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ABSTRACT BOOK

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UNIVERSITY OF SHEFFIELD

BSHM
British Society for the History of Medicine

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Keynote

Disease, Accident and Disaster in Coal Mines and the Mines Inspectorate

Key note speaker

Dr. Joan Gaunt (Retired GP)

Abstract

The title reflects the main themes – the improvements in safety in coal mines as a result of the Mines Inspectorate's investigations into accidents and disasters after its' formation in the 1850s and the resulting Parliamentary reports, making Britain's mines the safest in the world. Disease in miners is considered, as well as the types of injuries in accidents and disasters. It is illustrated with much and varied historic material from the collections of National Coal Mining Museum.

References

N/A

Imagining Pandemics: A Century of Medical Failure

Key note speaker

Dr. Mark Honigsbaum (City University of London)

Abstract

Ever since the devastating 1918-1919 'Spanish' influenza pandemic, medical experts have sought to anticipate epidemics and mitigate their worst impacts. But while Britain has long been a pioneer of predictive epidemiology - and disease modellers occupied influential positions on key committees that advised the government on its response to Covid-19 - Britain mounted one of the least effective responses to the coronavirus pandemic of any country in the world.

This talk suggests this paradox can be traced to a combination of medical and political complacency and over-reliance on disease models predicated on influenza. Rather than putting on our faith in mathematical models to predict the course of epidemics and dictate mitigation measures in future, I argue we need to cultivate more profound forms of imaginative engagement with pandemics – ones that take account of the lived experiences of epidemics and the long history of quarantines.

A useful starting point would be to recognise that while abstractions such as the R° may be useful for calculating the reproductive ratio of a virus and telling us when should lock down and when to relax suppressive measures, they can never capture the messy social reality of epidemics, much less tell us when we will be delivered from our pandemic purgatory.

References

N/A

The Art of Nursing: A History of Contradictions

Key note speaker

Prof. Christine Hallett (University of Huddersfield)

Abstract

Christine Hallett's paper traces the history of the artistry considered to be at the heart of nursing practice. Drawing, essentially, on the 'history of ideas' her paper examines the shifting patters of acceptability and recognition of the concept of 'nursing artistry' alongside the scientific and moral emphases of professional nursing. The paper explores four cultural influences which have had a profound impact on the way in which the profession has viewed its mission and its purpose: religious self-abnegation; the idea of nursing work as female work; the association of nursing with 'care-work'; and the centrality of physical and emotional labour to nursing practice. Hallett's work draws upon a range of primary sources, from Victorian hospital memoirs, through early-twentieth-century writings such as the Baroness de T'Serclaes', *Flanders and Other Fields,*media representations such as the 1958 film, *The Feminine Touch,*the late-twentieth-century works of nurse-theorists such as Jean McFarlane and Virginia Henderson, and the writings of early-twenty-first-century newspaper columnists. Ultimately, she argues that nursing's association with self-sacrifice, female identity, care work and 'emotional labour' have, collectively, acted as both 'cultural anchors' and as 'millstones around the necks' of professional nurses in their endeavours to pursue a distinct knowledge-base and gain full professional recognition.

References

N/A

The CT Scanner- one of the greatest medical engineering developments of the 20th century.

Key note speaker

Ms. Liz Beckmann (British Society for the History of Radiology)

Abstract

On 1st October 2021, we celebrate 50 years since the 1st Clinical CT scan. This lecture reflects on the unique development process that created the CT scanner and the person behind the development, his roots from the Sheffield area and his intuitive approach to design and engineering.

The initial development of CT scanning was done by Godfrey Hounsfield and his team at the Central Research Laboratories of EMI. His initial proposal came from a project which had him thinking about pattern recognition. This early proposal and the development of the clinical prototype could easily have failed due to lack of support from most medical people and lack of funds. Fortunately his early experiments enabled him to prove the concept of reconstructing an image of a brain specimen through which a large number of x-ray readings had been taken the significance of which was recognised by Dr James Ambrose.

The first clinical CT scan of a patient was at Atkinson Morley Hospital, in Wimbledon, South-West London on 1st October 1971 by Godfrey Hounsfield together with Dr Jamie Ambrose the radiologist.

Godfrey Hounsfield, was an unassuming man who was born near Newark, his family having originated from the area South of Sheffield.

Godfrey was a fascinating man, who thought in a different way to many people, which made it challenging for those working with him.

Throughout his career he had a great love of fun both at work and in his social life, enjoying ramblings and social group outings

In recognition of the development of CT scanning and the significant impact that it had on the medical and surgical world, Godfrey received many awards. These included sharing the Nobel Prize for physiology or medicine in 1979 as well as receiving the British honours of CBE and a knighthood in 1981.

References

N/A

The Dirty, the Idle, the Drunken and the Disorderly': People, Public Health, Politics and Philanthropy in 19th Century Sheffield

Key note speaker

Dr. Chris Corker (York University)

Abstract

On 16 June 1832, as the national Cholera epidemic gained pace, the *Sheffield Mercury* wrote 'The Cholera is likely to come to Sheffield. It attacks chiefly the dirt, the idle, the drunken and the disorderly.' Such was the prevailing view of the people of Sheffield, which the disease arrived in the same year. Cholera quickly swept through the town, in part due to the lack of a coordinated response and joined up approach to local health support from local institutions, including the Town Trust. This view, that the disease principally afflicted the lower classes, was shattered when Master Cutler John Blake contracted Cholera and quickly perished. New systems would need to be established which supported all Sheffielders from such public health issues. One of the first responses was the establishment of a Public Dispensary in 1832, supported by sponsorship from the general population and businesses in the town. This was the first action which commenced a complex relationship in Sheffield during the Victorian age between people, public health, politics and philanthropy. This talk explores how this relationship evolved over the next decades, how the social conditions of Sheffield developed and influenced the developing need for enhanced public health understanding. The talk will draw on a report on the Sanitary Conditions of Sheffield in 1847, and records of health institutions in Sheffield during the period. Of note will be the development of philanthropic endeavours by increasingly wealthy business leaders in Sheffield, and how their control of social resources and political power influenced public health efforts, including the foundation of a maternity hospital in Sheffield.

References

N/A

The Mechanics of Science, how Orthopaedics and Engineering go step in step

Key note speaker

Prof. Sean Patrick Hughes (Imperial College London)

Abstract

In this paper the relationship between orthopaedic surgery and engineering over the last 60 years, will be analysed with the focus being on total joint arthroplasty (THA).

Philip Wiles at The Middlesex Hospital London in 1938 was the first surgeon to insert a THA into a patient. (1) Other surgeons working with technicians and engineers subsequently produced novel THAs. The major innovator though in this period was John Charnley who pioneered the low friction arthroplasty for the treatment of patients with osteoarthritis of the hip. (2) Charnley, a self-taught engineer, was supported by a technician, and collaborated with engineers. He also worked with industry, namely CMW (Calculated Molecular Weight) Laboratories Ltd, Charles F Thackery Ltd and Howorth Air Technology Ltd. Harry Craven, Charnley's technician, who had served an apprenticeship in mechanical engineering was involved in the design of the low frication arthroplasty, as well as the clean air operating environment. However, Charnley only acknowledged Harry Craven once in a publication. Other THA surgeons collaborated with engineers who came from Rolls Royce and the aerospace industry. The direction of travel over time has been from the orthopaedic surgeon working with a technician, to working with a bioengineer, to working with manufacturing companies. John Pickstone described Technoscientific companies, who in order to make the best use of resources, produced new commodities from their own research laboratories while using a web of academic and government laboratories. (3)

This lecture will explore the relationship between the technician, engineer, and orthopaedic surgeon, developing into a relationship between equals. The future though may well be of technoscience companies employing orthopaedic surgeons, to use company products, in company hospitals, and with company outcomes being recorded. The roles will then be reversed; the surgeon responsible to the bioengineer who in turn will be responsible to large technoscience companies.

References

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2. Charnley J, Arthroplasty of the hip a new operation, *Lancet,* 1961, ii 1129.
3. Pickstone John V, *Ways of Knowing, a new history of science technology and medicine,* (Manchester: Manchester University Press, 2000)

The rise of the Sheffield Steel and Cutlery Industry and the Associated Occupational Diseases

Key note speaker

Dr. John Dornan (Formerly Occupational Physician Sheffield)

Abstract

This paper describes the rise of the Sheffield Steel and Cutlery industry from medieval times until today and why it became established in Sheffield.

It describes the manufacture of "special steels", which developed as a result of new steel manufacturing processes and techniques. It also describes the Occupational Diseases associated with the processes involved and the hazardous materials used.

The importance of the Cutlery industry, in world markets, is explained and how the specific diseases associated with the "Knife Grinders" were investigated and identified in the nineteenth century by local physicians working in the Sheffield Public Hospital. The symptoms associated with File cutters disease are also explained.

The paper then describes how the control measures, introduced over a number of years, eventually prevented the development of the diseases described above. Finally, the results of the last known survey carried out into health hazards associated with cutlery manufacture (1980) are explained by the author.

References

N/A

Oral

‘Chair’ Dental General Anaesthesia and Mortality 1950-2000

Oral

Dr. Adrian Padfield (Formerly Consultant Anaesthetist Royal Hallamshire & Charles Clifford Dental Hospitals Sheffield)

Abstract

General anaesthesia (GA) in dental general practice (GDP) dates back to 1844 and the American dentist, Horace Wells and the technique had hardly changed since. In the UK, GA in GDP officially ended in December 2001[1]. After the publication of Dinsdale and Dixon’s paper of statistically accurate numbers of GAs in GDP in 1978 [2], I began collecting figures for UK dental school GAs in an attempt to dissuade academic dentists and the General Dental Council from requiring instruction of dental students in administering GAs. The numbers were falling and student numbers were rising. Then I began amassing the numbers of GAs paid for in GDP by the Dental Practice Board (DPB) in England and Wales; resulting in a set of figures back to the earliest days of the NHS. My paper is a review of 50 years for which there are reasonably accurate statistics: the numbers from July 1948 to December 1950 cover varying time periods and have not been included. It musters and analyses the numbers of GAs paid for by the DPB (formerly the Dental Estimates Board/DEB); known and estimated Scottish figures; the dental schools’ GAs, and school, local authority and other dental GAs. The mortality rate for GAs in DGP is presented.

References

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[2]Dinsdale RWD & Dixon RA: Anaesthetic Services to Dental Patients: England and Wales 1976. Br. Dent. J 1978 **144** 271-279

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‘Post tenebras lucem’ - Dr Richard Bright (1789 - 1858): the man behind the eponym

Oral

Dr. Bela Szebenyi (Consultant rheumatologist, Northern Lincolnshire and Goole NHS Foundation Trust)

Abstract

Among the Guy’s Hospital famous triumvirate (Thomas Addison, Thomas Hodgkin, and Richard Bright) the latter is the least known in the contemporary medical community.
It is therefore worth highlighting his achievements in the fields of medicine and arts.

Richard Bright has grown up in a highly educated and cultural family at the ’Age of Enlightenment’, reflected in their family motto *’Post tenebras lucem’*- out of darkness into light. In 1808 the young Richard Bright started his studies at Edinburgh University, first in political economy, mathematics and natural philosophy, switching to Medicine a year later. After graduation he extensively travelled the Continent, visiting Belgium, Germany, Austria and Hungary. His 600-page quarto volume *‘Travels from Vienna through lower Hungary…’*,published in 1818, provides a fascinating description of the countries visited, illustrated with some delightful engravings based on sketches during his travels. Bright applied the same investigative efforts in his travel writing as he would later do in his medical research. In 1820 he was appointed associate physician at Guy’s Hospital and started his extraordinary career in clinical medicine, teaching and research, culminating in his ‘magnum opus’ the *‘Reports on Medical Cases Vols I and II’*. He was the first who associated dropsy (oedema) and albuminuria to actual renal disease (nephritis), named after him as ‘Bright’s disease’.

Dr Richard Bright was a traveller, geologist, writer, artist, linguist, physician, pathologist, and researcher - a man of many parts indeed.

References

1.
Berry D, Mackenzie C: Eponymists in Medicine: Richard Bright (1789-1858). Physician in and Age of Revolution and Reform. Royal Society of Medicine Services Limited 1992, pp 1-296
2.
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‘The most sensational strike of modern times.’ The battle of Radcliffe Asylum.

Oral

Dr. Claire Chatterton (The Open University)

Abstract

In 1922 a strike took place at a mental health institution in the English Midlands – the Radcliffe Asylum near Nottingham. This was described by a local paper as the, ‘most sensational strike of modern times.’

The ‘Battle of Radcliffe Asylum’ occurred when the asylum’s management committee attempted to increase the working week of its nursing staff at the same time as it reduced their wages. Urged into action by the national leadership of their union (the National Asylum Workers’ Union) both male and female nursing staff barricaded themselves into the wards they worked on. This was thus a ‘sit-in’ strike and ensured that the patients were still cared for. After three days the wards were stormed by police and bailiffs and after what the Daily Sketch called, ‘a fierce hand-to-hand struggle’, the strikers (with patients fighting alongside them) were overpowered. All were dismissed and the battle was lost.

