

RCH Alumni

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Aluminations

FROM THE RCH ALUMNI

December 2020 | In this issue:

Alumni reflections on hospital life before and after the introduction of computers in the 1980s

Photo: Enlightenment VIII by Gigi & Robin Williams. This was a collaborative project by Gigi & Robin Williams called Photosynthetic - a study of oil, water and light in four parts. This one is from the Enlightenment series.



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The 2020 RCH Alumni Executive

President	Ruth Wraith OAM
Vice-President and Treasurer	Jim Wilkinson AM
Honorary Secretary	Caroline Clarke
Membership Coordinator	Garry Warne AM
Co-opted members	Kevin Collins
	Bronwyn Hewitt
	Peter McDougall
	Christine Unsworth AM
	Gigi Williams

President's Annual Report for 2020

Ruth Wraith OAM

The Report for 2020 is placed within the ongoing COVID-19 pandemic environment and also the 150th Anniversary of the Royal Children's Hospital.

The Executive recognised early in the pandemic that the activities of the Alumni Association would need to be substantially adjusted for possibly the whole year and this has been the case.

The goal was to maintain social connection between members and engagement of members with the Alumni activities they enjoy. Executive and Member meetings were re-formatted to the Zoom platform and for many this required the rapid acquisition of new digital skills.

The Executive met these challenges with enthusiasm, skill, great team work and good will. I would like to thank each person for their contributions and their support to the Committee as a whole and to myself.

Jim Wilkinson - Vice President, Treasurer, Member Data Base and Website management

Garry Warne - Secretary, Membership Officer and Editor of Aluminations (this newsletter)

Caroline Clark - Assistant Secretary and Zoom Coordinator

Kevin Collins - Vernon Collins Oration, Historical Society, RCH 150 Representative

Tony Cull - retired

Bronwyn Hewitt - Curator of Alumni Archives and Aluminations 'Reflections' Series.

Hugo Gold - retired. Past President 2018-2019.

Peter MacDougall - Meeting Presentations

Christine Unsworth - Social Events Coordinator

Gigi Williams - Digital Support

We were sorry that circumstances led to the resignation of Hugo and Tony from the Committee. Hugo was a member of the Executive for four years and is the Immediate Past President.

In multiple ways he has supported the development of the Association to its present form. We have missed Tony and Hugo and record our appreciation of their contributions to the Alumni.



This AGM marks the retirement of Garry Warne as Secretary of the Alumni Association, a position he has held for the last seven years. On behalf of all members, past and present, I thank him for his dedication, vision and constant attention to the intricacies of the role. Garry has made a significant and generous contribution to the Association so underpinning the vibrant and energised organisation of 2020.

Garry has also nurtured the Newsletter, now called Aluminations and managed the Membership process.

In 2021 Garry will continue as Aluminations editor and with Membership administration.

Membership

During this year, 28 new members were welcomed with Don Robertson registering as the 200th member on the Active database. Currently there are 209 members, with 31 interstate members and 19 overseas members. The new members for 2020 include 15 medical, 7 allied health, one dental surgeon, one nurse, two former Board Members and two management staff. There are 126 male members and 83 female members.

A challenge has been to find effective ways to engage retiring and resigning staff with the Alumni Association and the Executive are addressing this.

Sadly several honoured and revered members died during this year. Mrs Margaret Barnett AO, Mr Robert Dickens, Dr Ian Hopkins OAM, Professor Andrew Kemp AM who was President of the Alumni 2014- 2015 and Professor Margot Prior AO who was a member of the Executive 2016-2017. Each will be fondly remembered by us.

Three members received the Officer of the Order of Australia (AO) in the Queen's Birthday Honours, Mr Alex Auld, Professor Graeme Barnes and Professor George Werther. We congratulate them on the recognition of their contributions to paediatric medicine.

Events and activities

Details of the events and activities of the Association for this year have been recorded in Aluminations and also on the website.

With the advent of COVID-19 only the March Lunch gathering was able to take place at RCH with the remainder of the 2020 programme happening via Zoom and rebranded Aluminars.

Lunchtime meetings

On 3rd March, Dr Knowles Kerry AAM introduced us to the history, beauty and challenges of the Antarctic and inspired many to seriously consider visiting the Territory. The COVID-19 isolation requirements came shortly after in mid-March and those dreams were destined to remain as dreams for the foreseeable future.

This was the only in-person meeting for the year.

Aluminars

(the name given to our meetings via Zoom)

On 24th June A/Professor Lou Irving kindly agreed to transfer his planned in-person Lunch Meeting presentation to our first and experimental Zoom meeting. The topic was timely, 'COVID 19 and How to Stay Safe'. It paired well with the 8th July presentation by Professor David Vaux 'Researchers Behaving Badly'. The subjects and presentations were welcomed and most appreciated.

Our next Zoom gathering on 10th September was also highly topical, '22 Years in China - a Dynamic View of the Australian Chinese Relationship' with Ed Smith reflecting his insights and experiences and broadening our understanding of some of the challenges currently in play.

The final **Aluminar** for 2020 on 28th October was presented by Professor Lynn Gillam on the topic: 'Should Children be told about their Medical condition - Always?' Professor Gillam challenged the large Zoom gathering of over 100 people with issues for comment and opinion. The thoughtful responses drew out the nuances and complexities inherent in this issue in a discussion that could have continued well into the afternoon.

We would like to thank each speaker for their generosity of time and their thoughtfulness in the selection of their subject. Members have appreciated the opportunity to participate in thinking and research on highly current and pertinent issues.

The attendance at Zoom meetings has increased meeting by meeting with members from interstate and overseas participating.

The Vernon Collins Oration was enthusiastically supported by Kevin Collins and the Alumni who were, along with the wider RCH community deeply engaged with the address by Professor Elizabeth Elliott on 'Championing Child Rights Amidst the Chaos of COVID 19'.

Kevin introduced the Oration speaking to the legacy of Vernon Collins in whose memory the Oration is presented.

Gala dinner

As always, the Annual Gala Dinner for 2019 at the beautiful venue of the Kew Golf Club was a great success with the room filled with conversation and indeed much laughter over dinner. Professor Kathryn North enthralled the gathering with her address 'The Brave New World of Precision Medicine' introducing many to the wonders of genomics.

The decision to cancel the 2020 Gala Dinner was taken when it became clear that the COVID 19 social restrictions would prevent such gatherings. However we expect to hold our Gala Dinner once again in November next year.

Aluminations

Aluminations, previously known as the RCH Alumni Newsletter, has been pivotal in the life of the Alumni during COVID19. To date four editions have been published with the fifth edition (this edition) planned to be online by the end of the year. Members have contributed a wide range of interesting topics, personal anecdotes and experiences including travel stories and photos.

Inspired by the RCH 150 anniversary and the advent of COVID induced changes to our activities, the Executive decided to develop a themed approach to each edition under the heading of 'Reflections'. This has stimulated some extremely interesting papers on 'Infectious Disease and Epidemics', 'Biomedical Engineering and Technological Engineering' in the July and September editions respectively with the theme 'Hospital Life Before and After Computers in the 1980s' for the final edition for 2020.

