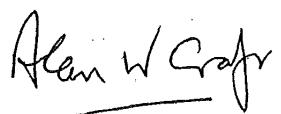


**A commentary on Dr Michael Ledwith's Report to the Inquiry
into Hyponatraemia-related Deaths in Northern Ireland entitled:**

***"A Review of the teaching of fluid balance and sodium
management in Northern Ireland and the Republic of Ireland
1975 to 2009"***

**by Professor Sir Alan Craft, Emeritus Professor of Child Health,
Newcastle University, England.¹**

The information contained in the Report, is to the best of my knowledge,
true at the time of writing.



13 05 11

Signed
A Craft

¹ Curriculum vitae appended to this report.

Commentary on the Ledwith report

Dr Ledwith has undertaken a comprehensive review of the teaching of fluid balance in children with particular reference to sodium and hyponatraemia. He has also produced an addendum dealing with the relationship between doctor and nurse training and the clinical inter relationships between the two professions.

He has carried out a review of the training of undergraduate and postgraduate trainees over the period from 1975 to 2009. Although this is mainly from a Northern Ireland, and to some extent all Ireland, perspective it has been set in the context of the rest of the UK.

The education of medical students and postgraduate doctors has been governed on a UK wide basis throughout this time period and he correctly refers to the General Medical Council, the Specialist Training Authority, the Postgraduate Education and Training Board and the General Medical Council.

Undergraduate Teaching

All medical schools in the UK have been, and are, under the overall scrutiny and governance of the General Medical Council. Until the production of the first version of "Tomorrow's Doctors" in 1993 there was little, if any, central prescription from the GMC as to what should be in individual medical schools curricula.

Dr Ledwith describes the typical medical school curricula of the 1970s and 1980s consisting of a fairly strict demarcation between the first 2 or 3 years of basic science teaching followed by a further 3 years of clinical teaching.

In 1962 my own University (Newcastle) embarked on the first of many curriculum changes to move towards a more integrated approach to teaching. Instead of teaching separate subjects of anatomy, physiology and pathology a

more integrated approach was taken with a systems based method right from the start eg the cardiovascular system would be a theme and there would be an integrated approach to the teaching of the anatomy, physiology and pathology of the cardiovascular system along with clinical aspects of the diseases of this system.

This integrated approach has now been adopted by most medical schools and indeed is recommended by the GMC. However some notable medical schools eg Oxford and Imperial still teach in the traditional way.

There was no prescription as to what teaching there should be about fluid management and even less so for this in children. It was left to individual schools to decide what to include in their teaching and detailed instruction in fluid balance was not expected. Fluid management was not usually a part of the assessment process either during the course or at the end.

It is interesting to note that in some of the overseas institutions where I have examined, a much more detailed assessment of the students knowledge of fluid management was undertaken in the final examinations. This difference is probably due to the fact that in many overseas countries, newly qualified doctors would be expected to do much more in terms of patient care and often relatively unsupervised.

The philosophy in the UK has traditionally been that undergraduates learn about medicine and as junior doctors they learn how to practice medicine and how to be a doctor. Detailed fluid management has traditionally been considered to be a postgraduate subject.

Since the publication of "Tomorrows Doctors" there has been a gradual move to a much more structured programme, with principles defined by the GMC and detailed implementation left to the individual schools.

One of the basic principles which drove the GMC to revise their guidance was the recognition of the fact that their previous stance of expecting graduating medical students to have a comprehensive knowledge of medicine was no longer tenable. The knowledge and evidence base was becoming so vast that students were suffering from "information overload". In future they needed to be taught the core principles of medicine on which they could build in their postgraduate training.

A general principle adopted for education regarding children was that medical students, the vast majority who would not be choosing paediatrics as a career, needed to understand the key difference between children and adults. One of the

most obvious differences is that children are constantly growing and developing and are moving from a totally dependent state to one of independence. The family is much more of an integral part of a child's life and illness. So the concept of a child's illness in the context of the family is a key principle which most medical schools will include in their teaching.

Any medical school will decide how to teach the core principles of paediatrics and may use any illness as an illustration. One can therefore not expect a comprehensive knowledge of paediatrics to be taught or included in examinations.

Prior to the late 1990s I would not expect a comprehensive knowledge of fluid management or of hyponatraemia, in particular, to be taught to UK medical students. Even now, in 2011, there is no mandate from the GMC that a detailed knowledge of fluid balance in children should be taught or the knowledge of it assessed.

Postgraduate Training-Transition to Medical Practice

Until the turn of the century the traditional route for transition from medical student to junior doctor was the need to undergo a year of pre-registration house officer training. Following graduation medical students were provisionally registered with the GMC and after a satisfactory year as a house officer they could apply for full registration. The work of house officers was limited and had to be closely supervised both by a consultant and more senior trainee doctors. Most doctors would not undertake a paediatric house officer post. They had to undertake 6 months on a surgical ward and 6 months on a medical ward. Occasionally permission was given for a post on a paediatric ward to be counted as medicine or surgery.

During this year newly qualified doctors would learn about fluid management and how to prescribe and monitor it. They would learn from more senior junior doctors and their consultant and would in many posts be guided and monitored by senior nursing staff.

