

NOTE THAT THIS PORTFOLIO HAS BEEN ANONYMISED AND PAGE NUMBERING TOGETHER WITH THE ACTUAL EVIDENCE PRESENTED HAS BEEN REMOVED. PAGE BREAKS HAVE ALSO BEEN REMOVED TO REDUCE THE FILE SIZE FROM THE ORIGINAL.

IT IS OFFERED AS BUT ONE EXAMPLE OF AN ACCEPTABLE ROUTE-ONE PORTFOLIO PRESENTATION.

**Application for the
Association of Clinical Scientists (ACS)
Certificate of Attainment**

Portfolio of Evidence

Xxxxxx Xxxxxxx

Audiology Unit

Yyyyyy Hospital

Zzzzzzzzzzzzz

Modality: Audiology
Submodality: not applicable

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COVERING REPORT

My scientific career began in 1992 when I embarked on a three-year BSc (Hons) degree at XXXXXXXXX University. Following this I studied for two masters (MSc) degrees (Neuroscience 1996-7, University of XXXXXX; audiology 1997-8, University of XXXXXXX). All these courses have contained significant research and analytical components. My Grade A training as a Clinical Scientist began in September 1997 when I started employment with XXXXXXXX NHS Trust (XXXXXXX Hospital), where I have been employed ever since. The first year of grade A training consisted of the Audiology MSc. Upon completion of the Audiology MSc, CAC (original scheme) training was undertaken, principally at XXXXXXXX Hospital, from September 1998. Apart from in-house training at XXXXXXXX Hospital, I had numerous secondments at other Audiology departments within the UK. Adult Rehabilitation and Diagnostic Audiovestibular Assessment (DAV) practical components of the CAC were passed in October 1999 at XXXXXX Hospital and the CAC written paper was passed in July 1999. Paediatric Audiology practical components were passed in March 2000 following two further short secondments (CHAC in XXXXXXXXXX Hospital).

Following successful completion of the CAC examinations, I was given a permanent post as an Audiological Scientist at XXXXXXXXX Hospital. This post was nationally assessed by a Consultant Audiological Scientist (Xxxx XXXXXXXX), initially at Grade B 8-10 from April 2000. In light of additional duties and responsibilities, regrading was made to B12 (April 2001), and then B 14-16 (April 2002), my present grading. Please refer to my curriculum vitae (Appendix 8) for further information.

**COMPETENCES REQUIRED FOR
CLINICAL SCIENTISTS TO ATTAIN STATE REGISTRATION**

MODALITY:	<i>Audiology</i>	SUBMODALITY: (if applicable)	<i>N/A</i>	APPLICANT'S NAME:
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APPENDIX 1

This set of documents must be completed and returned in your portfolio.
Please complete the three header sections above on each page.
Refer to the Specific Competences document for guidance in completing this document.
Use typescript or black ink and block capitals for all sections.

EXPERIENCE: The candidate should be able to demonstrate that he/she has worked in an environment that has enabled the individual to receive training and gain experience relevant to the competences set out below.

SCIENTIFIC

AREA OF COMPETENCE	INDICATE SECTION(S) IN PORTFOLIO WHERE COMPETENCE IS DEMONSTRATED
<ul style="list-style-type: none"> understanding the science that underpins the specialty (modality) and the broader aspects of medicine and clinical practice 	p 3
<ul style="list-style-type: none"> demonstrating a strong base of knowledge appropriate to the specialty and to the investigations and therapeutic options available 	3
<ul style="list-style-type: none"> experience of searching for knowledge, critical appraisal of information and integration into the knowledge base 	3
<ul style="list-style-type: none"> ability to apply knowledge to problems associated with the routine provision, and development, of the service 	4
<ul style="list-style-type: none"> ability to identify the clinical decision which the test/intervention will inform 	4
<ul style="list-style-type: none"> ability to make judgements on the effectiveness of procedures 	5
<ul style="list-style-type: none"> application of the knowledge base to the specialty (modality) and to the range of procedures/investigations available 	5

COMPETENCES REQUIRED FOR CLINICAL SCIENTISTS TO ATTAIN STATE REGISTRATION		
MODALITY:	Audiology	APPLICANT'S NAME:
	SUBMODALITY: (if applicable)	