Under consideration is combining the Reflections articles into a Collection as a record for the Hospital Archives.

The quality of Aluminations and flyers have advanced to a professional standard as a result of engaging Dan Warne to transform them to the digital format.

The Executive have received commendations for **Aluminations** from within and beyond the Hospital.

The Website which is well accessed, is a source of current and past information about social activities, past editions of Newsletters / Aluminations and member news and profiles. It is another key forum for members to connect.

Alumni Archives

A project initiated this year has been to gather archival material and data on the early years of the Alumni Association and draw it together before it is lost. We aim to establish a system that will enable appropriate current material to be retained and filed. This has proved to be a challenging and time consuming task but is well in progress.

Many members have contributed material they have 'tucked away' that has helped to fill a number of gaps.

RCH 150th Anniversary

For the wider RCH community as well as the Alumni, COVID 19 restrictions derailed plans to mark the 150th anniversary of the Hospital. The Alumni contributed to the Hospital's planning to mark the event via consultation with the Archives and Heritage Committee.

The Foundation generously supported us financially to develop a series of podcasts called 'Turning Points'. They will be completed next year.

The Alumni is also engaged with the Melbourne University Faculty of Medicine project to mark the 150 Anniversary, focussing on some aspects of lived history.

Children's Rights International (CRI)

The conjoint Alumni/CRI Zoom meeting 'Indigenous Child Health, Children's Rights and the Law' planned for August will now take place on Thursday 26th November. This will be another stimulating and topical presentation on a deeply significant issue within our society. Registration is open on the Alumni website.

Relationship with the Hospital

Again this year the active links between the Hospital and the Alumni have continued to evolve. Matt Sabin, as always, supports the Alumni and assists us to negotiate

current systems with the Hospital. The Alumni are most appreciative and thank him and RCH staff from a number of departments.

The Foundation is also generous in its support especially making available their delightful meeting rooms for our gatherings and assisting us to ready them for our purpose. COVID restrictions dictated that the March gathering was our only meeting there for 2020 however we are eagerly awaiting a return, hopefully sometime in 2021.

Members have appreciated being able to register to receive automatic weekly notification of Grand Rounds. This year access to the Library and for parking discounts when attending Alumni functions at the Hospital have been made available. Details for these are on the Alumni website.

Recently the Creative Studio web team has assisted us to upgrade capacity on our Website to accommodate larger editions of Aluminations.

The Hospital Staff Newsletter 'Stethoscoop' is forwarded to the Secretary and then onto Members who have expressed their interest in receiving the PDF.

Forward planning

As I write this Report our State and Federal leaders are introducing us to the concept of 'COVID normal' for 2021. What this means is as yet unclear.

The current Executive look to continuing Aluminations including the Reflections Project. Aluminations as an online format have been most successful and will probably continue along with in-person gatherings when they become possible.

The Annual Gala Dinner associated with the AGM is scheduled and other social activities continue to be under consideration, the idea having been cancelled for this year.

We look forward to continuing our enriched relationship with the Hospital, to increased applications for membership and to ongoing friendships within the Association.

Ruth Wraith OAM is President of the RCH Alumni. [View her full profile](#)

Report on Professor Lynn Gillam's Aluminar on 28 October 2020

Hugo Gold

"Should children be told the truth about their medical treatment - always?" was the question posed by Professor Lynn Gillam to the capacity Zoom audience of alumni and RCH campus colleagues at the Alum-inar of 28 October 2020.

The principal of Autonomy has become increasingly dominant in medical practice since the middle of the twentieth century. It has almost completely eradicated the previously dominant practice of medical paternalism, in which the doctor knew best, and the patient was expected to comply with instructions.

Paternalism allowed doctors to selectively control the information provided in order to achieve the optimal best outcomes for their patients. If the truth was told, it was certainly not the whole truth, and often not even the truth. In Paediatric practice, it may not even have been attempted.

Good decision making by autonomous patients requires access to good information. Doctors have a central but not exclusive role in providing information. Full and complete disclosure-the whole Truth - is an ethical imperative and essential in establishing the trust required for an effective doctor patient relationship.

Children of primary school age are generally regarded as lacking the full capacity to make decisions on their own behalf about their medical treatment. This is based largely on their inability to adequately assess the significance of the information provided. The responsibility for decision making falls to a substituted decision maker, usually the parents, who must act in the child's best interest.

Children still retain the right to be informed and involved in decisions about their medical care. Ethical best practice calls for open, honest and developmentally appropriate dialogue about diagnosis, treatment and expected outcomes.

Truth telling results in better psychological outcomes, better compliance with treatment, and enhanced respect for the child's developing autonomy.

The interactive discussion during the Alum-inar highlighted the experience of changing practice towards increased truth telling. Older members recalled the revolutionary move and its generally positive effect on all concerned.

Discussion then centered on the challenges to meeting the ethical standards in a number of clinical situations.

Examples discussed were:

1. A 10 yr old child with a complex lung disease who required a surgical procedure which would result in a major improvement to quality and length of life, but with a 1/5000 risk of death.
Should the risk be disclosed to the child?
2. A 9 yr old child with a heart condition well controlled with medication, but with a moderate risk of sudden death.
Should the risk be disclosed to the child?
3. An 8yr old child with bone cancer in one leg, requiring amputation.
The parents insist that the child not be informed about the amputation prior to going to theatre.
Should the clinicians accede to the parents' demand?



The enthusiastic discussion of these situations emphasized that truth telling generally promotes the best interests of the child. Its purpose is not just to improve decision making but to enhance the understanding of Self — for parents, children and their care givers.

*“For you shall know the truth, and
the truth shall make you free”.*

Professor Lyn Gillam is the Academic Director of the Children’s Bioethics Centre at RCH. Many Alumni have benefitted from the work of the CBC which is funded for its basic operations by an RCH foundation endowment.

Its educational activities, including a well-received Essential ethics podcast series, the National Bioethics Conference, and scholarships are dependent on funds raised by The Friends of the Bioethics Auxiliary.

The Friends have recently offered membership at a discounted rate for members of the Alumni.

The Friends of the CBC host a number of ethics events throughout the year which may be of interest. Their next event is a hypothetical relating to COVID 19 on 19/11/2020 via ZOOM.

Alumni interested in joining this event, and supporting the CBC should contact davidkoleib@gmail.com.

**Hugo Gold is the
Immediate Past President
of the RCH Alumni.**
[Read his full profile.](#)



Looking back after seven years as Honorary Secretary of the Alumni

Garry Warne

For seven years, from 2013-2020, it was my privilege to serve as Honorary Secretary of the RCH Alumni. An American friend of mine, Dr Jean D Wilson, in his autobiography *The memoir of a fortunate man*, said, referring to his five years as secretary of the American Academy of Physicians, “I think I have the soul of a secretary because I actually enjoyed this position”.

Well, I thoroughly enjoyed being secretary of the Alumni, and I hope it showed through. I thank everyone for re-electing me to the position year after year and for being willing to embrace the transformation of the Alumni that through gracious cooperation we have achieved together. A very good feature of the Alumni is the complete absence of workplace politics and hierarchical relationships. We are all equal and cooperation comes easily.

