journal of the American Academy of Audiology* 23, 757-767. Davis et al (2007) Acceptability, benefit and costs of early screening for hearing disability: a study of potential screening tests and models, *Health Technology Assessment* 11(42).
3.5	'There should be an agreed policy on the further diagnostic investigation of individual with a positive test result and on the choices available to those individuals.	There are established management routes for patients presenting for assessment through the traditional GP route to Audiology. These are informed by professional and learned society guidance. There should be no reason why assessment of patients referred from screening would

		differ from existing routes. The clinical management decisions made by Audiologists are complex as they take a holistic approach and consider individual patient needs, attitudes as well as results of the diagnostic assessment. Across the whole the UK some GPs and other health professionals do screen and check people's hearing, and refer positive cases to audiology or ENT. There are large variations in the numbers of audiological assessments between different areas, and without a screening programme, these varying numbers of people seeking help have been dealt with well and waiting times have been kept low. It is therefore clear that the services available are flexible enough and are appropriate to manage the further diagnostic investigation and management of screen detected cases of hearing loss. Public Health England (2013) NHS Atlas of Variation in Diagnostic Services: reducing unwarranted variation to increase value and improve quality, London: Public Health England; The Department of Health and NHS England (2015) The Action Plan on Hearing Loss. London: Department of Health and NHS England. Available from: http://www.england.nhs.uk/2015/03/23/hearing-loss/.
4.1 & 4.2	'There should be an effective treatment or intervention for patients identified through early detection, with evidence of early treatment leading to better outcomes'	Hearing aids are now digital signal processing devices and therefore the reference to analogue hearing aids is irrelevant. Reference to cochlear implantation (CI) in this screening paper is irrelevant as candidates for CI will have severe/profound hearing loss and gross /immediate needs if unassisted. They would present without the need for screening. Numbers however are relatively small and most candidates will be existing users of hearing aids. The content of sections 4.1 and 4.2 is not cohesive and would benefit

		from sub sections. In terms of effectiveness of the intervention: **Benefits of early amplification:** It is well recognised that providing hearing aids to someone early is more beneficial than waiting. Monitor (2015) NHS adult hearing services in England: exploring how choice is working for patients, London: Monitor. Available from: https://www.gov.uk/government/publications/nhs-adult-hearing-services-in-england-exploring-how-choice-is-working-for-patients; Eurotrak data (2012). Available from: http://www.anovum.com/publikationen/Anovum_EuroTrak_2012_UK_EuroTrak%202012.pdf **Strength and quality of evidence**. Most randomised controlled trials (RCTs) of hearing aids compare their features or fittings. This is because their benefits are long recognized and demonstrated, and in today's research funding climate it is doubtful that any grant funder would fund a RCT to show the benefit of hearing aids. In many ways a hearing aid is the 'best-proven' intervention for hearing loss, which in a UK context provides difficulties in performing an ethical RCT study. However, two available RCTs have demonstrated clear benefits of hearing aids to hearing-related quality of life. Mulrow et al (1990) Quality-of-life changes and hearing impairment, a

		randomized trial. *Annals of Internal Medicine* 113(3), 188-94. Davis et al (2007) Acceptability, benefit and costs of early screening for hearing disability: a study of potential screening tests and models, *Health Technology Assessment* 11(42). Dawes et al (2015) Hearing-aid use and long-term health outcomes: hearing handicap, mental health, social engagement, cognitive function, physical health, and mortality, *International Journal of Audiology,* early online 1-7. Available from: http://informahealthcare.com/doi/abs/10.3109/14992027.2015.1059503?journalCode=ija Aside from the research evidence base, we believe that it also important to consider practice-based evidence. Audiology has been at the forefront in the use of patient reported outcomes measures (PROMS) within service delivery. Extensive use of research validated PROMS is used to manage individual patients and monitor impact of interventions across cohorts of patients. Data should be available from the local services and should also be considered by the review. There is increasing evidence of an independent association between hearing loss, declining cognitive function and dementia. Hearing aid use has been associated with better cognition and evidence of the benefit of hearing aids on communication. Impact and burden of dementia on individuals, their carers and society is high. Dementia is prominent on the healthcare agenda and it would be a detriment to that work and to the individual patients to limit an intervention that has a positive impact on communication ability in the elderly. Amplification has a positive impact for people with existing health