CLINICAL		INDICATE SECTION(S) IN PORTFOLIO WHERE COMPETENCE IS DEMONSTRATED
AREA OF COMPETENCE		
<ul style="list-style-type: none"> ability to provide interpretation of data and a diagnostic (therapeutic) opinion, including any further action to be taken by the individual directly responsible for the care of the patient 		P6
<ul style="list-style-type: none"> understanding of the wider clinical situation relevant to the patients presenting to his/her specialty 		6
<ul style="list-style-type: none"> ability to develop/devise an investigation strategy taking into account the complete clinical picture 		7
<ul style="list-style-type: none"> understanding of the clinical applications of his/her specialty and the consequences of decisions made upon his/her actions/advice 		7
<ul style="list-style-type: none"> awareness of the evidence base that underpins the use of the procedures employed by the service 		7

**COMPETENCES REQUIRED FOR
CLINICAL SCIENTISTS TO ATTAIN STATE REGISTRATION**

MODALITY:	<i>Avulology</i>	SUBMODALITY: (if applicable)	APPLICANT'S NAME:
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TECHNICAL	
AREA OF COMPETENCE	INDICATE SECTION(S) IN PORTFOLIO WHERE COMPETENCE IS DEMONSTRATED
<ul style="list-style-type: none"> understanding of the principles associated with a range of techniques employed in the modality 	p 8
<ul style="list-style-type: none"> knowledge of the standards of practice expected from these techniques 	8
<ul style="list-style-type: none"> experience of performing these techniques 	8
<ul style="list-style-type: none"> the ability to solve problems that might arise during the routine application of these techniques (troubleshooting) 	9
<ul style="list-style-type: none"> understanding of the principles of quality control and quality assurance 	10
<ul style="list-style-type: none"> experience of the use of quality control and quality assurance techniques including restorative action when performance deteriorates 	10

**COMPETENCES REQUIRED FOR
CLINICAL SCIENTISTS TO ATTAIN STATE REGISTRATION**

MODALITY: <i>Autology</i>	SUBMODALITY: (if applicable)	APPLICANT'S NAME:
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RESEARCH AND DEVELOPMENT		INDICATE SECTION(S) IN PORTFOLIO WHERE COMPETENCE IS DEMONSTRATED
AREA OF COMPETENCE		
<ul style="list-style-type: none"> ability to read and critically appraise the literature 		<i>p 12, 11, 14-16</i>
<ul style="list-style-type: none"> ability to develop the aims and objectives associated with a project 		<i>12, 11, 14-16</i>
<ul style="list-style-type: none"> ability to develop an experimental protocol to meet the aims and objectives in a way that provides reliable and robust data (i.e. free of bias) 		<i>12, 11, 14-16</i>
<ul style="list-style-type: none"> ability to perform the required experimental work ability to produce and present the results (including statistical analysis) 		<i>12, 11, 14-16</i>
<ul style="list-style-type: none"> ability to critically appraise results in the light of existing knowledge and the hypothesis developed and to formulate further research questions 		<i>13, 11, 14-16</i>
<ul style="list-style-type: none"> ability to present data and provide a critical appraisal to an audience of peers – both spoken and written 		<i>13, 11, 14-16</i>

**COMPETENCES REQUIRED FOR
CLINICAL SCIENTISTS TO ATTAIN STATE REGISTRATION**

MODALITY:	<i>Anatomy</i>	APPLICANT'S NAME:
SUBMODALITY: (if applicable)		

COMMUNICATION	
AREA OF COMPETENCE	INDICATE SECTION(S) IN PORTFOLIO WHERE COMPETENCE IS DEMONSTRATED
<ul style="list-style-type: none"> ability to assess a situation and act accordingly when representing the specialty 	p17
<ul style="list-style-type: none"> ability to respond to enquiries regarding the service provided when dealing with clinical colleagues 	17
<ul style="list-style-type: none"> ability to communicate with patients, carers and relatives, the public and other healthcare professionals as appropriate 	17
<ul style="list-style-type: none"> ability to communicate the outcome of problem solving and research and development activities 	17
<ul style="list-style-type: none"> evidence of presentation of scientific material at meetings and in the literature 	18

**COMPETENCES REQUIRED FOR
CLINICAL SCIENTISTS TO ATTAIN STATE REGISTRATION**

MODALITY:	<i>Anology</i>	SUBMODALITY: (if applicable)	APPLICANT'S NAME:
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PROBLEM SOLVING	
AREA OF COMPETENCE	INDICATE SECTION(S) IN PORTFOLIO WHERE COMPETENCE IS DEMONSTRATED
• to assess a situation	<i>p19</i>
• determine the nature and severity of the problem	<i>19</i>
• call upon the required knowledge and experience to deal with the problem	<i>19</i>
• initiate resolution of the problem	<i>19</i>
• demonstrate personal initiative	<i>20</i>