Mary Dwyer was President when I was co-opted onto the Executive as Assistant Treasurer in 2013 and as secretary I had the honour of serving four other presidents: Andrew Kemp, Kevin Collins, Hugo Gold and Ruth Wraith. Each one has left a distinctive stamp on our organisation.



When I took on the role, I asked myself what could be done to make the Alumni better. I made some notes in June 2013 and spoke to them at a General Meeting. I thought that we needed to know more about members’ interests outside medicine so that we could provide

some cultural nourishment and benefit from members' hidden talents. I wondered what we could do for members who were shut-in or otherwise prevented from attending meetings. It occurred to me that electronic communication would be a better way of reaching these shut-in members, as well as those now living far from Melbourne, even overseas, than printed notices mailed out through the hospital Executive Offices. I questioned why we should restrict ourselves to just two meetings a year in addition to the Vernon Collins Oration and why they always had to be on medical topics? And I dared to think the unthinkable, that we should broaden our membership and create a community more like the multidisciplinary teams we had enjoyed being part of in our working lives. At the time, some members were fearful that the latter proposal might be too radical a change.

Successive Presidents and Executive committee members made progressive changes. Sumitra Wickramasinghe pushed for us to have our own website and with wonderful assistance from Jim Wilkinson and the Educational Resource Centre at RCH, this became a reality in 2015 during Andrew Kemp's term as President. Jim now maintains the website and it is always completely up to date. We were able to use email to communicate with many members and gradually the number of members who were unable to use email was reduced to a handful (now none). This meant that we could communicate with members directly, whenever we liked, at no cost and without imposing on the hospital Executive staff. Andrew Kemp and I carried out a comprehensive review of the electronic membership data base and made sure everything was correct.

During the terms of Kevin Collins and Hugo Gold, there were many consultations between Alumni and hospital staff about what activities would be held to mark the 150th anniversary of the founding of the hospital. Little did they know that all planning would be foiled by the severe lockdown associated with the novel coronavirus pandemic in 2020. Planning for RCH 150 will remain a focus for the new Alumni Executive.

We began increasing the number and scope of Alumni meetings and were very grateful to RCH Foundation CEO Sue Hunt, who made very beautiful rooms in the Foundation available to us without charge for our lunchtime meetings. The advent of the COVID-19 pandemic in 2020 forced us to abandon face to face meetings and exploit Zoom technology. Caroline Clarke and Gigi Williams, who had the best technical grasp of this, took responsibility for setting up and hosting virtual meetings. By this means, we were able to accommodate much larger audiences and hold many more meetings, since we no longer had to organise catering and venues. Additionally, Zoom meetings, called Alum-inars from June onwards (the name coined by Jim Wilkinson) can be recorded and viewed at any time after the meeting.

Members in India and Indonesia have been able to join in. Zoom meetings have been popular and may well continue, even after face to face meetings resume. Every cloud has a silver lining.

The broadening of our membership base became possible in 2016 during Kevin Collins' term as President, when Constitutional changes were approved at the Annual General Meeting. These changes granted campus-wide membership eligibility to all former professional employees of the hospital, the MCRI and the University Department of Paediatrics. We have been proactively inclusive and have received more and more applications, not only from former medical and dental staff, but also from Allied Health professionals, scientists, former Executives and Board members, and senior nurses. It was very exciting when Ruth Wraith OAM, the former Head of Psychotherapy at RCH, was elected as our first non-medical President. We were also excited when a departing Fellow in paediatric surgery aged in his thirties applied for membership. We have members in the U.K., Israel, Indonesia, Vietnam, India and New Zealand. One of our members, Dr Knowles Kerry AAM, is the former Director of Australia's biological research program in Antarctica. Of course, they represent only a very small proportion of the RCH diaspora of former trainees, many of whom are now leaders in their own countries and we would like to have more of them as members.

The 2020 Executive, with four non-medical members, reflects the diversity of the overall membership. Ruth Wraith OAM has been mentioned previously. Gigi Williams, former head of the Educational Resource Centre, has enhanced our newsletter with her outstanding photography and writing. Bronwyn Hewitt has curated the Reflections section in Aluminations with great success. Christine Unsworth AM organised our first all-day excursion which was all set to go ahead when the pandemic intervened and it had to be postponed. Broadening the membership base has brought great benefits to the Alumni and we are better known now than we were.

In 2013, the Alumni newsletter was a single page written by members of the Executive and mailed out to members from the hospital Executive office. In 2014, we invited contributions from members. Since 2016 the newsletter has been designed to be sent out electronically, which means that length is not a limiting factor and we can include high resolution digital photography without compromising image quality. Our newsletter, renamed Aluminations at Christine Unsworth's suggestion, is now professionally designed by Dan Warne and thanks to Bronwyn Hewitt, each edition in recent times has had a theme called 'Reflections' around which members have been invited to prepare articles. This was obviously stimulating for the authors among us and provided a vehicle for the recording of memories about how significant changes in paediatrics and hospital life came

about. This highlights an advantage that senior members of the Alumni have over younger practitioners, which is that we were witnesses to and participants in major developments in medicine at a formative stage. We have many amazing people in the Alumni and we all have great stories to tell. We remember how exciting it was to see history being made and to be part of it. Capturing some of that excitement and those stories is an important project for future Alumni.

Aluminations is widely read, as it goes out electronically to all current staff of the hospital, the MCRI and the University Department of Paediatrics, and to the RCH Board. We receive many commendations on the high standard of this publication and it has contributed to the growing reputation of the Alumni.

The secretary is the communications hub for the Alumni. I have made great use of email and have tried to use it to keep everyone informed about new members, upcoming events, and deaths. Writing letters

of welcome, congratulation and condolence, as well as tributes for publication in the death notices of the daily newspaper is not a chore, it is a privilege. In addition, the communication between members of the Executive is almost exclusively by email. Important documents are stored on Google Drive which is shared by all members of the Executive. One of my functions was to enable members to contact one another and us, particularly alerting us to celebrations and the passing of members known to them. I think that good communication is essential for the maintenance of a healthy and vibrant community.

Caroline Clarke is taking over from me as your new Honorary Secretary. I wish her every success and I hope that she enjoys the role as much as I have.

Garry Warne AM was Director of Endocrinology and Diabetes, and Director of RCH International, at RCH. [View his full profile.](#)



Photo: Garry Warne

Historic RCH Christmas photos



Courtesy of the Royal Children's Hospital Archives and Collections.



Hospital Life before and after Computers in the 1980s

Bronwyn Hewitt, former RCH archivist

Remember how medicine was practiced in hospitals before the digital age? Patient records were paper (or film) based, handwriting was often hard to read, the amount of information recorded was not consistent across disciplines and communication between colleagues depended on telephones, hand written correspondence or finding time to meet with other specialists involved in the treatment of a patient.

From the 1980s, modern fax machines facilitated secure communication of documents. Then came the era of the computer followed by the even more advanced and cost-effective microcomputers. This technology was introduced at the RCH from the mid-late 1980s where it was often used for administrative and financial tasks. Then the Internet arrived, first used as a communication tool in Universities. When Australia joined the global Internet (on June 23rd June, 1989), via a connection made by the University of Melbourne, it was mostly used by computer scientists.

