



**BRITISH SOCIETY for the HISTORY of
PAEDIATRICS and CHILD HEALTH**

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AUTUMN MEETING 2017



Friday 8th to Saturday 9th September

Selwyn College Cambridge

Programme

Friday 8th September

13.00 Lunch

Session 1 Chair: Euan Ross

- 14.00 Prof Mike Wadsworth ‘The Legacy of the British National Birth Cohort Studies’
- 14.30 Prof Peter Dunn ‘The importance of the Umbilical Circulation’
- 15.00 Dr Philip Mortimer ‘Looking after Tom Brown’ (Healthcare in Britain’s Victorian Public Schools)’

15.30 Tea

Session 2 Chair: Nick Baldwin

- 15.50 Dr Jonathan Dossetor ‘A Geographical Biopsy’
- 16.20 Prof Mike Dillon ‘The Story of Three Books’
- 16.50 Prof Russell Viner ‘The Emergence of Adolescence’
- 17.30 Dr E. Estlin Cadogan Prize presentation ‘Childhood Health Promotion 1870-1901’

18.00 AGM

18.30 Drinks reception

19.30 Dinner

Saturday 9th September

Session 1 Chair: Nick Barnes

- 09.00 Prof Ian Goodyer ‘The Emergence of Child & Adolescent Psychiatry’
- 09.40 Dr Chris Verity ‘From Whooping Cough to Orange Card; the birth of the BPSU’
- 10.10 Dr Mary Clare Martin ““You did not hurt me very much last time, Papa”; Willie Selwyn, William Charles Cotton and Colonial Childhood in New Zealand, 1841-1848’

10.40 Coffee

Session 2 Chair: Jonathan Dossetor

- 11.00 Prof Deborah Thom ‘Researching Corporal Punishment in 20th Century Britain’
- 11.40 Dr Mary Lindsay ‘How a Shipwreck in 1740 contributed to British Bone-Setting/Orthopaedics and the Welfare of Children in Hospital’
- 12.10 Dr Nick Barnes ‘Adding a Cubit? Tom Thumb and other short stories’

13.00 Lunch

15.00 Guided Tour of selected items in the Fitzwilliam Museum with Nick Chrimes, author of “Cambridge, Treasure Island of the Fens”.

Please let Jonathan Dossetor know if you wish to come on this tour, as places are limited.

Abstracts

The legacy of the British national birth cohort studies

Professor Michael Wadsworth

Gloomy predictions made during the interwar years about the future national trend in fertility, and concerns about how to reduce infant mortality in the early post-war years, persuaded clinicians and epidemiologists to undertake a large-scale study of births in 1946. A second, comparable study of births was begun in 1958, to form an evidence base from which to assess progress in care at birth and during the perinatal period after 10 years of the NHS. Children in both studies were followed-up into adolescence and then adulthood, and are still studied, in order to investigate longer-term outcomes.

(www.nshd.mrc.ac.uk) (www.cls.ioe.ac.uk). In 1970, 1991-2 and 2000-1 three new large-scale studies of health at or before birth and in early life were established to examine child health and effectiveness of policy, and to compare with the earlier investigations. Those sample populations have also been followed-up ever since. (www.cls.ioe.ac.uk) (www.bristol.ac.uk/alspac)

Altogether the five studies from across the first half century of the NHS comprise what is now an accessible database on 73,642 live births and the subsequent health and life styles of their subjects. Individually and together they are now used as a unique resource for studying processes of ageing, from cradle to grave. This paper describes the studies, gives examples of findings, and considers the future value of this database and how it might be replicated today.

Summary c.v.

Prof Michael Wadsworth (PhD, FFPH, FAcSS) worked in Population Epidemiology first in Prof. John Butterfield's Department of Experimental Medicine at Guy's Hospital Medical School, and then in the Department of General Practice at Edinburgh Medical School, before joining Dr James Douglas's team to work on the MRC National Survey of Health & Development, the original national birth cohort study. He became Deputy Director of that study in 1979 and was Director from 1986 until retirement in 2006. His main interests were in studying the processes of change in physical and cognitive function with age in middle life and their relation with earlier life, and in maintaining the birth cohort and preparing for its current role as a resource for the study of ageing.

