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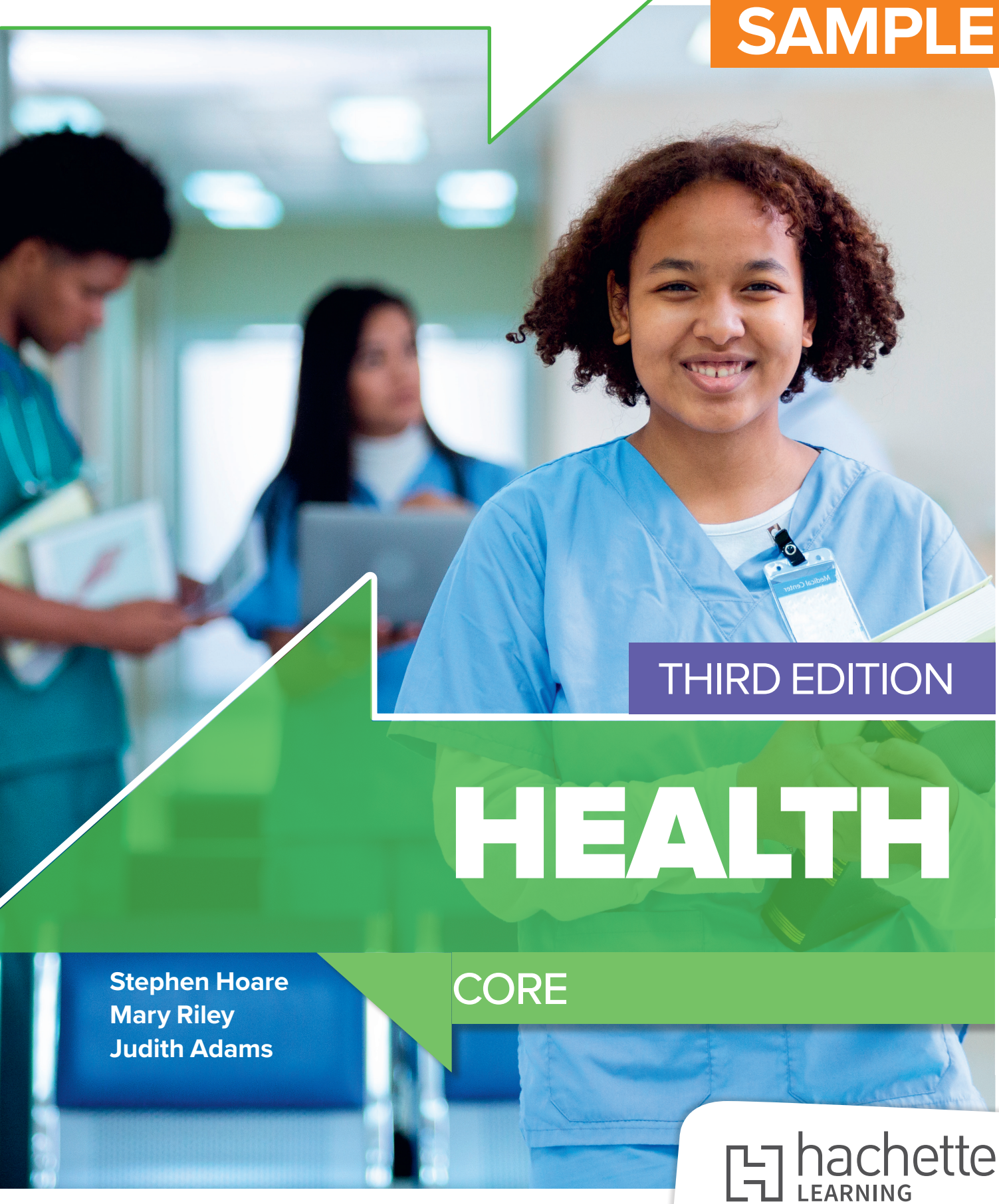

THIRD EDITION

HEALTH

CORE

Stephen Hoare
Mary Riley
Judith Adams

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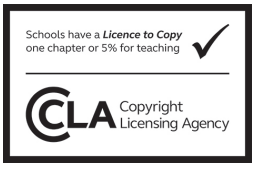

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Answers can be found online at: www.hachettelearning.com/health-and-social-care-3rd-answers

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Stephen Hoare

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Guide to the book

The following features can be found in this book.

Learning outcomes

Core knowledge outcomes that you must understand and learn. These are presented at the start of every chapter.

Key term

Definitions to help you understand important terms.

Reflect

Tasks and questions providing an opportunity to reflect on the knowledge learned.

Test yourself

A knowledge consolidation feature containing short questions and tasks to aid understanding and guide you to think about a topic in detail.

Research

Research-based activities – either stretch and challenge activities, enabling you to go beyond the course, or industry placement-based activities, encouraging you to discover more about your placement.

Practice points

Helpful tips and guidelines to help develop professional skills during the industry placement.

Case study

Placing knowledge into a fictionalised, real-life context. Useful to introduce problem-solving and dilemmas.

Health and safety

Important points to ensure safety in the workplace.

Project practice

Short scenarios and one to three focused activities, at the end of each chapter, reflecting one or more of the tasks that you will need to undertake during completion of the ESP. These support the development of the four core skills required.

Assessment practice

Core content containing knowledge-based practice questions at the end of each chapter.

Answers can be found online at: www.hachettelearning.com/health-and-social-care-3rd-answers

Content area 1: The healthcare sector

Introduction

This unit gives an overview of the healthcare sector, its historical context and development over time. We will discuss the diverse nature of services provided, where they fit into the national framework and how they are funded.

The healthcare sector covers a wide range of organisations and employers as well as a wide range of jobs. We will explore career pathways in the healthcare sector, along with the benefits of evidence-based practice and multidisciplinary team working.

Public health is concerned with protecting, and improving, the health of the population rather than focusing on the health of the individual. We will consider the public health approach to healthcare and how this benefits regional and national population health through prevention and improvement initiatives.

Many areas of healthcare now use advanced technology to deliver care and monitor patients. You may have tried out some of these advances, such as using a health app on your phone; others – including artificial intelligence and assistive computer technology – you may not have experienced yet. We will explore use of technological innovations and evaluate their benefits for patient care and treatment.

Finally, we will look at evidence-based practice and multidisciplinary team working.

Learning outcomes

The core knowledge outcomes that you must understand and learn:

- **1.1** The origins of the healthcare sector and how this has developed into the current healthcare sector
- **1.2** The range of employers and organisations within the healthcare sector
- **1.3** The characteristics of primary, secondary and tertiary healthcare tiers and organisational structure
- **1.4** The different ways in which the sectors are funded
- **1.5** The career pathway opportunities for employment and progression within the healthcare sector
- **1.6** The factors that influence the services accessed by an individual and the impact of potential barriers to accessing healthcare services
- **1.7** The potential impact of external factors on public health
- **1.8** How the use of different developments in technology supports the healthcare sector
- **1.9** Emerging technologies and the potential impacts on care provision
- **1.10** The importance of evidence-based practice and reflective evaluation in the healthcare sector
- **1.11** Multidisciplinary team working in the healthcare sector

1.1 The origins of the healthcare sector and how this has developed into the current healthcare sector

1.1.1 Origins of the healthcare sector in the UK

The creation of the NHS was the result of many years of debate and discussion from the early 1900s onwards. In 1942, Sir William Beveridge, former Liberal MP, produced what has become known as the Beveridge Report. In it he outlined what he described as five 'evils' in society: want (poverty), disease, ignorance (lack of education), squalor (poor housing) and unemployment. Among his proposals to deal with these social problems was the suggestion to set up a National Health Service.

Before the creation of the NHS, patients who found themselves needing a doctor or medical facilities generally had to pay for those treatments and healthcare was very expensive. Many people could not afford to pay for treatment, which had serious health consequences – for example, lower infant survival rates, death from diseases that could be treated but the cost was too expensive and poor dental health.

In 1945, Aneurin Bevan became Health Minister. He campaigned to bring about the NHS in the form we are now familiar with. Bevan said the NHS should be based on the following essential principles:

- everyone should be entitled to use it
- healthcare provided should be free of charge (at the point of use)
- it should be based on need rather than the ability to pay for it.

The National Health Service Act 1946 created a comprehensive health service for England and Wales. The NHS launched on 5 July 1948, and it was the world's first completely free healthcare service. Bevan's NHS was funded under the National Insurance Act of 1911, and it was set up to be funded by taxpayers, who paid a small amount from their wages each week. In June 1948 a leaflet was sent to every household; it explained that the NHS:

> … will provide you with all medical, dental and nursing care. Everyone – rich or poor, man, woman or child – can use it or any part of it. There are no charges, except for a few special items. There are no insurance qualifications. But it is not a 'charity'. You are all paying for it, mainly as taxpayers, and it will relieve your money worries in time of illness.
>
> Source: 'The start of the NHS 1948', Socialist Health Association website

1.1.2 How the healthcare sector has developed and reformed since 1948

1950s	Introduction of charges – due to expenditure exceeding demand – for: • prescriptions • dental care services • eye care services.
1960s and 1970s	Regional and area health authorities created; integration of hospital and community services.
2000s	The NHS 10 Year Health Plan to increase funding, reduce waiting times and improve choice.
2010s	NHS Long Term Plan focused on digital transformation, mental health and personalised care.
2020s	Integrated Care Systems (ICSs) introduced to coordinate health and social care services more effectively and efficiently with a central role in pandemic response.

▲ NHS timeline

The NHS has undergone many changes, updates and reorganisations (see table). Advances in medicine, changing health needs and developments in society have meant the NHS must move forward so that the service continues to function for the future.

In response to increasing costs and expenditure to meet the demand for healthcare and the need to keep up with health innovations, some services now incur charges, for example:

- the prescription charge per item in England is £9.90 at the time of writing
- most hospital trusts now limit the number of free IVF attempts
- only medications and treatments verified by NICE (National Institute for Health and Care Excellence) as 'value for money and cost effective' are funded by the NHS
- there are charges for some dental work (with exemptions for children, pregnant/nursing individuals) and opticians.

