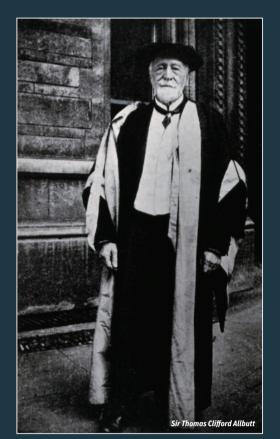
# Welcome

Did you know...?



Some of Britain's most renowned surgeons were born in Leeds, such as Sir Thomas Clifford Allbutt, who invented the modern thermometer.

This history of medicine in Leeds covers almost 300 years, from the building of the new Leeds General Infirmary in 1771 to the first hand transplant in 2013 through the ground breaking work on sanitation in 1833 which changed the face of health in the city.

Whilst Leeds is well known for its impressive industrial past, it has also been the home of many medical accomplishments, celebrated surgeons and successful pharmaceutical businesses.

This trail will take you on a journey to some of story of the significant events and important individuals who made Leeds the flourishing

Leeds' most important medical sites and tell the centre for health and medicine it is today.



On this side of the leaflet you will find a brief background of modern British medicine and a timeline of turning points in the history of health and medicine in the city.

Alongside the map on the other side you will discover the story behind famous institutions, businesses and individuals which have shaped the history of health and medicine.

It will take you about one hour to walk round this trail. As you make your way through the city, don't forget to look around as you pass many important and beautiful buildings.

This trail has been produced in partnership with Leeds City Council as part of a series of maps which invite you to explore this vibrant and historic city.

# **Health and medicine** in modern history

Can you imagine a world without anaesthetics, over-the-counter painkillers or even plasters? In the last two hundred years inventions such as these have had a significant impact, and with improvements in sanitation and the discovery of antibiotics, our health is now protected in very different ways. The nineteenth century saw medical training become more professional, the introduction of aseptic surgery to reduce the risk of infection, and the germ theory of disease. Hospitals, some of which specialised in brand new areas of medicine, were built to serve an increasing population. Physicians and surgeons tried out new tools and techniques, developing new operations and equipment to go with them, and specialist companies were set up to manufacture complex devices from precision forceps through to artificial respirators.



Chadwick in 1842. The darker areas show the part of Leeds worst hit by

As northern towns expanded during the Industrial Revolution, many more demands were placed on doctors and hospitals, and Leeds became one of the most important centres of innovation. Societies were formed that became hotbeds of discussion, attracting distinguished speakers from across the country. The Leeds School of Medicine, set up in 1831, trained aspiring doctors and was the forerunner of the University of Leeds.

Trainees were able to treat real patients, and the establishment of the British Medical Journal and the Lancet brought new case studies and more information within their reach.



Fast forward to the twentieth century and the development of medicine was dominated by global conflicts. Blood transfusions were pioneered in the First World War making long operations safer, and the founding of the National Health Service in 1948 brought free healthcare within everyone's reach. More recently, the first hand transplant in the UK was performed at Leeds General Infirmary in 2013. Led by Professor Simon Kay, surgeons showed that the city is still at the cutting-edge of new procedures.

This trail invites you to step inside Leeds' medical past. Discover how famous doctors pioneered new inventions, how improvements in public health banished deadly diseases and how the hospitals we see today have moved and changed.

# **Timeline**

The building of Leeds General Infirmary (LGI) on Infirmary Street was completed.

Population of Leeds reached 25,000.

 Leeds-Liverpool Canal, the longest single waterway canal in Britain was completed.

1832 \_\_

1800 \_

1816 \_

The Anatomy Act came into effect allowing practitioners, anatomy teachers and medical students to dissect donated bodies.

1833 —

The Factory Act was passed, shortening the working day for children in workhouses and factories. This was an important step in reducing child mortality and improving safety.

1834 —

The second site of the Leeds School of Medicine was purchased on East Parade, opposite the LGI.

One of the first trials of ether as an anaesthetic was carried out at Leeds Medical School and was recorded by Claudius Galen Wheelhouse, a medical student. Within days it was being used on patients at the Infirmary.

1851 —

The population of Leeds reached 101,000.