The nursing press were quick to condemn the strikers but in recent times they have been honoured by the union. The episode itself though, is hardly known. Drawing on primary sources from the papers of the National Asylum Workers’ Union at the University of Warwick and the hospital’s records, held in the Nottinghamshire Archives, and utilising articles from contemporary journals (e.g. Nursing Times, Nursing Mirror, Journal of Mental Science, Nottingham Journal) this paper aims to redress this balance and explore its significance in nursing history.

References

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48th Annual Report on the State of the Mental Hospital for the County of Nottingham… for the year ended 31st March 1923 (Nottinghamshire Archives, SO/HO/1/6/9)

A History of Cape Engineering Ltd, Warwick

Oral

Dr. Adrian Padfield (Retired Consultant Anaesthetist, Sheffield)

Abstract

Cape Engineering Ltd was started in disused aircraft hangers by TG Turner who left the Alvis car company in the late 1940s. He was joined by GS Webley, also of Alvis. Their first major contract was making kits of parts to improve Both cabinet respirators. In May 1952 GT Smith-Clarke (chairman of the Coventry hospital group and until 1950, Chief Engineer Alvis) was asked by the Birmingham Regional Hospital Board to modify pre-war, hastily constructed Both 'iron lungs' which were not 'user friendly' for patients or nurses. By August the five Both machines in Coventry were modified and approved by the Ministry of Health. In August 1953 Cape started making a radically new and improved cabinet respirator designed by Smith-Clarke: The Alligator.

Cape Engineering was sold in late '50s but Webley & Turner bought it back. A group was formed: Cape Warwick Holdings. It incorporated Cape, Microflow, Pressoturn, Warwick Productions, and Capecraft. Most medical engineering was carried out by Cape though Capecraft made equipment for new hospitals in the Middle East. The polio outbreak in Copenhagen showed that positive pressure ventilation via tracheostomy or endotracheal tube was life saving and practical. Smith-Clarke designed an IPPR ventilator, made and marketed by Cape which they developed the Cape Waine. A very successful and robust anaesthetic machine:

Cape Warwick Holdings was bought by Thomas Tilling in 1976 but they were taken over in a 'dawn raid' by BTR in 1983. BTR closed Cape Engineering merging it into Cape Warwick who produced portable iron lungs for use in patients' homes.

References

Smith-Clarke GT. Mechanical breathing machines. Proceedings of the Institution of Mechanical Engineering 1957; **171**: 52

Oral; Ronald Walton ex-MD Cape.

Book: Padfield A. Coventry, Alvis & the Iron Lung 2020 Hughes & Co Pershore

A silver lining: Sheffield, silver and industrial lung disease.

Oral

Dr. Erin Whyte (Specialty Registrar, Histopathology. Sheffield Teaching Hospitals)

Abstract

In the mid-20th century pathologists from the University of Sheffield published a series of case reports describing post-mortem findings in men working in the local silver industry.

In these case studies Harding and colleagues pulled together information from post-mortem examination, radiology, histology and clinical history to describe the effects of exposure to common metals (silver and iron oxide) encountered in the silver trade. Deposition of silver, lining both the walls and small vessels of the lungs, was a universal finding but the authors were unable to conclusively define the potential effects on morbidity or mortality. Whilst silver and iron oxide were thought to be of relatively low pathogenic risk one case showed an unexpected degree of fibrosis of the lungs leading the authors to speculate if this 'harmless' nature was potentially misleading.

This paper contextualises these findings through modern histopathology and understanding of both the pathological consequences of silver and iron oxide exposure and the laboratory techniques used in the cases. Clinical research into silver toxicity has continued since the publication of these cases studies with renewed interest in the later 20th century to the present due to the use of silver in nanotechnology. The use of silver in medicine (as an antimicrobial agent or in the development of radiology) is well documented in the secondary literature but there is comparatively less exploration of silver in the occupational health sphere or as a causative agent of disease. The clinical histories provided and wider post-mortem findings also allow use to appreciate daily life in industrial Sheffield in the first half of the 20th century.

References

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Harding, H., 1948. Fibrosis in the Lungs of a Silver Finisher. Occupational and Environmental Medicine, 5(2), pp.70-72.

Analysing Death as a Skeletal Figure by E.L. Sambourne

Oral

Ms. Ecem Mimoglu (Imperial College London)

Abstract

The anti-vaccination movement has existed since the discovery of vaccination itself and has continually presented a significant public health risk. This essay seeks to explore the origins of the anti-vaccination movement through an analysis of *Death as a skeletal figure*, a cartoon created as a commentary on the 1898 Vaccination Act by E.L. Sambourne.

Compulsory vaccination was first introduced in Britain with the 1853 Vaccination Act. The decision to make vaccination mandatory aggravated the existing anti-vaccination movement and caused protestors to unite nationwide to establish the National Anti-Vaccination League (NAVL). As tensions mounted, the 1889 Vaccination Act was passed. This introduced a conscientious objector clause for parents with deep-seated beliefs (BMJ, 1898). *Death as a skeletal figure* was created by Sambourne to foreshadow the unravelling of public health standards that would result. E.L. Sambourne, was an upper-middle class gentleman with a natural affiliation to those criticising the anti-vaccination movement, so he provides an illustration of the prevailing stereotypes of anti-vaccination protestors, (although he fails to acknowledge the significant socio-economic and philosophical underpinnings of their movement).

This essay concludes that the core ethical dilemma plaguing the Victorian public was whether an individual's right to autonomy supersedes the government's intentions of protecting public health. This is a striking example of the deep divisions between the societal classes of Victorian England and is a strong reminder of the importance of public health, autonomy, and equality in healthcare. The highlighted themes remain pertinent to the anti-vaccination movement present today.

References

A range of sources have been consulted, including primary sources such as the original cartoon, *Punch* magazine articles, and an article from *The Times*. Secondary sources such as modern books and journal articles have also been considered. These include *Bodily Matters* by Durbach and Walkowitz (2004) and *The Life of Edward Jenner* by Baron (2014).

Changing the measure of success in prosthesis industry - how the Oxford Knee took on SKAR

Oral

Ms. Kaija-Liisa Koovit (University of Leeds)

Abstract

In 1976, Dr John O'Connor and Mr John Goodfellow from the Nuffield Clinic at Oxford introduced the first meniscal bearing knee replacement. A medical innovation that mimics the human knee joint movement and would revolutionise the knee industry - or so they thought. In 1995 the Swedish Knee Arthroplasty Register (SKAR), the most respected and influential registry for arthroplasty globally, published a damming paper on the product stating that it should only be used within a clinical trial. It could all have gone downhill, but instead, by 2009, the Oxford Knee had become the number one product of its kids and the most clinically tested partial knee in the world. It was not because they changed the product; they took it upon themselves to prove the testing and the article wrong. Within the archive of John Goodfellow located at the Thackray Museum of Medicine in Leeds is the correspondence of the Oxford Knee Team and SKAR, which showcase the making of that article and how the Oxford Knee Team realised that no matter what they said and what evidence they collected SKAR had already made up their mind on what they would publish. Instead of fighting SKAR, the Oxford Knee team started collecting evidence of their own, leading to an overall analysis of whether the industry standard for success - revision rates - can be considered the measure of success in all cases of prosthetic surgery.

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Charles Lindbergh's contributions to medical engineering

Oral

Mr. David Hamilton (St Andrews)

Abstract

The Nobel Prize winner Alexis Carrel invited Charles Lindbergh, the famous aviator, to be a volunteer in his tissue culture laboratory at the Rockefeller Institute for Medical Research in New York. There, Lindbergh worked part-time for six years from 1930 and improved the laboratory's traditionally simple equipment. Lindbergh's best-known contribution was the first organ perfusion pump, a closed system enabling prolonged, sterile perfusion.

Less well-known are his other contributions, and the first was a new double centrifuge tube. This enabled rapid separation of serum using an inner porous tube of clotted blood, and the device was extended as many variants later, notably in the Corning Company's centrifugal concentration Spin-X range. He then designed a centrifuge for continuous separation of cells from plasma, developed by others later for plasmapheresis. Even in exile in England from 1936, his experiments continued, adding a hyperbaric chamber to the perfusion system. Finally, returning to New York in 1939, on the eve of war he published details of a new flask for Carrel's tissue culture work. They hoped, but failed, to achieve the goal of culturing the poliomyelitis virus in the industrial quantities needed to produce a vaccine.

Lindbergh's well-known aversion to publicity meant he was content that his presence in the laboratory was concealed for many years, and he was understandably reluctant, at first, to publish on his work. Added to this, his biographers have seldom looked beyond the more dramatic events in his life.

His success came from merging cognate skills, applying his knowledge of aeronautical engineering to the lab's biomedical projects. His innovations were part of the moves at this time in biomedical engineering which successfully offered better instrumentation and new investigative equipment.

References

David Hamilton *The First Transplant Surgeon: The Flawed*Genius *of Alexis Carrel,* London 2017.

Convalescent plasma treatment in a pandemic: a historical perspective

Oral

Dr. Edward Wawrzynczak (British Society for the History of Medicine)

Abstract

At the start of the COVID-19 pandemic there was no proven therapy for patients with life-threatening SARS-CoV-2 infection. One option was to infuse plasma obtained from patients who had recovered from the disease and were presumed to have developed immunity to it.

In 1890s Germany, medical researchers experimented with the serum of convalescents to treat cases of pneumonia, typhoid fever, scarlet fever and measles. Some favourable results were reported but the number of patients treated was small, obtaining convalescent serum was problematic and the rationale was questioned so the procedure was little used.

During the Spanish influenza pandemic, convalescent serum and plasma were tried in patients with complicating pneumonia. Several US studies reported clinical improvements, especially when treatment started soon after diagnosis, but were criticised for lacking appropriate control cases making it unclear if reduced mortality was due to the blood preparations administered.

The approach continued to be used in the 1920s and 1930s to combat viral diseases. In the UK, the London County Council organised the provision of convalescent serum for regular outbreaks of measles in the capital. In an institutional setting, given early after infection, serum could prevent or lessen the severity of the disease in vulnerable young children.

Outbreaks of SARS-CoV-1 in 2003 and pandemic influenza A (H1N1) in 2009 saw the use of blood plasma from convalescent patients obtained by plasmapheresis. The few trials suggested the treatment was safe and helped reduce mortality, especially when commenced early, but were predominantly studies of poor quality that left room for doubt.

The scale of the crisis caused by SARS-CoV-2 has offered a unique opportunity to conduct large-scale, well controlled trials of convalescent plasma treatment. This paper considers what the lessons of history tell us about how to use this century-old approach in a modern pandemic.

References

No references.

David Hilfiker Revisited: The Consequences of a Pioneering Discussion of Medical Error

Oral

Mr. Matthew Morrell (Medical student, University of Sheffield), Prof. Ian Sabroe (Consultant Respiratory Physician, Honorary Professor of Medical Humanities, University of Sheffield), Dr. Chris Millard (Department of History, Lecturer in the History of Medicine and Medical Humanities, University of Sheffield)

Abstract

Medical error is a significant problem for institutions, patients, and healthcare workers. In the 1980s, physician David Hilfiker provided initial descriptions of the emotional impact of error on physicians.[1,2] In an environment where medical error was seldom discussed, they proved to be both highly influential and contentious.

To better understand the historical developments of the ongoing medical error discourse, Hilfiker's landmark work was analysed and its influence over time charted. This work argues that Hilfiker's partialised conceptualisation of medical error - which emphasised individual emotion in place of systems - had a profound and lasting reach that helped shape developments in error discussion.

Hilfiker's works were analysed for their linguistic content, with close reading applied to draw out crucial claims regarding medical error. A timeline of Hilfiker's influence was synthesised through analysis of literature that cited him, and further literature searches were conducted to identify important error developments outside of his explicit influence.

Hilfiker's work was found to be profoundly influential, initially prompting a sole focus on physicians' personal, emotional responses to error, and then becoming transformed in a new context which emphasised patient safety above physician experience. His accounts of physician experience were crucial to the conceptualisation of the controversial 'second victim' discussion, and he gave permission for individual error confession in a manner that minimised the systemic, collective aspect of the error disclosure discussion. However, the fundamentally transformed terms of error in the 21st century hold implications for Hilfiker's ongoing influence, and the extent of his impact upon both of these discussions can help explain tensions within current error discourse.

References

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Denis Burkitt and mapping the geography of chronic diseases

Oral

Prof. John Cummings (Emeritus Professor, School of Medicine, University of Dundee)

Abstract

The earliest examples of maps of diseases are credited to Valentine Seaman who plotted the distribution of yellow fever in New York in 1798 followed in 1830-1840 by Shapter and then John Snow with their maps of cholera in Exeter and London. Soon after this maps were drawn of the distribution of heart disease, cancer and tuberculosis and so evolved the science of epidemiology.

Burkitt, an Irish surgeon called to work in Africa, arrived Lira, Uganda, in 1946 where the outstanding surgical problem he had to deal with was hydrocele of the testis. He noticed that the majority of the men with the condition lived in villages to the east of the town and drew a simple map to show this. He did not stay long enough in Lira to follow this up but the cause was Filariasis.

On moving to Mulago hospital in Kampala he was asked to see a child with tumours of its jaws. His curiosity aroused he began to collect similar cases, discovered that these children had tumours at many sites in the body and that the disease occurred in only certain areas around the city. He set off on the 'Long Safari' across East Africa to map the disease and on return to Kampala he showed his maps to Alexander Haddow, an entomologist. Haddow showed Burkitt maps of temperature and rainfall in Africa, which coincided with the tumour distribution. Soon afterwards the first virus to be associated with a human cancer was identified.