The numbers working for the NHS have increased significantly over the years. There are now more than 1.2 million people working for the NHS. For example, in

1948, 11,700 doctors worked for the NHS; today, there are over 150,000 working for the NHS in England alone.

Source: NHS Workforce Statistics, August 2025, available online

Job roles within the NHS have also changed; for instance, the basic personal care that nurses used to provide is now more likely to be provided by healthcare assistants. Further, nursing is now a degree-level profession, and nurses are involved in providing more complex care than was historically given by doctors.

To help address the future demands for services, the government has produced the 'NHS Long Term Plan' to prepare the NHS for meeting the challenges of providing healthcare for the nation. This features more care in the community, promoting overall wellbeing and prevention rather than only treating illness, as well as strategies to challenge health inequalities and deprivation in society.

The NHS Long Term Plan was published in 2019. In 2024, the new Labour government commissioned Lord Darzi to carry out a comprehensive investigation of the problems facing the healthcare system and the current state of the NHS in England. Lord Darzi's report was published in September 2024 and led to the development of a new 10 Year Health Plan for England that was published as a policy paper in July 2025.

Reflect

Find out more about the new 10 Year Health Plan by reading the policy paper 'Fit for the future: 10 Year Health Plan for England – executive summary' on the gov.uk website.

Read the summary document.

- Do you agree with the list of failings?
- Which aspects of the plan do you think are most important? Why?
- The NHS has undergone many drastic changes during the twenty-first century. Discuss with others in your class whether this is a good thing. Do these changes address issues and provide solutions? Does continual change distract from the basic purpose of the NHS?

Private sector healthcare (see Section 1.2) has developed in parallel with the NHS, often providing the same type of treatment and care, but at a cost to the patient.

Private sector healthcare:

- is funded through private medical insurance or individual payments for treatment or care
- continues to expand to meet needs in areas like elective care, diagnostics and mental health – sometimes to avoid NHS waiting times, for example, hip replacement has long waiting times on the NHS but can be done much sooner at a private hospital.

Sometimes the NHS will buy in private treatment in order to shorten the wait time for individuals. This is because the local NHS trust hospital may have a lack of available beds while a local private hospital has beds available.

Many charities have developed services to support health and wellbeing and provide healthcare, for example, Marie Curie Hospices, Macmillan Cancer Support, Mind, Diabetes UK and Age UK (see also Section 1.2 and Figure 1.1).

Test yourself

1. State the three essential principles of the NHS.
2. When were prescription charges brought in?
3. Describe two ways the role of a nurse has changed since the NHS was introduced.
4. List three ways the NHS Long Term Plan is helping prepare the NHS to meet future demands.
5. State two features of the private sector.

1.2 The range of employers and organisations within the healthcare sector

1.2.1 The different employer and organisational settings within the healthcare sector

A wide range of local and national healthcare provision is in place to meet the diverse needs of individuals in society.

NHS

The National Health Service is provided by the state, funded by the taxpayer, with the government (UK, Scottish and Welsh) responsible for making decisions about funding allocation and policy. It provides healthcare, free at the point of use (other than some prescription and dental charges) throughout the United Kingdom.

NHS England, the body responsible for managing national health provision in England, aims to improve the population's quality of life by providing the care, support and treatment needed. Prevention of ill-health

and the promotion of healthy living lifestyles are also key aspects of national health and social care provision.

The NHS is currently organised into Trusts and Foundation Trusts.

Trusts

Trusts are statutory public bodies delivering healthcare under the NHS in England. In 2025 there were about 212 Trusts operating in four main areas:

- Acute, managing general hospitals and related services.
- Mental Health, delivering psychiatric care (inpatient), community mental health teams and associated services.
- Community Health, offering district nursing and other community-based services.
- Ambulance Trusts, providing emergency response services as well as patient transport.

NHS Trusts are directly managed by the Department for Health and Social Care and their leadership is appointed by the government.

Foundation Trusts

Foundation Trusts:

- have more autonomy than NHS Trusts
- can be more responsive to local needs
- are governed by a board of governors which includes staff, patients and members of the public
- have flexibility in how services are delivered
- can make their own financial decisions.

Private healthcare

Private healthcare services are owned or run by private individuals or corporations rather than the government. Private care providers usually charge a fee for their services. They are businesses and work to make a profit. Examples include private residential care homes, BUPA and Nuffield Health Hospitals, non-NHS dentists and opticians. Some of the services private organisations provide may not be available from the state sector, i.e. those provided by the NHS; examples include some cosmetic surgery, cosmetic dental procedures, pharmacists and **IVF**. Although pharmacists provide NHS services, such as prescriptions, they also provide a range of other products and services (such as medicines, vitamin supplements, medical devices such as hearing aids and vaccinations) outside of the NHS.

Charities and private/non-profit making organisations

A **non-profit making organisation** is a business whose aim is not to make money for directors, owners or shareholders; rather, its purpose is to provide a benefit to society, usually in the form of help and support for individuals in need.

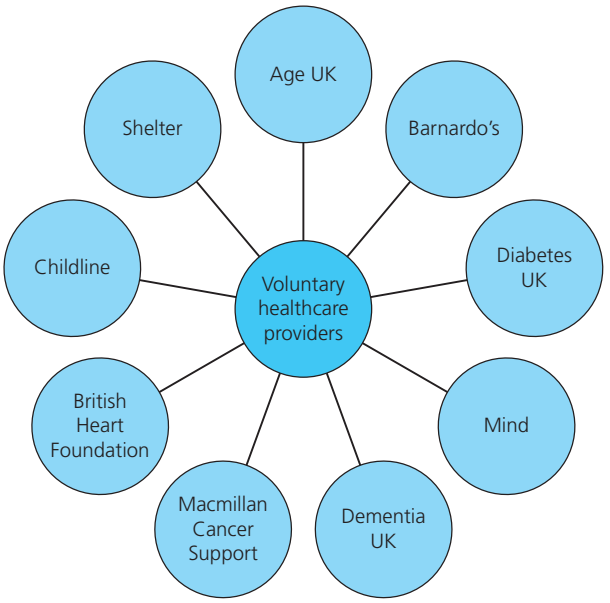
Charities have a distinct aim to provide a benefit to society and are funded by donations from the community. Not-for-profit organisations and charities are sometimes referred to as **third sector** organisations. Although some staff will be paid to lead and manage the organisation (usually from income received in the form of donations or grants), services are mainly provided by volunteers who do not get paid and who give their time for free. These are private organisations in that their services are not run by the government, and they do not have a duty to provide services; instead, they provide healthcare and other services because they see a need for them.

Key terms

IVF: in vitro fertilisation. A fertility treatment in which an egg is fertilised by sperm in a test tube and then the fertilised egg is implanted in the uterus.

Non-profit making organisations: businesses whose aim is to benefit society rather than make money for directors, owners or shareholders.

Third sector: also called the voluntary sector. An umbrella term for non-profit making organisations and other organisations that are not public (i.e. state-run) or private, such as non-governmental organisations (NGOs) and charities.



▲ Figure 1.1 Examples of non-profit making healthcare providers

Research

Look at the websites of three of the voluntary organisations shown in Figure 1.1. Read about the types of physical and mental health services care and support they can provide. Find out about the current health-related campaigns they are running.

Social care services

Adult social care

Adult social care provides practical support for individuals who have conditions such as early dementia, mental health conditions and disabilities, to enable them to stay independent.

Services provided can include:

- support with developing the skills needed to live independently
- support with getting up in the morning, washing, dressing and using the toilet
- help with household tasks, such as cleaning, cooking or shopping
- arranging home adaptations, for example, installing a bath lift or walk-in shower, widening doorways or lowering kitchen worktops
- recommending suitable household equipment and gadgets, for example, easy-pour kettles or easy-to-hold knives and forks
- arranging meals on wheels
- running day centres that allow people to meet others, take part in social activities and get a hot meal
- support with the organisation of physical, leisure or social activities
- arranging respite care, which allows unpaid carers to take a short break.

Children and young people's social care

Children and young people's social care includes:

- provision of parenting classes to help struggling parents
- provision of parenting advice from family support workers
- support for children with disabilities
- provision of access to a children's centre
- local authorities having responsibility for children in short- and long-term foster care
- child protection services – if social workers are worried about a child being at risk of harm, they must investigate. During the investigation, family support is offered and a needs assessment is carried out to ensure appropriate parenting help is provided.

Housing services and youth and community services

Housing services and youth and community services are available to:

- help plan the transition of children from children's and young people's social services to adult social services and prepare them to leave care
- carry out adaptations to make a home more accessible if someone has a disability
- provide volunteering opportunities in some areas; this includes youth clubs and a range of activities that are intended to support mental health and wellbeing skills development.

For additional details of social care services, access the 'Social care and support guide' on the NHS website.

Employers and organisations in the healthcare sector

There is a wide range of other employers and organisations in the healthcare sector, some of which are discussed below.

Complementary and alternative medicine providers

Complementary and alternative medicine (CAM) covers treatment that falls outside of mainstream healthcare. Complementary medicine is usually offered together with conventional medicine – whereas alternative medicine is used instead of conventional medicine, although there can be overlap between these two.

Examples include:

- homeopathy
- acupuncture
- chiropractic
- herbal medicines.

Pharmaceutical companies

Once a new drug moves from the research (pre-clinical) phase it enters the clinical phase, involving clinical trials. These are usually carried out in NHS hospitals, but some may also be conducted by the pharmaceutical company 'in-house'. Healthcare professionals are employed by pharmaceutical companies to supervise, coordinate and support clinical trials. Pharmaceutical companies also employ healthcare professionals to work in patient support (working with patient groups) and medical education (training doctors and nurses on the correct use of the company's products).

Health informatics and technology providers

Increased use of technology in healthcare (see Sections 1.8 and 1.9) means that companies who provide these products and services often need to employ healthcare professionals.

Research and academic institutions

As well as their role in clinical trials, these organisations also carry out their own research into diseases and new treatments.