It was realised that the LGI was too small to meet the needs of the rapidly growing population. A new site on Great George Street was purchased.



1865 \_

◆ The Medical School moved from East Parade to its first purpose-built site on Park Street.

1893 \_\_\_

Leeds gained City status.

1899 \_

Pioneering social researcher Seebohm Rowntree published his influential study on the social conditions of York, highlighting low wages and unemployment as major causes of ill health.

Seacroft Hospital was established as a specialist site for treating and isolating patients with infectious diseases.

1914 —

1948

The War Office began to use Thackray's 'Aseptic' range of standard field dressings.



National Health Service was established.

1967 \_

Pioneering cytogenetics laboratory opened at St. James's Hospital where researchers examined the structure and function of chromosomes.

1998

The Jubilee Wing at LGI was opened to coincide with the 50th anniversary of the NHS.

The UK's first hand transplant took place at the LGI.

## 1782, 1786 and 1792

Additional wings were added to the original LGI, expanding it from a 27 bed facility to a massive 150 bed institution.

#### 1812

William Hey appointed senior surgeon at the LGI. ▶

### 1831

In June six local physicians, including Samuel Smith, set up a private medical school.



First cholera epidemic in Leeds killed 700 people.

Robert Baker published his groundbreaking report on sanitation in the city.

25% of workers were employed in the textile mills.

2,000 people died in the second cholera epidemic.

Thomas Clifford Allbutt began his 28 year career in the LGI.

Thomas Clifford Allbutt invented the short clinical > thermometer, which allowed temperature to be read much more accurately in less than 5 minutes.

Grand opening of the LGI in its current location. ▶

### 1899

It became compulsory for dwellings in Leeds to be connected to sewers.

Charles F. Thackray and Henry Scurrah Wainwright purchased a small pharmacy on Great George Street – the beginning of the famous Thackray dynasty of medical manufacturers. >

Thomas Clifford Allbutt was knighted and made a Knight Commander of the Civil Division of the Order of the Bath.

The Brotherton Wing of the LGI was opened. ►

# 1963

Thackray's company began working in partnership with Sir John Charnley to produce low friction sockets and femoral prostheses for hip replacement surgeries.

# 1979

The Worsley Building opened, home to the Leeds Dental Institute.

Channel 4 series 'One Born Every Minute' filmed at the LGI.

# Find out more...

To find out more about the history of medicine, you can visit the Thackray Medical Museum. next door to St James's Hospital on Beckett Street, 2 miles from the city centre. Find out more at www.thackraymedicalmuseum.co.uk



### **References:**

Credits

S.T. Anning, The History of Medicine in Leeds (Leeds: University of Leeds Press, 1978)

S. Burt and K. Grady, The Illustrated History of Leeds (Derby: Breedon Books, 2002)

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collaboration with Leeds City Council. It has

Linch and Tess Hornsby Smith.

University of Leeds.

Leeds General Infirmary, 1768

and make it accessible to the public. They were

Rebecca Tinnion, who are undergraduate students at the University of Leeds, as part

# **Walk it**

\_eeds **History of Medicine Trail** 







Leeds

Leeds is very compact and walkable, easily accessible by bus, train or car. Leeds Bradford Airport is just half an hour from the city centre by bus. There are numerous car parks and ample blue badge car parking spaces in the city centre.

### **I** Leeds Visitor Centre

VisitLeeds is a friendly visitor information centre and Art gallery shop located at the Leeds Art Gallery on The Headrow, open 7 days a week.

0113 378 6977 www.visitleeds.co.uk

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### **II** Leeds Travel Information

With up-to-the-minute information about car parking spaces, public transport and walking routes, travelling into and around Leeds has never been easier.

