

Proposal to establish a new Foundation Year 2 post in Microbiology and Public Health Medicine based in York.

Representation of microbiology and public health medicine has declined within modern undergraduate training programmes offered by UK medical schools over the last decade. This has occurred despite rising tides of infectious disease caused by antibiotic resistant bacteria and rapid spread of new infections around the globe which have delivered a need for increasing numbers of specialists in infection and epidemiology. As a result it is now very difficult to fill specialist training posts at registrar level and to recruit new consultants in both microbiology and public health medicine.

It is therefore proposed to establish an integrated 4 month post where trainees will work in the Microbiology department at York hospital, the Genitourinary Medicine department at Monkgate and the Health Protection Unit on the University of York campus. An example working week is given at the end of this proposal but can easily be amended to meet the interests of individual trainees. Time slots within the week can also be flexed to allow trainees to follow through interesting problems as they arise. This post will give trainees an opportunity to understand how infection affects people both within and outside hospital and to take part in the multidisciplinary work which is required to combat the unique threats that infection poses.

Attachment in Microbiology/Genitourinary medicine.

Training location – The Microbiology department at York Hospital is recognised for training by the Royal College of Pathologists and has 1.5 wte Specialist Registrars. There are two Consultant Microbiologists who supervise trainees. The department offers a comprehensive microbiology, virology and mycology service and is housed in modern, well equipped laboratory facilities. York hospital is a large District General Hospital which includes specialist services in haematology, oncology and renal medicine. The laboratory processes around 170,000 requests per annum. The Genitourinary Medicine service is based at Monkgate and provides a full range of sexual health services including care for HIV patients and screening for Chlamydia.

Knowledge and skills – Infection is a common problem faced by doctors working with patients in all parts of our communities. A sound knowledge of the principles of diagnosis and management of infection, use of antibiotics and other anti-infectives, and prevention of spread of infection through sound infection control practices is essential for all doctor's training.

The trainee would be attached to the Microbiology and Genitourinary Medicine departments for 6 sessions per week. Training would concentrate on

the interface of the microbiology service with other clinical areas. During this time they would gain experience of;

1. The role of the laboratory in the management of individual patients from a variety of hospital and community settings and how to use laboratory services cost effectively.
2. An introduction to the way in which different sample types are processed within the laboratory and the health and safety issues which arise.
3. An ability to recognise how infection causes critical illness and how microbiologists contribute to effective management of these patients.
4. The vital role of infection control in preventing spread of infection through working with infection control nurses.
5. The important role of the microbiologist in working to rationalise use of antibiotics.
6. The epidemiology of sexually transmitted infections and methods to control the spread of these infections.
7. The management of patients infected with HIV.
8. The way in which the microbiology service contributes to the work of the Health Protection Unit through surveillance and outbreak investigation.
9. The career opportunities available to doctors who train in microbiology.

The exact balance of time spent on different aspects of microbiology or genitourinary medicine is flexible. Where, for example, a trainee wished to pursue specialist training in microbiology more time could be devoted to gaining bench skills.

Educational programme - a range of different teaching settings would be used throughout the attachment. These would include;

1. Bench teaching by Biomedical Scientists to demonstrate processing of laboratory samples- to develop practical skills.
2. Clinical handover meetings to discuss individual cases with senior trainees and consultants- to ensure trainees maintain high quality patient records and can communicate with other team members effectively.
3. Shadowing senior trainees and consultants on clinical rounds in intensive care, haematology, renal medicine and neonatal medicine- to increase the trainees understanding of how infection causes critical illness and their ability to prioritise results and provide advice in a timely fashion.
4. Shadowing infection control staff and attending infection control team meetings- to develop basic skills required in all medical careers.
5. Ward visits to review patients with positive blood cultures and other significant microbiological results- to improve the trainees understanding of how laboratory results can be used to ensure high quality patient care and effective use of antibiotics.

6. Weekly tutorials- to assess the trainees core knowledge in microbiology and public health medicine and their presentation skills.
7. Participate in genitourinary medicine clinics and follow samples through into the laboratory- to develop the trainee's skills in diagnosis and management of sexually transmitted infection including HIV.
8. Follow individual cases from microbiology into public health medicine- to improve the trainee's understanding of the impact of infectious disease across population groups.
9. Undertake small audit projects as appropriate- to develop the trainee's appreciation of how audit is used to improve service quality and to assess their ability to evaluate evidence critically.

Attachment to Health Protection Unit

Training Location

The North Yorkshire Health Protection Unit is the local presence of the Health Protection Agency. The Health Protection function is a public health function which concentrates on the protection of the public primarily from infectious illness but also non –infectious hazards such as chemicals and radiation.

The essential elements of the health protection function includes

Surveillance of infection

Outbreak management

Managing the public health consequences of single cases of certain infections such as meningitis, hepatitis B, Legionnaires Disease etc.

Strategic development to improve services around infectious illness

Aspects of emergency planning particularly CBRN incidents

These functions are provided across the whole health community including acute and community facilities and primary care.

Interface with other components

The post-holder would be attached to the Unit for the equivalent of 4 sessions a week over the course of the 4 month block. The integration of the HPU attachment with the microbiology and GUM elements facilitates the opportunity to follow through cases and projects which cut across these specialities to enhance the understanding of the contribution of the different specialist teams to the overall clinical management of a case or problem. This will build upon the strong working relationships between these specialities and also permit cross speciality projects to be devised and supported.

Training Environment

The Unit is based on the York University campus at the Science Park. The post holder will have access to appropriate facilities including desk, computer etc and our library and internet resources. The Unit has recently undergone Faculty Assessment for Public Health SpR / SpT training and has 2 training slots approved. The consultants are registered trainers and a public health registrar is currently in –post. Regular support meetings and topic based tutorial programmes will run throughout the attachment

Knowledge and Skills

Principles of epidemiology (K)

Specific epidemiology of some diseases (K)

Improved understanding of surveillance and how health information is used (K)

Public health management of infections and outbreaks (K / S)

Infection control (K)

Principles of managing a major health crisis such as pandemic flu (K/S)

Audit (S)

Report writing (S)

Understanding of NHS structures (K)

Communication and networking skills (S)

Improved awareness of the wider network of partners involved in maintaining health (K)

Routine Activities of post-holder

Review of routine infectious disease notifications and laboratory reports and action resulting

Responding to queries from the public and a wide range of health professionals

Contact tracing and contact management for certain infectious diseases

Liaison with hospital, community and primary health care teams and others such as schools, prisons etc

Participation in outbreak control (as the opportunity arises)

Participation in training others

Completing a specific small project which may be an audit, a simple needs assessment, a questionnaire survey, or reviewing or developing a care pathway or policy (full support in methodology will be provided)

Opportunity to attend selected senior management meetings to introduce concepts such as influencing change, meetings management etc.

General issues.

No out of hours work is required during this attachment. Out of hours working in other specialties on the trainees rotation may be possible during the time spent in microbiology and public health medicine.

Time will be made available for the trainee to attend generic training for Foundation Year 2 provided by the York Hospital Trust. Final assessment will be organised through the trainee's designated educational supervisor using nationally agreed tools.

Example timetable

	am	pm
Monday	Microbiology lab - handover meeting - ward visits - infection control	GUM clinic
Tuesday	Microbiology lab - bench session - tutorial - ward visits inc. ICU	Public health medicine
Wednesday	Microbiology lab - handover meeting - ward visits - audit work	Public health medicine
Thursday	Microbiology lab - ward visits inc. haematology - bench session	Public health medicine
Friday	GUM clinic	Public health medicine