Government and regulatory organisations

This category includes those who oversee and regulate healthcare standards and practices of organisations and professionals.

Community health services

Community health services provide support across a range of needs and age groups, but are most often used by children, older people, those living with frailty or chronic conditions, and people who are near the end of their life. Community services often support people with multiple, complex health needs who depend on many health and social care services to meet those needs. Health visitors, home care assistants, chiropody, heart failure nurses, occupational therapy, palliative care nursing and school nurses are examples of services provided in the community. This can be, for example, in people's own homes, in residential homes, in schools or at the local GP surgery. The increasing number of people living longer and with long-term conditions means that more people are likely to need support from community health services in the future.

Test yourself

1. Briefly explain three roles of the NHS.
2. Give three examples of private healthcare services.
3. Explain what is meant by a 'non-profit making' organisation. Give an example.
4. Other than hospitals, list three examples of healthcare working environments.

1.3 The characteristics of primary, secondary and tertiary healthcare tiers and organisational structure

Care provision in the healthcare sector is classified as primary care, secondary care and tertiary care.

1.3.1 The types and purposes of primary care

Primary care (see Figure 1.2) is where an individual has made a first contact with a medical practitioner, usually a **GP**, for advice or treatment. As a result of this first contact the patient will be questioned, probably examined, and may be treated by the GP or referred on to a specialist for further care. Primary care is often the first point of contact for assessment and diagnosis. Primary care:

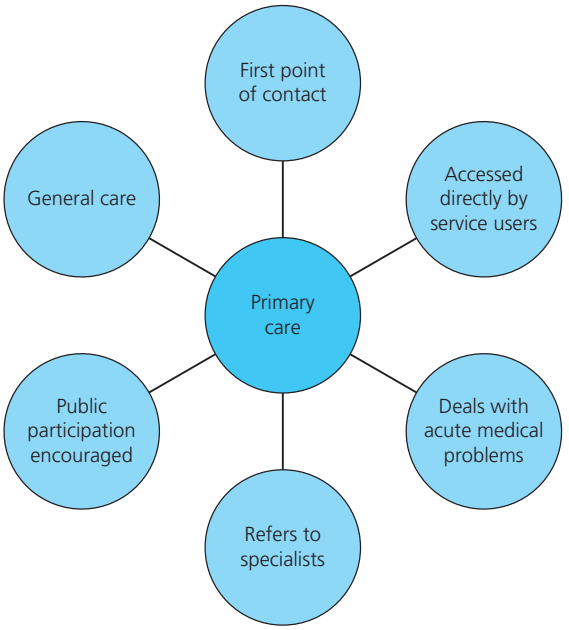
- can be accessed directly without a referral
- provides general care, unlike the more specialist care provided by hospitals and other providers of secondary care
- deals with prevention and early intervention
- deals with acute medical problems and refers these, where appropriate, to a specialist.

Key term

GP: A general practitioner is a doctor in the local community, usually based in a health centre or surgery. GPs deliver primary care and will provide initial diagnosis and treatment or will refer the individual to a specialist.

Examples of primary care providers are:

- GP surgeries
- pharmacists
- dental services
- opticians



▲ Figure 1.2 Features of primary care

- walk-in centres
- A&E (the accident and emergency department of a hospital)
- NHS 111 telephone service – this is a free service, available 24/7, for people with medical concerns where patients are uncertain about their severity or who to consult. It can save attending A&E unnecessarily and can provide reassuring advice from a professional who will direct patients to call 999 if emergency treatment is required
- community health services such as health visitors and school nurses.

1.3.2 The types and purposes of secondary care

Secondary care involves, for example, social care services and hospital services where individuals may attend as **inpatients** or **outpatients**. This could be for investigations, tests or treatment for an illness or condition. It includes Accident and Emergency services, inpatient services, planned surgeries, outpatient clinics and maternity services.

Features of secondary care include:

- healthcare services that individuals are referred to, usually by their GP
- planned care treating a specific illness, condition or injury, such as carrying out an operation, for example, a hip replacement or removal of tonsils
- specialised care, for example, at a clinic that specialises in the illness or condition. This could be a series of appointments with a physiotherapist to help with a sports injury, for example.

1.3.3 The types and purposes of tertiary care

Tertiary care includes what is often long-term care provided in residential care homes, through mental health services and in the individual's own home. Other types of tertiary care include:

- palliative care
- specialist burns units
- neurosurgery
- intensive care units.

Features of tertiary care include:

- care is often long term
- it is highly specialised.

Tertiary care refers to specialist medical attention provided by practitioners who focus on particular diseases or anatomical (body) systems. People typically access this level of treatment through a referral, typically from a secondary care provider. For example, when a GP identifies cancer in a patient, they will be referred to an oncologist (a cancer specialist) who may prescribe a course of chemotherapy, after surgery, for the treatment of the cancer. Another example is where someone is referred for treatment by a specialist burns unit if they have suffered a severe burn injury.

Respite care (also known as short break care) is a type of tertiary care providing specialist care that enables families and carers to have a short break from looking after the person they are caring for. This may be an individual with learning or physical disabilities who needs care and support with daily living tasks. Provision of specialist short break care supports carers to take time out to focus on their own needs and helps stop them becoming run down and exhausted by the demands of providing continuing care.

Palliative care is a type of tertiary care that focuses on providing relief from pain and other symptoms of serious, often long-term illness. It can be provided alongside treatment to cure a disease, so palliative care is not always limited to end-of-life care.

End-of-life care is personalised care provided by specialist teams of professionals such as community nurses, Macmillan nurses and sometimes also volunteers. It supports the person to live as well as possible until they die. Alongside taking care of the individual's physical

Key terms

Inpatient: patient who receives medical treatment, tests, etc., while staying in hospital.

Outpatient: patient who visits a hospital or clinic to have treatment, tests and investigations, but does not have to stay there.

Respite care: offers a break for carers from caring responsibilities, while the person they care for is looked after by someone else. Increasingly known as 'short breaks' care because of the negative implications of 'respite', i.e. that the cared-for person is a burden.

End-of-life care: aims to achieve the best quality of life possible until the individual's death. It is a holistic approach and supports the individual and their family.

Palliative care: focuses on providing relief from pain and other symptoms of serious, often long-term illness. It can be provided alongside treatment to cure a disease, so is not always limited to end-of-life care.

needs, end-of-life care takes a **holistic approach**, helping with the person's emotional, spiritual and social needs. The team will also support carers, family members and close friends of the individual.

End-of-life care can be provided by **hospices**. These are specialist care settings that provide a range of services to support individuals. Some hospice care is provided by charitable organisations such as Marie Curie Cancer Care and Sue Ryder services.

Key terms

Holistic approach: a way of approaching the delivery of healthcare that considers the whole person, not just the part that requires physical treatment. It also considers an individual's intellectual, emotional and social needs.

Hospice: provides support and end-of-life care to individuals and their families. Hospice care can be provided where individuals choose, for example, at home, in a hospice room at a hospital, in a nursing home or at a specialist hospice.

Case study

Read the case study 'Intensive Therapeutic and Short Breaks Service' by the West London Mental Health NHS Trust, about young people using a local short break service; it is available online as a downloadable PDF (search for ITSBS Ealing).

- Discuss the benefits for the young people and their parents of the intensive therapeutic and short break service.
- Identify the benefits for the NHS of delivering the service in this way.

Research

Produce a list of healthcare settings or organisations that you know of in your local area. Classify the care settings/organisations as primary, secondary or tertiary providers.

Practice point

Which type of care does your placement organisation provide?

Give reasons to explain your answer, including:

- whether it is a primary, secondary or tertiary care provider
- features of the type of care provided.

Reflect

Dr Richard Berman FRCP is a Consultant in Supportive and Palliative Care based at the Christie NHS Foundation Trust.

- Read Dr Berman's blog post about palliative care on the Royal College of Physicians website (titled 'Richard Berman: traditional palliative care no longer serves the cancer population') and consider his approach to end-of-life care.
- Discuss with a partner the importance of multidisciplinary teamworking in Dr Berman's work.

Test yourself

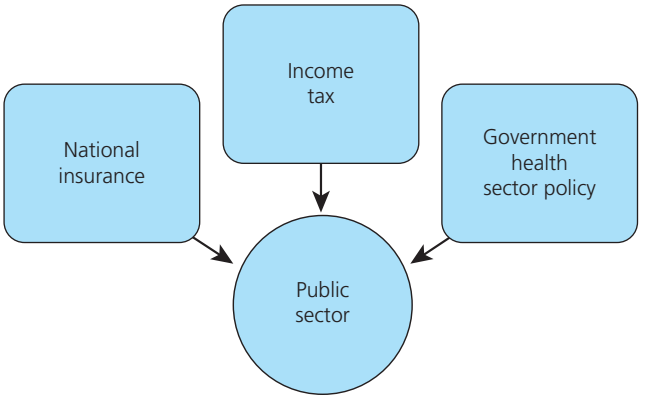
1. Define the term 'primary care'.
2. Give four examples where primary care would be provided.
3. Explain the features of secondary care.
4. List three features of tertiary care.

1.4 The different ways in which the sectors are funded

1.4.1 The ways the public sector is funded

The government sets up, manages and leads the public sector services. They are paid for from working people's taxes based on their income (Figure 1.3). Most hospitals and GP surgeries are examples of public sector services.

The public sector is now funded differently depending on whether it is part of an NHS Trust or NHS Foundation Trust.



▲ Figure 1.3 How the public sector is funded

NHS Trusts

Integrated Care Boards (ICBs) are responsible for the commissioning of services through the allocation of funding depending on local population needs. They are subject to Departmental Expenditure Limits (DELs). These are set by HM Treasury and define how much each department can spend. They are subject to tight controls and cannot retain any surplus or borrow independently.