Returning to England Burkitt pioneered the role of diet in the cause and prevention of coronary heart disease, bowel cancer and other chronic diseases and became known as 'The Fibre Man'.

References

Burkitt DP. A children's cancer dependent on climatic factors. Nature.1962; 194:232-34. Burkitt DP. Relationship as a clue to causation Lancet. 1970;2(7685):1237-1240.

Dr William Harwood Nutt (1869 – 1943) Artisan Missionary, Pioneer Radiologist In Sheffield And Radiation Victim

Oral

Dr. Mike Collins (BSHM)

Abstract

William Harwood Nutt lived an extraordinary life. His childhood was disrupted due to difficult family circumstances and by the untimely death of his father. Originally trained as a carpenter, Harwood-Nutt joined the London Missionary Society in Central Africa (1892-1896) where he was involved in the building of schools and clinics in addition to supervision of a dispensary. Letters describing his experiences in Africa held at the School of Oriental and African School in London have been studied (Ref). Forced to abandon missionary work due to illness, he then entered Medical School in Edinburgh. Whilst a student, he acted as a surgical dresser during the Boer War. After graduation, he was appointed as the first Medical Officer in charge of the Electrical Department at the Royal Hospital in Sheffield in 1906. He pioneered the use of the recently discovered X-Rays for diagnostic and therapeutic purposes and singlehanded built up the first X-Ray department at the hospital. He developed a serious radiation illness because of excessive exposure to X-Rays primarily incurred in the removal of bullets and shrapnel from wounded soldiers during the First World War. The long terms risks of radiation forced Harwood Nutt to resign in mid-career in 1922. Records show that he eventually received a small “gratuity” after a long fight for compensation. He then turned his hand to general practice and finished his career in a successful practice near Norwich.

Harwood Nutt’s life was a cycle of repeated reverses and recovery. Separate illnesses forced him to abandon two occupations. He had the capacity and resourcefulness to find new and very successful careers. He left behind a considerable legacy.

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EIGHTEENTH-CENTURY SURGICAL BOOKS: WHO WROTE THEM, WHO READ THEM AND WHY?

Oral

Dr. Ursula Mulcahy (Durham University)

Abstract

This research is intended as the basis of a study of eighteenth-century operative surgery. The books, especially in the early part of the century are notoriously inaccurate but studying them does give a snapshot of the way surgery developed in Britain, At the beginning of the century there were, in general, two main types of books– those which had been published sometimes centuries earlier by physicians, often describing operations they had never seen and those written for and by military surgeons. This raises the question of why anyone would buy them? I argue that the most like reason was to provide prospective examination candidates with facts they could memorize.

Later in the century, training in surgery became established in London, along with schools of anatomy. I argue that authors' reliance on anatomy to fill the gaps in surgical know-how was another reason for the inaccuracies in the books. Finally, at the end of the century, most of the books were written by surgeons working in hospitals outside of London. I argue that this was an attempt to advertise their skills. And as they often contained numerical analysis of their results, their greater accuracy could be said to demonstrate the beginnings of medical statistics.

References

Too numerous to fit into the box

Factors within professional groups in developing antenatal clinics 1900-1939.

Oral

Dr. Tony Hollingworth (Semi Retired consultant Obstetrician & Gynaecologist, Barts Health, London)

Abstract

The gestation and delivery of antenatal clinics has not been a smooth process and it would take the first half or the twentieth century before regular attendance at such clinics became an established part of pregnancy care. The Boer Ward and World War 1 had exposed the poor health of British recruits which, in turn, acted as a trigger for improving maternal and child welfare. In 1900, pregnancy was considered a normal physiological process and therefore required no medical intervention before labour. Dr J.W. Ballantyne, an Edinburgh pathologist, was one of the few to question that view and established the value of seeing women during their pregnancy in his 'pro-natal clinics'. The establishment of the Ministry of Health in 1919 and the subsequent work its Department of Maternal and Child Welfare helped to develop antenatal care with one of its main aims being to reduce the maternal mortality rate.

However, entrenched attitudes presented difficulties in setting up antenatal centres in a nation where the self-interest in some of the care-giver groups was considered more important than the health of the pregnant women. These groups included Health Visitors, Midwives, and Doctors including Medical Officers of Health, General Practitioners and Specialists. The main focus will be on attitudes, training and remuneration and how these factors impacted on each groups involvement in developing antenatal care. Despite the establishment of municipal clinics, many women had entrenched attitudes which resulted in many failing to benefit from accessing appropriate antenatal care at free municipal clinics. These attitudes will also be presented.

Part of MSt dissertation, Oxford University 2020.

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Famous Doctor-Authors of Fiction – Arthur Conan Doyle, AJ Cronin, Richard Gordon

Oral

Prof. Barry Hancock (Emeritus Professor of Oncology, representing the Aesculapian Society of Sheffield)

Abstract

Good doctors are good storytellers; some make it a second career. The fictional characters created by famous doctor-authors have inspired many medical careers.

Arthur Ignatius Conan Doyle(born May 22, 1859) is best known for his creation of the detective Sherlock Holmes—one of the most vivid and enduring characters in English fiction. While a medical student, Conan Doyle was deeply impressed by the skill of his professor, Joseph Bell, in observing the most minute details regarding a patient's condition This master of diagnostic deduction became the model for Conan Doyle's literary creation. John H. Watson, known as Dr Watson, is Holmes' friend, assistant and sometime flatmate, and the first person narrator of most stories. He is described as the typical Victorian-era gentleman, unlike the more eccentric Holmes. He is a good doctor and astute, although he can never match his friend's deductive skills .

Archibald Joseph Cronin (born 19 July 1896) was a Scottish physician and novelist. He was one of the most popular writers of the twentieth century. In his novel *The Citadel* he chronicles the career of a young doctor, Andrew Manson, against a backdrop of poverty, lack of sanitation, and ill health, the corrupting influence of privatised medicine, power, and prestige, and deeply entrenched professional hostility towards innovators. *The Citadel* interestingly may have been an inspiration for the National Health Service .

Richard Gordon (born Gordon Stanley Benton, 15 September 1921 and also known Gordon Stanley Ostlere), was an English surgeon and anaesthetist. He was best known for a long series of comic novels on a medical theme beginning with *Doctor in the House*, set in the fictitious St. Swithin's, a teaching hospital in London. These novels were good-humoured, witty and apparently autobiographical (as Simon Sparrow) – the later films were very popular with cinema goers.

References

None

Forgotten Fatalities: accident rates in the peacetime military, shipping, fishing and mining since 1900.

Oral

Prof. Tim Carter (Norwegian Centre for Maritime and Diving Medicine, Haukeland University Hospital, Bergen), Dr. Stephen Roberts (Medical School, Swansea University, Swansea)

Abstract

The annual accident fatality figures from the Health and Safety Executive and before that the Factory Department have usually been taken as the headline indicators of accident risks at work, but they present only a partial view on risk. Additionally a number of occupations that have not had fatalities recorded within these frameworks contribute largely to the totality of work related fatalities, as do deaths on public roads while at work.

Information has been collected using peacetime annual fatality data in the armed forces, registers of seafarers and annual returns for mining. These show that the rates in all these groups have far exceeded those in the sectors of industry that are normally used as indicators of risk. Yet they have received limited political or public attention, despite accounting for 45% of all fatal occupational accidents since 1900. Concern in some of these sectors has focused on deaths from major disasters rather than on the larger numbers of single person fatalities. Like other sectors all have, in general, experienced steady falls in fatality rates. Some may be attributable to improved safety management, while others may relate to structural changes in activities. For instance military deployments moved from colonial postings to supporting international alliances, while the vessels in the merchant shipping and fishing fleets have changed markedly.

Despite these risk reductions some sectors have shown continuing high levels. These relate to the inter-war Royal Air Force, fishing in the second half of the twentieth century and the coal industry in its declining years since 2000. Aspects of sector-specific safety culture are likely to have contributed to this.

References

[none currently - article accepted for publication in Occupational Medicine subject to minor modifications. Will notify when formally ‘in press’.

From Anti-miasma Beaks to Double Masking: A Historical Review of Medical Face Coverings for Airborne Infection Control

Oral

Mr. Bryan Rhodes (Worshipful Society of Apothecaries)

Abstract

My presentation will chart the development of practical measures to combat the risk of airborne infection from the early 1600s, when incense and pomanders were supplemented with beaked costumes, to the current viral pandemic and the proliferation of disposable face coverings. I will consider the theoretical basis for the use of face coverings and comment on how frequently they were used before the 20th century. I will show how the emergence of the germ theory of disease and the scientific discoveries of Pasteur, Tyndall and Hamilton in the 19th and early 20th centuries led to new methods aimed at reducing the risk of airborne transmission of infection, including the use surgical masks. I will consider the evolution in design of face coverings alongside other practical prophylactic measures, including air filtration and ultra-violet light. I will show how John Charnley's design of ventilated helmet and operating gown has influenced medical PPE design in the current pandemic. Finally, I will highlight the current range of designs of disposable face coverings using recent photographs from Japan and England.

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Industrial Medicine: Sheffield's Edgar Allen Institute for Medico-Mechanical Treatment.

Oral

Dr. Rod Amos (Retired Consultant Rheumatologist, Sheffield)

Abstract

Industrial medicine, now known as Occupational Medicine, grew out of the recognition that different industries had their own peculiar health risks which impacted not only the health of the workers but the efficiency of the industry. It became clear that measures were needed to prevent work related illness both for the benefit of the employer and the employee.

In an area dominated by heavy manufacturing industry, such as Sheffield, injuries as well as other health problems dominated the scene.

A local steel magnate, William Edgar Allen, built and financed a facility to provide physical treatment to the injured where **'working men and women, wage earners to regain health and the use of their limbs as quickly as possible and enable them to return sooner to their work after injuries, accidents and illnesses.'** It was amongst the first, and was certainly the most modern, physical treatment centre in the country. Opening in 1911 it provided for the local working population and throughout its life was regarded with great affection by Sheffielders. Three years after opening WW1 broke out and its facilities were immediately offered to the war office and in the first 2 years of the war alone it provided rehabilitation services for more than 1500 injured servicemen financed by Edgar Allen and the local Sheffield population. It continued to provide a first class service after the war adapting as medicine changed until its closure in 1988. This is its story.

References

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TREATMENT BY MEANS OF MECHANICAL THERAPEUTICS AT THE EDGAR ALLEN INSTITUTE, SHEFFIELD. BY RODOLPH ABERCROMBIE Lancet April 1912 p 1076

Edgar Allen Institute Souvenir Booklet

Is the Criticism of John Keats's Doctors Justified?

Oral

Prof. Sean Patrick Hughes (Imperial College London), Dr. Noel Snell (Imperial College London)

Abstract

John Keats (1795-1821) died of consumption in Italy on 23 February 1821. His treatment in both London and Rome has been criticized for failing to diagnose that Keats had pulmonary tuberculosis. Lord Brock (1903-1980) castigated Dr James Clark (1788-1870) in particular concluding that it 'was difficult to condone such a rubbishy assessment.'[1]

Here we review the evidence for this censure, from the letters of Keats and his companions, the publications of Dr James Clark, and the contemporary treatment of consumption in the early nineteenth century.

In 1821 Clark aged 31 was in Rome amassing information on the management of patients with consumption, which he later published between 1830 and 1836. Clark defined consumption as being a constitutional disease and that the stomach was often affected . His reasoning was that inflammation of the mucous membrane of the stomach from tuberculosis led to venous congestion. On this basis Clark restricted Keats's diet and advised him to undertake exercise, especially horse riding, to improve his lung function. Furthermore, he regularly bled Keats in order to reduce his abdominal venous congestion. This regimen was accepted practice at the time.

Clark's correspondence shows that he did know Keats had consumption. We argue that Clark was in fact applying the knowledge then available for the management of consumption, that his approach to the treatment of John Keats was entirely rational, and he was a caring and concerned doctor.

The question remains how many of the medical profession today can say that the treatment they now advise, might not indeed be regarded as rubbishy when viewed through the eyes of future generations?

References

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James Pownall: Mad Doctor and Murderer

Oral

Dr. Peter Carpenter (Bristol Medico-Historical Society)

Abstract

James Pownall was a surgeon and asylum proprietor in Calne who became Mayor in 1853, but also had bouts of insanity and was admitted to asylums 6 times. In 1854 a patient sought police protection from him and another was shot by him and died. He was treated in an asylum, closed his own and semi-retired. Four years later he became ill and cut the throat of his mother in law and tried to shoot her. He was treated in Northfields Asylum near Bristol by Dr Davey and quickly became 'perfectly sane'. Davey insisted he had to discharge him. James' family wanted him to be permanently confined. The magistrates distrusted the Brother in law, as they had forced the closure of his own asylum over wrongful confinement. The Commissioners told Davey to discharge James with an escort to a supervised house. This happened but he there dismissed his escort and murdered the young servant Louisa Cook without warning. James died in Broadmoor and the Magistrates and Commisioners publically passed the blame of the murder onto Davey.