0113 245 7676 www.leedstravel.info

### Walkit.com

The urban walking map and route planner helps you get around Leeds on foot. Get a walking route map between

any two points, including your journey time, calorie burn, step count and carbon saving. It's quick, free, healthy and green.

www.walkit.com/leeds







## • The house of Sir Thomas **Clifford Allbutt**

On the edge of the University campus, Lyddon Hall was once home to one of Yorkshire's most celebrated physicians Sir Thomas Clifford Allbutt. After studying at the University of Cambridge he began his long and distinguished medical career in Leeds in 1861. He helped combat the rise of endemic diseases of the Victorian era by working for the House of Recovery (1863-65) and the Leeds General Infirmary (1864-84). Allbutt drew attention to the importance of a patient's temperature during diagnosis. He invented the short clinical thermometer, six inches in length, which quickly became a ground-breaking medica device. This led to quicker, more accurate and more reliable diagnoses. Although we take reliable thermometers for granted now, in its day Allbutt's invention was a pioneering piece of equipment.

### Did you know?

Whilst living at Lyddon Hall, Allbutt had a close friendship with George Eliot, the famous English novelist. She is thought to have modelled the character of Tertius Lydgate in 'Middlemarch' on Allbutt. The description of Tertius reflects Allbutt's ambitious and hardworking nature.



## The Leeds General **Infirmary (LGI)**

The Leeds General Infirmary – known locally as the LGI – serves the city of Leeds alongside one other major hospital, St James's, and smaller specialist facilities such as Chapel Allerton Hospital. Established in its current location in 1869, the hospital features grand architecture, designed by George Gilbert Scott, who was also responsible for the iconic building of St Pancras Station in London. The LGI remains one of the most impressive Victorian buildings in Leeds. The hospital's specialities have shifted from the containment of infectious diseases such as diphtheria and smallpox, to carrying out the UK's first successful hand transplant and a pioneering cross-generational kidney transplant in 2013. The LGI has a rich cultural and social history, with millions of patients having passed through

#### Did you know?

During the LGI's construction in 1858, Florence Nightingale was called in to give advice and expertise on the size, space and layout of the wards. Her recommendation of the pavilion layout, with a central administration block and wards extending off a long linear corridor to allow the air to circulate, was duly adopted.



# The house of William Hey

The celebrated surgeon William Hey was born in 1736. He began working at the LGI when it was opened in 1771 and after several important medical discoveries he was appointed a senior surgeon in 1776. Hey discovered and gave his name to Hey's ligament, Hey's saw and Hey's amputation, gaining the respect of his fellow professionals for these important breakthroughs. Hey was Mayor of Leeds twice, leading a life of great medical and social influence. His home, few other British surgeons rival the achievements of Hey. He was also the first in a line of surgeons; his son took over the family practice when Hey retired in 1812 and his grandson also became a surgeon at LGI.

### Did you know?

Amazingly for a successful surgeon, Hey was blind in one eye following an incident with a penknife that took place when he was four.



# **1** A former workhouse

In the nineteenth century textile mills dominated the city, attracting new inventions and ambitious entrepreneurs. Not everyone benefited as industries grew; some people slipped into poverty and ended up in the workhouse. On the corner of Lady Lane and Vicar Lane was one such institution. The social impact on Leeds was considerable and workhouse conditions had damaging effects on health. For workers, their day consisted of bad ventilation, overcrowding, low pay, long hours frequent and illnesses such as byssinosis ("brown lung disease"), caused by exposure to cotton dust, were common and frustratingly untreatable. Arguably, children were the greatest casualties of workhouse life as they had essentially swapped childhood for the role of a wage earner, some from as young as nine years old.

### Did vou know?

Mill children were susceptible to work accidents which caused a whole range of disabilities, such as deformity of spines, limbs or bent knees. In one tragic case, a young girl's leg was caught in a revolving part of a textile machine and the limb had to be amputated in order to free her. Due to the poor understanding of sanitation and hygiene by doctors at the time, the girl later died from an infected wound.



SWEET STREET

JACK LANE

Key: 1 Trail



## 1 The site of Thackray's **Pharmaceutical Shop**

When a pharmaceutical shop on Great George Street became available in 1902, opposite the Leeds General Infirmary, business partners Charles F. Thackray and Harry Scurrah Wainwright saw the perfect opportunity to create their own medical business in the heart of Leeds. Many medically-related businesses had already developed in the area providing customers for the new shop. Thackray initially sold basic medical preparations, such as cough mixtures and eye drops, but as advancements were made in aseptic surgery Thackray was able to develop another side to his medical business by providing the LGI and other local hospitals with sterilised dressings and supplying instruments for surgical use. Thackray's 'Aseptic' range was even accepted by the War Office as the standard field dressing on the battlefields of the First World War.