NHS Foundation Trusts

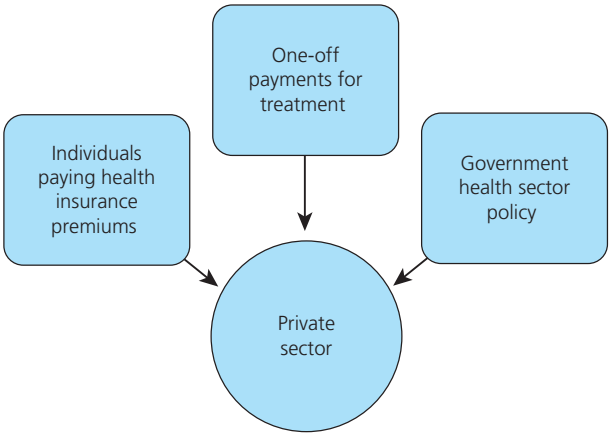
These have contracts with ICBs and can retain surplus and reinvest in services, facilities or staff development. They can also borrow money to reinvest in infrastructure or service innovation.

1.4.2 The ways the private sector is funded

Private sector services are owned or run by private individuals rather than by the government. Private care providers charge fees for their services as they are businesses and need to make a profit. Examples include private nursing homes, Nuffield Health Hospitals and non-NHS dental services. Service users will self-pay for treatment or may have private health insurance, which they or their employers purchase, that covers the cost. The private sector is often used for elective surgery, physiotherapy or mental health support (to avoid lengthy NHS waiting lists or where NHS provision is lacking) as well as cosmetic surgery that might not be provided by the NHS.

Sometimes the NHS may refer patients to private services or beds, usually to reduce waiting lists, in which case the cost will be covered by the NHS, not the patient. (see Figure 1.4)

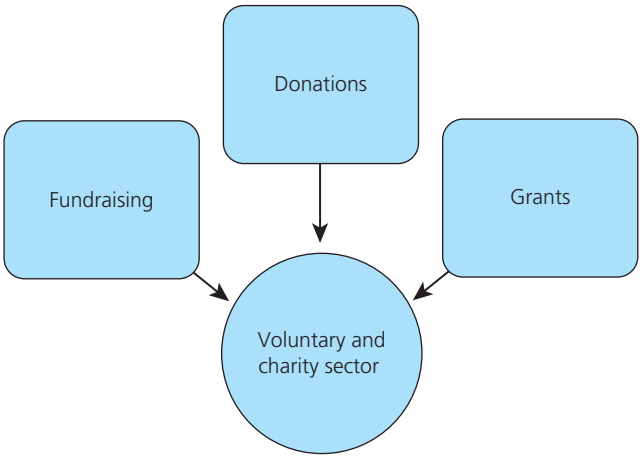
Corporate and Occupational Health Services are private providers funded by employers and contracted for employee health checks, occupational therapy and mental health support.



▲ **Figure 1.4 Private sector funding**

1.4.3 The ways the non-profit making and charitable sector is funded

This sector includes not-for-profit organisations and charities. Their services are mainly provided by volunteers who do not get paid. To cover the cost of providing their services, they rely on donations from members of the public, money from fundraising campaigns, and sometimes government grants, which they may receive if there is a specific need for their services that the NHS is unable to offer, although the NHS does sometimes provide funding to these organisations (Figure 1.5). These services often provide palliative care, mental health, substance misuse recovery services and community support.



▲ **Figure 1.5 Funding the voluntary and charity sector**

1.5 The career pathway opportunities for employment and progression within the healthcare sector

The Institute for Apprenticeships and Technical Education (IfATE) was an employer-led organisation sponsored by the Department for Education. A key element in the work of the Institute was to support employer groups in developing apprenticeships. The Institute closed in June 2025 and its work is now being done by Skills England.

Skills England maintains the occupational maps that underpin technical education. These occupational maps show where technical education can lead. They group occupations that have related knowledge, skills and behaviours into pathways so that it is easier to see opportunities for career progression within a particular route. Within each pathway, occupations at

the same **level** are grouped into clusters to show how skills you have learned can be applied to other related occupations (Figure 1.6).

▲ Figure 1.6 Modern laboratory equipment needs qualified and highly trained staff

Key term

Levels: in this context, a way of grading a qualification or set of skills and the corresponding occupations. The levels used today are based on the National Vocational Qualifications (NVQ) levels 1 to 5 developed in the 1980s. Over time, more emphasis has been given to the degree of difficulty or challenge of the qualification rather than the level of occupational competence in the workplace. There are now eight levels, and they cover academic qualifications such as GCSEs, A Levels and undergraduate and graduate degrees, as well as vocational qualifications such as T Levels and apprenticeships.

1.5.1 Different roles and entry routes into the healthcare sector

The Skills England occupational maps include Technical, Higher Technical and Professional occupations.

Technical

These are skilled occupations that a college leaver or an apprentice would be entering, typically requiring qualifications at levels 2/3.

Higher technical

These are occupations that require more knowledge and skills. This could be acquired through experience in the workplace or further technical education. They typically require qualifications at levels 4/5.

Professional

These are all occupations where there is a clear career progression from higher technical occupations, as well as occupations where a degree apprenticeship exists (level 6).

These career pathways are summarised in the table below:

Research

To find the most up-to-date occupational maps, search online for 'Skills England occupational maps.'

Were you able to find the latest information? Do you think this will be a useful resource to help you plan your own career?

Entry route	Job roles	Key characteristics	Progression opportunities
Level 2 Entry-level roles (technical roles)			
• School leaver • Foundation apprenticeship • Apprenticeship	• Healthcare support worker • Adult care worker	• Supervised, hands-on care roles • Basic clinical and personal care tasks	• Level 3 vocational qualification or apprenticeship
Level 3 intermediate roles (technical roles)			

• College leaver
• Apprenticeship
	• Lead adult care worker
	• Senior healthcare support worker in:
	  • adult nursing
	  • mental health
	  • maternity
	  • children and young people
	  • theatre support
	  • diagnostic imaging
	  • allied health therapy support
		• More responsibility
		• Works under supervision of registered professionals
		• Supports patient care and therapy
			• Level 4/5 higher technical qualification or assistant practitioner

Entry route	Job roles	Key characteristics	Progression opportunities
Higher technical occupation roles			
• Higher technical qualification • Foundation degree	• Assistant practitioner • Nursing associate	• Greater autonomy • Supports clinical decision-making • Bridges support and professional roles	• Top-up to Level 6 degree or Degree Apprenticeship
Professional healthcare roles			
• University degree • Degree apprenticeship	• Registered nurse • Midwife • Allied health professional • Healthcare science practitioner	• Professional registration • High responsibility • Leads care delivery and planning	• Continued professional development (CPD) • Postgraduate study • Specialisation • Leadership roles

1.5.2 The benefits of different healthcare progression routes

Benefits

When you were a child, what did you want to be when you grew up? Is that still what you want to do? Some people seem able to plan their careers and then pursue their objectives with single-minded determination. Others may move from job to job without any clear plan. The former group is usually, but not always, more successful than the latter. Whichever category you fall into, the end of your T Level course is just the beginning. It helps if you have a plan as to how you can progress in your career. Even if you are not sure where you want to go, at the very least you should be aware of the opportunities that are available.

The various healthcare progression routes will enable you to:

- gain additional experience
- develop specialist skills
- earn higher qualifications
- access new roles and responsibilities.

Research

Professional bodies in your field may offer careers advice or information. You should use all the resources and sources of advice and information available to you. Find the professional body relevant to your chosen field of work and see if their website has useful resources. Make a list of sources of help and information about how to progress your career.

Routes

Further/higher education programmes

As you come to finish your T Level, it is a good idea to have already planned your next move. You will have achieved a level 3 qualification, so you should normally consider moving on to a level 4 or level 5 qualification, unless you decide to change track – in which case there will be a range of other level 3 qualifications that might be suitable.

If you plan to remain in the health sector, you will probably consider a level 4 or level 5 qualification appropriate to your chosen field of work, such as Higher Technical Qualifications. In some cases, this will mean that you have to become registered with a statutory regulator, such as the Nursing and Midwifery Council or the General Dental Council.

Your T Level will be worth UCAS points, so you can continue into higher education (level 5 or 6) at university or with another education provider, if you wish.

Apprenticeships/degree apprenticeships

An apprenticeship is a job with training to industry standards and should involve entry into a recognised occupation. Apprenticeships are employer-led, so employers will:

- set the standards the apprentices need to meet
- create the demand for apprentices to meet their skills needs
- fund the apprenticeship, for example, pay for training
- employ the apprentice, i.e. pay them and give them work
- be responsible for training the apprentice on the job.

The needs of the apprentice are also important. Apprentices are not meant to be simply a source of cheap labour – the apprentice must be able to achieve competence in a skilled occupation. Not only that, but they should also acquire skills that are transferable and offer the possibility of long-term earnings potential, greater security and the ability to progress in the workplace.

A higher apprenticeship (level 4) might lead on naturally from a level 3 T Level, but entry to a level 6 or level 7 degree apprenticeship is also possible. Degree apprenticeships combine working for an employer with studying at a university. Study periods can be on a day-to-day basis or in blocks, depending on the programme and the needs of the employer.

More information about degree apprenticeships is available on the UCAS website or the Institute for Apprenticeships and Technical Education website.

Continuing professional development (CPD) registration with professional bodies

Continuing professional development can take many forms. It is a way in which professionals use different learning activities to maintain, develop and enhance their abilities, skills and knowledge. CPD combines different methods of learning, such as:

- conferences and events
- training workshops
- e-learning programmes
- best practice techniques
- ideas sharing
- shadowing a more experienced professional in the field.

CPD programmes are often run by employers or professional bodies. Professional bodies fulfil several important functions. As well as being the guardians of professional codes of conduct in their area of expertise, they offer CPD programmes.

In some occupations in the health sector, you must be registered with a statutory body, such as one of the professional bodies.

Internships or scholarships

Internships can offer valuable experience in a real work environment – particularly if you have not gained this through an apprenticeship. Internships are usually relatively short and often take place during the summer months, as many are designed for college and university students. Placements are similar, but generally last longer – for example, six months to one year – and may be integrated into a university degree. Internships and placements are usually offered by the NHS, large companies such as GSK (which manufactures pharmaceuticals) or Unilever (consumer products), as well as other healthcare providers. In some cases, you will be paid at least the **UK National Living Wage**, though it can be much higher than this; however, some internships are not paid at all. **Bursaries** are often available to cover your costs in an unpaid internship. Many of the professional bodies already mentioned will offer help with internships, placements or bursaries. Their websites are the best place to look for advice and information.