Davey insisted that the Commissioners generally insisted on the discharge of patients when sane and if he had not discharged James he could be sued for wrongful confinement. He does not mention his abilty to certify a patient to be unfit to be at large.

This paper will draw on a wide range of contemporary documents containing the views of the main parties. It will conclude by discussing the undiscussed prior tensions between the actors in this case.

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John Graunt F.R.S. (1620-74): the Founding Father of Human Demography, Epidemiology and Vital Statistics

Oral

Dr. Henry Connor (Honorary Research Fellow, History of Medicine, University of Birmingham)

Abstract

John Graunt, a largely self-educated London draper, can plausibly be regarded as the founding father of demography, epidemiology and vital statistics. His pioneering analysis of the London *Bills of Mortality* combined methodology advocated by Francis Bacon with the reductionist approach of René Descartes.[1] His efforts replaced guesswork with reasoned estimates of population sizes and provided the first accurate information on male:female ratios. He quantified the extent of immigration from countryside to city and his demonstration of the 'dying out' of a cohort paved the way for life table analysis. His comparison of London data with rural data provided the first recognition of the 'urban penalty'. His use of the first known tabular aggregates of health data anticipated the work of Thomas Sydenham by clarifying distinctions between acute diseases, which were often epidemic, and chronic illnesses which were often endemic. He quantified the high infant mortality and attempted the calculation of a case fatality rate during an epidemic of fever. As one who lived at a time when plague was prevalent he was the first to document the phenomenon of 'excess deaths' during epidemics and his observation that "troublesome seclusions in the *Plague-time* is not a remedy to be purchased at vast inconveniences" has been echoed by modern businessmen during the Covid-19 pandemic. He provided a template for numerical analysis of demographic and health data and initiated the concepts of statistical association, statistical inference and population sampling. By making a novel concept intelligible to a broad audience he influenced the thinking of doctors, demographers and mathematicians.

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Lead Poisoning In Sheffield Due To The Contaminated Water Supply 1885 - 1890. Parallels With Flint Michigan 2014 - Ongoing

Oral

Dr. Mike Collins (BSHM)

Abstract

The Medical Officer of Health (MOH) first reported cases of lead poisoning in certain areas of Sheffield in 1885. Investigation revealed that the source of the water supply to these areas came from the Redmires reservoir only and that this water was slightly acidic. People living in other parts of Sheffield supplied with water from different reservoirs had a lower incidence of lead poisoning. The MOH concluded that the combination of lead supply pipes and acidic water from Redmires reservoir was the cause of the lead poisoning and that the problem could be alleviated by adding alkali to the water close to the reservoir. This advice was not acted upon and lead poisoning continued to be reported. Eventually, after local and national publicity, a public inquiry was convened in 1890 and expert advice was sought. This concluded that the advice of the MOH was correct and the problem was resolved by adding lime to the water.

The reasons for the delay in implementing the MOH's advice will be evaluated. Professional conflict and rivalry between the organisations involved contributed to the delay. Other causes of lead poisoning in the city such as that related to file cutting was another contributory factor.

Parallels are drawn with the current crisis in Flint Michigan where the combination of the contaminated water supply and lead supply pipes is thought to have led to a high incidence of lead poisoning and other diseases.

Lessons learnt in Sheffield and in Flint remind us of the hazards involved with the continuing use of lead supply pipes and the risks involved when contaminated water is supplied using these pipes

References

None

Leading, being led, or reciprocal partnership? – reappraising doctors' roles in the history of medical innovation

Oral

Dr. Wulf Stratling (University Hospital of Wales, Cardiff / Lübeck University, Germany.)

Abstract

Numerous key-developments of contemporary medical technology constitute *defining* components of "modern" apparatus (since c. 1900) for peri-operative anesthesia, intensive care, and rescue medicine.[1] Current medical historiography usually claims that *clinicians* involved in these developments *led* instrument makers to manufacture the appliances they designed, or "invented". It is also lamented that this has profoundly changed and that nowadays industry leads, stifling creativity, and innovation.[2] An extensive historical and technological reappraisal of the above segment of anesthesia-related technology (c. 1900-1950s) is currently being conducted.[3] The findings suggest that the above narrative is mis-contextualised, biased, and incorrect: All relevant innovations are *technology transfers* from other areas (mostly industry). All medics celebrated for alleged technological expertise cooperated with and depended on specialist engineers, and on external manufacturers. A large prevalence of pre-modern-, interim-, or hybrid-technologies illustrates that in most areas it took over a generation to replicate innovations in medicine, which had already been achieved in other fields, or countries. The period around the two World Wars (c. mid-1910s – early 1950s) is notable for relative stagnation. This contrasts starkly with the alleged progress usually postulated, notably in current Anglo-American historiography. The evidence presented illustrates profound and systematic under-recognition of international and trans-disciplinary interactions, and inter-dependency. Many of our current narratives on the history of medical engineering and innovation reflect a distorted (self-)perception of doctors' roles.

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LeRoy Sante, Peter Kerley, and learnings from the Epidemic Influenza Pneumonia outbreak of 1918-1919.

Oral

Dr. Adrian Mark Kynaston Thomas (Canterbury Christ Church University)

Abstract

Dr. Leroy Sante (1890–1964) was professor and head of the department of radiology at St. Louis University School of Medicine from 1919 until his retirement in 1960. He wrote a major book on chest radiography in 1930 (1), and a monograph on lobar pneumonia in 1928 (2). The influenza epidemics of 1918 and 1919 demonstrated beyond doubt the great value of the chest radiograph which was previously not universally used. For example, when the great physician Sir William Osler died in 1919 of complicated pneumonia, his physicians saw no need for chest radiography. Sante undertook a systemic study of lobar pneumonia in 1919, and since his hospital had bedside radiography he was in an excellent position to undertake the study. Sante undertook daily radiography and his findings showed that the generally accepted views of pneumonia were wrong.

The Anglo-Irish radiologist Sir Peter James Kerley (1900-1979) made important contributions to the understanding of pulmonary shadowing, and his contributions were reviewed in 2016 (3). Kerley described his findings of interstitial influenza pneumonia seen in 1918-1919 in 1931 (4), and this contributed to his classic classification of interstitial linear shadowing that is shown on chest radiography.

The contributions of Sante and Kerley to the understanding of pulmonary changes in influenza pneumonia will be reviewed, as well as their lasting significance.

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Living with the 'Black Death'?: state responses to infectious disease in early Tudor England

Oral

Dr. Euan Roger (The National Archives)

Abstract

This paper explores contemporary attitudes to – and lived experiences of – the annual epidemics of plague (increasingly supplemented by other infections), which broke out in England almost every summer for the first two decades of the sixteenth century. The main focus of the paper is the provision of new regulations to control the spread of infection, notably the adoption of quarantine measures in the south of England c. 1517-1520.

On 13 January 1518 a series of ordinances to regulate plague outbreaks were proclaimed in London. These have previously been thought to have been the first set of quarantine measures issued in England; part of an ambitious new social policy led by the King's chief minister, Cardinal Thomas Wolsey, and intended to bring England in line with the leading Renaissance states in Europe. The discovery of two previously unknown documents from the archives of St George's College, Windsor – which predate the London ordinances – requires a reconsideration of this narrative.

The paper argues that demands for plague quarantine regulations were driven primarily by Henry VIII's personal – and pronounced – fear of infection, and considers the shared historical memory of life in a time of regular plague outbreaks, in the fifteenth century and beyond. In doing so, it explores the ways in which medical ideas and experiences of infection travelled across Europe. It also considers the state's official response to outbreaks, as disruption increasingly became codified in official records and precedent, and the spatial settings in which ordinances were created end enforced.

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Miasma theory and the British public health response to the 1918 influenza pandemic

Oral

Dr. Martin Edwards (BSHM)

Abstract

I suggest that in Britain, the public health response to control of the 1918 influenza pandemic owed more to older miasma theory than to prevalent germ theory. Miasma, a corruption of the air, was considered to be the means of transmission of influenza until the last decades of the 19th century, when germ theory supplanted notions of transmission by miasma. By the time of the 1918/19 influenza pandemic miasma theory was obsolete and had no serious medical advocates. Influenza was assumed to be transmitted through an infecting germ, though the causative organism was unclear. The main contender was *Bacillus influenzae* described by Richard Pfeiffer in 1892, but experimental and clinical evidence was conflicting and many doctors, particularly in Britain, were unconvinced. In particular, the apparent ability of the infective agent to pass through a bacterial filter suggested that a bacterium might not be responsible at all.

When an influenza epidemic struck Britain in 1918 the government and public expected authoritative advice from the medical establishment regarding its control and prevention. I suggest that uncertainty about the nature of the germ responsible led doctors to fall back upon miasmatic concepts in their recommendations for its control. The rationale offered by medical professionals for measures such as ventilation of rooms, quarantine and the avoidance of crowded spaces sounds miasmatic rather than germ-influenced and would have been familiar to their peers a century earlier. Similarly these practitioners overwhelmingly rejected measures for which the rationale is germ-based rather than miasmatic, such as vaccination and the wearing of masks. In contrast, doctors in the United States were generally more convinced that *Bacillus influenzae* was the causative organism (the US Surgeon General declared it unequivocally to be so in 1918) and enthusiastically embraced measures such as public mask-wearing for influenza control.

References

None included.

Noise induced hearing loss: a preventable occupationally induced disease of the industrial revolution

Oral

Mr. Andrew Parker (Peak Medical Practice), Dr. Victoria Parker (University of Sheffield), Ms. Josephine Parker (University of Bristol), Dr. William Parker (University of Sheffield)

Abstract

It has been known for many years that loud noise can cause hearing loss. The earliest reports date from military activities in the 1700s but with industrialisation of the developing world in the 19th century, the damage of exposure to chronic occupational noise was recognised in the late 1800s, initially in boilermakers but also in others including forge workers, platers and welders, all of which has significant relevance to clinical practice today.

It was not, however, until the 1960s and the development of audiometry that the diagnosis of noise induced hearing loss became refined and quantified. This significant advance enabled clinicians to recognise the typical diagnostic pattern.

Noise deafness is entirely preventable and began to attract the attention of litigators. The first legal precedent for obtaining compensation was not in fact until 1971 in the case of Berry v Stone Manganese Marine in which the Court found that the employers had an obligation to provide hearing protection.

Other cases followed into the 1980s where employers had been in breach of their statutory duty to provide protection. The publication of Noise and the Worker in 1963 and then that of the Wilson committee were considered to be most important landmarks in establishing negligence.

This presentation will discuss the historical aspects of the diagnosis of noise-induced hearing loss from the earliest times to a refined mathematical model now routinely used by experts and the Courts and which in part was developed by one of the founding fathers of the specialty of Audiovestibular Medicine at the Royal Hallamshire Hospital in Sheffield, Mr JT Buffin FRCS.

References

N/A

Occupational Health and the United Kingdom Post Office, 1860-1901: Initial Findings

Oral

Dr. Harry Smith (Kingston University)

Abstract

This paper arises from the project 'Addressing Health: Morbidity, Mortality and Occupational Health in the Victorian and Edwardian Post Office'. The project investigates the history of ill health in the nineteenth century using the pension records of the UK Post Office. These records contain information on the medical causes of retirement and the sickness records of 25,000 postal workers between 1860 and 1901. They cover the entirety of the UK and all occupations within the Post Office, from messengers and sorters to the Postmaster General. Each individual's medical information was generated by the Post Office's own medical officers and represent a valuable source to examine occupational health across the entirety of the UK in the nineteenth century for the first time using a source in which the definition of sickness was relatively consistent across time and place. They also allow a consideration of occupational health amongst service workers, in contrast to the usual focus on manufacturing and extractive trades. This paper presents the initial findings from the data extracted from these sources. The incidence and duration of sickness is broken down by location, time, gender, age and occupation to examine how different kinds of work, different environments and different moments in an individual's life course and career affected their chances of falling ill. The cause of retirement data allow specific medical conditions to be related to particular occupations, and the variation in these is again examined by location, period, age, gender and occupation. These findings enrich previous work on the geography of occupational ill health in Great Britain and provide an entirely novel picture for Ireland.

References

n/a

Outwitting the Venetian Republic's cordon sanitaire in 1774: Giacomo Casanova's avoidance of quarantine

Oral

Dr. Lisetta Lovett (Honorary Senior Lecturer in Humanities, Keele University and retired Consultant Psychiatrist and Senior Lecturer in Medical Education)

Abstract

In the fourteenth century, the Venetian Republic imposed strict public health measures to contain plague. These included measures such as quarantine, restriction of personal movement and fumigation of vessels and their goods. As a result of their success, ports across Europe started to implement similar measures. By the eighteenth century the incidence of plague in Europe was low compared to previous centuries. However, the Venetian Republic continued to take the threat very seriously given it was in constant trade with the East and particularly Constantinople, where plague outbreaks were common.

As with any public health measure success depends on public acceptance and cooperation. Penalties for contraventions are meant to discourage rule- breaking sceptics. But these do not always work as we are now witnessing with cybercriminals selling forged vaccination certificates on the dark web. Just as now, some in the eighteenth century also tried to get around regulations to avoid quarantine.

This paper relates the story of why and how Casanova, aged 19 years old outwitted the *cordon sanitaire*, avoided quarantine and almost got caught. The paper will describe the Republic's main public health measures at the time and the penalties it imposed for contravention as well as comment on how successful it was at avoiding outbreaks of plague during the eighteenth century.