MANAGEMENT	
AREA OF COMPETENCE	INDICATE SECTION(S) IN PORTFOLIO WHERE COMPETENCE IS DEMONSTRATED
• to understand the principles of management	<i>p21</i>
• to understand the principles of quality assurance, audit, safety and accreditation relevant to a specific discipline	<i>21</i>

Note:

The above are the generic competences that must be met by all Clinical Scientists. These competences have also been mapped onto specific subjects. Copies of these can be obtained from the ACS Administrative Office.

SCIENTIFIC COMPETENCES

Competence Area 1

Understanding the science that underpins the speciality (modality) and the broader aspects of medicine and clinical practice.

1. This has been achieved through completion of an Audiology MSc, also the BAAS Certificate of Audiological Competence, in particular through secondments to other centres (see page XX).
2. Understanding the broader aspects of the discipline has been achieved in my present post by close working with ENT and Physiotherapy departments through multidisciplinary dizziness clinics. My grade A training included paediatric testing in the community with my CAC Supervisor and a Consultant Community Paediatrician specialising in Audiology.
3. Understanding broader issues such as surgical contraindications, the need for CT and MRI scanning and psychology services, have been achieved through my cochlear implant work.

Competence Area 2

Demonstrating a strong base of knowledge appropriate to the speciality and to the investigations and therapeutic options available.

This competence area has been covered by:

1. MSc Audiology.
2. Completion of BAAS CAC.
3. Grade B experience with vestibular/DAV assessment (and contribution to treatment programmes), cochlear implants and adult rehabilitation.
4. My involvement in roles as co-ordinator for vestibular rehabilitation and vestibular assessment require a good understanding of the appropriate investigations and options available. I have also acquired an appreciation of the therapeutic options available by understanding the interface between Audiology and other professionals. I have close links in my current post with Hearing Therapy, Speech Therapy, Psychology services, and Physiotherapy.

Competence Area 3

Experience of searching for knowledge, critical appraisal of information and integration into the knowledge base.

1. Literature searches using Medline, library services and internet resources for three degrees/four dissertations.
2. Work toward these dissertations necessitated integration of new knowledge of different drafts as each project evolved.

Competence Area 4

Ability to apply knowledge to problems associated with the routine provision, and development, of the service.

1. During my career as a Grade B Audiological Scientist, I have made a significant contribution to the development of the vestibular service. For example, the service was initially fairly prescriptive, but there is now increased flexibility and 'smoother' throughput of patient activity between ENT, Audiology and Physiotherapy. ENT Consultants are happy for the Physiotherapist specialising in vestibular rehabilitation and myself, to refer patients to one another without having to refer via ENT. The service has also developed in terms of progression from vestibular assessment (e.g. electronystagmography) to contributing to individual treatment programmes. This may take the form, for example, of either the Epley particle repositioning manoeuvre for benign paroxysmal positional vertigo, or tailored vestibular rehabilitation exercises.
2. Ongoing contribution to implant services, working closely with the Cochlear Implant Co-ordinator. For example, on a regular basis, we look into the running of monthly ENT/Audiology implant assessment clinics, to determine how these can be done most efficiently, particularly in consideration of patients who travel some distance (e.g. patients travelling from XXXXXXXX).

Competence Area 5

Ability to identify the clinical decision which the test/intervention will inform.

Use of a range of test procedures necessitates my use of appropriate clinical decision making:

1. I have substantial experience with routine use of real ear measurements for conventional (analogue) and programmable (digital/modern technology hearing aids). This informs me as a clinician (and the

patient through an appropriate level of communication), whether the hearing aid fitting appropriate or optimal. Based on this, appropriate changes can be made to hearing aid settings or choice of an alternative device may be considered. In some cases, this may involve assessment for consideration for cochlear implantation, and require liaison with others for this purpose.