As well as help with bursaries, many of the professional bodies can offer help with **scholarships**. These are usually available to help with the costs of obtaining higher qualifications, usually at level 6 or level 7. Educational institutions that offer these qualifications may also offer scholarships or can give guidance on what scholarships and other sources of funding are available.

Key terms

Internship: a period of usually entry-level work experience lasting for a fixed period (one week up to 12 months).

UK National Living Wage: the government's legal minimum wage for workers aged 21 and over. It is designed to ensure workers receive a fair wage that reflects the actual cost of living.

Bursary: a type of financial support provided to students that may be based on financial need and that does not need to be repaid, unlike a loan.

Scholarship: similar to a bursary, but is usually awarded based on performance or achievement, or for study in areas where there is an unmet need.

Research

- Visit the Skills England website and search the apprenticeship standards to find out about one of the following roles:
- Healthcare support worker in a health setting
- Community health and wellbeing worker
- Senior healthcare support worker in a health setting.

(From the apprenticeships search page on the Skills England website, you will need to filter the results by checking the 'Health and science' route and then sorting the results alphabetically.)

1.6 The factors that influence the services accessed by an individual and the impact of potential barriers to accessing healthcare services

1.6.1 The possible implications of a range of personal factors that influence the services an individual would access

There is a range of personal factors (see table) that have implications for planning and delivering services, as well as determining the type of support required.

Key term

Cognitive behaviour therapy (CBT): talking and listening therapy that examines how an individual behaves and thinks in order to help change the behaviour that is an issue and ultimately improve the individual's mental health.

Implications for service planning

Service planning includes several different aspects, including coordination with specialist services and integration of care.

Accessibility planning is important and can cover:

- mobility aids
- transport arrangements

Personal factor	Examples of how it affects the services required
Pre-existing health condition such as diabetes	Diabetes management: blood tests at the GP surgery every three months to monitor glucose levels, checks of any wounds as they can heal slowly and cause ulcers, regular eye checks as vision can be affected by diabetes.
Physical disabilities such as multiple sclerosis	Ongoing support with managing specific symptoms: physical disabilities are wide-ranging and each may require different types of care and support, whether help with mobility, such as needing walking aids or physiotherapy, for example.
Mental health conditions such as anxiety, depression, panic disorder, OCD (obsessive compulsive disorder)	Psychological therapies such as **cognitive behaviour therapies (CBT)** are often offered by the NHS before prescribing medication. CBT aims to help and enable individuals to change their negative thought patterns by looking at practical ways to improve their state of mind. More detail about mental health therapies can be found on the NHS website. Conditions such as anxiety and post-traumatic stress disorder may require antidepressant medication, which is sometimes used to treat people coping with long-term pain. The medication increases the level of certain chemicals in the brain, which can help to relieve their symptoms. Panic disorder is a severe type of anxiety where individuals can feel worried and fearful, which causes them to have panic attacks. Talking therapies and medication are the main treatments (see the NHS website), but treatment will depend on the symptoms being experienced. Obsessive compulsive disorder (OCD) results in repetitive behaviours, such as repetitive cleaning, checking locks or repeatedly checking a baby is breathing. CBT is often used as treatment to help individuals to face their fears. Antidepressant medications can also be given.
Learning disabilities	Annual health checks: people with a learning disability sometimes have poor physical and mental health due to health issues not being recognised or conditions not being noticed. This is why the NHS encourages individuals, aged 14 and over, who are on their GP's learning disability register to have an annual health check. Full details of the physical and other checks, and how the check is made accessible for individuals with learning disabilities, can be found on the NHS website (see the page 'Annual health checks – learning disabilities').
Different age groups – infancy, childhood, adulthood, senior years	Common children's illnesses, ageing process: personal factors at different life stages, such as common childhood illnesses and ageing, affect the types of services required. (See Section 5.7 for detailed information about support and services required at different ages in the lifespan.)
Gender	Most gender-specific services are for women, for example, to support women's menstruation, contraception, pregnancy and gynaecology. There are also sexual health services specifically tailored for women and for gay and bisexual men. Some mental health services are targeted at either men or women. The 'gender health gap' describes the fact that women tend to outlive men but have greater levels of illness throughout their lives. This is due to a combination of factors – for instance, medical research has focused on male biology; social factors may lead to women prioritising the wellbeing of their families over their own health; cultural and ethnic factors may discourage women from accessing healthcare.
Social care needs	Support with activities of daily living and maintaining independence (see Section 1.2 on adult social care).

- **inclusive** communication strategies and accessible information formats
- age-appropriate and gender-sensitive service design
- involvement of carers and **advocates**, and consideration of developmental stages.

Key terms

Inclusive: providing equal access for all, particularly people who might otherwise be excluded or marginalised.

Advocate: person who helps individuals to express their needs and wishes as well as supporting them to make informed decisions and to challenge decisions made by healthcare providers.

Implications for delivery

The services that any individual requires will depend on their personal circumstances and could have implications far beyond the immediate clinical context. It is always desirable to offer flexible scheduling and continuity of care with familiar professionals, particularly for patients who may be vulnerable.

The healthcare environment needs to be accessible, and staff should be trained in mobility and communication support.

The service delivery must always be person-centred and may require approaches that take account of any physical or mental trauma, with suitably tailored communication.

It may be necessary to provide specialist support for children and older adults, as well as those with learning disabilities and gender-specific needs.

Effective delivery might also require home visits, community-based care and multi-agency collaboration.

Implications for the type of support required

Initially, this is likely to focus on clinical care: medical treatment, medication management and specialist therapies. Once the patient's immediate needs are met, in the longer term they may require emotional, psychological and peer support. Some patients may need help with personal care, adaptive equipment and even supported decision-making. Beyond that, preventative care, health promotion and age/gender-specific services will be important.

Social support covers aspects such as:

- housing
- financial assistance
- respite care.

1.6.2 The impact of potential barriers to individuals in healthcare contexts

Types of barrier

There are countless possible reasons why individuals may not access healthcare services, but some of the most common types of barriers are given in the table. It is important that all healthcare practitioners consider these potential barriers and take responsibility for doing their bit to help individuals overcome them.

Barrier	Examples
Socioeconomic	Cannot afford cost of some paid-for services, e.g. prescriptions, eye care, dentist care, although some groups are eligible for these free-of-charge. Pre-payment certificates (3 month or 12 month) can be cost-effective for those who need multiple prescriptions, but the up-front cost can be high for those on low incomes. Availability of affordable transportation, e.g. cost of public transport to get to appointments/ expensive parking. Lack of paid leave from work to attend appointments means an individual may be unwilling or unable to afford to take time off work. Unable to understand and respond appropriately to medical information, e.g. unfamiliar with medical terminology/jargon.

Barrier	Examples
Psychological	Fear or anxiety about diagnoses, procedures or the medical environment. Perceived stigma around/embarrassed by condition and/or using the service. Mistrust of the healthcare system due to previous events or trauma.
Physical	Inaccessible buildings with a lack of ramps or wide doorways for wheelchairs. Lack of adapted facilities such as toilets and car parks. Sensory impairments not catered for: information not available in Braille or large print, staff not trained in BSL (British Sign Language), poor signage or lighting that could affect people with visual impairments.
Cultural and language	Staff only speak English, lack of interpreters, information only available in English. Practitioners are not aware of cultural differences, e.g. some treatments being unacceptable to some cultures. Conflict between current medical practices and individuals' views on illness, gender roles or traditional medicine. No provision for patients who do not want to be seen by a healthcare provider of the opposite sex. Health literacy: ability to navigate the healthcare system – knowing where to go, understanding processes, communicating effectively, advocating for self, use of digital tools, etc.
Geographical	No local services; large travel distances to facilities or specialists. Limited travel options – lack of transport to get there, not on a bus route. Fewer healthcare facilities – may be a long wait for services in some areas.

Test yourself

1. Identify four personal factors that would require access to healthcare services.
2. Give an example for each of the following barriers to accessing healthcare services:
   - socioeconomic
   - psychological
   - physical
   - cultural and language
   - geographical.
3. Describe how two different personal factors would influence the services required by an individual.

Impact of barriers

Socioeconomic barriers can lead to:

- delays in seeking care due to cost concerns
- patients prioritising their basic needs over healthcare
- digital exclusion due to limited access to online services.

Psychological barriers can lead to:

- avoidance of services due to fear of judgement
- overwhelming feelings due to complex systems.

Physical barriers can mean:

- lack of accessibility at clinics
- distances are too long for reasonable travel.

Cultural and language barriers can cause lack of understanding of choices, procedures and processes.

Geographical barriers can result in delays in accessing services.

1.7 The potential impact of external factors on public health

1.7.1 The range of external factors which could impact the activities of the healthcare sector

Outside of normal levels of healthcare required, certain factors and events can influence people's health and wellbeing and thus the healthcare sector, as outlined in the table.