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Parallels between the 1720 Marseilles plague and covid-19

Oral

Dr. Lisetta Lovett (Honorary Senior Lecturer in Humanities, Keele University and retired Consultant Psychiatrist and Senior Lecturer in Medical Education)

Abstract

Three hundred years ago, in the summer of 1720 plague hit Marseilles killing 50,000 people. This was the twentieth occasion in the city's history and the last major Western European plague epidemic. One of the physicians of the city, Dr Bertrand practiced throughout most of the epidemic, survived and wrote a journal of events even though his wife and son died. This is not a sterile medical record but a detailed description of political wrangling, disputes between experts and human suffering. Dr.Bertrand's poignant journal reveals challenges and mistakes then that are very reminiscent of our recent experiences of the covid-19 pandemic, particularly in its first wave.

In this paper I will highlight some of these whilst drawing attention to their parallels through referencing news items in 2019 and 2020 as the Covid pandemic unfolded. The journal gives us an historical perspective that puts our current experiences of managing the coronavirus into perspective.

I conclude that human behaviour and concerns have not changed much despite better medical understanding and expertise. Altruism, self sacrifice, exploitation, political incompetency (as well as instances of efficiency), disagreements and rivalry between medical experts, practical challenges such as food shortage and disposal of the dead, fears for the economy and about further waves of infection are all as relevant today as they were 300 years ago.

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Plague in Eyam: an international journey.

Oral

Dr. Rod Amos (Retired Consultant Rheumatologist, Sheffield)

Abstract

In the 17th century the third world pandemic of plague swept into England probably from Amsterdam. It devastated London in 1665 – 1666 infecting mainly the poor in overcrowded, high density poor quality housing and killed up to 100,000 people. As it reached its zenith an isolated Derbyshire village, Eyam, became infected and its death toll, for its size was equally dramatic but whereas the death toll in London was vast, and the accounts somewhat impersonal it is impossible to remain aloof from the intensely personal stories of the Eyam villagers and Eyam subsequently became famous as the village that cut itself off from the surrounding world, to its own detriment, to save other communities.

The accepted account of the cause of plague is that infected rats were the source and transmitted it to humans via the vector of the rat flea. However, there are no reports of an excess of rats dead or alive in London or Eyam so perhaps an alternative explanation is needed. The story moves on into the 20th century and, without denying that rats and other rodents act as a biological reservoir for Yersinia pestis, evidence mounts that many outbreaks are sustained by person to person spread without the intervention of the rat or its flea. This account seeks to describe and explain what actually may have happened in Eyam.

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Epidemiology of a bubonic plague outbreak in Glasgow, Scotland in 1900. Katharine R. Dean, Fabienne Krauer and Boris V. Schmid. 02 January 2019 Royal Society

Plague industries in early modern English and Scottish towns

Oral

Ms. Rachel Clamp (Durham University)

Abstract

During outbreaks of plague, municipal authorities issued proclamations and ordinances designed to prevent and control the spread of the disease. Numerous studies have surveyed these administrative responses to plague across England and Scotland. But how were these policies put into practice? And by whom? The answer to these questions reveals a network of individuals engaged in a range of positions designed to meet the changing needs of their communities.

First coined by Neil Murphy in his work on early modern France in 2013, the term 'plague industry' refers to the 'creation of official positions specifically to cope with the impact of epidemics'. This paper will explore how this term might be applied to towns in England and Scotland by analysing the interconnected roles of plague nursing, cleansing and burial as well as highlighting the individuals responsible for the distribution of provisions and plague policy enforcement.

As will be revealed, multiple plague industries existed across England and Scotland, as responses to plague took on an increasingly local, rather than national, character. These industries encompassed roles ranging from the official, salaried positions accompanied by pensions and benefits to the under-valued or unpaid work of neighbours and friends. This paper will show that the same role could be performed by individuals of differing status or gender and conceptualised in different ways from town to town.

This study will not only increase our understanding of responses to epidemic disease but will also allow us to gain a sense of the lived experience of those who witnessed these events whilst also offering important insights into the history of gender and labour.

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Reassessing the history of respirators – a re-emerging story of shared heritage

Oral

Dr. Wulf Stratling (University Hospital of Wales, Cardiff /), Dr. Jan Schumacher (MD, PhD, FRCA) (Department of Anaesthetics, Guy's and St Thomas' NHS Foundation Trust, Westminster Bridge Rd, London SE1 7EH, UK)

Abstract

Respirator technology facilitates life-sustaining breathing in irrespirable, or unsafe surroundings. It is mostly used in the fields of rescue-medicine and workplace safety [e.g., in mining-rescue, by fire-brigades, in personal protective equipment (PPE) in chemical industry and medicine (e.g., during the current Covid-19 pandemic)]. Modifications are used e.g., in diving technology, in aviation alongside high altitude and space exploration, and in apparatus for peri-operative anaesthesia and intensive care. Current historiography traditionally claims a "dominant" role in these fields for British pioneers and inventions.[1]The gas-warfare of World War I (WW I; 1914-1918) is often said to have been the most important trigger for related innovation.[1] Recent and ongoing research has already proven many of the current narratives incorrect.[2,3] Identifiable main causes for inaccuracies are trans-disciplinary under-recognition and nationalistic bias, notably during times of international conflict and wars.[3]Presenting selected, recent results, the contributions of the famous British peri-WW I pioneers Henry Albert Fleuss (1851-1933), and John Scott Haldane (1860-1936) are re-contextualised on the base of newly emerging evidence. The findings suggest significant Central European-British interactions at the time. Many of these are inconsistent with current assumptions concerning the chronologies and causalities of relevant developments. The findings are consistent with a corresponding phenomenon, which can also be demonstrated for the preceding period. For the latter, the contributions of the British manufacturers Christian Augustus Siebe (1788 – 1872) and Gotthilf Frederick Heinke (1786-1871) will be chosen as illustrations.

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Reflections on the archives of Dr Donald Hunter (1898-1978)

Oral

Dr. Christopher Derrett (British Society for the History of Medicine)

Abstract

Dr Donald Hunter is widely regarded as the father of British occupational medicine. He was a founding editor of *the British Journal of Industrial Medicine* in 1944, and his seminal textbook *Diseases of Occupations* reflected a wide-ranging interest in workplace health and disease. Hunter was also renowned as an exuberant teacher and medical historian.

After his death, most of Hunter's extensive archives that included diaries, correspondence, account books, publications, lecture notes, photographs, and teaching material were deposited in the Wellcome Library and in the archives of the London Hospital, Whitechapel. In this talk, I will reflect on what these archives tell us about the development of Hunter's professional career from schoolboy to elderly celebrity.

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Research on human guinea pigs at the Sorby Institute, Sheffield

Oral

Ms. Lee Coppack (BSHM)

Abstract

Number 18 Oakholme Road in the Sheffield suburb of Broomhill is a large Victorian villa originally suitable for an upper-middle class business man, his family and his domestic servants. In World War II, it became the Sorby Research Institute, a centre for experimental human research first headed by Kenneth Mellanby, an entomologist and nephew of Sir Edward Mellanby, and later (Sir) Hans Krebs.

The Sorby Institute is particularly interesting because it was the venue for what appear to be the only medical experiments during World War II conducted on conscientious objectors (COs) in Britain.

My presentation will explain how the COs came to the Sorby Institute as consenting "human guinea" pigs, the attitudes of the COs and Kenneth Mellanby's attitude towards them. I will discuss why his research with them on scabies was so important at the time and, briefly, how Hans Krebs continued the work of the institute after Mellanby joined the Army. I will also consider the extent to which the critical concept of insiders-outsiders is helpful in this context.

Primary sources include material from the Sorby archives at the University of Sheffield and writing by Kenneth Mellanby and Hans Krebs.

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Scottish Doctors in Imperial Russia.

Oral

Mr. Michael Davidson (Royal College of Surgeons of Edinburgh)

Abstract

The Scottish medical diaspora in Britain and its growing Empire is recognised in the historical literature, less so is the role of Scottish doctors who travelled east to Imperial Russia. Practitioners who appear in the historical record are those who worked in the military, Imperial court or published treatises and journals. They took part not only in the development of healthcare in Imperial Russia but in anthropology (Matthew Guthrie), natural history (Robert Lyall) and sciences (Alexander Crichton). A few became not only physicians (John Rogerson, Thomas Dimsdale and James Wylie) to the Imperial court but confidants and advisors to Emperors and Empresses and were liberally rewarded. Like their contemporaries within the growing British Empire, they communicated their observations through publications and communications with Learned Societies, e.g., the Royal society of Edinburgh (John Grieve). I will describe individual doctors and their contributions to a wide field of studies, as well as networks of patronage.

Most were sojourners returning to Britain wealthier and more influential than their relatively humble origins would have allowed if they had remained in Scotland. A few remained in Russia and established families.

My access to primary sources in British archives has been limited during lockdown, but with the lifting of restrictions I will consult resources to refine my presentation.

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Scotsmen in the Service of the Czars Ian G Anderson

Sheffield's world first Penicillin treatment

Oral

Dr. Dr James Burton (Member Sheffield Aesculapian Society)

Abstract

The paper examines the role of Dr Cecil Paine, a Sheffield pathologist, who was the first to provide clinical evidence of the successful therapeutic use of penicillin.

In August 1940, an Oxford team headed by Chain and Florey published in the Lancet their discovery of penicillin, followed in 1941by the publication of case histories to illustrate their clinical success. This was based on the fundamental work of Alexander Fleming in 1929 from St Mary's Hospital, London, on the mould Penicillium notatum, from which penicillin was derived as an antibacterial agent. During the intervening years, the therapeutic potential of this had not been pursued either by Fleming or anyone else.

Paine qualified at St Mary's in 1928 and was appointed Assistant Pathologist to Sheffield Royal Infirmary in 1929, where he developed an interest in penicillin , which he had discussed with Fleming. He obtained mould from Fleming and made a broth with which he titrated concentrations of penicillin against Stap.albus. Two clinicians , a Dermatologist and ophthalmologist, sent patients or swabs to Paine for culture and subsequent treatment with the broth. Whilst the application of pads soaked in penicillium broth were ineffective in three cases of Sycosis barbae, local treatment of two neonatal eye infections were highly sensitive to penicillin as was the response to a penetrating eye injury infected with Pneumococcus. Despite these remarkable results, Paine did not publish his work on penicillin, the reasons and consquencies for which will be discussed

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Smallpox: Variolation in East and West

Oral

Prof. Anthony Robert Butler (University of St Andrews)

Abstract

In former times epidemics of smallpox were common and greatly feared as the consequences could include severe disfigurement, blindness and even death. Before the coming of Jennerian vaccination, the only defence against smallpox was to give a young, healthy person a mild attack of smallpox, so mild that it caused no permanent harm but gave the person lifelong immunity. This procedure was called variolation and became famous in Britain partly from its association with Lady Mary Wortley Montagu. It was practised in other parts of the world and, although it met with considerable success, there were great dangers in its use. Variolation sometimes led to severe smallpox and the victim was damaged for life or even died. Also, without precautions, the variolated person might spread smallpox, Procedures were developed by practitioners to weaken the virus. The procedure used varied from person to person and from country to country. Obviously there was no understanding of what was happening and all the procedures were empirical. Some of those used in Britain and China will be described and discussed. By the beginning of the nineteenth century variolation had been replaced by vaccination.

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St Mary's Doctor in the House, Corkscrew Charlie, and other notables

Oral

Dr. John Turner (Royal College of Physicians London)

Abstract

Life as a junior doctor life at St Marys Hospital London in the late 1960's, based on experience as a House Physician, senior resident and briefly, deputy for the legendary Medical Superintendent 'Cocky Cockburn',. Drawing on oral history interviews from the Royal College of Physicians *Voices of Medicine* project for which I am both interviewer and interviewee.

Placed In the context of an era of seismic social and technological change, including early renal transplantation, cardio-pulmonary resuscitation and the 1967 abortion act. Notables comprised Churchill's physician, 'Corkscrew Charlie' (Lord Moran), Dr Bill Frankland, 'Grandfather of Allergy', and the oldest guest on *Desert Island Discs*at 103. Others include Sir Roger Bannister, Marys neurologist and first four minute miler, Sir Arthur Porritt, surgeon, olympic medallis„ and Governor General of New Zealand, Sir George Pinker, Royal Obstetrician, and the legendary Welsh and British Lion J P R Williams.

Dr Maurice Pappworth, a renowned teacher of Medicine who prepared some of us for the rigours of the MRCP. A maverick outsider, denied a London Teaching Hospital post because of discrimination, he shook the medical establishment by publishing *Human Guinea Pigs: Medical Experimentation.* Revelations which transformed consent procedures, revolutionised medical research attitudes and heralded the modern ethics committee.

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The benefits to the seventeenth-century apothecary of Culpeper's translation of the London Pharmacopoeia

Oral

Dr. Graeme Tobyn (University of Central Lancashire)

Abstract

Nicholas Culpeper scandalised the College of Physicians of London and their Royalist supporters by issuing a translation into English of their sacred text the *Pharmacopoeia Londinensis*(1618) in the year King Charles I was executed. He stated that apothecaries would benefit from the publication because the compound medicines could not be made up at home by most people, who, learning of their benefits, would seek them from the apothecaries and increase their trade. Was it not also his intention to help the apothecary in his shop with an Englished version of his dispensatory, to point out variations in receipts and methods of preparation of some compounds, indeed to let them know to what medical use they might safely put the finished product?