		conditions such as depression and dementia. People are more likely to manage their other morbidities if they can hear, as well as reduce the disability and handicap they might develop in the future, barriers to communication with their doctors or other health-care providers are removed if a patient is adequately supported and therefore hearing aids should be available to support all with mild hearing loss. Mondelli and Souza (2012) Quality of life in elderly adults before and after hearing aid fitting. *Revista Brasileira de Otorrinolaringologia* 78(3), 49-56. Lotfi et al (2009) Quality of life improvement in hearing-impaired elderly people after wearing a hearing aid. *Archives of Iranian Medicine* 12(4), 365-70. McArdle et al (2005) The WHO-DAS II: Measuring outcomes of hearing aid intervention for adults. *Trends in Amplification* 9(3), 127-43. Mizutari et al (2013) Age-related hearing loss and the factors determining continued usage of hearing aids among elderly community-dwelling residents. *PLoS One* 8(9), e73622. National Council on the Aging (2000) The consequences of untreated hearing loss in older persons. *Head & Neck Nursing* 18(1), 12-6. Yueh et al (2010) Long-term effectiveness of screening for hearing loss: the screening for auditory impairment--which hearing assessment test (SAI-WHAT) randomized trial. *Journal of the American Geriatrics Society*, 58(3), 427-34. Dawes et al (2015) Hearing-aid use and long-term health outcomes: hearing handicap, mental health, social engagement, cognitive function, physical health, and mortality, *International Journal of Audiology,* early online 1-7. Available from: http://informahealthcare.com/doi/abs/10.3109/14992027.2015.1059503?journalCode=ija. Pronk et al (2011) Prospective effects of hearing status on loneliness and depression in older persons: identification of subgroups. *International Journal of Audiology* 50(12), 887-96. Gopinath et al (2012) Hearing-impaired adults are at increased risk of experiencing emotional distress and social engagement restrictions five years

Page 12 (4.1 and 4.2)		later. *Age and Ageing* 41(5), 618–623. Gonzani et al (2008) Psychological profile and social behaviour of working adults with mild or moderate hearing loss. *Acta Otorhinolaryngologica Italica* 28(2), 61-6. Arlinger (2003) Negative consequences of uncorrected hearing loss – a review. *International Journal of Audiology* 42(2), 17-20. It is a common misconception that people who are provided with hearing aids do not use them. The evidence shows that most people do use and gain benefit from their hearing aids. More recent evidence from a systematic review and from two studies undertaken showing data from the UK shows that acceptance of hearing aids is higher than the figures quoted here. A systematic review showed that although studies used different time periods and measures, very high numbers of people continued to use and benefit from hearing aids, usually around 80-90%[2]. A recent study of numbers across Europe, including in the UK, and a study undertaken into the introduction of AQP in England also showed that the vast majority of people wore and gained benefit from their hearing aids, and were satisfied with their hearing aids[3]. Furthermore, with proper information and support, including self-management, levels of hearing aid use increase and people have improved ability to hear and communicate[4]. In view of the above evidence, we believe that there is an effective treatment or intervention available for patients identified through

		screening, with evidence of early treatment leading to better outcomes
4.2	There should be agreed evidence-based policies covering which individuals should be offered treatment and the appropriate treatment to be offered.	See comments to 3.5 above
5.1	'Evidence from RCTs.....'	We draw attention to findings of other randomised controlled trials such as Mulrow 1990 and other studies and modelling of screening such as Davis et al 2007 and Morris et al 2013.
6	Conclusions Including stated area of uncertainty: 'capacity of audiological services to meet potential screening programme increased demand'	The conclusions section needs to be revised to reflect the above. It is not unreasonable to suggest that existing services would have difficulty managing additional activity referred from screening within existing resources – there is clearly unlikely to be spare capacity in NHS service at present. The question should be: 'can additional capacity be developed to manage demand generated by screening?' This could be addressed by phased introduction of screening programmes, not least to allow for supporting resources to be secured. Consideration of the financial implications should consider savings to the health economy and beyond. If hearing loss is acknowledged as a significant health issue it justifies a pro-active approach to identification and management. There is clear evidence that early intervention improves outcomes for people with hearing loss. There is also evidence that hearing aids work, are acceptable to people with hearing loss and bring major benefits. As the national government strategy the Action Plan on Hearing Loss has stated, unaddressed age-related hearing loss is a major public health issue which will cause increasing issues for people unless

		something is done. A hearing screening programme would encourage people to get the help they need from hearing aids and other support, ensure they are made aware of the impacts of hearing loss and the effectiveness of the interventions available, which in turn will normalise hearing loss and ultimately will lead to thousands more people being able to communicate, manage and reduce the risk of other health conditions, and remain active, independent and healthy for much longer.
Page 21 6.2	Implications for research	A large amount of evidence, detailed in our response, has not been included in this review. This evidence is sufficient to fulfil the criteria and introduce screening for hearing loss in adults. Governments across the UK have already made tackling hearing loss and improving its diagnosis a priority, and Public Health England has committed to strengthen the evidence base on the diagnosis and management of hearing loss. Any further investigations or research necessary before screening can be introduced should be more clearly highlighted in the National Screening Committee's review. This includes precisely what research is needed and what this would add to the existing evidence base. This will allow Public Health England and the wider government to meet its commitments in the Action Plan on Hearing Loss by delivering this further evidence and ensuring that the growing challenge of hearing loss is met. The Department of Health and NHS England (2015) The Action Plan on Hearing Loss. London: Department of Health and NHS England. Available from: http://www.england.nhs.uk/2015/03/23/hearing-loss/; The Scottish Government (2014) See hear: a strategic framework for meeting the needs of people with a sensory impairment in Scotland, Edinburgh: Scottish Government; Department of Health, Social Services and Public Safety (2012) Physical and sensory disability strategy and action plan 2012-2015, Belfast: Department of

		Health, Social Services and Public Safety.

Please return to Adrian Byrtus (Evidence Review & Policy Development Manager) adrian.byrtus@nhs.net **by 11th September 2015**