2. Regular use of electronystagmography (ENG). Upon analysing the results, I write formal reports to the referring Consultant, suggesting further management options. For example, I indicate whether a course of vestibular rehabilitation would be appropriate, or whether additional testing would be recommended.
3. Results from cochlear implant preliminary assessments. For example, if patient is currently outside the criteria for implantation because of performance on speech discrimination tests, decisions are made as to when to repeat testing, or whether any additional intervention at this stage may be beneficial to the patient (e.g. tinnitus counselling).
4. Results from evoked response audiometry. I write to the referring Consultant to advise whether or not there is the suspicion of a non-organic component to the hearing loss. This requires an appreciation of the implications to the patient and clinical resources.

Competence Area 6

Ability to make judgements on the effectiveness of procedures.

1. I have experience at choosing which tests and procedures are most appropriate, or those that will be most effective at, achieving the results which will be most informative for management of the patient. For example, patients are now referred for 'vestibular assessment' rather than 'calorics' as was the case previously (refer also to sections on service development). This necessitates consideration of the effectiveness of different test procedures and implications to patient treatment and management.
2. Results from the tests which I do perform are weighted against informed opinion regarding the utility of the test compared to other options available. For example, use of evoked response audiometry for diagnostic purposes is considered against the use of MRI (the gold standard) in terms of issues such as sensitivity/specificity and possible waiting times for an appointment.

Competence Area 7

Application of the knowledge base to the speciality (modality) and to the range of procedures/investigations available.

1. As part of the cochlear implant assessment programme, I decide which tests perform, and which order of testing is most logical in terms of efficiency of resources and least inconvenience to the patient.
2. Experience of application across specialisms within Audiology itself. For example, vestibular assessment of cochlear implantees.

CLINICAL COMPETENCES

Competence Area 1

Ability to provide interpretation of data and a diagnostic (therapeutic) opinion, including any further action to be taken by the individual directly responsible for the care of the patient.

1. Results for vestibular assessment are identified in terms of central or/and peripheral pathology, site and side of lesion, and central compensation status.
2. Management is indicated in terms of potential appropriateness for vestibular rehabilitation or particle repositioning techniques (e.g. Epley). In terms of further action, I suggest whether further investigations may be useful.
3. I have specific diagnostic opinion depending on the nature of the test procedure. For example, a vestibular assessment report to the referring ENT Consultant may comment on whether patient's medication or other aspects of the history may be contributing to the symptoms.
4. Alternatively, when interpreting auditory brainstem responses, I estimate the threshold of hearing, and judge whether there is material concern regarding the presence of a non-organic component to the reported hearing loss. Again, this information is passed to the referring clinician as appropriate.
5. I know the scope and limits of my own job duties and responsibilities and where this fits in with the role of my line manager and other senior professionals with whom I come into close contact. For example, if a patient being assessed for possible suitability for cochlear implantation draws attention to potential surgical or other issues, I would discuss these either with the Surgeon or Cochlear Implant Co-ordinator, as appropriate.

Competence Area 2

Understanding the wider clinical situation relevant to the patients presenting to his/her speciality.

1. I have an appreciation of patients' other health issues and possible contraindications for further testing. For example, as part of a vestibular assessment, if a patient has neck or back problems this may indicate choice of alternative testing to take into consideration patient comfort and safety. For example this may mean use of body positional testing rather than use of the Hallpike manoeuvre.
2. I provide audiology input to the cochlear implant team. Unanimous agreement is required to proceed with implantation, and therefore even when a patient is audiological suitable, as part of a team I agree to decline based on other clinical issues.

Competence Area 3

Ability to develop/devise an investigation strategy taking into account the complete clinical picture.

1. I have experience at implementing strategies for patients presenting with a suspected non-organic component to the hearing loss. I decide which test/s to perform (and in which order) to gain diagnostic information. For example, this may involve deciding at what point to test a patient's lip-reading ability, and an aided audiogram, and compare this with unaided (pure tone) thresholds and the acoustical properties of the device to determine whether the information presented is reliable. This may require use of objective testing to investigate suspect results (e.g. auditory brainstem responses; neural response telemetry).
2. Deciding when/when not to remap a cochlear implant speech processor. For example, if speech discrimination performance is assessed first, based on the results for this and previous results for that patient, this may highlight the severity of any perceived deterioration in performance.

Competence Area 4

Understanding of the clinical applications of his/her speciality and the consequences of decisions made upon his/her advice.

1. I have developed an understanding of the difficulties presenting to the hearing impaired. For example, I appreciate disappointment to a patient if implantation is declined, and this is weighted against offering an implant to an individual who may have unrealistic expectations.
2. I am aware of the consequences to the dizzy patient if they are advised regarding their condition, and what level of mobility or activities they should participate in. This could have consequences to individuals who are not confident to return to work for fear of future falls.