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The earliest known prosthetic joints? Ben Murray (1910-1955) and his hand clinic at Leith

Oral

Mr. Iain Macintyre (Royal College of Surgeons of Edinburgh)

Abstract

Andrew (Ben) Murray suffered two childhood accidents which resulted in a leg amputation and an ulnar palsy. Despite this, as a medical student in Melbourne, he was an 'accomplished' ballroom dancer and cricketer. Further overcoming his disabilities he began a surgical career and in 1941 came to Leith Hospital in Scotland to gain further experience. Murray started a hand clinic at Leith Hospital where he produced some pioneering work. His innovations included a multidisciplinary approach to the rehabilitation of hand injury, including physiotherapy and vocational training. It is believed that he performed the first joint arthroplasty, using stainless steel hinge joints. The paper will describe this case with the original photographs and x-rays. After the war the hand clinic was disbanded and in 1948 Murray returned to Australia to establish a successful practise in orthopaedic surgery in Brisbane. He died there in tragic circumstances in 1955 at the age of 45, a victim of the Brisbane medical massacre, shot dead by a deranged patient.[2] Contemporaries and patients spoke of his surgical skill, his enterprise and his humanity. Hooper, a hand surgeon and Morrison, a plastic surgeon, who have reviewed Murray's work, regard some of his innovations as world firsts for which he was never given credit.[1,3]In addition to artificial joint arthroplasty these included grafting of a digit from one hand to the other, pollicisation and using wire to stabilise finger fractures.

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The Evolution of Hospital Dental Surgery after the National Health Service

Oral

Mr. Andrew Sadler (Retired)

Abstract

Before the NHS, voluntary hospitals were served by a number of elite dentists in an honorary capacity. They performed dental extractions, carried out minor mouth operations and treated broken jaws with wires and dental appliances, usually in a subordinate role to, particularly, plastic and ENT surgeons.

During the following 40 years ambitious and innovative dentists expanded their role to provide comprehensive surgery to the mouth, face and jaws, often in the face of sustained opposition from the established surgical specialties. By the 1990s, the new specialty of Oral and Maxillofacial Surgery had become accepted within the medical community and was recognised by the General Medical Council.

For this oral history project, done within the British Dental Association John McLean Oral History archive, 21 pioneers of the speciality and witnesses to the process were interviewed between 2012 and 2020. They had qualified as dentists between 1944 and 1979.

The interviews revealed that the progress was achieved through the hard work and innovation of individuals outside the major teaching hospitals. A qualification in medicine as well as dentistry became necessary. The Royal College of Surgeons of Edinburgh made a significant contribution, but the College of Surgeons of England did not.

The interviews reveal that surgical care in Britain lagged well behind some overseas countries such as Germany and the USA and several pioneers went overseas for inspiration and training. Many visited each other's hospitals to help with newer techniques and others learned from textbooks, scientific journals or had been inspired by both the good and bad practice of other surgical specialties.

The result was improved outcomes for those suffering from injury, cancer, deformity and oral and dental disease. However, there were many within the profession who were antipathetic to the process.

References

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The forgotten legacy of the Friendly Society doctor

Oral

Dr. Hilary Morris (University of Brighton)

Abstract

Throughout the nineteenth century Friendly Societies became an increasingly essential provider of welfare to workers and their families particularly in industrial Britain. These organizations . which were effectively forerunners of insurance companies, offered a range of schemes including, for the first time, access to a doctor, for members and their families. The popularity of this new form of healthcare and the level of work it generated, led many Friendly Societies to offer a formal contract of employment to GP's who in return for a regular salary, were restricted from pursuing any other form of medical practice. At a time when many newly trained doctors without connections or independent wealth, faced the real danger of unemployment, this type of regular work had its appeal. However it was often said that Friendly Society doctors were mostly those whose ineptitude meant that they could not find a more profitable and less onerous practice elsewhere.

The role of the Friendly Society doctor has to date failed to attract the research it justly deserves. These GPs were at the forefront of recognizing the true dangers of industrialization as well as witnessing the growing problems associated with little or no public health initiatives in the industrial cities where they were mainly based. The primary evidence is often difficult to locate, but there is sufficient material to show that this was one of the most challenging areas of medical practice until the creation of the Welfare State. The increasingly restrictive contracts placed on them by the Society officials also became one of the first reasons for these doctors to eventually take collective action to protect their professional status, whilst not forgoing their primary role, namely that of being the first workers doctor.

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The management of child abuse in the nineteenth century: Sheffield, 1870-1900.

Oral

Dr. Patricia Brennan (Current University of Sheffield: Sheffield Children's Hospital, retired)

Abstract

At least since 1796, when Thomas Spence wrote the '*Rights of Infants*', the poor condition of the country's working-class children was a topic of discussion in Great Britain. Children were deemed as essential to maintain the country's industrial and military might, but their poor living conditions, poor physical condition, and their maltreatment were of concern.

This study focuses on Sheffield, drawing mainly on local newspaper reports of prosecutions for child maltreatment from 1870 to 1900, 19 years before (Group 1) and 11 years after (group 2) the 1889 Prevention of Cruelty to, and the Protection of, Children Act (hereafter called the Children's Charter) and after the setting up of a National Society for the Protection of Children office in the city, also in 1889.

The review of cases of both child physical maltreatment and neglect reported in Sheffield newspapers, 1870-1900, reveals 123 cases involving 255 children, 48 in Group 1 and 75 in Group 2. The study makes comparisons between the two groups and illustrates the types of cases presenting and their changing profile and the development of a holistic assessment of children, parents and homes. It also clearly shows how various professionals, including those from medical, legal, education and counsel services together with solicitors and magistrates, together with neighbours, became increasingly involved in a city-wide network to try to prevent child maltreatment or prosecute if prevention was unsuccessful. Was there co-operative multiagency working to protect children developed in the later twentieth century? This study illustrates that effectively by 1900 in Sheffield, there was multiagency working in a semi-structured way to protect children from abuse, preceding Government written guidelines by almost a century.

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The Medical Perspective of Grinders' Asthma

Oral

Dr. Derek Cullen (Consultant Physician Emeritus, Sheffield.)

Abstract

The cutlery industry has existed in Sheffield since Mediaeval times, the essential component of which 'grinding' to produce a cutting edge in the tool being made, was to become so injurious to the grinder's health that it was observed in 1819 by Sir Arnold Knight, founder of Sheffield's Medical School, that 'of 2,500 grinders there were not 35 who had reached 50 years of age'. The disease they suffered from, Grinders' Asthma, was relatively unknown before 1750 and was to almost completely disappear by 1950. This paper will discuss the industrial changes that brought about the growth of Grinders' asthma during the 19th century, namely the expansion of dry grinding and the transfer from water to steam driven grinding as well as the environmental factors of a town rapidly becoming more unhealthy as smoke belched from its chimneys. It remained however, for technological advancement to eventually prevent the disease.

The therapeutic role of the medical profession was limited to expectorants, tonics mixed with sulphuric or nitric acid, and the application of leaches, with no answer to terminal tuberculous infection, but despite these limitations, doctors founded a chest clinic based on the principles of the dispensary movement. They were particularly active in gathering morbidity statistics to support health improvements such as the restriction of working hours of young persons and the inhibition of grinding for children under eleven. Their work stimulated the installation of ventilation measures such as fans to extract dust from grinding wheels and inventions such as the 'Grinders' Life Preserver' invented by J,H. Abraham for which he was awarded the gold medal of the Society of Arts in 1832.

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The Mellanbys of Lodge Moor: the beginnings of medical research at the University of Sheffield

Oral

Prof. Tilli Tansey (William Harvey Research Institute, Barts & The London, QMUL, LONDON EC1M 6BQ)

Abstract

In 1920 Edward Mellanby (1884-1955) became Professor of Pharmacology at the University of Sheffield, and also an Honorary Physician at the Royal Infirmary. Mellanby, later Sir Edward and Secretary of the Medical Research Council, arrived in Sheffield with a strong reputation for his research in biochemical aspects of nutrition, especially on the newly discovered 'accessory food factors' (vitamins). His wife May (1882-1978) was also an accomplished scientist, her work focussing particularly on the effects of nutrition on dental development and disease. In addition to providing Mellanby with clinical resources, the University created dedicated Field Laboratories for them both at a site in the suburb of Lodge Moor, where their experimental animals, mainly dogs and chickens, were maintained. Local National Insurance Panel doctors in Sheffield, inspired by the reputation and the promise of their new Professor, collected £1000 to provide equipment for these labs. Work at Lodge Moor included Edward's elucidation of cod liver oil as a treatment for the then widely prevalent disorder of rickets, and May's demonstration of the importance of vitamins A and D in particular for the proper post-natal development of teeth.

The direct clinical relevance and the quality of the research work of both Mellanbys not only consolidated their own reputations; they were enormously significant directly and indirectly in fostering medical research in Sheffield, Edward for example being a strong advocate for the appointment of the later Nobel Laureate Howard Florey as Professor of Pathology in 1931.

This paper will briefly examine the nature and influence of the Sheffield work of the Mellanbys.

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The Ongoing History of Virus Hunting and the Role of Gain of Function Studies

Oral

Prof. Paul Richard Goddard (Bristol Medico-Historical Society)

Abstract

Porcelain filters near the end of the 19th century permitted the identification of infectious agents smaller than bacteria. The term virus was first specifically used to describe such agents by Martinus Willem Beijerinck in 1898.

The electron microscope in the 1930s allowed viruses to be seen clearly for the first time.

Virus research has continued with the development of Gain of Function (GoF) studies (1). Initially concentrating on a specific function, such as higher yields for vaccine strains, since 2010 GoF studies have focussed on showing whether non-pathogenic strains of viruses could be made infective to human beings (2). The laboratories had a history of accidents in which small outbreaks of novel viral diseases occurred and in 2014 the Obama administration called for a moratorium on the research.

The NIH gave money to Peter Daszak to continue GoF in coronaviruses, carried out in the Wuhan Institute of Virology using humanised mice, culminating in reports that the researchers had successfully made harmless viruses pathogenic to man. (3)

In the autumn of 2019 the Covid-19 pandemic started in Wuhan. Over three million people have died from the virus.

Despite suggestions to the contrary (4,5) viruses commonly escape from laboratories, including Smallpox in Birmingham, Anthrax from the USA, Foot and Mouth disease from Purbright and 5 outbreaks of SARS1 from laboratories (6).

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The Prolonged Gestation of Obstetric Ultrasound

Oral

Dr. Sheila Duncan (Former Reader in Obstetrics and Gynaecology, Sheffield)

Abstract

1. The development of the use of ultrasound in clinical practice involved many talented individuals and supportive agencies but, that it occurred at all is mainly owing to Ian Donald whose vision and tenacity simply refused to brook failure. Interested in gadgetry from early life, he trained in medicine in the 1930s, served in the RAF in WW II, continued his specialist training post-war and became Regius Professor of Midwifery in Glasgow in 1954. Right away he capitalised on the local expertise in marine engineering to study the use of of ultrasound metal-flaw detectors in human tissues. Early developments were promising and images could be produced but translation into practical usable machines on any scale almost proved a development too far. In the 1960s the industrial landscape and practices changed. Amalgamations, manufacturing needs and fiscal rigour all led to to greater centralisation, the demise of local industry and the streamlining of expenditure with subsequent disruption. Support, on the scale required was stuttering, scepticism was rife, safety was recurrently suspect and a lesser mortal would have abandoned further attempt. Regrouping and further progress did however occur. Developments in electronics and advances in medical engineering in many countries took over and led to the use of smaller, practical real-time machines. This paved the way for the spectacular, globally-available technique which exists today.

References

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The surgeon who caught the Loch Ness Monster

Oral

Mr. Iain Macintyre (Royal College of Surgeons of Edinburgh)

Abstract

In 1933 an increase in the number of reported sightings of a supposed monster in Loch Ness generated widespread interest in the phenomenon. The following year a London surgeon, R K Wilson, took photographic plates to an Inverness chemist, which, when processed, appeared to show a long necked creature in the waters of the loch. The photographs made headline news in the *Daily Mail*. Analysis of the photographs suggested that they were genuine and Wilson's status appears to have enhanced their credibility. The 'surgeon's photograph' went on to become a well-known, even iconic, image. During World War II Wilson served with the Special Operations Executive, was parachuted into occupied France and Holland and was decorated for his war service. After the war he worked as a public health surgeon in Papua New Guinea and died in 1969. He never talked about the 'surgeon's photo.' It was not until 1994 that the truth behind the photographs was revealed and this will be described in the talk.

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The vermiform appendix; discovery, inflammation and treatment.