Today, we take for granted the instant communication computers and the Internet have brought to all aspects of our lives. In the medical field and at a local level, this has meant:

- more accessible, efficient, cost effective and reliable treatment being available for patients.
- better monitoring and care of critically ill patients in ICU
- a high level of precision with surgical procedures and the use of microsurgery
- a world of research possibilities being opened up and new technologies for that research to forge ahead, also increasing global collaboration
- tertiary studies are now available in Health Informatics



- the medical record has been revolutionised with bedside computers enabling real- time patient data to update the individual record which can be shared with other health professionals at multiple locations
- more transparency for patients and the facilitation of information when required for medico-legal cases

So, do you remember what it was like before all these advances were available?

What it was like when computers first arrived at the RCH?

What most changed in the way you practised your particular field of medicine after their introduction?

Did you revel in the technical side of computerisation? Were there technical disasters that you can recall? Was important information lost on a failed 'floppy disk' perhaps?

There should be many personal stories and anecdotes about this subject from an era that most of you would have experienced. Please email your Reflections to rch.alumni@rch.org.au

A website of interest on this topic:

[A history of the Shift Toward Full Computerization of Medicine](#)

Bronwyn Hewitt is Former RCH Archivist and an Alumni Executive member.

RCH Medical Recording 50 years ago, well before computers

Geoff Dreher

RCH Discharge Summaries 1966 -1970

As a JRMO at RCH in 1966, one of my major responsibilities was to write a Discharge Summary for every patient that I was responsible for, when rostered to an Inpatient Unit.

This sounds simple, but in those days we only had a pen to write up notes in patients' medical records, or as time went on we could dictate our discharge summaries into a recorder for the Medical Record Library Staff to type

up for us to sign and then they would send a copy to the patient's referring doctor.

This process usually meant that the referring doctor would only get the Discharge Summary about a week after the patient was discharged and so if any care was required before that time we would need to ring the patient's doctor and verbally explain.

Some RMOs were good at this process, but others would leave a Unit and/or forget to go down to the Medical Record Department to complete Records, so some Patient Records would pile up awaiting completion. (Most RMO Rosters were 24 hours in those days and 60 hours a weekend – so tired RMO's were not unusual. As Deputy Director of Medical Services I changed these rosters to maximum 10 hour shifts in 1970.)

This was not the only problem confronting Medical Record keeping during that time but as I became Chief RMO in 1968, and then Deputy Director of Medical services in 1970, I became aware of concern by many staff about 'the system' - particularly in the relationship between the Casualty and Inpatient Departments. This concern was expressed by RMO's, Medical Record

RCH General Clinic 1972



Department Staff, and support staff such as the Admitting staff in the Casualty Department.

This encouraged me to examine the problems and recommend changes based on observations in the Casualty Department. I received extraordinary support from all staff involved and my recommendations were eventually accepted.

I also used the investigation to write a Thesis for my Master of Administration degree which was submitted in 1974, entitled :

Improving the Productivity of a Casualty Department

The RCH Casualty Department was experiencing a significant growth in attendances in the 1970's, many of which were not classed as emergencies. (In those days an 'emergency attendance' was one defined as 'needing casualty treatment'.)

Many staff expressed despair that there was little objective data on attendances in the Casualty Department and many staff tried to avoid being rostered to Casualty for these reasons.

Hence the definition of the role and best operational structure of the Casualty Department was required in order to improve its productivity. To this end I was given authority to investigate and recommend changes to the Casualty Department.

Key Points in the investigation included:-

- 1. Medical Records:** Medical Records of patients attending Casualty were separate from and not under the control of the Medical Record Librarians (they were not called Medical Record Administrators until some years later!!).

Hence it depended upon the Clerical Staff working in the Casualty Department to ensure that a Casualty Medical Record was made available for RMO's to record what was happening to a patient. Attached is a copy of the Forms used with the instructions to RMO's on how to use them.

These records were kept for six months and then destroyed if the patient did not attend again in that time. If a patient reattended after six months and said they had been before, then the admitting clerical staff may have been able to check that that was true by looking in their name & address attendance files – but this of course was no clinical record.

If a patient attending Casualty had been an RCH Inpatient previously this usually meant that the responsible Unit doctor was called down to Casualty

to see the patient and he/she could ask for the Inpatient Medical Record and write in that, which of course meant that a record of the patient's Casualty visit was kept!

- 2. Patient Attendances:** There was concern about escalating patient attendance numbers so I compared the Victorian Under 14 population growth with RCH Casualty attendances and found:

YEAR	UNDER 14 POPULATION VIC	RCH CASUALTY ANNUAL ATTENDANCES
1966	882,020	73,541
1971	948,010	91,900
Growth Rate	7.5%	25.0%

This significant increase required investigation regarding the reason for the increase in attendances i.e. was the increase for patients requiring Surgical emergency care? Or were they attending for General clinical care?

The Casualty Department had developed a Triage system overseen by an 'Enquiry Nurse' to separate General Clinic patients (who could queue and wait for attendance) from those requiring immediate emergency care. Furthermore, as some patients came with a doctor's referral letter those patients were placed in General Clinic A and all others went to General Clinic B. However after some time the number of patients who went to a doctor before coming to RCH dwindled so there was just a "General Clinic".

Furthermore I found that the attendances to the General Clinic had not significantly increased between the hours of 9am and 4.30pm on weekdays but increased significantly for all other hours – indicating that parents were coming after work and did not waste time going to their GP's! Unfortunately, the roster for RMO's was biased towards daylight weekday hours and hence waiting times for General Clinic patients increased on weekends and at night.

By July 1973, 70% of Casualty attendances at RCH were classed as General Clinic and only 30% were for Surgery.

Furthermore I found that approximately 70% of all General Clinic patients and 70% of all Surgical patients were self referred.

In summary, the numbers of non urgent patients attending RCH Casualty was increasing very fast. The solutions introduced included:



RCH Casualty Reception 1972

- i) Appointing a Casualty Supervisor who was an experienced Emergency Physician who became the head of the Casualty Department and oversaw its operation.
- ii) The General Clinic opened at all hours and staffing matched the attendances .
- iii) The responsibility for Medical Records of General Clinic and Casualty Emergency patients were passed to the Medical Records Administrator and her Staff and hence were merged with the Inpatient record system.
- iv) All support Departments such as Radiology, Pathology, Physiotherapy, Occupational Therapy, etc., were informed about the Casualty attendances etc., and made sure their staff were aware of the need to match attendances, records, etc..

Finally – my experience in assisting the development of the RCH Casualty Department in the 1970's assisted me greatly when I found very similar problems developing at Dandenong Hospital and Royal Melbourne Hospital where I became Director of Medical Services in 1978.

These problems occurred well before Computer assisted Medical records came into being and I think their understanding and resolution assisted and enabled the development of the modern records.

Geoff Dreher was Chief RMO 1968-70 and Deputy Director of Medical Services 1970-76 at RCH. He later became DMS and CEO of RMH and of a number of Private Health services.