External factor	Possible impacts on the healthcare sector
Pandemic	The worldwide spread of an infectious disease has devastating effects on populations and can put severe pressure on healthcare provision, with long-term effects. Examples include the influenza pandemic (known misleadingly as Spanish Flu) of 1918–19 and the recent Covid-19 pandemic.
Epidemic	The widespread outbreak of an infectious disease – above what is normally expected in a specific area or community – can have a huge impact on healthcare systems in affected areas and/or populations. Examples include the outbreak of Ebola virus several times in West Africa in the 2010s, or the Zika virus in Brazil in 2015–16. Norovirus (also called the winter vomiting bug) causes vomiting and diarrhoea and is highly contagious.
Endemic diseases	These are diseases or conditions regularly found, and very common, among a particular group or in a particular area. For example, malaria is endemic in many of the hotter regions of the world where mosquitoes are prevalent, such as Africa, South America and Asia. Seasonal flu is endemic as it affects different countries at different times of the year (although in 1918 seasonal flu developed into a pandemic).
Extreme weather events	These include exceptionally cold or hot weather and very serious, intense storms: • The bushfires in Australia in January 2020 destroyed lives, homes and wildlife. These now occur regularly in the summer in Australia. • In the UK, very hot weather can cause individuals, particularly older people and those with conditions such as heart disease, to become seriously ill if they do not keep cool and well hydrated. Extreme cold weather can increase the risk of hypothermia, which can be fatal. A recent increase in extreme weather events around the world is believed to be a result of climate change, so this challenge will likely only become more significant in the future.
Infrastructure	In a healthcare sense, buildings and maintenance of older hospitals may cause limitations on the services offered. Certain types of care or treatment may not be available in all areas because of a lack of facilities. Transport strikes can restrict access to healthcare facilities, either directly for those reliant on public transport or indirectly if they cause traffic congestion. Power failures and water shortages could result in care settings having to be evacuated. Major incidents such as a train crash or motorway accident could affect hundreds of people, and a lack of infrastructure could inhibit or prevent the movement of supplies or people in many regions.
Digital infrastructure and cyber-security	Digital infrastructure is becoming increasingly critical to healthcare. This means that, as the risk of cyber-attack increases, cyber-security needs to be addressed. There is also an increased risk of digital exclusion in rural or socially deprived areas.
Geographical events	These may involve fires, flooding and landslides, which can affect the operation of local care services. Certain areas of the UK are becoming more at risk of flooding, resulting in families having to be rescued from their homes and treated for injuries or hypothermia, for example. Disasters that happen in specific geographical locations can have a sudden and significant impact, for example, the eruption of the Mount Nyiragongo volcano in the Congo in May 2021 when thousands of people had to leave their homes.
Government policy	Government policy can have a significant impact on healthcare delivery and can change from one government to the next or from one Secretary of State to another. Public Health England (PHE) was created in 2013 to protect and improve the health and wellbeing of the population of England. Following perceived failings by PHE during the Covid-19 pandemic, PHE was abolished and the UK Health Security Agency (UKHSA) was set up to: • prevent, prepare for and respond to infectious diseases and environmental hazards • provide scientific and operational leadership • focus on public health protection and building the nation's health security capability. The Department of Health and Social Care (DHSC) sponsors the UKHSA and oversees its operations. Both agencies collaborate to enhance public health protection and respond effectively to health threats. However, there have been criticisms of the lack of financial controls within UKHSA and the financial management and accountability of the DHSC.

External factor	Possible impacts on the healthcare sector
Misinformation and media influence	Misinformation and media influence can have a negative impact on public health, particularly with the spread of health misinformation on social media. For example, there was a great deal of false information spread on social media about vaccine safety, particularly during the Covid-19 pandemic, which led to an increase in vaccine hesitancy (suspicion of vaccines or reluctance to be vaccinated). Improved **digital literacy** means that people may have greater access to healthcare (e.g. through web-based information sources or online appointments) as well as increasing the ability of healthcare professionals. On the other hand, lack of digital literacy can restrict access to healthcare or reduce the ability of healthcare professionals to make best use of modern technologies.
Industrial action of registered professionals	Industrial action of registered professionals can have a significant impact on people's access to healthcare. In recent years, strike action by resident (formerly junior) doctors was partly caused by a failure in their pay to keep up with inflation over many years. Yet it was also the result, in part, of increased stress among healthcare staff and deteriorating working conditions. At the time of writing, doctors' strikes have led to the cancellation of more than 500,000 appointments and operations, resulting in an additional 140,000 patients being added to waiting lists. The British Medical Association (BMA) – the doctors' trade union – has rejected recent offers of improved pay and conditions and scheduled further strikes.

Key terms

Pandemic: an epidemic that has spread over several countries or continents, usually affecting many people.

Epidemic: a sudden increase in the number of cases of a disease above what is normally expected in a specific area or community.

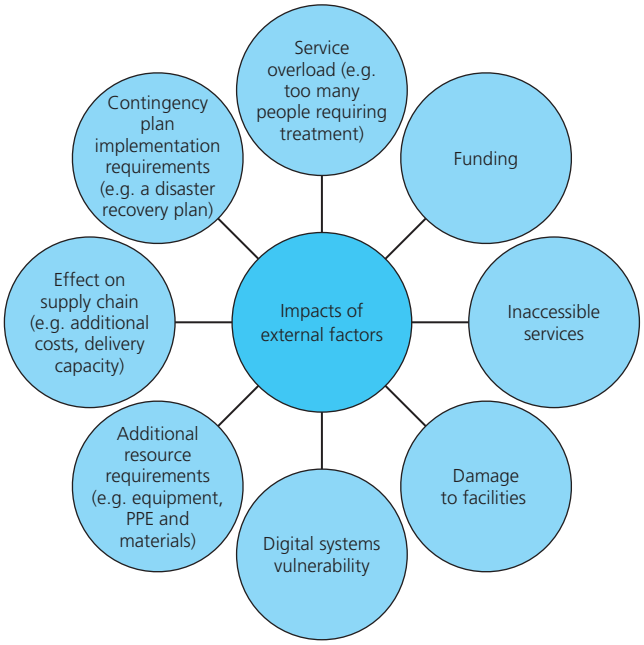
Endemic: diseases or conditions that are common but limited to a particular region, making the spread and rates predictable.

Infrastructure: the basic systems and structures needed and used by a society or organisation in order to function effectively. It includes roads, transportation and other services.

Digital literacy: the ability to find, evaluate, create and communicate information using digital technologies.

1.7.2 The impacts of the range of external factors on the activities of the healthcare sector

All the external factors and initiatives mentioned above will contribute to staffing and resource demands throughout the NHS. The impacts of external factors on the provision of healthcare services can be significant (see Figure 1.7).



▲ Figure 1.7 Impacts of external factors on healthcare services

Service overload

The impact of the Covid-19 pandemic in 2020–21 on the NHS was debilitating. In May 2021, BBC News reported that waiting lists at nearly one in three hospitals in the UK had increased significantly, leading to over a year without treatment for 10 per cent of patients; this included major disruption to cancer services, resulting in fewer people being referred or screened for cancer as a result of pressure on the health service.

However, the NHS is now routinely experiencing service overload, even in the absence of a pandemic. Seasonal flu has caused many hospitals to declare a **critical incident**, where the demand for beds exceeds the hospital's capacity. The increased demand for services is often made worse by staff illness. Lack of capacity in the care system means that patients who are well enough to be discharged have nowhere to go. This is known as bed blocking and has been one factor contributing to service overload all year round.

Another factor contributing to service overload is challenging staff recruitment, including:

- a shortfall of over 100,000 staff in early 2026 due to an ageing workforce, difficulties with staff recruitment and training issues
- burnout and retention, where increased stress leads to greater absenteeism and higher staff turnover rates
- attracting new talent becomes difficult due to reports of inadequate support and resources, lower pay rates and geographical disparities (differences) in pay.

Funding

Funding has always been an issue within the NHS and never seems to keep up with the demand for services. This can be made worse by diversion of funding to priority areas, sometimes because of political or patient pressure. As NHS resources are finite, this then leads to reduction of funding for non-priority areas.

Key term

Critical incident: when the level of disruption in a hospital or other facility or service means that the organisation cannot deliver critical services, risking patient safety.

Inaccessible services

Rural communities face multiple challenges, most of which are due to isolation – particularly lack of good public transport. This can make it difficult to go shopping, visit a local library or socialise. Rural isolation can also make it more difficult to access healthcare services, whether that involves getting to see a doctor or nurse, find a pharmacy or attending an outpatient appointment. It can also make it harder for healthcare professionals to make home visits, and it can mean that an ambulance can take much longer to reach individuals during a medical emergency.

Even in urban settings, transport disruption, for example, due to transport strikes or traffic congestion, can prevent access to healthcare services.

To try to improve efficiency, many NHS services are being provided remotely, such as through the NHS app. Also, many GP surgeries now operate online appointment booking. While such digital services can improve access for many, those who are less able to use the internet or smartphone apps can be excluded from accessing healthcare. These people are very often the most vulnerable, such older people, who might be in the greatest need.

Damage to facilities

You may have seen from the Research exercise that NHS funds for buildings and maintenance are being reallocated to support day-to-day running costs. The maintenance backlog in 2023/24 stood at £13.8 billion, of which £2.7 billion was classified as high risk – that is, urgent work needed to avoid major disruption, injury or catastrophic failure of services.

Source: The King's Fund, 'What the recent ERIC data tells us about the state of NHS buildings', 20 December 2024

Research

Read the article 'Tight budgets and tough choices: the reality of an NHS living within its financial means' on the King's Fund website. The authors claim that, while the NHS has been under financial pressure for more than ten years, recent financial pressures on the NHS are of a different nature. They ask the following questions:

- Why are NHS organisations in financial distress?
- What does the financial context mean for local leaders?
- What decisions are being made?
- How are these decisions having an impact on patient care?
- What do we think should happen next?

Think about this in the context of your work placement.

- Can you see the same financial pressures as those described in the article?
- What effects are financial pressures having on the activities of your organisation?
- Do you agree with the authors' conclusions?

It should be obvious that the risk of damage to facilities is likely to have a growing impact on the activities of the UK's healthcare system.

Digital systems vulnerability

Section 1.8 covers the ways in which developments in technology supports the healthcare sector. The downside of this is that digital systems can be vulnerable. NHS hospitals have been subject to numerous cyber-attacks, often leading to:

- loss of patient records
- operational disruption including postponement of critical medical procedures and appointments
- disruption to essential services such as blood testing and diagnostics.

