

So you want to be ... a medical microbiologist

Introduction

Training doctors may have had little contact with medical microbiologists in their undergraduate years, but will inevitably have grappled with some aspect of the investigation, management and prevention of infections in their patients that is the specialist field of the medical microbiologist.

Unlike many other countries, including those in Europe and North America, where practice is entirely laboratory-based, medical microbiology in the UK is the specialty that bridges and encompasses the clinical management of infection and the intelligent application of scientific analysis. In healthcare-based infection control, and in community health protection, microbiologists have to consider the impact of infections in the individual patient and on the rest of the population.

The job

Consultant medical microbiologists work in teams, usually with consultant colleagues and with clinical scientists, healthcare scientists and infection control nurse specialists. The work involves all aspects of the investigation, management and prevention of infection in individuals and communities, so there are close working relationships with pharmacists, clinicians, hospital engineers, bed managers, environmental health officers and health protection specialists.

Every day as a consultant is varied, and is subject to constant interruption with urgent clinical problems in an individual, concerns about infection control or potential outbreaks and discussions about the best application of new techniques in the laboratory.

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While the specialty is very receptive to flexible working, there is a demanding continuity in the management of infected patients that is very satisfying and requires good teamwork. What little on-call work there is can be done from home.

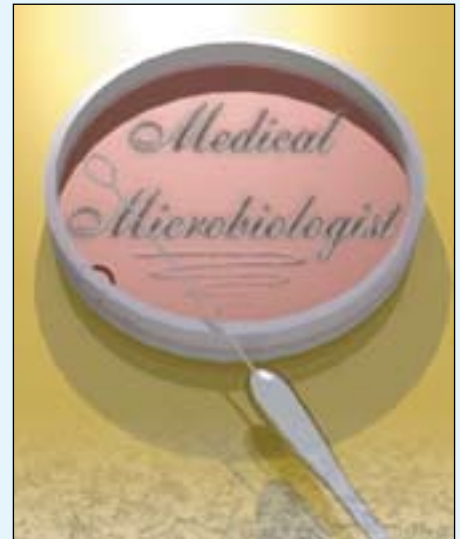
The specialty has great breadth, with opportunities to develop specialist interests in virology, which also has specialist training, mycology and parasitology as well as in the infections in particular clinical fields, such as haematological malignancy, human immunodeficiency virus and sexually transmitted infections or neonatal medicine.

Training

Microbiology has always accepted doctors from a broad range of training backgrounds, as well as those who have a relatively short period of general experience after registration. Postgraduate medical training is in a state of change and for recently qualified doctors microbiology and infection control form part of the core of foundation training. Many trusts now offer microbiology as a 2-week taster or 3–4 month component of foundation year 2, and this may be combined with related specialties that deal with infection.

Specialty training is offered in most deaneries and many have training rotations which offer a range of training and an opportunity to develop preferences for a style of working as a specialist; ranging from the highly specialized environment of a national reference service for a single organism, an academic career with research and teaching as a principal driver, or a general microbiologist working in primary, acute and secondary care. Most microbiologists manage to combine a number of these strands, building a rich and varied career.

Assessment of specialist training takes the form of a written examination after 1 year, after which trainees can choose between bacteriology and virology, and written and practical exams at the end of 3 years. The minimum period for training is 4.5 years, but is 6 years for those who choose joint training in microbiology and infectious



diseases. These trainees need to fulfil the requirements of both specialties, but can take advantage of considerable overlap. Currently Membership of the Royal College of Physicians has been a requirement for all applicants to joint schemes.

Job opportunities

Job opportunities for qualified microbiologists exceed demand at present and the UK supply will not meet the growing demand for microbiologists as infection continues to play a major part in modern health care. A large number of well-trained health-care scientists and clinical scientists already work alongside clinically qualified colleagues and are able to ensure that scientific and technical developments flourish. [BJHM](#)

KEY POINTS

- Medical microbiology captures the span of science and clinical practice.
- Practice is fluid and dynamic, responding to changing microorganisms and global patterns of disease.
- The specialty offers a fulfilling and fascinating career.
- Microbiologists need well-developed people skills, as they are one of the few specialties that seek to influence the practice of other health-care workers.
- Patterns of working are not linear or predictable; every day is different and one needs to be flexible, curious and able to prioritize well.
- Career opportunities exist for generalists, specialists, academics and scientists.