Around 2000 the Chief Medical Officer of England devised a plan known as "Modernising Medical Careers", to reform postgraduate training. The first part of this was to create a situation where newly qualified doctors would enter "Foundation Programmes" which would consist of 2 years of posts (usually lasting for 4 months each) rotating around different specialties including general practice. Paediatrics is often included as part of these foundation programmes. With this change has come a much more structured educational programme which will include formal teaching and assessment of fluid management skills.

Post graduate training

Traditionally doctors would move from a pre-registration house officer post into a senior house officer post in their chosen specialty. They would then take professional examinations of the Medical Royal Colleges and having successfully completed these would move on to registrar and senior registrar appointments before applying for a consultant post.

The reform of postgraduate medical education which started with creation of Foundation training has now resulted in a more structured registrar training with Specialist Registrars (SpR) in a continuous programme from years 1 to 7 or 8 all in the same training programme. Previously doctors would have to change jobs between SHO, registrar and senior registrar. Now they are appointed to a "run through" training programme in one geographical area.

Medical examinations have evolved over the last 40 years and most would now contain assessment of knowledge and skills regarding fluid management.

Post consultant appointment training - Continuing Medical Education ("CME")

Over the past 20 years there has been a move for consultants to formalise their continuing medical education. However it has always been left to them to decide on their needs and there has been little scrutiny of this apart from counting the number of hours of CME.

Once again over the past few years there has been a move towards more formal needs assessments of doctors' education and this has been facilitated by the introduction of the annual appraisal system. As part of this an educational plan is produced for the coming year.

Once a doctor is registered with the GMC there has been no mechanism to ensure that they remain up to date and competent to practice medicine. In the wake of the Shipman enquiry, and building on previous work, the GMC are moving towards a system of relicensing and revalidation. At present this is unlikely to include formal assessment of fluid management skills but there is no reason why it could not.

Locums

Dr Ledwith comments on the special position of locums. There is, and has been for many years, a shortage of doctors. Many hospitals have to employ locums to cover posts which cannot be filled and to cover unexpected absences due to sickness and other causes. Often locums have to be sought at very short notice so there is little chance to assess the skills and competency of the locum doctors. Many locums are excellent but others can be less so.

RQIA

This Authority has taken the issues around hyponatraemia very seriously and their survey in 2008 would suggest that there has been great improvement in all professional staff with regard to fluid management.

PMETB and NIMDTA

Dr Ledwith describes the role of PMETB which is UK wide and of NIMDTA which is the organisation specific to Northern Ireland which is responsible for the organisation and delivery of training in that country.

The age of patients admitted to paediatric wards

The situation in Northern Ireland mirrors that in the rest of the UK. Most children's wards will take patients up to the age of 15 years and there is some flexibility beyond that for patients who have a chronic condition eg cystic fibrosis or have learning disabilities. There has been a strong effort across the UK to ensure that children are not admitted to adult wards and this now rarely happens.

Inter-professional training

Traditionally nursing education was very separate from medical training and indeed it still is at the undergraduate level. There are some parts of the UK where there is some joint training but this is the exception. As Dr Ledwith points out the former situation of the doctor being pre-eminent on the wards is no longer extant and there is a huge deal of inter professional respect. At the post graduate and continuing education level there is often joint training with great benefits to team working.

The practice of medicine and nursing has moved from the individualistic to one where team working is the norm. Mutual respect for other professions is essential to this and is encouraged by example and by some formal training.

Conclusion

Dr Ledwith has provided a comprehensive review of the teaching of fluid balance to medical students and doctors in Northern Ireland over the past 40 years. He has rightly put this in the context of the rest of the UK.

I agree with his assessment that there has been little in the way of formalised and structured training for medical students. Postgraduate training has also contained little structured training in fluid management and most doctors have learned "on the job" with supervision by more senior colleagues including nurses. In recent years there has been much more structure to this aspect of training and the process of teaching and assessment which has been established in Northern Ireland is impressive and to be welcomed.

Personal perspective

I studied medicine in Newcastle from 1964 to 1969.

Following graduation I undertook a pre registration house officer post (PRHO) in paediatrics. It was somewhat unusual at that time to be a PRHO in paediatrics but more common in the subsequent years.

Following this I undertook training in adult medicine and then returned to a series of paediatric posts before becoming a consultant in 1978.

My initial consultant post was at a moderate size District General Hospital 10 miles to the east of Newcastle and I combined this with a part time post in Newcastle developing the new specialty of paediatric oncology (children's cancer).

In North Shields I worked with 1 other consultant, a registrar and senior house officers to provide a general paediatric service.

When I moved full time to Newcastle in 1985 I continued with my sub-specialty of paediatric oncology but also continued to be part of the on call rota for general paediatrics until my retirement from clinical practice in November 2009.

In 1993 I was appointed to the Sir James Spence Chair of Child Health and assumed the responsibility for the teaching of undergraduate medical students of whom there were initially 180 but later expanded to 380.

In the late 90's I became involved with the British Paediatric Association which became the Royal College of Paediatrics and Child Health.