Additional resource requirements

- Advances in technology mean that there is a growing demand in the NHS for the latest **equipment**. This places a growing financial strain on the NHS but can also increase the need for more and better-trained staff as well as the support network that much modern equipment requires.
- The Covid-19 pandemic exposed how ill-prepared the NHS was in terms of availability of suitable **personal protective equipment (PPE)** needed to keep patients and staff safe. There are concerns that the lessons of the pandemic have not been fully learned and that availability of suitable PPE could restrict the provision of healthcare in the future.
- Section 8.11 covers the spread of infectious diseases among populations and communities and Section 8.14 describes how **vaccines** can help prevent this. However, the availability of some essential vaccines is not guaranteed. For reasons of profitability and product liability concerns, many pharmaceutical companies are discontinuing production of vaccines and research into new vaccines. In addition, there is a growing reluctance in some populations to be vaccinated or have their children vaccinated. These factors are already having an impact on healthcare services as diseases such as measles become more prevalent. In early 2026 the World Health Organization (WHO) announced that the UK had lost its measles-free status.

Effect on supply chain

Some of the issues we have looked at can influence the NHS supply chain. Emergency procurement of items such as PPE can increase costs for suppliers that are likely to be passed on to the NHS as well as disrupting their business. For example, demand might exceed the delivery capacity within the supply chain causing disruption to availability of essential supplies.

Contingency plan implementation requirements

The NHS must plan for and respond to a wide range of incidents and emergencies that could affect health or patient care. The Civil Contingencies Act (2004) requires NHS organisations and providers of NHS-funded services to show that they can deal with such incidents while maintaining services.

Disaster recovery plan

During a disaster situation, hospitals and other healthcare settings must continue to provide essential medical care to their communities. Any incident that causes loss of infrastructure or a patient surge, such as a natural disaster, terrorist act or chemical, biological or explosive hazard, requires a response and recovery plan that enables the continuing provision of healthcare. Without appropriate emergency planning, local health systems can easily become overwhelmed in attempting to provide care during a critical event. Limited resources, a surge in demand for medical services, and the disruption of communication and supply lines are significant barriers to the provision of healthcare.

To ensure health facilities' readiness to cope with the challenges of a disaster, hospitals and other healthcare organisations must be well prepared and should have a **disaster recovery plan**. The various aspects covered by a hospital's disaster recovery plan are shown in the table.

Area	Planning considerations
Communications	How will the hospital be notified of an external disaster and how will this be communicated throughout the hospital? How might this be done if the usual infrastructure is damaged, e.g. if electricity is down?
Resources and equipment	Extra supplies should be kept in case of emergency, so that essential activity can continue, and patients can be protected.
Safety and security	The police may become involved in the event of a disaster, and internal security measures need to be maintained to ensure, for instance, that people entering and leaving the hospital can still be controlled.
Staff responsibilities	All staff in the hospital must have received training so they know what to do in a disaster situation, who will be in charge (chain of command) and any other relevant preparation to keep the system functioning.
Utilities	In the event of a disaster, water, fuel and electricity supplies may be disrupted. How will the hospital ensure that generators will kick in to maintain essential systems, for example, oxygen supplies?
Relocating services	This might require mutual aid between hospitals to manage and ensure supply and demand for services
Protocols relating to **surge capacity**	These must begin with identifying current and potential adult critical care capacity together with escalation protocols to ensure care can be provided to all patients who need critical care support within the NHS.

▲ A disaster recovery plan for a hospital

Key terms

Utilities: within a hospital, the systems vital to keeping the hospital operational; they include electricity, medical gas, heating, ventilation and air conditioning, water supply, sewerage and waste management systems, communication systems, transport systems such as elevators, and fire safety systems.

Protocol: official procedure or set of rules that determines the correct course of actions to be taken in a certain situation.

Surge capacity: the ability of a hospital to cope with an unexpected increase in patient demand far beyond its usual operating capacity.

Heatwave: a prolonged period of abnormally high temperatures. In the UK, a heatwave is generally defined as three or more days of average maximum temperatures exceeding 25–28 °C (depending on region).

NHS Heatwave Plan

Climate change means that there is likely to be an increase in the frequency and severity of **heatwaves**. The NHS Heatwave Plan outlines the actions for healthcare providers, local authorities and the public to minimise the health risks associated with high temperatures.

The key objectives of the NHS Heatwave Plan include:

- raising public awareness by informing the public about the risks of heatwaves and how to stay safe
- protecting vulnerable groups by focusing on individuals at higher risk such as older people, those with pre-existing health conditions and those living in isolated places
- ensuring that health and social care services are prepared to respond effectively
- encouraging communities to support each other, particularly vulnerable individuals, by checking in on them and providing assistance during heatwaves.

NHS Cold Weather Plan

As well as increasing the risk of high temperatures, climate change is also increasing the risk of severe cold weather conditions. The NHS Cold Weather Plan is designed to alert individuals and organisations about the potential health impacts of cold weather, enabling them to prepare and respond effectively.

Key components of the NHS Cold Weather Plan include:

- cold weather alerts: a system of alerts that categorise cold weather conditions into five levels; each level triggers specific actions to protect health
- public health messages to help individuals stay safe during cold spells, particularly for vulnerable groups such as older people and those with pre-existing health conditions

- collaboration involving the UK Health Security Agency (UKHSA), hospitals and other healthcare providers, local authorities and other stakeholders.

Public trust and behavioural impact

Contingency planning often focuses on what the organisation can do to prepare for all foreseeable events. However, for any plan to be successful, it requires buy-in from all involved. This means that members of the organisation (healthcare professionals) must play their part, but so too must members of the public – users of the service and others. Therefore, maintaining public trust is important and so is taking account of human behaviour.

Public health campaigns can reduce demand for healthcare services, reducing the risk of service overload, which is one of the main sources of stress in the healthcare sector. Early intervention, such as vaccination programmes or healthy eating campaigns, can also reduce the risk of service overload.

There has been a significant reduction in trust in authority figures in recent years. This is particularly noticeable with government and politicians in general. However, healthcare professionals are also less trusted. In some cases, the profession has brought this upon itself; think about the various healthcare-related scandals you have heard about. We considered the effect of misinformation and media influence in Section 1.7.1, and we must recognise that this has played its part in the growing hesitancy among some parts of the population to adhere to public health policies. Behavioural science has a part to play in ensuring that contingency planning takes account of human nature.

Another aspect of human behaviour that can have an impact on healthcare provision in times of crisis is the tendency to panic buy. During the early stages of the Covid-19 pandemic the public were advised to pay close attention to hand hygiene, particularly through thorough handwashing, but also through use of hand sanitiser. Very soon it became almost impossible to purchase hand sanitiser because of panic buying. One effect of the instruction to stay at home ('lockdown') was that people were anxious about running out of essentials if they could not get to the shops; the result was panic buying of toilet rolls.

Reflect

Think about your work placement. Are you aware of any contingency or disaster recovery plans?

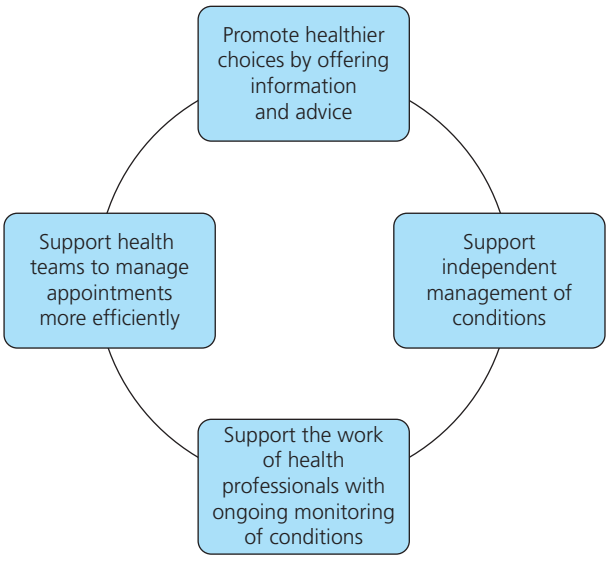
Do any of the examples of the impact of external factors we have discussed apply to your organisation? Are you aware of any steps that can be taken to reduce this impact?

Test yourself

1. Identify three external factors that can potentially impact the activities of the healthcare sector.
2. Describe two examples of the long-term impact of the Covid-19 pandemic on the NHS that have already become evident.
3. What is the purpose of a disaster recovery plan?
4. Give three examples of what a disaster recovery plan should cover.

1.8 How the use of different developments in technology supports the healthcare sector

1.8.1 How electronic health-based applications support the healthcare sector



▲ Figure 1.8 Benefits of health apps

NHS app

The NHS app was developed for and is run by the NHS. It allows users (who must be over the age of 13 and registered with a GP in England) access to a variety of common services. You can use the NHS app to:

- order repeat prescriptions – see your available medicines, request a new repeat prescription and choose a pharmacy for your prescriptions to be sent to
- book appointments – search for, book and cancel appointments at your GP surgery; see details of your upcoming and past appointments
- get health advice – search trusted NHS information and advice on hundreds of conditions and treatments; you can also answer questions to get instant advice and medical help near you
- view your health record – securely access your GP health record to see information like your allergies and your current and past medicines; if your GP surgery has given you access to your detailed medical record, you can also see information such as test results and details of your consultations
- register to be an organ donor – choose to donate some or all your organs and check your registered decision
- find out how the NHS uses your data – choose whether data from your health records is shared for research and planning.

After you have downloaded the app, you will need to set up an NHS login and prove who you are. The app then securely connects to information from your GP surgery.

If your device supports fingerprint detection or facial recognition, you can use it to log into the NHS app each time instead of using a password and security code.

Research

Watch the short video 'Why I use the NHS App' on NHS Digital on YouTube to find out more about how a range of individuals use the NHS app.

- Do you think the NHS app would be useful for your own needs?

Using health apps has benefits for the individual as well as for the NHS and health professionals (see Figure 1.8). Their use promotes healthy choices and lifestyles, raising awareness of how individuals can independently take control of their health.

Some apps also enable remote monitoring and so can be more convenient for a **practice nurse** or GP to regularly monitor patients without having to make an appointment to visit the surgery, thus reducing the demand on GP services.

Key term

Practice nurse: a nurse based at a GP surgery, providing a range of services including immunisations, diabetes monitoring, cervical smears and general health checks.