The importance of the umbilical circulation in preventing respiratory distress syndrome following premature Caesarean delivery, 1957 – 1973

Peter M. Dunn, University of Bristol

In 1958 I commenced a 10 year apprenticeship in perinatal medicine commencing as a registrar at the Birmingham Maternity Hospital in Loveday Street. I was particularly concerned at the very high mortality (32%) from respiratory distress syndrome among premature infants delivered by Caesarean section. My studies led to the development of a method of delivering such infants with their umbilical circulations intact. The mortality among such infants fell immediately to 4% and finally to 0%. The philosophy behind my method was as follows.

Adaptation to extrauterine life depends on the achievement of adequate alveolar ventilation, followed closely by a greatly increased pulmonary blood flow and other profound fetal-to-adult changes in the circulation.

The key to successful adaptation is the replacement with air of the lung fluid which fills the alveoli prior to delivery. Evacuation of this lung fluid is aided by an abrupt rise in blood catecholamines during labour and by thoracic compression during the second stage of vaginal delivery. After birth it is further achieved by pulmonary lymphatic drainage impelled by the ‘milking’ action of respiration.

The preterm infant is vulnerable to maladaptation and the respiratory distress syndrome because of various disadvantages in respect to the mechanics of respiration which impede the establishment of alveolar ventilation. His difficulties are increased by Caesarean delivery which may anaesthetise him and also deprive him of the vaginal squeeze. Elective section before labour further deprives him of the surge in blood catecholamines.

At delivery his cardio-respiratory haemodynamics may be seriously compromised by premature occlusion of the umbilical cord and also by resuscitation in the head-down position. An understanding of the pathophysiology of maladaptation at birth has led to a method of management that attempts to avoid these iatrogenic factors. This includes delivery of the preterm Caesarean section infant with umbilical circulation intact, and, when indicated, the use of gentle positive pressure ventilation (15 minutes) with the infant in a head-up position and the placenta lying alongside the baby.

References

Dunn, P.M. Caesarean section and the prevention of respiratory distress syndrome of the newborn. In: H. Bossart et al, eds. Perinatal Medicine, 3rd Europ. Congress of Perinatal Medicine, Lausanne, 1972. Bern, Hands Huber, 1973: 138-145.

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Looking after Tom Brown: a century of health improvement in British Public Schools.

Dr Philip Mortimer

Pre-Victorian boarding schools were crowded unhealthy places with frequent outbreaks of disease, often with deaths. The Clarendon Commission of 1860-64 called for improvement in the conditions in the so-called Public Schools, and in 1875 The Lancet launched its own inquiry. Nonetheless, outbreaks continued into the twentieth century. The introduction of universal childhood immunisation and access to the National Health Service transformed matters.

A geographical biopsy

Dr Jonathan Dossetor

When Anthony Epstein heard Denis Burkitt talk in the Middlesex hospital in 1961, he saw the implication of his work and this led to the discovery of the EB virus. However, Denis Burkitt had been working for some years on the tumour which bears his name, and the story of how he got to the 1961 flashpoint is the subject of this talk. Many of his early papers and notes were given to the Wellcome library by his widow, and I have looked at these papers and traced the evolution of his thought in the 10 years leading up to 1961.

At the same time that the role of smoking in the causation of lung cancer was just beginning to be understood, Burkitt's work eventually led to the appreciation of viruses as another major aetiological factor in cancer. The 'geographical biopsy' that I will describe in this talk was an important step along that road.

Pliny the Elder is quoted as saying 'Out of Africa there is always something new' Denis Burkitt did discover something new in Africa, but epidemiological research in Africa poses many problems and it is a tribute to Burkitt's persistence that he was able to collect the evidence for his theory. How he did so is the subject of this presentation.

We could call this talk – 'EB virus – the prequel'.

