

Clinical genetics

Clinical geneticists are doctors who diagnose and manage families with genetic disorders.

This page provides useful information on the nature of the work, the common procedures/interventions, sub-specialties and other roles that may interest you.

Nature of the work

Clinical geneticists give advice on:

- appropriate management of rare disorders
- genetic testing
- reproductive options e.g. the availability of prenatal testing for a specific disorder
- risk assessment of individuals and genetic counselling of family members

It is a rapidly evolving field with developments in molecular diagnostic techniques and increased knowledge about genetic causes of human disease.

Clinical geneticists do not prescribe or undertake operative interventions themselves. The term is used by the RCP [1] to refer to the work of medical doctors and not non-medical clinical staff (such as genetic counsellors and genomic counsellors [2]).

Clinical geneticists manage conditions such as:

- chromosomal abnormalities, which cause birth defects, mental retardation and/or reproductive problems
- single gene disorders such as cystic fibrosis, muscular dystrophy, Huntington's disease and sickle cell disease [3]
- familial cancer and cancer-prone syndromes such as inherited breast or colorectal [4] cancer and neurofibromatosis
- birth defects with a genetic component such as neural tube defects and cleft lip and palate
- inherited cardiac conditions associated with sudden death
- learning difficulties associated with other problems or a family history

Common procedures/interventions

These include:

- clinical history taking
- physical examination
- genetic testing
- genetic counselling

- performing skin biopsies
- taking clinical photographs
- using computerised databases

Sub-specialties

There are no associated CCT [5] sub specialties of clinical genetics [6].

Clinical geneticists may develop sub-specialty interests such as:

- cancer genetics [6]
- cardiac genetics [6]
- dysmorphology

Want to learn more?

Find out more about:

- the working life [7] of a doctor in clinical genetics [6]
- the entry requirements [8] and training and development [9]

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Pay and conditions

This section provides useful information about the pay for junior doctors (doctors in training), SAS doctors (specialty doctors and associate specialists) and consultants.

Find out more about the current pay scales for doctors [10], and there's more information on the BMA website [11].

NHS employers [12] provides useful advice and guidance on all NHS pay, contracts terms and conditions.

Medical staff working in private sector hospitals, the armed services or abroad will be paid on different scales.

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Where the role can lead

Read about consultant and non-consultant roles in clinical genetics [6], flexible working and about wider opportunities.

Consultant roles

You can apply for consultant roles six months prior to achieving your Certificate of Completion of Training [13] (CCT [5]). You will receive your CCT [5] at the end of your clinical genetics [6] training.

Managerial opportunities for consultants include:

- clinical lead - lead NHS consultant for the team

- clinical director - lead NHS consultant for the department
- medical director - lead NHS consultant for the Trust

Most NHS consultants will be involved with clinical and educational supervision of junior doctors.

Here are some examples of education and training opportunities:

- director of medical education - the NHS consultant appointed to the hospital board who is responsible for the postgraduate medical training in a hospital. They work with the postgraduate dean to make sure training meets GMC standards
- training programme director - the NHS consultant overseeing the education of the local cohort of trainee doctors. This could be the foundation training [14] programme director working within the HEE local office/deanery
- associate dean - the NHS consultant responsible for management of the entirety of a training programme. This role will be also be working within the HEE local office/deanery

SAS doctor roles

SAS doctors (Staff, Associate Specialists and Specialty Doctors) work as career grade specialty doctors who are not in training or in consultant posts. You will need at least four postgraduate years training (two of those being in a relevant specialty) before you can apply for SAS roles.

Find out more about the SAS doctor role [15].

Other non-training grade roles

These roles include:

- trust grade
- clinical fellows

Academic pathways

If you have trained on an academic clinical genetics [6] pathway or are interested in research there are opportunities in academic medicine.

For those with a particular interest in research, you may wish to consider an academic career in clinical genetics [6]. Whilst not essential, some doctors start their career with an Academic Foundation post. This enables them to develop skills in research and teaching alongside the basic competences in the foundation curriculum.

Entry into an academic career would usually start with an Academic Clinical Fellowship (ACF) and may progress to a Clinical Lectureship (CL). Alternatively some trainees that begin with an ACF post then continue as an ST trainee on the clinical programme post-ST4.

Applications for entry into Academic Clinical Fellow posts are coordinated by the National Institute for Health Research Trainees Coordinating Centre (NIHRTCC). [16]

There are also numerous opportunities for trainees to undertake research outside of the ACF/CL route, as part of planned time out of their training programme. Find out more about academic medicine. [17]

The Clinical Research Network [18](CRN) actively encourages all doctors to take part in clinical research.

Clinical genetics [6] is evolving rapidly with the development of molecular diagnostic techniques and

increased knowledge about the contribution of genetics [6] to common disorders.

Research and development opportunities exist both in the clinical and laboratory aspects of the specialty. Academic departments within genetic centres are active in pushing forward scientific and clinical knowledge.