Competence Area 5

Awareness of the evidence base that underpins the use of the procedures employed by the service.

1. Understanding of the principles underlying real-ear measurements and target requirements for adult hearing aid patients.
2. I have awareness of the limitations of different test techniques. For example, if a patient undergoes a diagnostic ABR assessment, I am aware that MRI is the gold standard but that there may be a lengthy wait for this, and the ABR test may be used as part of a two-stage test strategy.

TECHNICAL COMPETENCES

Competence Area 1

Understanding of the principles associated with a range of techniques employed in the modality.

This has been achieved through the completion of:

1. MSc Audiology.
2. BAAS CAC/ in-house Grade A training.
3. Grade B training and development.

Competence Area 2

Knowledge of the standards of practice expected from these techniques.

1. Competence in all major areas of Audiology covered by the MSc Audiology and BAAS Certificate of Audiological Competence.
2. Test techniques (e.g. procedure for pure tone audiometry; electronystagmography) undertaken in accordance with British Society of Audiology (BSA) protocols.

3. Knowledge of electrical safety standards and calibration standards by one day meeting with Xxxx Xxxx, Senior Physicist, XXXXXXXXXXXX in August 1999, also attendance of three day calibration course at XXXXXXXX Hospital, XXXXXXXX in March 1999.
4. Regular meetings with other Audiological Scientists from Trusts within the area, allow many key issues to be discussed.

Competence Area 3

Experience of performing these techniques.

This experience can be divided principally into two stages:

(1) MSc Audiology/Grade A training

- Distraction testing
- Performance audiometry
- Visual reinforcement audiometry
- McCormick Toy Test
- Otoscopy
- Pure tone audiometry
- Aided audiometry
- Tympanometry (diagnostic)
- Otoacoustic emissions
- Acoustic reflexes
- Speech audiometry
- Electronystagmography (ENG)
- Caloric irrigation (air; water)
- Dynamic posturography testing (Equitest)
- Dix Hallpike manoeuvre
- Neck positional testing
- Body positional testing
- Impressions for taking ear moulds
- Auditory brain stem responses - diagnostic
- Auditory brain stem responses - threshold

(2) Grade B Scientist

Many of the techniques listed above. Additionally:

- Real ear measurements
- Ear canal stimulation
- Speech discrimination assessment
- Cochlear implant speech processor programming
- Cochlear implant electrode impedance testing
- Particle repositioning - Epley manoeuvre
- Vestibular habituation exercises - Brandt Daroff
- Cortical evoked response audiometry

Competence Area 4

The ability to solve problems that might arise during the routine application of these techniques (troubleshooting).

This is encountered on a regular basis as part of my current Audiological Scientist post.

Example 1:

Vestibular assessment. If ENG traces are poor, I systematically establish whether the problem is with the recording equipment, patient preparation, faulty electrodes, etc.

Example 2:

If a cochlear implant patient reports that the implant is not working, I need to establish whether this is a simple matter of poor batteries rather than, for example, map corruption or the processor itself not working, versus processor programming issues.

Competence Area 5

Understanding of the principles of quality control and quality assurance.

1. I attend the Cochlear Implant Audit, to check procedures against local and national protocol. This is also an ideal venue for voicing ideas for future quality standards or investigating potential areas for weakness.

2. Conformance to British Society of Audiology Recommended Procedures.
3. Tests and patient management conducted in accordance with Trust Protocols.
4. Calibration of equipment used for (POCIA) assessment and review of speech discrimination for cochlear implantees or candidates.

Competence Area 6

Experience of the use of quality control and quality assurance techniques including restorative action when performance deteriorates.

1. Cochlear implant patient programme maps are stored on PC. Data is backed up onto floppy discs, and adequate supplies of replacement speech processors are kept in stock. This means that if a patient contacts me reporting a faulty processor, I can load their settings onto a replacement and arrange for this to be delivered.
2. Diagnostic audiovestibular assessment test results are stored on PC. Written reports held on departmental database, with additional paper copy as further backup.
3. Ongoing training as developments occur. For example, I work with the Cochlear Implant Co-ordinator when new speech processor types are introduced.
4. Attendance at national meetings, and regular implant workshops, to compare the work I do compared to Scientists working at other centres.