Oral

Mr. Andrew Raftery (Member Sheffield Aesculapian Society)

Abstract

Considering the frequency of diagnosis of appendicitis at the present time, it may be assumed that its aetiology has been known for centuries. In reality the causes and treatment of appendicitis have only been known for the past 125 years. The first descriptions of the appendix appear in the late 15th and early 16th century. One of the first drawings of the appendix is from the work of Leonardo Da Vinci (1492) but it was not named. Credit for the first description of the appendix is given to Berengario Da Carpi (1522), while Vesalius (1543) illustrated the appendix but referred to it as the caecum. During the 18th century there was much confusion about the role of the appendix in right lower quadrant inflammation. Further confusion occurred when Heister and Mestevier both described perforated appendices resulting from foreign bodies. Heister had described an inflamed appendix in his public autopsy of a criminal at Altdorf in 1711. Appendicitis in a living person was first diagnosed in 1834 by Wilhelm Billonious in Geneva. However, the need to treat it by operation was recognised only in 1880. Claudius Amyand in 1735 was credited with the first appendicectomy which was carried out for perforation by a pin. Considerable debate remains as to who performed the first appendicectomy for acute appendicitis. The presentation will describe the developments in the treatment of acute appendicitis examining the roles of Reginald Fitz in the USA and Robert Lawson Tait and Sir Frederick Treves in England .

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Thomas Wakley and the Crowner's Quest

Oral

Ms. Carolyn Paul (Whittington Hospital)

Abstract

After seven years at the helm of his controversial and influential journal, the Lancet, Thomas Wakley, the founding editor feared that effective medical reform could not be achieved by this publication alone.

In 1830 the position of coroner for Middlesex was vacated by the demise of the incumbent. Wakley used numerous examples of violent death, suspected poisoning, medical malpractice and quackery to illustrate the importance of medical knowledge for a coroner and put himself forward as a candidate for the vacancy.

Despite considerable support from freeholders of the county, members of parliament and doctors he was narrowly defeated on that occasion.

This marked beginning of a sustained campaign to appoint medical men as coroners, culminating in Wakley's appointment as coroner for West Middlesex in 1839, a post he held until his death in 1862.

A search of articles in which the term 'coroner' or 'inquest' appear has revealed a prolific correspondence and vigorous debate in the pages of the Lancet in which some notorious cases of the era and other less well-known stories are revealed.

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Training for medicine in Bristol in 1720

Oral

Dr. Michael Whitfield (Bristol Medico-Historical Society)

Abstract

Alexander Morgan became a barber-surgeon in Bristol in the early 1720s. He worked in the centre of the city and trained 5 surgeons himself, and all the indications are that he was a competent and fairly ordinary medical man who made two important contributions to the history of medicine, the first that he kept a notebook during his apprenticeship that survives[1] and second, that he collected and translated ancient documents relating to the history of Bristol that were used by the author of the first history of the city[2].

The notebook contains the detailed case histories of 95 patients that tell us something of the training undertaken by an apprentice during this time that medicine was evolving from balancing Hippocratic humours to the iatro-mechanistic understanding of Boerhaave.

Morgan was taught how to take blood in large quantities, create fontanelles and blisters, make medicines and plasters and spent much of his time dealing with injuries, abscesses and venereal diseases. We learn how barber-surgeons cooperated with apothecaries and physicians and managed diseases on a day-to-day basis.

The barber-surgeons were regulated through the Bristol gild that ensured that the seven years of apprenticeship resulted in appropriate qualifications and enabled the apprentice to gain his citizenship[3].

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Use of animal lungs in early human cardiopulmonary bypass machines

Oral

Dr. William Parker (University of Sheffield)

Abstract

Cardiac surgery began to develop in the first half of the 20th century. By the 1950s, it was clear that for more challenging procedures, such as those tackling complex congenital heart disease, cardiopulmonary bypass was necessary. With the development of suitable pumps to maintain a cardiac output, a key challenge remained how to adequately oxygenate the blood. Dodrill of Detroit used the patient's own lungs as an oxygenator but this was felt to be unsatisfactory and was quickly abandoned. Gibbon of Philadelphia had spent years developing a film oxygenator first used in 1953 and a related approach was taken by Melrose in London and Crafoord in Stockholm. Lillehei of Minneapolis used live human 'donors' in cross-circulation procedures, later abandoned in favour of the bubble oxygenator he had developed with De Wall.

Another often-overlooked strategy was the use of animal lungs as oxygenators of human blood. Surgeons at the time had access to a range of species used in the development of and training in new procedures and technologies. Whilst techniques had been successfully trialled for animal-animal procedures, early attempts at perfusing various animal lungs with human blood led to rapid dysfunction. Nevertheless, animal lungs were used as oxygenators in a number of procedures. Some had good results but many ended in failure. In particular, from 1951 William Mustard of Toronto used lungs of the rhesus monkey as part of a machine to operate on 15 congenital cases, all but 3 without success, whilst Gilbert Campbell of Minnesota used canine lungs to repair both congenital and acquired defects.

This paper will describe, critique and contextualise the use of animal lungs as oxygenators within human cardiopulmonary bypass circuits, shining a spotlight on this intriguing and obscure chapter in the technological evolution of modern cardiac surgery.

References

N/A

Vaccine hesitancy: not a twentieth century phenomenon

Oral

Mrs. Sylvia Valentine (University of Dundee)

Abstract

Medical authorities around the world are attempting to bring Covid under control by vaccination. In addition to conspiracy theorists, there are individuals with genuine concerns who want their questions answered before consenting to vaccination. Vaccine hesitancy has continued to grow in recent years not least because of the now discredited theories surrounding MMR vaccine. However, opposition to vaccination is not a new phenomenon. In the early nineteenth century the British government sought to control smallpox, by introducing compulsory vaccination. Vaccination had been available for affluent members of society from the turn of the nineteenth century, but the poor were unlikely to be able to protect their children without the generosity of benefactors. Infant mortality rates, particularly amongst the poor, were causing concern and compulsory smallpox vaccination was finally introduced in England and Wales in 1840 and in Scotland from 1 January 1864.

The efforts to eliminate smallpox were undermined by the activities of anti-vaccination campaigners, just as present day anti-vaxxers campaign against Covid vaccination. In England and Wales, by the 1850s an anti-vaccination movement had taken root, joined in the late 1880s by Scottish opponents to compulsory vaccination. By the late nineteenth and early twenties centuries the anti-vaccination movements across England Wales and Scotland campaigned together for total abolition of the Vaccination Acts.

This paper discusses the research into the growth of opposition to smallpox vaccination in Scotland, the influence of the English anti-vaccination movement and identifies the tactics employed to encourage parents to become vaccination defaulters.

References

Not applicable

What does the biography of Duncan Forbes MBE (1873-1941), Medical Officer of Health for Brighton (1908-1938), reveal about managing a pandemic?

Oral

Mr. Thomas Khan-White (Medical Student at Brighton & Sussex Medical School), Dr. Maxwell Cooper (Brighton and Sussex Medical School), Dr. Benjamin Whiston (Brighton and Sussex Medical School)

Abstract

Coronavirus disease 2019 (COVID-19) and the national lockdowns of 2020/21 illustrate how modern public health systems are founded on empirical evidence and contemporary understanding of disease transmission. Duncan Forbes was one of the earliest sanitarians in Britain to propose and implement a new understanding of infectious disease control, most clearly exemplified in his reponse to Brighton's outbreak of "Spanish" flu. Starting his early career in Manchester and Cambridge, his eventual tenure as Brighton's longest-serving medical officer of health (MOH) left an indelible mark by challenging the entrenched tradition of terminal disinfection and by devising his "Brighton methods" for the care of tubercular patients. Forbes led Brighton's public health responses during World War One and the 1918/19 Spanish influenza pandemic. Forbes also strove to improve health and housing in Brighton through an extensive programme of slum clearance. His views on limiting access to contraception on the grounds of eugenics are also significant. Analysis of Forbes' work then allowed a discussion of his legacy, considering his management of pandemic disease, his valuable contributions to the field, his contributions to Brighton as well as more controversial stances. Further discussion regarding the applicability of Forbes' works to our experience of tackling COVID-19 also helps to relate his life to the present day. In conclusion, Forbes undeniably had a great influence in shaping modern practice in public health, the town of Brighton and its people and his ordeals in managing the pandemic of 1918-19 bears many similarities, as well as stark differences, to our experience today. It is hoped that the presenting author's strong preference for conducting an oral rather than poster presentation shall be taken into account by the reviewers.

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Wounded and Home to Blighty (Ambulance Trains in the First World War)

Oral

Prof. Barry Hancock (Emeritus Professor of Oncology representing the Aesculapian Society of Sheffield)

Abstract

World War 1 was one of the bloodiest wars in all of human history. During the war the Royal Army Medical Corp (RAMC) dealt with $5^{1/2}$million casualties (2M battle, $3^{1/2}$M non-battle). 3% died, 55% returned to service; 58% of battle casualties were due to shrapnel - this was an artillery war – which caused shredding wounds with clothing and blood and tissue fluid intermixed, in an era before antibiotics. Other casualties include those suffering from mental illness – 'shell-shock'- and there were 186,000 admissions from gassing (mainly chlorine, later phosgene and mustard gas) of whom 5,900 died, representing 10% of total wounded. Ambulance trains were first used during the First World War in France and Belgium to transport wounded or sick soldiers to hospital. Also called first aid trains, hospital trains, casualty evacuation trains or travelling hospitals, they were specifically designed so that nurses of the Red Cross and the Queen Alexandra's Imperial Military Nursing Service and army medical officer doctors and orderlies of the RAMC could continue the care of evacuated soldiers. Ambulance trains were a link in the chain of medical evacuation. Seriously wounded men were given first aid then taken by motor ambulance to a casualty clearing station – a field hospital close behind the lines. These field hospitals were usually set up close to a railway line. When patients had been given emergency treatment and stabilised they were loaded into an ambulance train where they received proper medical attention and were transferred to a base hospital. Care continued at the base hospital and on the hospital ships that carried them back to their homeports. Consequently, when they arrived most casualties were already in a reasonably stable condition. Ambulance trains then carried patients from the ports to areas in Britain nearest their home.

References

None

‘Manie dangerous woundes and shotts’: Medical consequences of gunshot wounds in the British Civil Wars

Oral

Prof. Stephen Rutherford (Cardiff University, School of Biosciences), Mr. Michael Evans (Cardiff University, School of Medicine)

Abstract

In the British Civil Wars, firearms were highly prevalent. Wounds caused by these weapons were often fatal, but could be survived. So what was the effect of bullets from Civil War firearms on the human body?

A modern bullet (conical, and high-velocity) has four characteristic behaviours when it strikes the human body (Fackler and Malinowski, 1985). Yet it is not certain whether a seventeenth-century musket ball (spherical, soft-lead, and slower velocity) behaves this way. A systematic review of modern ballistics and surgical literature, case studies of modern deaths by historical firearms, and published medical manuals by civil war surgeons suggested fundamental differences from Fackler’s observations, in wounds caused by musket balls. The ‘permanent cavity’, caused by the passage of the bullet through the tissues, is usually narrow and follows a straight pathway in the body, though it may widen by pitching, yawing or tumbling of the bullet. A musket ball seemed to change direction frequently, making the permanent cavity larger and more complex. The ‘temporary cavity’, caused by lateral displacement of tissues by the permanent cavity, is impossible to compare from the evidence. ‘Penetration and exit’ of the bullet from the body is considerable in modern bullets, but musket balls frequently remained lodged within the body. These were usually removed, but there is evidence of them being retained for many decades after the injury. ‘Fragmentation’ of a modern bullet is common, but appears not to have occurred in musket balls.

Impacts of musket balls within the body had significant implications for surgical interventions required. Evidence of gunshot wound survivors infers that these surgical treatments could be highly effective. The diversity of these procedures, and their biomedical validity, is discussed.

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‘The Dissectors Dissected’: Sheffield’s Medical School Riot of 1835

Oral

Dr. William Parker (University of Sheffield)

Abstract

The first Medical School in Sheffield was run by the Overend family and established in the early 19th century.[1]Until the 1832 Anatomy Act, such institutions were unable to reliably obtain cadavers without graver-obbing, to which the authorities had generally turned a blind eye. Burke and Hare in Edinburgh had escalated the process to include murder. There is good evidence that the Overend School took part in graverobbing prior to 1832. Later testimony suggests students were involved.

Regardless of the Anatomy Act, public fears around the activities of Medical Schools remained. In Sheffield, these came to a dramatic head in January 1835. A drunken argument between the School’s caretaker, John Butler, and his wife, Ann, spilled into the street. When John tried to strangle Ann, she cried ‘murder’. Thinking a ‘Burke-ing’ was taking place, a crowd stormed the School, smashing and looting. Settling down after police intervention, the crowd returned the next morning, impassioned by a handbill alleging a sustained campaign of misconduct. This time the building was gutted, contents and floors removed and burnt in the street. Firemen were pelted with stones and a Superintendent attacked with a scalpel. Only when Dragoons had been deployed twice was calm restored, though further outbreaks of violence occurred against the Overend home and the new Surrey Street Medical Institution. A number of rioters were prosecuted and there were calls for changes in the governance of the town. The School was rebuilt and continued to provide medical services well into the second half of the century.

In a fresh review of contemporaneous sources such as newspaper reports, this paper will reconstruct in detail the events of January 1835, consider their causes and how these may have influenced Sheffield’s response to later disturbances such as the Stirrings/Outrages.