From 1997 to 2002 I was Vice President in charge of education and training and from 2002 to 2005 was President of the College. During this time we recognised the need for more structured and explicit training as well as improved methods of assessment.

From 2004 to 2007 I was chairman of the Academy of Medical Royal Colleges which is an overarching body of all of the Medical Royal Colleges in the UK and the Irish Republic. As College President I was a member of the Specialist Training Authority and was then appointed by the Secretary of State to the newly formed Post Graduate Medical Education and Training Board which had responsibility for all post graduate training.

I was also a member of the General Medical Council and its Education Committee.

For 30 years I have been involved in the examination of medical undergraduates both in my own University and in many others across the UK. I have also regularly examined in Dublin as well as several overseas Universities including Hong Kong, Singapore, Malaysia, Oman and Kuwait.

For over 25 years I have been an examiner for postgraduate paediatric exams initially under the auspices of the Royal Colleges of Physicians of the UK and latterly for the RCPCH. I have also examined extensively overseas.

CURRICULUM VITAE – PROFESSOR SIR ALAN WILLIAM CRAFT

SURNAME	FORENAME(S)	D.O.B.
CRAFT	ALAN WILLIAM	6/7/46

DEGREE, ETC. (SUBJECT, UNIVERSITY, AND DATE)

MBBS	Newcastle	1969	FMed.Sci	2003
MRCP(UK)	London	1972	FAAP	2003
MD	Newcastle	1978	FRCP(I)	2003
FRCP	London	1982	FRCP(E)	2003
FRCPCH		1996	FIAP	2003
FFPHM		2001	FRCR	2005
			FRCA	2006

Current Posts from November 1 2009

Emeritus Professor of Child Health , Newcastle University
Honorary Consultant Paediatrician, Royal Victoria Infirmary
Chairman of The Scout Association 2009-
Board member MDU 2009-

Previously

Consultant paediatrician and paediatric oncologist, Newcastle, 1997-2009
Sir James Spence Professor of Child Health, Newcastle University 1993-2007

Honour

Knighted by Her Majesty the Queen for services to medicine and children's cancer 2005

Other Positions

National

President - Royal College of Paediatrics and Child Health – 2003 - 2006
Chairman Academy of Medical Royal Colleges – 2004-07
Vice President of the Royal College of Paediatrics and Child Health 1998 - 2003
Elected Member of Council Royal College of Paediatrics and Child Health 1996-98
Chairman United Kingdom Children's Cancer Study Group 1992 - 94
Chairman Medical Research Council Bone Sarcoma Committee 1989-96
Member Cancer Therapy Committee, MRC (1989-96)
Member of Management Board UK Case Control Study of Childhood Cancer (1992 - date)
Honorary President – Association for Children with Life-Threatening or Terminal Conditions and their Families
Member of Council and Case Committee of MDU 2002-
Member of Board of Management of MDU 2009-
Member of the Professional Advisory Panel of the NHS Litigation Authority 2000-2004
Member of Clinical Academic Careers Panel 2003-7
Member HTA paediatric medicines evaluation panel 2004-6
Appointed member of PMETB 2003-6
Panel member Research Assessment Exercise 2002,2008
Director of Northern Institute for Cancer Research, Newcastle University 2007-2009
Member of CRUK international advisory panel on future of CCLG

International

Co-Chairman European Intergroup Co-operative Ewings Sarcoma Study Group 1989 - present
President - International Paediatric Oncology Society (SIOP) 1999 – 2005
Secretary General SIOP 1993-1999
Founder member of EMSOS
Chairman European Osteosarcoma Intergroup

Until recently the holder of the Sir James Spence Chair and Head of Child Health at Newcastle University, the oldest department in England and currently one of the largest in the UK with 9 Professors, 31 Senior Lecturers/Lecturers and over 60 other staff.

Child Health is responsible for the paediatric teaching of 380 medical students.

Publications

Over 250 original papers, review articles and chapters have been published in major journals and books over the last 25 years.

Regularly invited speaker at major national and international meetings.

Recent Service Reviews and other tasks

- On behalf of Minister for Health for England – Review of sustainability of funding for paediatric palliative care.
- Review of paediatric and maternity services in
 - Worcester, Redditch, Kidderminster
 - Oxford, Banbury
 - Cumbria, Dublin
- Review of specialist services for children in Scotland.
- Review of impact of neurosurgery review in Wales
- Development of new specialist commissioning tools for England
- Review of Maternity and Paediatric Services in Dublin
- Review of general paediatric surgery provision for NW SHA.

Research

- Clinical research into the management of bone tumours and other aspects of paediatric oncology
- Epidemiology of childhood cancer
- Evaluation of screening for neuroblastoma
- Running international clinical trials in osteosarcoma and Ewing's sarcoma

Major grant funding over 30 years from MRC, NIH, Wellcome, CRUK, LRF, DH, NECCR

Charity activity

Established NECCR in 1978. They have raised over £5m

Established Children's Cancer Fund for patient support which raises £150K annually

Initiated St Oswald's Children's Hospice which has raised £5m to build and ongoing £1.5m to run