

Biomedical Scientist Education & Training

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Background

- A presentation developed for student/trainee Biomedical Scientists, especially those engaged on undergraduate training programmes within the Surrey Pathology Network.
- Supports the Health Professions Council (HPC) Standards of Proficiency and IBMS Certificate of Competence Portfolio

HPC Standards of Proficiency states:

- **1a: Professional autonomy and accountability**
- Registrants biomedical scientists must:
- 1a.5 know the limits of their practice and when to seek advice
- - be able to assess a situation, determine the nature and severity of the problem and call upon the required knowledge and experience to deal with the problem
- - be able to initiate resolution of problems and be able to exercise personal initiative

Also states:

- Registrants biomedical scientists must:
- 1a.8 understand the need for career-long self-directed learning

Application

- What does this mean? How do we translate this into practice?
- 1a.5 states “know the limits of their practice”
 - This changes with time.
 - Undergraduate/pre-registration education & training
 - Post-graduate education & training

Undergraduate/pre-registration education & training

- BSc BMS studies – basic principles, applied knowledge, disease theory
- Professional tutorials – in support of HPC Standards
- Work placement – designed to support attainment of IBMS Certificate of Competence

Post-graduate education & training

- Specialist knowledge & skills
 - Microbiology
 - Haematology & Blood Transfusion
 - Biochemistry
 - Histology
 - Cytology
- 18 – 24 months portfolio development

Specialist training

- Guided by policies & procedures
- Standard Operating Procedures (SOP's) are our "bible"
- Identify what, when & where we do things
- Question how & why we do things
- Includes experiential learning
- Investigative/experimental learning

Assessing situations & resolving problems

- 1a.5 sites example of assessing a situation and determining the nature & severity of a problem and call upon knowledge & skills to deal with it. This will change with time & experience, but in order to do so we must be well versed in the science behind what we do and apply an analytical approach to problem solving (root cause analysis).

Learning experiences

- Taught courses, including:
 - Basic education, e.g. BSc, FD
 - Post-graduate courses, e.g. MSc, PGDip
 - Management courses, e.g. DMS, MBA

Learning experiences

- Short courses, including:
 - Those designed to support development of Specialist knowledge & skills, e.g.
 - Parasitology
 - Coagulopathy
 - Analyser operation & maintenance

Learning experience

- In house education & training
 - Basic training, including multidisciplinary rotation
 - Induction & Mandatory Training
 - E&T in support of KSK (see later slides)
- Specialist training
 - 18 – 24 months in single discipline
 - Develop competency to work unaided without supervision (incl. shift & on-call)

Learning experiences

- Highly specialist education & training, e.g. advanced training in techniques for one section of a department
 - Histology dissection
 - Coagulopathy investigations
 - Point of Care Testing management

Learning experiences

- Continuing Professional Development (CPD)
- Much of what we do once qualified can be classed as CPD
 - Experiential learning
 - Group meetings, either as member or presenter
 - Teaching/tutoring others

CPD (cont)

- Reading: professional journals, textbooks, trade publications, CSO Bulletin, etc
- Websites: ASPH, IBMS incl. discussion forums, etc
- www.Pathmax.com Pathology educational site
- www.labtestsonline.org.uk site providing info on all lab tests
- www.biomedscience.co.uk site containing many SOP's, H&S info, CPD activities, etc
- www.noshcs.co.uk National Occupational Standards in Healthcare Science (from May 2005)

Agenda for Change: implications for learning

- Knowledge & Skills Framework (KSF)
- Tool for identifying what knowledge & skills are needed for every job in the NHS
- 6 common core dimensions to all jobs

KSF: core dimensions

- 1 Communication
- 2 Personal and people development
- 3 Health, safety and security
- 4 Service improvement
- 5 Quality
- 6 Equality and diversity.

KSF: specific dimensions

- Plus an additional 24 specific dimensions, only some of which apply to any one job
- Usually, not more than 7 apply to any one job
- Health & Wellbeing
- Estates & Facilities
- Information & knowledge
- General

KSF: specific dimensions applicable to BMS

- Example: HWB8 Biomedical investigations & intervention
- See "Career Framework for Healthcare Scientists" for further details
- Four levels for each dimension with indicators to describe how k & s need to be applied at that level
- Plus examples of application specific to that job
- Used in development review process to ensure lifelong learning and aid service development

Role of the laboratory in learning

- To create an environment where learning can take place/is required to take place
- To ensure learning facilities are appropriate to needs of learner
- To support the learner in whatever way possible

Responsibility of learner

- Responsible for own development & may be responsible for others development
- Apply learning style constantly
- Seek support from others incl. line manager
- Take on role of lifelong learner
- Record learning taking place (personal development portfolio & reflective diary?)
- *Disce ut proficias* (Learn, that you may improve)

Links

- www.ashfordstpeters.nhs.uk seek the Education & Training section under “Working in Pathology”
- www.ibms.org

Further learning

- Using the internet, investigate “theory of learning”
(http://www.brookes.ac.uk/services/ocsd/2_learntch/theories.html)
- Which theory best suits the way you learn? How does this compare with your fellow students?

Further learning (cont)

- Search the internet for Mandatory Learning & CPD activities in your area over the next three months (start at IBMS and ASPH websites, see also [NHS eLearn website](#)).
- Consider how you might participate in these and gain evidence towards your Portfolio.