RESEARCH AND DEVELOPMENT COMPETENCES

Competence Areas 1-6

These are covered by my academic career. These skills have been utilised in my CAC training (e.g. completion of the written examination), and my current Grade B position (e.g. research into running vestibular services, vestibular treatments such as particle repositioning and the relationship between implants and dizziness, or implants and tinnitus).

Academically, I am qualified across a broad spectrum of disciplines (Psychology, Neuroscience, and Audiology).

Psychology

Taught components: Psychological Testing, Statistics and Methodology; Brain and Behaviour, Cognitive Psychology, Industrial Psychology, Psychopathology, Social Psychology, Personality, Philosophical Psychology.

Research component (Experimental Neuropsychology) for dissertation.

Research paper published based on this:

List of papers cited here.

Neuroscience

Awarded Medical Research Council international advanced course studentships.

Neuroscience background transcends traditional disciplines.

Taught components: Neuropsychology, Imaging Techniques, Physiology, Pharmacology, Neuropathology and Clinical Neurology, Anatomy/developmental anatomy, Statistics & Methodology.

Research components (Physiology; Neuropathology) for two written dissertations.

Audiology

Awarded Audiological Scientist Trainee post.

Taught components: Clinical Otology, Adult Rehabilitation, Sound Perception and Physiology, Paediatric Audiology; Diagnostic audiovestibular assessment, Acoustics, Statistics.

Research Component: Speech intelligibility rating in cochlear implanted children:

Specific competencies:

Competence Area 1

Ability to read and critically appraise the literature.

This has been achieved via:

1. BSc(Hons) Psychology

2. MSc Neuroscience
3. MSc Audiology
4. CAC written paper
5. Grade B research and development for vestibular service development.

Competence Area 2

Ability to develop the aims and objectives associated with a project.

1. Four written theses submitted in part fulfilment of BSc and both MSc degrees.
2. Development of vestibular services post-CAC.

Competence Area 3

Ability to develop an experimental protocol to meet the aims and objectives in a way that provides reliable and robust data (i.e. free of bias).

1. All four degree dissertations required ongoing refinement of project in view of pilot study preliminary findings, literature reviews, etc.
2. Preparation of written paper (*paper cited here*) necessitated refining previous written material (BSc(Hons) Psychology dissertation) for style and presentation which would be appropriate for peer reviewed journal.

Competence Area 4

Ability to perform the required experimental work ability to produce and present the results (including statistical analysis).

1. I have acquired substantial experience at designing and running experiments, across a number of disciplines. This has required consideration of power analysis, methodology and statistical interpretation.
2. Experimental work has been formally taught on all three degree courses. Results have been presented both written and orally (see page XX).
3. Statistical analysis required for all four degree theses (including Analysis of Variance (ANOVA), post ANOVA tests (e.g. Tukey test), also analysis of non-parametric data (e.g. intraclass correlation coefficients).

Competence Area 5

Ability to critically appraise results in the light of existing knowledge and the hypotheses developed and to formulate further research questions.

Based on experimental data from theses, discussion sections highlighted further areas for investigation, or ideas for future research in the relevant field.

Competence Area 6

Ability to present data and provide a critical appraisal to an audience of peers – both spoken and written.

1. All theses have been written and orally presented to the qualifying department.
2. Successful publication of paper in peer reviewed scientific journal (*Paper cited here*).

Publications

References to papers listed here.

Scientific Research

Research listed here.

PRESENTATIONS

At XXXXXXXX XXXXXXXX (2000-2), oral presentations (with PowerPoint) have been given to the Audiology Department as part of continuing professional development (CPD) lunchtime seminar meetings:

1. Speech Audiometry
2. Vestibular Assessment/findings
3. Vestibular Rehabilitation

Presentation to ENT:

1. Contribution of vestibular assessment and ENG to patient management.

Presentations 1997-8 during MSc Audiology

1. Seminar group. Is Meniere's disease a single entity?
2. Summary of MSc project background/findings/interpretations/conclusions

Presentations 1996-7 during MSc Neuroscience

1. Talk given on central visual dysfunction (e.g. agnosias)
2. Talk given on second messenger systems (pharmacology)
3. Summary of MSc project (Physiology)
4. Summary of MSc project (Neuropathology)

Presentation 1995 during BSc(Hons) Psychology

1. Summary of BSc project

LABORATORY SKILLS

Date and locations cited here.

Facilities used for preparation of dichotic listening materials for BSc thesis

Animal behavioural study of sound localisation in normal and cortically blind ferrets (MSc project).