The faltering introduction of computers at RCH

George Werther

It was 1982, and I had arrived at Stanford University with my family to complete the remaining year of my US fellowship training in paediatric endocrinology. During my first week in the department I noticed that typists were not using typewriters. They were using remarkable “word-processing” machines with a white screen and black print. These were Xerox machines, the precursors of computer-based desktop systems. Within a few months there appeared a number of Apple II computers, which seemed further marvels. They could perform a range of functions, including word-processing using “Wordstar”. I became hooked on computers. These were heady times, when we could walk the quiet streets of Palo Alto with our friend who worked at “Apple” and pass Steve Jobs’ home, spotting him through his front window, at the kitchen sink.

Fast-forward to early 1983 when I returned to RCH Melbourne to join the Endocrine Unit led by Garry Warne. I soon told Garry about these amazing computers, and meanwhile went out and purchased for my home an Apple “clone”, mischievously named “Medfly”, signifying its ability to “eat up” the Apple, as the Californian Medfly was wont to do.



In those early days there were various Apple clones, as well as the first IBM PCs – all on the back of the earlier very basic Commodore 64, Compucolour etc. Interestingly, I paid around \$2000 for the Medfly, and over the last 35 years just about every computer system I have bought has been around the same cost, despite huge increases in memory, speed and colour systems.



Garry, by his own admission, was a committed pencil and paper man. He was reluctant to consider computers for our Department. He only bought his first home computer five years later, in 1988. Nevertheless, I persevered, together with a few other enthusiasts around the hospital, forming the first computer sub-committee. While our committee agreed that desktop computers were the future, we debated the merits of Apple versus IBM PC, most agreeing that IBM PC was the way to go. But no, the “authority” became one Barry Holt, a technician in the Research Institute, who was a Compucolour guru and who insisted that there was no future for IBM PCs, and that the only way forward was to purchase a computer containing an “S100 bus” – the interface for laboratory electronic equipment. And the only such computer was the “Vector”.

While the rest of us were sceptical, Barry won the day and ten departments each purchased a “Vector”. This was a remarkable machine for its time – an all-in-one unit with built-in integrated word-processing/spread sheet/database software -and an S100 bus!! However, it was quirky in that it had 7.25 inch “hard-sectored” floppy discs which were completely incompatible with any other computer system. Neither was the software compatible with other systems. But worse than that, it was completely unreliable. Every one of the ten units purchased repeatedly failed. Over a period of 2-3 months the head of computer services at RCH systematically replaced almost every component of our computer, with each attempt failing to fix it. Only when he finally replaced the computer case did we have a functioning computer!! By that time we were ready to throw it out the window.



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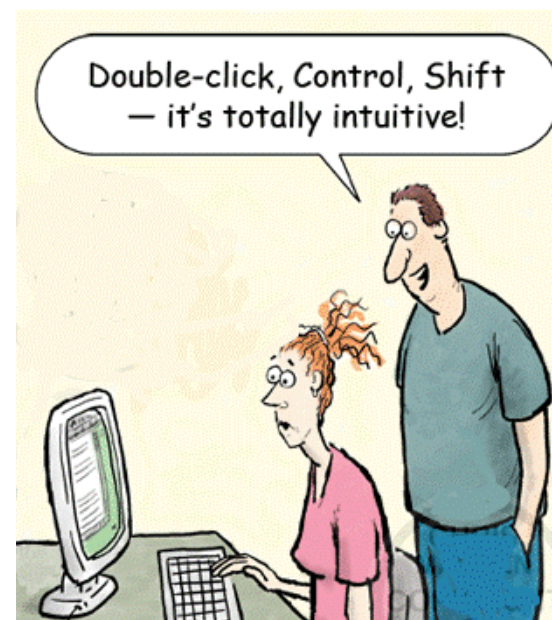
FOR TOMORROW'S SYSTEMS TODAY

And what did we pay for this "lemon"? There were two models, namely the base model with the 5 Megabyte hard disc (Yes, that's right 5 MEGabyte!) and the superior model with the 10 Megabyte hard disc. We opted for the 10 Megabyte version, and we paid ... \$10,000!! That would be around \$32,000 in today's

values!! Needless to say, within 12 months we ditched the "Vectors" and opted for IBM PCs. It is interesting to consider that a computer today with a 1 Terabyte hard disc costs around \$2,000, so that we now have 10,000-fold disc capacity for around a tenth of the effective price!

Oh, and I should mention that the "essential" S100 bus was to my knowledge never used! Desktop computers were however subsequently widely used in research for data storage and analysis – and as discussed below, for production of slide and poster presentations.

Well, we eventually settled in to using reliable IBM PCs, all of us on a steep learning curve, being introduced to Microsoft Word in 1984. Our administrative staff embraced computers with enthusiasm, although there were glitches. A memorable recurring event was the unanticipated "auto-correct" function, which led to many surprising and sometimes embarrassing outcomes. And I have had a running joke for the last 30 years with a former fellow who was fascinated with the power of the instruction "Control-Insert".



The other area where early desktop PCs had a major impact was in our medical illustration department. We all remember the ubiquitous Letraset, which was essential for the production of posters and slide presentations. In the early 1990s my colleague from Stanford gave me a copy of "Harvard Graphics", the company where his wife worked. It was a wonder, allowing slides and poster material to be produced on the desktop PC. I recall walking into the medical illustration department (the "Educational Resource Centre") clutching my copy of Harvard Graphics and demonstrating its features. Letraset was soon discarded in favour of Harvard Graphics, which was at the forefront of slide and poster preparation until it was displaced by PowerPoint around 2000.

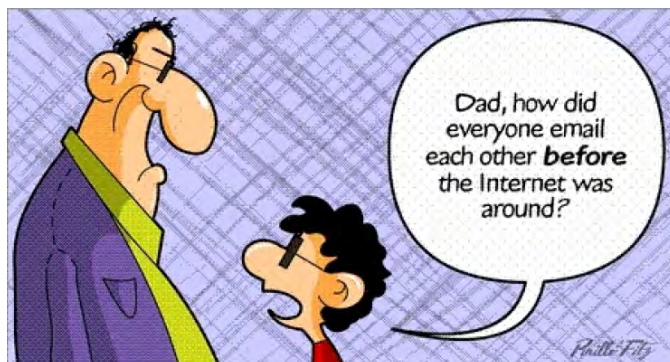
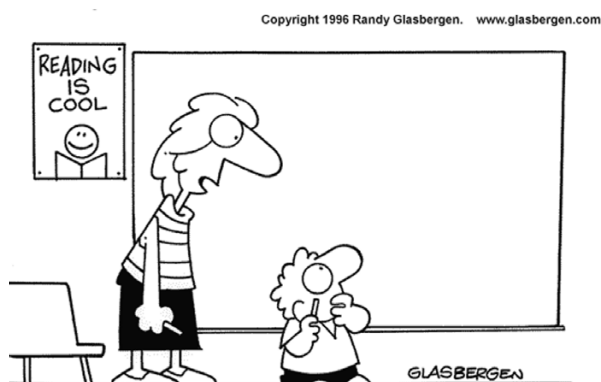
It is also sobering to recall that while fax machines appeared in the 1980s, it was not until the mid-1990s that the internet (World-Wide-Web) appeared, together with our first exposure to email, courtesy of its initial provider

Hotmail, quickly followed by Yahoo and others. And our first mobile phones appeared around the same time. While only some 25 years have passed since then, and 35 years since we were first introduced to computers, it is humbling to recall that before those times our distant communication was by hand-written or typed letter, a difficult concept for our grand-children to comprehend.