The Story of Three Books

Professor Michael Dillon (UCL Great Ormond Street Institute of Child Health, London)

The invention of printing in the middle of the fifteenth century marked the revival of learning as far as medicine was concerned and led to the appearance of the first three printed incunabula on diseases of children. The first of these was "Libellus de egritunibus infantium" by Paulo Bagellardo published in Padua in 1472 (the 2nd medical work ever printed). The second was "Ein regiment der jungen kinder" by Bartholomaeus Metlinger published in German in Augsburg in 1473. The third was "Liber aegritudinum puerorum" by Cornelius Roelans published in Louvain in 1485.

Each of these works were compilations of what was known at the time of writing and relied heavily on material from the past, especially influenced by Arabian physicians such as Rhazes. However, each also included the authors' own opinions on selected topics. Bagellardo's book was divided in to two parts: care of the newborn and diseases of children under 22 separate headings. Metlinger's book had 4 parts: care of the newborn, how to nurse normal children, diseases affecting children and care of children from walking and talking to seven years. Roelen's book confined itself to diseases of children and was a fuller work subdivided in to 52 chapters covering a wide range of topics.

The paper will describe the lives of the authors, more details of their books and of further editions that were published in the early 16th century that are in the presenter's library emphasising how plagiarism seemed to be an accepted practice in those times. These 3 works were the forerunners of other published books on paediatrics that emerged in Europe during the 1500s including, of course, in Britain the Boke of Children by Thomas Phaer in 1545 and The Arte and Science of preserving Bodie and Soule in Healthe, Wisdome and Catholike Religion by John Jones in 1579.

Childhood Health Promotion during 1870 - 1901

Dr Eddy Estlin

Child health is an important determinant of health-related outcomes across the life course. The World Health Organisation (WHO) now advocates health education as a means to promote individual health, and historical perspectives can inform contemporary policy and practices that are related to improvements in health literacy. This paper utilizes the WHO ICF-CY as a frame for the study of child health promotion for the late Victorian era. The major findings are that the ICF-CY concept map supports the systematic analysis of historiography, in terms of body structures and functions, for activities and participation and for the contextual influences of environment and personal factors that related to child health promotion for this time period. Taking physical education as an exemplar, research insights from biomedical sciences such as physiology did not systematically inform physical education practices in Britain and the USA, despite the growth of inter-disciplinary groups and the availability of biomedical publications in the late Victorian era. This has a parallel with the modern era of health promotion and the knowledge gained from sport and exercise science. The lessons of history may help raise awareness for health literacy interventions, and future studies will explore this theme.

From whooping cough to orange card – the birth of the BPSU

Dr Chris Verity

In 1974 Archives of Disease in Childhood published a paper entitled “Neurological Complications of Pertussis Inoculation” reporting 36 children seen at Great Ormond Street Hospital who had developed their symptoms soon after receiving triple vaccine. A storm of media publicity followed and as a result pertussis vaccine uptake dropped and whooping cough epidemics recurred. By 1977, coverage against pertussis had declined from 77% to 33%, falling as low as 9% in some districts.

In response to this crisis “the most important single investigation to arise from the controversy” was launched. This was the National Childhood Encephalopathy Study, an enormous case-control study that identified every child between 2 and 36 months of age hospitalised for acute neurological illness in England, Scotland and Wales: the aim was to assess whether recent immunisation was a risk factor. In 1981 it was concluded that although pertussis immunisation was associated with an increased risk of acute neurological illness, the risk appeared to be very low and the risk of permanent neurological injury was still lower.

Those who organised this major epidemiological study, and others, became convinced of the need to set up a process that would facilitate similar studies in the future. Negotiations led to a collaboration between three bodies – the British Paediatric Association, the Public Health Laboratory Service and the Institute of Child Health. Together they set up the British Paediatric Surveillance Unit which was led by an executive committee of paediatricians, epidemiologists and public health professionals. The aim was to encourage paediatricians to study the epidemiology of rare childhood infections and other disorders and to provide them with the means of carrying out these studies.

The first BPSU card was mailed in June 1986 and included AIDS, Lowe syndrome, HUS, neonatal herpes, SSPE and X-linked anhydrotic ectodermal dysplasia. The card went to 800 consultant paediatricians in the UK and the Republic of Ireland. Now over 3000 consultants are involved, over 100 studies have been completed and over 300 scientific papers have been published. The BPSU methodology has been utilised worldwide and 12 countries are members of the International Network of Paediatric Surveillance Units. This has been a great success story and the contributions of those who had the vision to establish the BPSU should be applauded.