Thackray's flourished in the twentieth century and became one of the leading independent medical companies. In 1963 the company began working with Sir John Charnley to produce innovative femoral prostheses with low friction sockets for hip replacements. In 1971 they were producing five types of stems and four sockets, with an output of nine to ten thousand hip implants a year. Thackray's company modernised the way in which hip replacement surgery was



# Leeds School of Medicine (1834-1865) – 1 East Parade

Leeds was one of the first industrial towns to have a private medical school. Following the establishment of such schools in London. Edinburgh and Glasgow, a number of famous Leeds-born surgeons and physicians, including William Hey and Charles Turner Thackrah, came together to found a new medical school in Leeds on North Street. The first premises proved too restrictive for the expanding school and in 1834 the Leeds School of Medicine moved to a new site on East Parade. It included two lecture rooms, a dissecting room and chemical laboratory. The course at Leeds was more focused on practical medical care, rather than the theoretical approach available elsewhere. This training coupled with the location of the school proved invaluable as students could complete their apprenticeships at the LGI just around the corner.

#### Did you know?

One of the first trials of ether in Leeds was recorded in 1846 at the Leeds School of Medicine by Claudius Galen Wheelhouse, who was then a student. He described the experience, noting how he and his colleagues 'fell over one after another quite insensible and unconscious.' Just days later the practice was being used by surgeons at the LGI, where patients endured a more pain-free and comfortable surgical experience than was previously possible.



# First Site of the Leeds General **Infirmary, Infirmary Street**

It took a total of three years and £4,599 to build the first Leeds General Infirmary in 1771. Following the introduction of medical institutions for the poor in England during the eighteenth century, the medical elite and governing bodies of Leeds asked John Carr, the architect of Harewood House, to design the building. It was located in what was then countryside, with its gardens stretching down from Infirmary Street to the River Aire. The institution flourished, with a number of wards being added to contend with the rapid growth of the industrial city and it maintained a reputation for its high standard of medical care and cleanliness, upheld by its nursing and medical staff and its surgeons, such as William Hey and

#### Did you know?

The building and maintenance of the LGI was based initially on local donations. Collections were made in churches, chapels and other public institutions to keep the hospital running.



# **8** Kirkgate Market

Cholera was the most feared disease of the nineteenth century. When it struck Leeds in 1832, the then open-air Kirkgate Market and the poorer areas surrounding it were the worst hit. In this area alone 700 people died in just six months. This prompted the social reformer Edwin Chadwick to commission Dr Robert Baker to conduct a report on the area, investigating the impact of cholera. Baker linked poor sanitation and lack of fresh water and sewage systems to of the Poor Law. Baker's report on sanitation and cholera paved the way for Chadwick's own famous report of 1842, which resulted in the area surrounding Kirkgate Market being cleaned up. The installation of sewage systems followed soon after, resulting in significant improvements to health in this densely populated area.

### Did you know?

Despite the work of Baker and Chadwick, improvements in sanitation in Leeds still took many years and cholera cases continued. The disease was proven to be water-borne in 1855, but the organism responsible, Vibrio cholera, wasn't identified until 1883.



### The Industrial Revolution in Leeds

The process of industrialisation in the nineteenth century changed the face of Leeds by transforming a market town into a thriving commercial and industrial centre. This success was in part due to the transport opportunities offered by the River Aire and the Aire and Calder Navigation. Access to water transportation encouraged trade with business outside the district, in Britain and Europe. However, this convenient water supply was not just used for washed and dumped their waste from the banks. Consequently the River Aire became an open sewer and a significant cause of public health problems. Indeed the regular consumption of water from the polluted river fuelled the cholera epidemic and caused typhoid and bowel infections.

### Did you know?

During the Industrial Revolution, Leeds was one of the most unsanitary districts in England. Poor public health, dirty living conditions and filthy public spaces were a major concern and with the help of health officials like Robert Baker, the city invested in improvements in environmental and social conditions, including a new sophisticated sewerage system which separated waste from the sources of drinking water.