Clinical geneticists also spend a significant amount of time teaching professional colleagues, healthcare students and the public about the genetic contribution to health and disease.

Other opportunities

There are opportunities to be employed by the NHS, academic institutions, private sector, universities, the armed forces, organisations and national governing bodies.

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Job market and vacancies

This section provides useful information about the availability of jobs, finding vacancies and where to find out more.

Job market information

NHS Digital regularly publish workforce statistics which show the number of full time equivalent consultants and doctors in training for each specialty: NHS Digital workforce statistics [19].

Competition ratios for medical specialty training places are published on Health Education England's specialty training webpage [20].

On this section we have information for England only. For information regarding Scotland, Wales and Northern Ireland please click on the links below.

NHS Scotland medical and dental workforce data [21]

NHS Wales medical and dental workforce data [22]

Department of Health, Social Services and Public Safety workforce information for Northern Ireland [23]

Where to look for vacancies

All trainees apply through the online application system Oriol [24]. You will be able to register for training, view all vacancies, apply, book interviews and assessment centres, and manage offers made to you.

All jobs will be advertised on NHS Jobs [25].

The BMJ careers [26] website also advertises vacancies.

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Further information

Organisations

Royal College of Physicians [27]

Royal College of Physicians of Edinburgh [28]

Royal College of Physicians and Surgeons of Glasgow [29]

British Society for Genetic Medicine [30]

Clinical Genetics Society [31]

Real-life stories

Clinical geneticist: a guide to a career in the specialty (BMJ) [32]

Other roles that may interest you

- Palliative medicine [33]
- Paediatrics [34]
- Medical oncology [35]
- Cardiology [36]

Source URL: <https://www.healthcareers.nhs.uk/explore-roles/doctors/roles-doctors/medicine/clinical-genetics>

Links

[1] <https://www.healthcareers.nhs.uk/glossary#RCP>

[2] <https://www.healthcareers.nhs.uk/explore-roles/life-sciences/genomic-counselling>

[3] https://www.healthcareers.nhs.uk/glossary#Sickle_cell_disease

[4] <https://www.healthcareers.nhs.uk/glossary#Colorectal>

[5] <https://www.healthcareers.nhs.uk/glossary#CCT>

[6] <https://www.healthcareers.nhs.uk/glossary#Genetics>

[7] <https://www.healthcareers.nhs.uk/explore-roles/medicine/clinical-genetics/working-life>

[8] <https://www.healthcareers.nhs.uk/explore-roles/medicine/clinical-genetics/entry-requirements-skills-and-interests>

[9] <https://www.healthcareers.nhs.uk/explore-roles/medicine/clinical-genetics/training-and-development>

[10] <https://www.healthcareers.nhs.uk/about-us/careers-medicine/pay-doctors>

[11] <http://bma.org.uk/practical-support-at-work/pay-fees-allowances/pay-scales>

[12] <http://www.nhsemployers.org/your-workforce/pay-and-reward>

[13] https://www.healthcareers.nhs.uk/glossary#Certificate_of_completion_of_training

[14] https://www.healthcareers.nhs.uk/glossary#Foundation_training

[15] <https://www.healthcareers.nhs.uk/i-am/currently-working-health/information-doctors/sas-doctors>

[16] <https://www.nihr.ac.uk/>

[17] <https://www.healthcareers.nhs.uk/i-am/currently-working-health/clinical-academic-careers/clinical-academic-medicine>

[18] <http://www.crn.nihr.ac.uk/>

[19] <https://digital.nhs.uk/data-and-information/publications/statistical/nhs-workforce-statistics>

[20] <https://specialtytraining.hee.nhs.uk/Competition-Ratios>

[21] <http://www.isdscotland.org/Health-Topics/Workforce/Medical-and-Dental/>

[22] <https://statswales.wales.gov.uk/Catalogue/Health-and-Social-Care/NHS-Staff/Medical-and-Dental-Staff>

[23] <https://www.health-ni.gov.uk/articles/staff-numbers>

- [24] <https://www.oriel.nhs.uk/>
- [25] <https://www.jobs.nhs.uk/>
- [26] <http://careers.bmj.com>
- [27] <http://www.rcplondon.ac.uk/>
- [28] <http://www.rcpe.ac.uk/>
- [29] <http://www.rcpsg.ac.uk>
- [30] <http://www.bsgm.org.uk/>
- [31] <http://www.clingensoc.org/>
- [32] <http://careers.bmj.com/careers/advice/view-article.html?id=20022302>
- [33] <https://www.healthcareers.nhs.uk/explore-roles/doctors/roles-doctors/medicine/palliative-medicine>
- [34] <https://www.healthcareers.nhs.uk/explore-roles/doctors/roles-doctors/paediatrics/paediatrics>
- [35] <https://www.healthcareers.nhs.uk/explore-roles/doctors/roles-doctors/medicine/medical-oncology>
- [36] <https://www.healthcareers.nhs.uk/explore-roles/doctors/roles-doctors/medicine/cardiology>