“You did not hurt me very much last time, Papa”: Willie Selwyn, William Charles Cotton and colonial childhood in New Zealand, 1841-48.

Dr Mary Clare Martin

Although Bishop George Selwyn is a well-known figure in nineteenth century history, and his younger son the lawyer John Richardson Selwyn merited his own biography, much less is known about Selwyn's elder son William, who came out to New Zealand with his family in 1841, aged one. Yet the accounts of Willie and his brother Johnnie by the bishop's chaplain William Charles Cotton, produced in part for family and friends back in England, provide an unusually detailed account of the dynamics of an early Victorian family.

These journals and letters provide a picture of a precocious yet attractive child whose sayings were of great interest to the bishop's chaplain. Willie's comments reflect back in Carrollian vein, the child's perspective on the organisation of this Anglican community, and, at times, its apparent absurdities. Contrary to the stereotype of the Victorian family (and of local Judge Martin's children, who William Charles considered well behaved but dull), Willie and his brother seemed to have no concerns about answering their father back. In reflecting on the nature of punishment, and more positive personal interactions in this family, it will be argued that parent-child relations seem to have been generally harmonious, with only rare references to punishment. This case-study suggests that the frequent perception that such families were emotionally damaging to children is therefore ripe for revision.

How a Shipwreck in 1740 Contributed to British Bone-Setting/Orthopaedics and the Welfare of Children in Hospital, 1959.

Dr Mary Lindsay

A small boy was washed ashore on an Anglesey beach and looked after by the local GP. The boy, his son and grandson became bonesetters. His great grandson, **Hugh Owen Thomas** (1834-1891), became a Liverpool GP with a unique understanding of the management of complicated fractures and dislocations old and new. Following Sydenham, he successfully treated children with TB of the hip, knee and ankle using his splints which provided prolonged uninterrupted rest, under his strict supervision at home, rather than the mutilating surgical treatment in hospital. His splints are still used today.

His wife's nephew, **Sir Robert Jones** (1857-1933), lived with them. Jones learned much from him, becoming an outstanding and innovative Surgical Superintendent to the Manchester Ship Canal. With Agnes Hunt he built the first children's orthopaedic hospital, presently in Oswestry. As a Major General he provided treatment and rehabilitation to the war wounded.

In 1892, he saw **Harry Platt** (1886-1986) who had a TB knee which Jones treated. Following Jones, Platt took up orthopaedics, and with Jones as his mentor, contributed a great deal to the field. While President of the RCS, he was appointed chairman to a government Committee - The Welfare of Children in Hospital - which, *inter alia*, recommended unrestricted visiting of children in hospital and admission of mothers of young children to prevent the emotional damage of separation.

Adding a Cubit to Man's Stature? Tom Thumb and other short stories

Dr Nick Barnes

Charles Sherwood Stratton (1838 - 1883) was of extremely short stature. Promoted by P T Barnum under the alias General Tom Thumb he became one of the first superstars of show business. His progression from circus dwarf to internationally famous performer was as much due to his acting ability and personality as to his size.

Tom's growth failure was caused by congenital deficiency of pituitary growth hormone. The pituitary is anatomically and functionally inaccessible and the elucidation of its role in health and disease is a remarkable chapter in the history of medicine.

The gross anatomy of the pituitary was described in the 16th century but it was not until the 20th that its many functions, including control of growth, were discovered. Growth hormone is species specific so attempts to replace it with animal pituitary extracts failed. In 1958 extracts from human glands collected post-mortem were first used successfully and, with a unique arrangement of national agencies, 27,000 children were treated on strict criteria according to need. In 1985 it was first recognised that human growth hormone could carry the fatal Creutzfeld-Jacob prion and the programme was closed. Fortunately, biosynthetic growth hormone had then become available and thereafter supplies have been limited only by cost. This has raised further dilemmas including the use of growth hormone by endurance athletes and the ethics of its use to enhance growth in normal short stature.

Would Tom have welcomed treatment?