Our hospitals and clinical practices have now gone paperless, we no longer need to make endless

photocopies of journal articles, and one would hope that trees are being saved. On balance, we are better off, but most of us still have a very small degree of nostalgia for the times when “cut and paste” meant just that.

Professor George Werther is a paediatric endocrinologist and a past Director of Endocrinology and Diabetes at RCH.



The Educational Resource Centre (ERC) – The Digital Age 1986-2015

Gigi Williams FRPS, FBCA, FAIMBI, BAppSc
Former Director, Educational Resource Centre

I worked in the Educational Resource Centre (ERC) since its inception in 1982, starting as a medical photographer and then went on to become the Director for 26 years.

In the [previous article](#) I described the earliest uses of photography and then the establishment of the Educational Resource Centre at the Royal Children's Hospital.

Like many aspects of life, digitalisation brought perhaps the most significant changes to ERC (now called 'Creative Studio/Services').



The introduction of computer graphic presentations, the establishment of the 3D Imaging Centre, digitalisation of medical photography and the development of the Web for RCH were part of the huge impact of the computer age within ERC that would also impact many within the hospital as a whole.

Computer graphics

It all started in 1986 when we won a developmental grant from the hospital to set up a routine computer graphics service. Up until then there were no computers, no email or internet. At first this led to computer graphic slides being designed within the department but being produced by an external bureau resulting in a physical slide for lectures and conference presentations. This opened up a world of communication design possibilities and our doctors and allied health professionals were able to give world class presentations show-casing their work. It wasn't long till the advent of software packages such as Powerpoint (1987) and the widespread introduction of digital projectors that meant that our clients could produce their own presentations, and this enabled us to focus on other aspects of providing a full range of contemporary services.

3D imaging centre

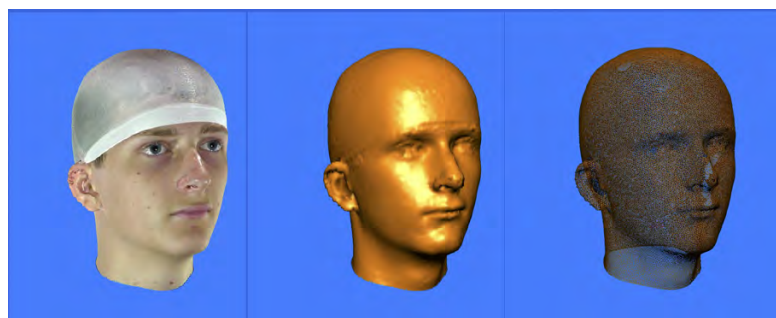
In 1988 we were amongst the first in Australia to use email (via the University of Melbourne) whilst investigating setting up a three-dimensional measurement service with experts overseas. After another successful developmental grant the medical photography team developed and established such a service in 1989. This included stereo photogrammetry (seen here with Cornell Papov), moire interferometry, and light sectioning systems. These techniques were used for direct patient care: monitoring hypertrophic burn scars, scoliosis and total facial shape assessment in craniofacial dystoses.



Although these analogue systems were found to be useful, they were labour-intensive, particularly when extracting data such as volume, surface area and shape change. The advent of powerful digital technology revolutionized the capture and measurement of patient images using three-dimensional (3D) technologies.

In 2004, the Department of Plastic and Maxillofacial Surgery approached ERC to investigate, implement and manage an appropriate paediatric digital 3D measurement system. From the numerous systems available, Lloyd Ellis, one of the senior medical photographers, investigated six for their performance and suitability for paediatric medicine and built on our experience from previous years. The most appropriate system tested was found to be the 3dMD. With generous funding from the Muriel & Les Batten Foundation the system was purchased and the RCH was the first site in Australasia, and amongst the first few in the world, to operate the 3dMD system and establish a routine clinical 3D photographic imaging service.

The system was based on digital stereo photogrammetry and comprised four modular units, each with a stereo pair of geometry CCD cameras (16 cameras in total), to capture a dimensionally accurate, non-invasive 3D image of the patient in less than 2 milliseconds using flash. It was soon discovered that hair on the head resulted in missing data and so we asked patients to put on a stocking to cover their hair. This improved data capture enormously. Similarly, it was discovered that a fifth unit was required to record missing information on the apex of the head.



Here are the three types of images obtained (above) – the first is the texture map, (complete with stocking over hair), the next is the smooth surface polygon and the last is the polygon wireframe. The wireframe is the most commonly used. It is most useful for anthropometric surface data and caliper measurements.

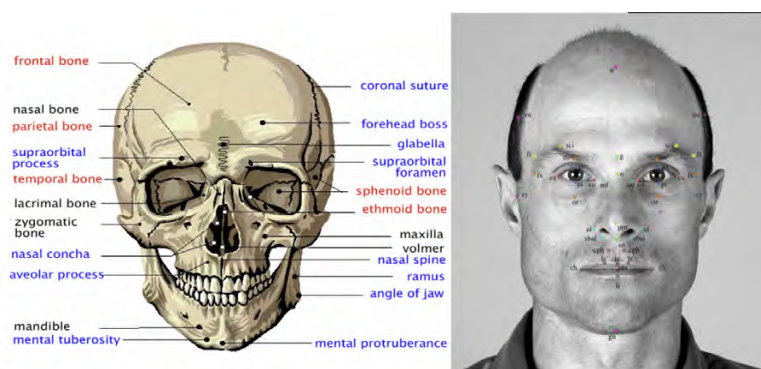
A new purpose-built space was made available with support from RCH and additional funding from the Batten Foundation (below) and in 2007 the Batten Foundation 3D Imaging Centre was officially opened and Lloyd Ellis became the Manager.



In July of the same year the John T Reid Charitable Trust made it possible for the Centre to employ a dedicated 3D medical photographer for two years and Susanne Williams joined the team (no relation!). (Lloyd with Susanne in the new area).

In 2008 we published a paper in the Journal of Visual Communication in Medicine (the leading international journal in our field)², that was awarded Best Published Paper that year and we received the Peter Hansell Memorial Award.