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“What do plastic surgeons do between wars?”: Harold Gillies’ quest for a specialism of peacetime

Oral

Dr. Elizabeth Faulkner (King’s College London)

Abstract

For his pioneering surgical work in World War I, Sir Harold Delf Gillies’ is widely considered the ‘father of modern plastic surgery’ (Crumley, 2003). While this work is well documented in literature, far less commentary has discussed what happened to Gillies’ nascent specialism of plastic surgery in the interwar years that followed. Research of both primary and secondary sources suggested that, in an age before routes to specialisation had been formally institutionalised, plastic surgery remained restricted to Gillies’ work and direct influence. Gillies successfully forged a space for his own practice; utilising his fame, reputation and connections to build an informal legitimacy amongst peers and colleagues. Yet the institutional landscape restricted the dissemination of medical advance, as rigid advertising censorship and a lack of certified medical specialist training and professional bodies, all acted as barriers to building formal legitimacy that would have enabled the specialty of plastic surgery to extend beyond Gillies’ immediate sphere.

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Poster

Epidemics and children's education: Sheffield, 1870-1906

Poster

Dr. Patricia Brennan (Current University of Sheffield: Sheffield Children's Hospital, retired)

Abstract

Epidemics and children's education:

Sheffield, 1870-1906

The 1870 Education Act started the push for providing education for all children in Britain. It was increasingly argued that children were the future of the nation and the Empire. In the face of the growing industrial and military might of Germany contemporaries claimed Britain needed a future healthy educated workforce and armed forces. Once children were gathered in the classroom, their condition caused concern. Their death rate was high, particularly from infectious diseases spreading through schools and neighbourhoods in epidemics.

This study considered two questions, firstly, how did infectious disease epidemics affect school attendance and education and secondly, how did health and education and other professionals and families work together to reduce the spread and incidence of disease. It focused on Carbrook School, located in a poor working-class area of Sheffield, from 1870 to 1906. It reviewed head teachers' school logs, Education and Local Council minutes and Medical Officer of Health annual reports.

In 1872, there were 1047 deaths from infectious diseases in Sheffield, mainly in children, predominantly measles, scarlet fever, diphtheria, smallpox and whooping cough. Medical advice was circulated to council committees, doctors, parents and school staff. General preventative measures included improvements to school accommodation, banning of infected children and those with infections in their families, notification of infectious diseases by doctors, families and teachers, disinfection of houses, bedding and families and vaccinations against smallpox and diphtheria. When epidemics swept through the city, from school to school, school buildings were closed for between 3 and 6 weeks, on the instructions of the Medical Officer of Health. As in 2000, these measures helped to limit infections but impacted on children's education and future and ultimately on the future of the nation.

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Ground-breaking pioneers or dangerous amateurs? What was the biomedical validity of early-modern surgery?

Poster

Prof. Stephen Rutherford (Cardiff University, School of Biosciences)

Abstract

The early modern period saw a revolution in the understanding of physiology, anatomy and medicine. Building on the advances of the renaissance, physicians and surgeons of sixteenth and seventeenth centuries were breaking new ground in wound care, surgery and medical understanding (Rutherford, 2018). Military conflict in the British Civil Wars correlated with pioneering developments in surgery. As warfare and tactics developed with increased use of firearms, so military surgery adapted to face these challenges of the battlefield. However, were the procedures undertaken by these medical professional sound medical practice?

This talk will address the biomedical validity of early modern surgical practices by examining the writings of surgeons from the British Civil Wars. Through the published works of seventeenth-century surgeons, it is possible to analyse the approaches they took in the treatment of battlefield wounds. Despite a lack of understanding of microbiology, biomedicine, and systems physiology, the practices exhibited by these authors frequently reflect common current surgical practice. Civil War surgeons evidence good understanding of the actions of bullets within the body, effective methods to control infection. And methods to promote effective wound healing. In addition, there is evidence of published surgeons in the early modern period basing their practice on an evidence base through experience and observations. With effective treatment, survival from very extensive battlefield injuries was possible. In determining answers to the problems posed by new developments in weaponry, early modern surgeons laid the foundations for many contemporary surgical practices in military surgery and contemporary medicine.

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Hysteria, head injuries, and heredity: 'shell-shocked' soldiers of Craigleith Villa, Edinburgh (1914-24).

Poster

Ms. Joanna Park (Medical Student, University of Edinburgh School of Medicine), Mr. Andreas Demetriades (Consultant Neurosurgeon, Department of Clinical Neurosciences, Royal Infirmary of Edinburgh; Scottish Society of the History of Medicine; Apothecaries Lecturer in the History of Medicine), Ms. Louise Neilson (LHSA Access Officer, University of Edinburgh)

Abstract

Craigleith Villa formed part of New Craig House, a psychiatric hospital opened in 1894 on the grounds of the Royal Edinburgh Asylum (LHSA, n.d.). Through the use of archival material, this project illustrates the as yet uncharted patients of Craigleith Villa around the time of WW1, predominantly 'shell-shocked' soldiers. Primary patient notes help to elucidate definitions, symptoms, and perceptions of 'shell-shock', in addition to its links with comorbid psychiatric conditions. This includes General Paralysis of the Insane (GPI), alcohol excess, dementia praecox, mania, and melancholia. Whilst the majority of these patients are suffering from shell-shock, it is not once explicitly listed as a diagnosis. As such, this paper shows the effects that canonical views held by the War Office and military psychiatrists on shell-shock aetiology had on the language used in psychiatric patient notes. The results corroborate wartime views that mental distress due to a physical head injury was preferable to shell-shock without obvious cause; that neurasthenia was a more desirable diagnostic label than hysteria; and that mental illness was predominantly due to an inherited flaw in someone's character. Language used by psychiatrists to describe their patients was influenced by contemporary perspectives on gender, class, and mental illness. More broadly, this paper adds to discussions about definitions and symptomatology of shell-shock that is being uncovered in historical patient notes across Europe from this period.

Note:research has been delayed owing to closure of the Lothian Health Services Archive (LHSA), so around two thirds of the patient case notes available at the archives have been analysed and discussed in this paper

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Manchester's Early Critical Care Nurses - separate, special, & space age.

Poster

Mrs. Sharon Whiting (RGN. Practice Educator, Critical Care Ward, North Manchester General Hospital. MFT. Postgraduate Student University of Manchester)

Abstract

At Congress this poster aims to:

- share the emerging findings from a project exploring the history of critical care nursing
- stimulate a conversation about the history of a field of nursing that has been the subject of many international headlines in 2020-21

Covid-19 has set critical care nurses as the poster-girls/boys at the centre of a global fight for survival. Early professional reflection suggests there is much to learn from the intensity of this recent experience.

Learning from past experience can inform the future of critical care. The International Council of Nursing (1989, in Baly 1999) deemed it critical to the future of the nursing profession that as well as examining present trends, history and nursing's past be studied. Further, Patricia D'Antonio et al (2010) argue that the power of nursing history lies in the possibilities it offers to inform such a debate.

Whilst critical care is a young medical speciality, in Europe it grew in response to the 1950s Polio epidemic (Reynold and Tansey, 2011). By the mid-70s most UK NHS hospitals had units. The nursing contribution to the history of critical care in the UK is difficult to find.

This work aims to capture the development of the art and craft of the critical care nurse. then use that experience to inform policy and practice, and in examining the application of science within the caring role, learn from those first practitioners.

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Pepys And His Weeps – The Long-Term Morbidity Of 'Cutting For The Stone'.

Poster

Dr. Steven Kennish (Consultant Radiologist, Sheffield Teaching Hospitals), Dr. Michael Collins (Consultant Radiologist Emeritus, Sheffield Teaching Hospitals)

Abstract

Introduction

Samuel Pepys famously underwent a perineal lithotomy (cutting for the stone) for a troublesome bladder calculus in 1658. His surgeon, Thomas Hollier, a renowned lithotomist, was subsequently said to have had four consecutive post-operative deaths, so highlighting the extreme risks associated with major pelvic surgery. Pepys, having had the good fortune to have survived the procedure, had to subsequently manage his perineal wound with constant dressing changes. Weeping from the wound may have consisted of a combination of urine, blood, lymphatic and seminal fluids. Despite Pepys' well documented adventurous sex life, there is no record of him having fathered any children. It is hypothesised that the lithotomy may have led to infertility.

Method

Historical references are explored to illustrate the methods of lithotomy in relation to perineal and pelvic anatomy, specifically the reproductive tract. Established surgical techniques are mapped against six randomly selected modern day anonymised Magnetic Resonance Imaging (MRI) studies of the pelvis in men of a comparable age to Pepys in 1658.

Results

As long ago as the 16th Century, the eminent surgeon Ambrose Pare', was aware that cutting for the stone could leave men "barren". [1] Perineal lithotomy is demonstrated to pose a significant risk of compromising male reproductive anatomy in all MRI cases. The risk of injury to the rectum and major blood vessels is also a major consideration. The prostate gland is shown to be consistently within or in the immediate proximity to the surgical track.

Conclusion

Whilst determining that a lithotomy is responsible for rendering Pepys infertile is speculative, the anatomical evidence from primary sources and modern pelvic MRI scans suggests a significant risk of reproductive tract injury. Intra-operative transection and post-operative scarring would certainly pose a risk of rendering male patients infertile.

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The Covid-19 pandemic and the “ventilator - panacea” - an example for historical lessons not learnt

Poster

Dr. Wulf Stratling (University Hospital of Wales, Cardiff /)

Abstract

As a rapid response to the outbreak of the Covid-19 pandemic (c. February – May 2020) various options were globally discussed to increase the availability of potentially life-saving ventilator technology. This presentation provides a short, systematic overview and analysis of the three main proposals at the time: 1. putting multiple patients on one ventilator; 2. utilisation of relatively simple, “historic” technology; 3. rapid mass-utilisation and production of modern devices (primarily by established and recognized *specialist* manufacturers). Examples of prominent initiatives are analysed, primarily from the perspective of the history and systematics of medical ventilation technology, and therapy. The author demonstrates that from the outset only proposal 3. offered clinically viable options. This result, ex-ante objectifiable and ex-post confirmed since, contrasts sharply with extensive discussions which were then entertained, even in the medical communities, on predictably non-viable alternatives. The same applies to the related media-, public-, and political attention, and the resources which were subsequently mis-allocated. From the perspective of a medical specialist these phenomena illustrate either a profound lack of deeper technological understanding of, or inattention to the enormous complexities of the underlying engineering, its history and wider backgrounds, and its application in medical practice. Historically, this phenomenon is also consistent with a longstanding tradition of a biased and factually often incorrect narrative: This is overly physician-centred[1] and under-recognizes trans-disciplinary interactions and inter-dependence in the international historiography of medical engineering and innovation.[2]

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The history of prions: Can we avoid a prion pandemic?

Poster

Dr. Kaesi Opara (Nottingham University Hospitals Trust)

Abstract

Prion diseases, also known as Transmissible spongiform encephalopathies (TSEs) are a group of infectious diseases caused by the misfolding of the prion protein. They all cause rapidly progressive dementia, a host of neurological symptoms, and are 100% fatal. Hippocrates is believed to have described the symptoms of what probably was a TSE that occured in goats in the 5th century BC but the first fully recognised prion disease to occur was scrapie in sheep during the 18th century.

The work of two Nobel Prize winners would prove the prion hypothesis: Daniel Carleton Gajdusek would prove in 1967 that diseases like Kuru are most transmissable by the consumption of nervous system matter and Stanley Prusiner would prove in 1982 that TSEs were caused by a prion protein in violation of the central dogma of biology.

Kuru remains the largest ever human epidemic of prion disease with around 2000 total deaths, but the variant CJD scare that occured in the UK in the 1990s due to the consumption of beef infected with BSE serves as a stern warning that a widespread prion pandemic is a real possibilty. Many public health measures are currently put in place to avoid one but factors such as the durability of the prion protein, the prevalence of PrP Sc found in UK residents and the continued consumption of brain food or infected animals in many cultures put into question how effective these measures will be.

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The interwar years of the Scottish Eastern Association of the Medical Women's Federation

Poster

Ms. Corinne Pope (Medical Student, University of Edinburgh School of Medicine), Dr. David Wright (University of Edinburgh)

Abstract

The Scottish Eastern Association (SEA) is a local branch of the wider Medical Women's Federation (MWF), an organisation founded in 1917 to represent and support women in medicine, as well as female patients (Hall, 1997). World War I had been a foundational period for women's rights, and especially women entering into the medical profession (Dyhouse, 1998); as such, this project focuses on what came after, when the drive for more women's rights was thought to have stalled, and when the SEA and MWF were still in their earliest stages.

Material from the Lothian Health Services Archive's 'GD51 Papers of the Scottish Eastern Association of the Medical Women's Federation' collection was collated and analysed in order to focus on three aspects of the period from 1918-1939: the actions of the SEA, either in isolation or in conjunction with the MWF, their relationship with the Federation, and their place in that specific historical climate. From this, it was found the SEA were active in improving gynaecological and sexual health; in campaigning for equal pay and other improvements for female doctors; in advocating on behalf of female medical students; in trying to improve gynaecology education; and in striving for women not to be side-lined as preparations for World War II were made. The SEA were more involved with local campaigns, whereas national initiatives involving the SEA were coordinated by the MWF. This work acts to refute claims that the MWF and other similar organisations had become more disenfranchised in this period.

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