Observation of cellular recording in ferret deep layer superior colliculus.

Immunohistochemistry for sections of human central frontal cortex, and double immunohistochemistry. Microscopic examination of sections stained for FAS-L/FAS-R, recording presence as a function of remaining neurons and glia (MSc project).

Observation of dissection of adult and child human brains.

Observation of basal ganglia lesioned rats: effects of rotation and disinhibition.

Observation of single cell recording for sodium channel in guinea pig.

Neuroanatomical dissection of embryonic mouse brain.

COMMUNICATION COMPETENCES

Competence Area 1

Ability to assess a situation and act accordingly when representing the speciality.

As a Grade B Scientist I am the departmental representative in multidisciplinary dizziness clinics held between ENT, Audiology and Physiotherapy. I need to judge what audiological input is required by the team, not just in terms of which tests are performed and the interpretation of test results, but also how these are weighted against other tools at the disposal of the team, and contribute to formulation of individual treatment programmes.

Competence Area 2

Ability to respond to enquiries regarding the service provided when dealing with clinical colleagues.

As sole tester for vestibular assessment, I welcome comments, questions and queries throughout all stages through the patient process from referral by ENT to ultimate discharge. I also work very closely with my line manager regarding the wider work of implant services, in terms of feedback to fellow professionals on the implant team (e.g. surgeons, speech and language therapists), patients and other services.

Competence Area 3

Ability to communicate with patients, carers and relatives, the public and other healthcare professionals as appropriate.

For vestibular services, adult rehabilitation, and implant services, I judge what information is appropriate for the patient, and this is explained in terms that the patient and/or carer will understand, but also sensitivity to the requests and wishes of the overall care or management of the patient (e.g. ENT). For example, if from vestibular assessment results indicate central pathology, care is taken to not alarm the patient or divulge any information which could cause any distress to the patient, or be misconstrued in any way.

Competence Area 4

Ability to communicate the outcome of problem solving and research and development activities.

This is achieved through regular meetings between my line manager and myself, monthly meetings with the cochlear implant team, and meetings between myself and the Physiotherapist specialising in vestibular rehabilitation.

Competence Area 5

Evidence of presentation of scientific material at meetings and in the literature.

As Grade B Scientist, I have made presentations to the department:

1. Vestibular assessment (also presented separately to ENT meeting)
2. Vestibular rehabilitation (joint with colleague from Physiotherapy)
3. Speech audiometry
4. Informally, I present the results of e.g. literature searches on a particular topic for discussion at departmental cochlear implant team meetings.

PROBLEM SOLVING COMPETENCES

Competence Area 1

To assess a situation.

For example, if a cochlear implant patient attends, reporting that they are suddenly unable to hear clearly with their speech processor, I fault find established in a logical, methodical manner to determine the origin or potential cause of a problem, and rectify the situation accordingly.

Competence Area 2

Determine the nature and severity of the problem.

I have an understanding and appreciation of the implications to the patients and their relatives and wider social framework, and consequences to the wider clinical picture, depending on what action has been taken.

Competence Area 3

Call upon the required knowledge and experience to deal -with the problem.

1. Experience from previous problems and their resolution.
2. Application of knowledge between specialisms within Audiology.

Competence Area 4

Initiate resolution of the problem.

1. In my Grade B post I adopt a "proactive" attitude, and gauge possible future events before an issue becomes a 'problem' in the first place.
2. Once a problem has been established, I work in close accordance with my line manager to discuss the situation, and see the problem through to final resolution.
3. For certain situations, I may be the only cover within the department with the appropriate background knowledge and experience required to approach the problem.

Competence Area 5

Demonstrate personal initiative.

I have to take initiative to prioritise and decide which queries can wait, and in the event of urgent situations what temporary or short term intervention is required to prevent any future difficulties.

MANAGEMENT COMPETENCES

Competence Area 1

To understand the principles of management.

1. Three day management course completed at XXXXXXXXXXXX XXXXXXXXXXXX, XXXXXXXXX, January 1999, as part of my CAC training.
2. Currently day-to-day supervisor for DAV component of CAC for departmental Trainee Audiological Scientist.
3. Organiser of CAC Secondments locally for visiting Trainee Audiological Scientists, and Easter placements for XXXXXXXXX University MSc Audiology students.
4. Some aspects have been formally taught through my Audiology MSc (e.g. management of change).
5. Proactive role in departmental implant and vestibular services.