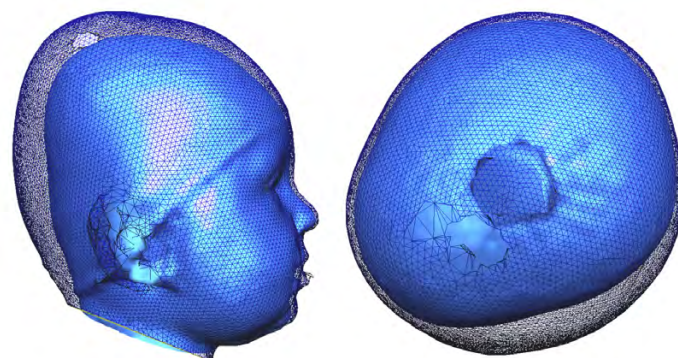
One of the first things that Lloyd had to do was to establish a way of comparing images over time so that accurate measurements for things like growth could be undertaken. After an extensive literature review, Lloyd established 42 sets of facial landmarks for children that enabled measurements to be taken in exactly the same place every time. This was based on extensive analogue work done by Leslie Farkas in the US. From this work Lloyd had to translate the physical anthropometric landmarks into a digital 3D environment (see above/ below).



The 3D Imaging system was predominantly being used for plastic and maxillofacial surgery, patient care such as craniosynostosis and facial atrophy. This enabled the surgeons to assist in their planning, auditing and assessment of patients requiring surgery. Changes in treatment over time were recorded and patients were able to compare images of themselves taken at different

times - a very useful communication tool for surgeons, parents and patients.

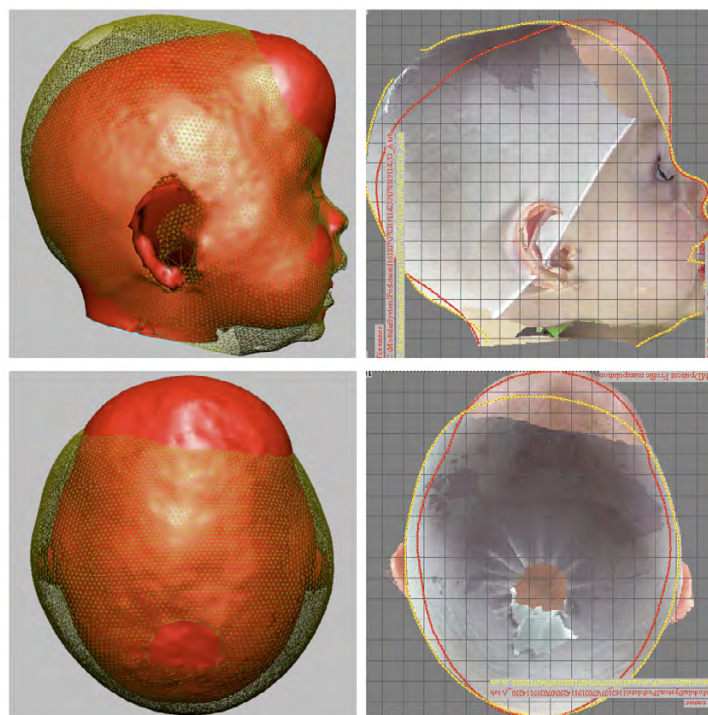
This child has scaphocephaly which is also due to abnormal patterns of suture fusion. You can see the difference between before and after. Tony Holmes used to send all of these patients to have CT scans to get volumetric measurements but as the 3D camera can provide this information he stopped sending them for these scans.



In another example, the system was used to determine the volume required to restore symmetry to the face in a patient with Parry-Romberg syndrome.

The technology was also applied to other surgical and non-surgical fields, including orthotics and prosthetics; monitoring the effectiveness of helmet therapy for treating deformational plagiocephaly for instance.

Plagiocephaly can also be due to abnormal patterns in suture fusions but it has become more prevalent since it was discovered that to avoid SIDS it was recommended to place your baby on its back to sleep. In many cases



this caused a flat head shape and needed rectifying using helmet therapy which entails wearing a specially made helmet that allows growth in certain directions but restricts it in others. This is done at about 6 months of age and here (last photo, previous page) you can see the change in head shape after 23 weeks helmet therapy.

Of other interest was the work with children who had a protruding chest (pectus carinatum). Alex Auldish trialled a brace as an alternative to surgery, monitoring the effectiveness of compressive chest orthosis for this condition in an "Australian first" trial environment. It resulted in a change in patient care. Patients used the chest brace and were only offered surgery if the brace was not effective or suitable. The brace was worn up to 23 hours a day over a period of some months. 3D imaging analysis enabled very accurate assessment of the effectiveness of the brace and the change in compressing the chest wall, where visual assessment and memory were extremely fallible. Patients and their families were much happier and less traumatized by not having surgery and the hospital saved significant costs and time that would have been associated with surgery.

This boy avoided surgery and instead had a brace fitted for 42 weeks which he had to wear 23 hours/day. Some younger children have finished the treatment in 2 months.



Of special note is the work with cancer patients in developing a much easier method of mask construction required for radiation therapy using the 3D camera. Traditionally children under six who had to undergo radiation therapy were required to have a mask produced so that their head would remain still and in the same position during the therapy. This was very time consuming and frightening for the child and general anaesthesia was required.

A far superior way to prepare the child for radiation therapy was to use 3D images which were taken in a matter of minutes and were then sent to the orthotist who milled a mask directly from the images. This avoided the child having to undergo plaster applied directly to the face over a period of hours to construct the mask. This collaborative project with the Cancer Centre and the Orthotics and Prosthetics Department not only resulted in happier, less traumatized children who no longer needed a general anaesthetic but also resulted in the Premier's Excellence Award in 2010 for 'GA - No way - minimising the use of general anaesthesia in radiotherapy mask production for children' (see below Lloyd Ellis, Jane Williamson and Rod Lawlor as part of the team accepting the award).



In the research area, the 3D Imaging Centre was integral to the Australian Headshapes Examination and Analysis Database (AHEAD) project led by the Department of Plastic & Maxillofacial Surgery. The aim was to have a databank of 3D images of the normal craniofacial anatomy of 1900 children aged 3 months - 18 years - 50 males and 50 females in each age group. The AHEAD study would have direct benefits to any child undergoing craniofacial or cleft lip and plate surgery.

Over the years a number of oral presentations and posters were presented at international meetings concerning the efficacy of the 3D images; papers were published in peer-reviewed journals; there was interest for media stories and thousands of patients were imaged using this technology and by 2015 a quarter of all ERC patients were photographed using the 3dMD system. Sadly, in 2013 Lloyd Ellis died suddenly whilst participating in the 100km Oxfam Trailwalker charity event. Robert Reitmaier took over his role managing the 3D Imaging Centre and it remains today providing 3D imaging as core business, at the leading edge of clinical research and practice (see first image, next page, the purpose built area in the 'new' hospital with Robert Reitmaier).

1. Nieuwenhuis G, Papov C, Williams R, The development of a photogrammetry service at the Royal Children's Hospital, Melbourne J Biol Photogr 1990; 58(4):129-37 (NB Nieuwenhuis was my previous name)
2. Williams K, Ellis L, Williams G, A 3D Digital Medical Photography System in Paediatric Medicine, JAMM 2008; 31(3):91-98.



Medical Photography and the move to digitalisation

In 2002, ERC had the first discussions with the IT department about the development and installation of an online medical photography viewer, that would allow authorised access to the medical photographs of patients. The implementation of such a system would then mean that it would be no longer necessary to use film, or have the negatives processed and printed nor would it be necessary to have the prints mounted in the traditional paper medical record (even Kester Brown volunteered to do this at one stage!)