Electronic health record (Trust specific)

Electronic health records (EHRs) are digital records that hold comprehensive and accurate care records for individuals. They are sharable across different services and allow healthcare staff to access medical histories quickly and safely. However, individual Trusts are responsible for implementation of their own EHRs. This means that not all Trusts have fully implemented EHRs, and they are not always being used to their full potential.

Research

The current Trust-specific EHRs came about because of an earlier attempt to create a centralised national system allowing patient records to be accessed across different NHS organisations by 2010. In 2011, after spending more than £10bn on the project, it was concluded that this goal was unattainable.

The Health Foundation (an independent charity) has published an article on the subject of EHRs, 'Electronic patient records: why the NHS urgently needs a strategy to reap the benefits' (9 April 2025). It is available on the Health Foundation website.

Find and read the article then think about the challenges of implementing EHRs across the whole of the NHS in England. What are the benefits? Are the objectives being met? What more must be done?

Remote monitoring and virtual wards

Developments in IT and communications technology make it possible to provide hospital-level care to patients in their own homes, or in other non-hospital locations such as care homes. Individuals can use devices at home to track their own health, which reduces hospital/clinic visits and can support their recovery at home.

Wearable technology

Wearable technology has become widely used in recent years and is playing an important role in healthcare provision. Devices such as smart watches and smart phones track steps, sleeping and heart rate. This encourages healthy habits and promotes healthy lifestyles. More importantly, it promotes autonomous management of health conditions such as:

- diabetes
- cardiovascular disease
- stress
- mental health conditions
- obesity
- sleep disorders.

Research

NHS England has published guidance on virtual wards and use of wearable technology (see the web article 'Virtual wards enabled by technology: Guidance on selecting and procuring a technology platform' on the NHS England website). The guidance is biased towards procurement aspects (choosing, specifying and buying equipment) but does contain some useful background information.

You can also search for YouTube videos, such as the video 'How digital remote monitoring and virtual ward solutions help improve the delivery of patient care', from Health Innovation Yorkshire & Humber.

You will find other videos of healthcare staff sharing their experiences of virtual wards and wearable technology if you search YouTube for 'Remote Patient Monitoring NHS England'.

- Think about your own health and wellbeing – do you use any wearable technology? Do you find it helpful? Can you see applications in your own work placement?

The use of wearable technology and remote monitoring:

- promotes healthier choices by offering advice and support
- supports independent management of conditions
- supports health professionals with ongoing monitoring of conditions
- supports health teams to manage appointments.

1.8.2 How healthcare professionals use assistive devices and technology in the healthcare sector and the benefits of it to individuals receiving care

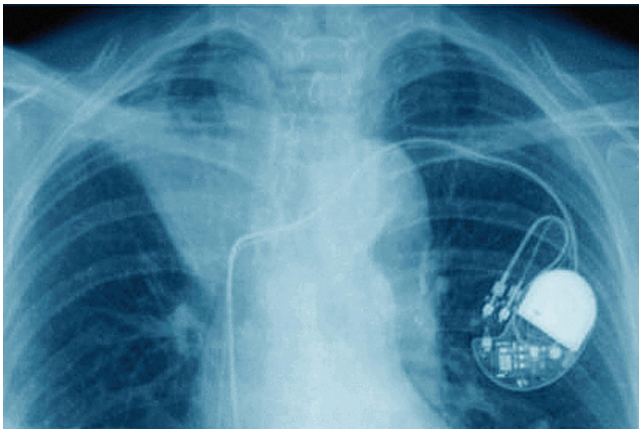
Assistive computer technology can be beneficial in that it provides support for healthcare practitioners, enabling them to treat or manage conditions more efficiently. It also provides solutions and treatments that may not have been available previously – such as remote monitoring of heart conditions, 3D printing of **prosthetic** limbs and robotic surgery – in order to offer improved support and treatment for many health conditions.

Key term

Prosthetic: artificial replacement for a missing limb such as a leg, foot, hand or arm.

Pacemaker

A pacemaker is an implanted electronic device (Figure 1.9) that regulates the heart rhythm by sending electrical impulses to stimulate the heart when it beats too slowly or too quickly. In Section 9.6 you will learn how part of the heart called the sinoatrial node acts as a natural pacemaker; it initiates the electrical impulses that cause the heart muscle to contract. If this fails, its function can be replicated by an implanted electronic pacemaker. This can prevent arrhythmias (irregular heartbeat), reduce the risk of stroke and improve cardiac function.



▲ Figure 1.9 X-ray of a pacemaker implant

The development of connected implants opens up possibilities for improving patient care by allowing health data to be gathered remotely, which enables monitoring and accurate analysis of how best to treat the patient. Some implants are 'smart' – they can communicate with external devices where readings are monitored, and treatment is delivered in response to readings received. Heart pacemakers often work like this, collecting, processing and transmitting data from the patient, who is at home, to the hospital for analysis.

Research

Find out how a pacemaker works. You can use the NHS website (search for 'Pacemaker implantation') or any other reputable source.

Then, read the following articles (available online) and answer the questions below:

1. 'NIH-backed device is first to offer long-term wireless monitoring of Parkinson's patients' brain activity' by Andrea Park, 4 May 20201, FIERCE Biotech website
2. 'How Rory Cellan-Jones used AI to monitor his Parkinson's disease' by Johanna Stiefler Johnson, 17 June 2021, Parkinson's Europe website.

- What activity does Rory Cellan-Jones do each day while wearing a medical device?
- How will wireless monitoring implants potentially help individuals with Parkinson's?

Case study

Interview with Paul

I often felt breathless and had difficulty walking even a short distance. On holiday with my family, I had to stay in the car while they went for a walk – I just couldn't keep up, 50 metres was really hard work. I couldn't sleep due to feeling breathless. I realised I couldn't go on like this so went to see my GP. He sent me for blood tests, an ECG and X-rays. 'I don't like the look of that' was his reaction to my ECG! I was sent to a cardiac specialist who diagnosed me with heart failure.

As a result of this diagnosis, I had to have a pacemaker and a defibrillator implant to help my heart pump more effectively. I also take various different kinds of medication such as beta blockers, tablets that slow down my heart. The implant was fitted in hospital, but I was able to go home the same day. My implant was fitted by a surgeon, but it was programmed by a team using laptops to set it up.

The implant was supplied with a monitor (see Figure 1.10). I just move the mouse over my implant, the mouse downloads the information to the monitor, which sends it to the hospital 'pacing team'. This data informs them about the performance of my heart and the effectiveness of my medication, so they know if anything needs changing. It monitors my heart rate and fluid levels; an alarm is triggered if these are not within the correct range. I can then download the information to the hospital straightaway using the monitor and they can start analysing the data. This means when I go to a hospital appointment, they have already seen the information and worked out any treatment changes that are needed. I don't have to go to the hospital that often because they will know if all is ok when I download my information, and they don't need to see me.

My implant really does provide reassurance as I am continually monitored. If I don't feel well, I can use the mouse to do a scan of my implant, which I can then send to the pacing team. The same if the alarm goes off – I just do a scan with the mouse and download the data to the pacing team. Since having my implant, my symptoms of breathlessness and the constant tiredness have more or less disappeared. Now I can be more active – I can go for a walk and keep up with my family, I don't have to keep sitting down and resting.

▲ Figure 1.10 Remote heart monitoring

- Use the NHS website to find out the meaning of 'ECG', 'heart failure' and 'beta blockers'.
- Using information from Paul's experience, write about the benefits for an individual and their quality of life while having a pacemaker and defibrillator implant.
- Discuss the benefits for the NHS of using this type of technology.

Robotic surgery

Robotic or robot-assisted surgery is used in surgical procedures to enhance precision and control. It combines computer technology with the experience of skilled surgeons. This technology provides the surgeon with a magnification of 10×, high-definition, 3D-image of the operation site. The surgeon uses controls in a console (see Figure 1.11) to manipulate special surgical instruments that are smaller, as well as more flexible and movable, than the human hand. The robot replicates the surgeon's hand movements while also reducing hand tremors. This means that the surgeon can operate with improved accuracy, dexterity and control, even during the most complicated of procedures.

▲ Figure 1.11 Robotic surgery

The benefits of robotic surgery are that it is minimally invasive, leading to quicker recovery times, reduced complications, and improved surgical outcomes and safety. Other benefits include:

- a smaller **incision**
- less damage to healthy tissue
- less pain
- a shorter hospital stay
- less visible scars
- faster recovery and return to normal activities.

These benefits are interrelated. For example, less damage to the healthy tissue will result in quicker healing, possibly less pain and a shorter hospital stay. A smaller incision will usually result in less scarring and a faster return to normal activities.

Key term

Incision: a cut made through the skin and soft tissue for a surgical procedure.

Hearing aids

These small, wearable electronic devices amplify sound and can transform the life of a person with partial hearing loss. They improve communication and social interaction, as well as improving access to learning and employment.

Mobility aids

A mobility aid is any device that supports movement for individuals with physical impairments; the term covers a wide range.

Prosthetics

A prosthesis is an artificial replacement for a missing limb, such as a leg, arm, foot or hand. The plural is prosthetics, although this term also describes the technology. A prosthesis restores function and mobility and can also improve self-esteem and support participation in daily life.

Research

Custom-designed 3D prosthetics for children

Traditional prosthetic limbs can be very expensive and can often cause discomfort for the amputee. They can also take weeks or months to be produced. 3D printing can produce prosthetics that are customised to the individual much more speedily and at a much cheaper cost. This is especially useful for children, who regularly need replacements as they quickly outgrow their prosthetic limbs.

The e-NABLE Community is a global community of volunteers who use their 3D printers to make free and low-cost prosthetic upper limb devices for children and adults in need; you can find out more about them at their website, Enabling the Future.

Read the following article that discusses 3D printed prosthetics – '3D Printed Prosthetics: Affordable Custom Limbs for Kids and Adults' – on the Healthool.com website.

- Summarise the advantages and disadvantages of 3D printed prosthetics. Do you think that they will replace traditional prosthetic limbs?

Wheelchairs

Wheelchairs are seated mobility for individuals with no or limited walking ability. They enable independent movement and allow for access to daily activities, education and employment (Figure 1.12).

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