

Appendices

Appendix 1: Definitions of service needs according to diagnosis

Need	Diagnosis	Hearing test result	Description
Diagnostic audiology assessment (possible hearing aid)	Sensorineural (acquired or congenital) or mixed hearing loss in both ears	Bilateral hearing loss (>25dB HL)	This involves air and bone conduction audiometry in sound proof room to confirm hearing levels and potential hearing aid fitting (depending on degree, and duration of loss). If a hearing aid is not suitable, other interventions such as cochlear implants, or sign language training may be suitable.(35) For mixed hearing loss, the underlying cause of the conductive component also needs to be treated.
Surgical assessment	Chronic otitis media – wet perforation Chronic otitis media – dry perforation Chronic otitis media – possible cholesteatoma	N/A*	Chronic otitis media – wet or dry require tympanoplasty to mend tympanic membrane (36) Chronic otitis media – possible cholesteatoma requires surgery to remove
Medication	Acute otitis media (AOM) Chronic otitis media – wet perforation Chronic otitis media – possible cholesteatoma Otitis externa (OE)	N/A*	AOM requires analgesics, and antibiotics (37) Chronic otitis media – wet perforation requires aural toilet, and ear drops (medication) to allow otorrhea (discharge) to clear prior to surgery.(36) Chronic otitis media – cholesteatoma may also require medication OE requires antifungal or antibiotic ear drops (37-39)
Impacted wax or foreign body removal	Impacted wax (IW) Foreign body (FB)	Hearing loss >25dB HL in either ear	IW and FB are removed using suction or hooks depending on skill and equipment availability.
Review (“watchful waiting”)	Otitis media with effusion (OME)	Hearing loss >25dB HL in either ear	OME requires re-examination of ears, and repeat audiometry (40)

* Need for service does not depend on whether hearing loss is present

Appendix 2: Age and sex structure of the population of persons aged 50 and above from the population of Malawi

	Population						Sample					
	Male		Female		Total		Male		Female		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
50-54	188,401	26.2	199,411	23.0	387,812	24.4	69	16.8	184	24.8	253	21.9
55-59	144,045	20.0	162,876	18.8	306,921	19.3	74	18.0	120	16.2	194	16.8
60-64	107,820	15.0	127,098	14.6	234,918	14.8	63	15.3	96	12.9	159	13.8
65-69	107,912	15.0	132,639	15.3	240,551	15.2	67	16.3	121	16.3	188	16.3
70-74	63,805	8.9	80,983	9.3	144,788	9.1	46	11.2	75	10.1	121	10.5
75-79	51,598	7.2	73,120	8.4	124,718	7.9	43	10.5	61	8.2	104	9.0
80-84	24,130	3.4	39,545	4.6	63,675	4.0	21	5.1	48	6.5	69	6.0
85-89	20,751	2.9	34,003	3.9	54,754	3.5	19	4.6	24	3.2	43	3.7
90+	10,018	1.4	18,383	2.1	28,401	1.8	9	2.2	13	1.8	22	1.9
Total	718,480	100	868,058	100	1,586,538	100	411	100	742	100	1153	100

Appendix 3: Proportion of tests conducted where ambient noise exceeded MPANLs

	Overall				People with hearing loss (>25dB)				People without hearing loss <25dB)			
	L		R		L		R		L		R	
	N	%	N	%	N	%	N	%	N	%	N	%
500	126	11.9%	119	11.9%	36	3.4%	30	2.8%	90	8.5%	89	8.4%
1000	53	5.1%	42	4.0%	7	0.7%	9	0.8%	46	4.3%	33	3.1%
2000	1	0.1%	0	0.0%	0	0%	0	0.0%	1	0.1%	0	0.0%
4000	0	0.0%	1	0.1%	0	0%	0	0.0%	0	0.0%	1	0.1%