Competence Area 2

To understand the principles of quality assurance, audit, safety and accreditation relevant to a specific discipline.

1. Knowledge of department's accreditation status and developments/changes, for CAC training centres.
2. Trust policies regarding quality service and patient care provision and issues such as patient confidentiality.
3. Time spent with Medical Physics as Grade A Trainee regarding electrical safety etc.

CAC SECONDMENTS/PLACEMENTS

Xxxxxxxx Infirmery

Secondment Supervisor: Mr Xxxxx Xxxxxx, Consultant Audiological Scientist. Adult Rehabilitation and DAV components (hearing aid (HA) clinic, hearing aid fitting and review, observation of hearing therapy, vestibular assessment). Also observed running of in-house ear mould laboratory facilities. 5 days Dates: February 1999

Xxxxxxxx Hospital

Secondment Supervisor: Dr Xxxx Xxxxxx, Consultant Audiological Scientist. DAV component: vestibular assessment, diagnostic and threshold evoked response audiometry (ERA), observed cortical ERA. 6 days Dates: April/May 1999

Xxxxxxxx Hospital

Secondment Supervisor: Mr Xxxxx Xxxxxx, District Audiological Scientist. Paediatric Audiology: visual reinforcement audiometry (VRA), aided audiograms, Adult Rehabilitation (probe mic placements, hearing aid fitting and real ear measurements), threshold ERA, neonatal otoacoustic emissions (OAEs). Visited local Council and gained wider appreciation of services to the hearing impaired. 5 days Dates: April 1999

Xxxxxxxx Hospital

Secondment Supervisor: Mr Xxxxxx Xxxxxx, Principal Audiological Scientist. DAV component: audiovestibular assessment, including diagnostic tympanometry/acoustic reflexes and speech audiometry for all patients. 2 days Dates: April 1999

Xxxxxxxx Hospital

Secondment Supervisor: Mr Xxxxxx Xxxxxx, Senior Audiological Scientist. DAV/AR/Paediatric components: HA clinic, vestibular assessment, OAEs. 3 days Dates: April 1999

Xxxxxxxx Hospital

Secondment Supervisor: Dr Xxxxx Xxxxxx, Consultant Audiological Scientist. Paediatric Audiology component: VRA in Hospital and community clinics, OAEs, neonatal ABR screening. 5 days Dates: May 1999 (CAC(I) practical examinations Oct 1999).

Xxxxxxxx Clinic, Xxxxxxxx

Secondment Supervisor: Mrs Xxxxx Xxxxxx, Principal Audiological Scientist. Paediatric Audiology components (above 18 mths, below 18 mths): VRA, distraction testing, tympanometry, otoscopy, McCormick toy test. 2 days Dates: January 2000

Xxxxxxx Hospital, Xxxxxxxx

Secondment Supervisor: Dr Xxxxxx Xxxxxx, Consultant Audiological Scientist Paediatric Audiology components (above 18 mths, below 18 mths): VRA, distraction testing, tympanometry, otoscopy, McCormick toy test. 3 days Dates: March 2000

CLINICAL SCIENTIST TRAINING (GRADE A)

- Completion of BAAS Certificate of Audiological Competence (CAC). Based at Xxxxxxxx Hospital. CAC (I not II) Supervisor/Line Manager: Mr Xxxxxx Xxxxxx, Principal Audiological Scientist.
- Components completed by practical examination: Adult Rehabilitation, Diagnostic Audiovestibular assessment (DAV), Paediatrics (under 18 mths), Paediatrics (above 18 mths). AR and DAV passed October 1999, Paediatric components passed March 2000).
- Completed (and passed) CAC written examination Summer 1999
- Management Course, Xxxxxxxx, January 1999
- Calibration Course, Dr Xxxxx Xxxxxx, Xxxxxxxx Hospital Xxxxxxxx 23-25.03.99

- Calibration (theory and practice), XXXXXXXX Medical Physics 17-18.06.99
- Employed between October 1999 and March 2000 as Associate Scientist, began work with adult cochlear implants and began development of DAV/vestibular services.

CLINICAL SCIENTIST TRAINING (GRADE B)

Refer to Curriculum Vitae for details of present and previous duties and responsibilities. Line Manager: XXXXX
XXXXX, Principal Audiological Scientist/Cochlear Implant : Co-ordinator XXXXXX XXXXXX