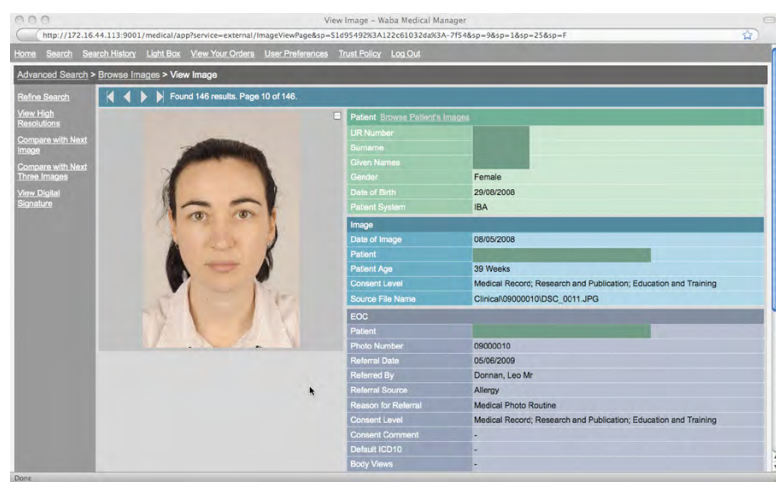
It was initially hoped that a module could be developed via CLARA (Clinical Lookup and Results Acknowledgement system) however as time passed it was clear this was not going to be the answer and ERC set up an internal digital patient database as an interim measure so that consultants could get access to their patient photos in a digital form.

In effect the analogue photographs were scanned to CD in addition to being printed and mounted into the case history. This meant that we were actually running two systems – one analogue and one rudimentary digital – but as it was an interim arrangement, we thought we would be able to manage. Unfortunately, this interim arrangement was to last several years!

In the meantime, this enabled us to determine the application requirements and the appropriate vendor as well as gain support for the project and identify funding.

Bert Di Paolo took the lead on this project and worked in collaboration with IT. He had to determine the exact requirements needed of the system such as being able to be accessed using a simple web browser; having authorised access via password protection; a multiple search facility; access history to allow an audit trail; ability to view the images in different modes eg split screens from the same or different Episodes of Care; storage of files, amongst many other considerations – one of which of course was cost.

A number of funding proposals were developed, as well as business plans and many, many meetings were had. After years of investigation, discussion and lobbying, in 2008 we secured philanthropic funds from the John T Reid Charitable Trust for a fully integrated digital medical photography system (MPS) that was successfully implemented in 2009 – the first in the country to have electronic medical record integration (see below a screen shot of the new system). In addition, funds from ERC's external revenue were used to purchase the digital camera equipment – initial purchase and replacement some years later as well as expensive software licenses.

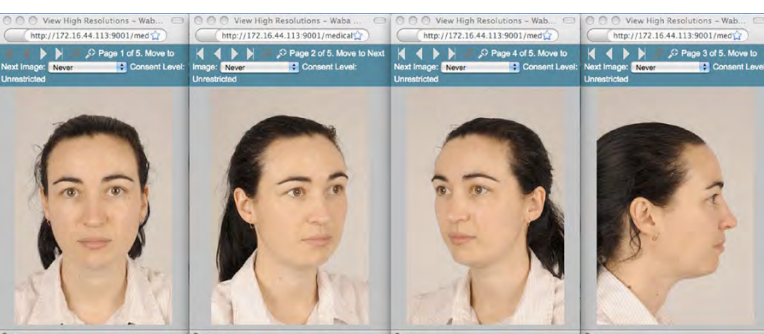


In order to find the ideal system, Bert researched a number of possible solutions including the global health module of CLARA; MD Analyze which was being used in the Orthopaedic Department at the time; Cerner MMF; Fuji Synapse Power Jacket and WABAllogic Medical Image Manager from the UK. Tenders were required as were interviews with the various vendors. WABAllogic Medical Image Manager was the successful vendor as it was developed in conjunction with other medical photography departments in the UK and had a proven track record.

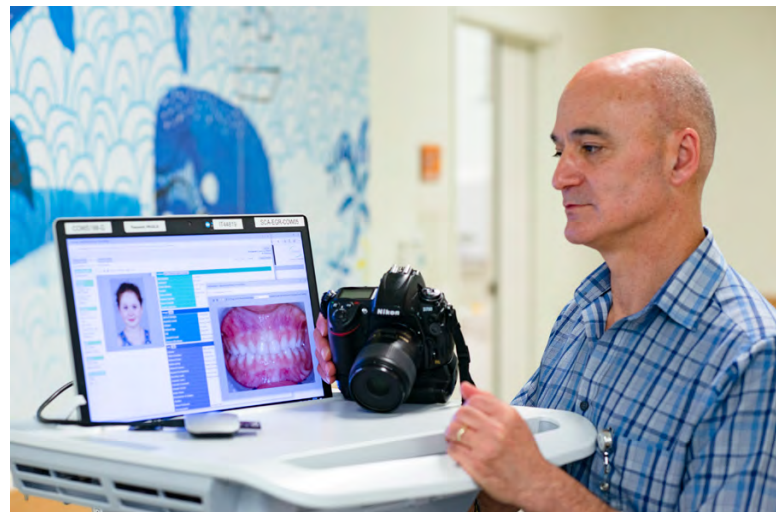
We called it the Medical Photography System (MPS). Essentially it is a web-based image viewer that allows the user to view 2D medical photographs, 3D images and video of RCH patients taken by the clinical photographers/videographers.

The project incorporated the use of the existing RCH PAS 'IBA', to send messages to the MPS to autofill fields corresponding to the PAS. This was to minimise double entry of data by the photographers, but also enabled the images to be given the appropriate security restrictions so that only authorised users could access images in the database.

Users accessed the MPS via the RCH intranet or via the web links in the Electronic Medical Record. After access had been granted users could log in to the system using their own username and password to ensure security of the clinical images. The MPS could be used as a search tool to find appropriately consented medical images via fields such as patient demographics/ date range/ ICD10 diagnosis codes/ body views/ mechanism of injury or studies. Images could be viewed as thumbnails or full screen, and multiple images could be opened simultaneously for comparison as can be seen below.



A number of 'lightbox' could be saved on each individual user's account. Each 'lightbox' could contain a selection of images as determined by the user. Users were able to order selected images for education / teaching and publication purposes electronically (dependant on the consent levels of the images). Selected images could be emailed to other authorised users via an electronic 'lightbox' link.



This was a huge change and had a huge impact. It meant we no longer had film cameras or their associated costs of developing and printing, (saving \$40,000/year), nor the volunteer labour that we used to stick the photos into the case history. Instead we had digital cameras and the patient photos were uploaded and available to the clinician within a day or two, sometimes within hours instead of the weeks and sometimes months that it took previously. The efficiency of this electronic system enabled the photographers to manage a 79% increase in numbers of patients from 2008 - 2012 and led to RCH being at the leading edge. Bert Di Paolo continues his good work in this area.



Above, L to R, Alvin Aquino, Robert Reitmaier, Bert Di Paolo and Lloyd Ellis in 2012.

It was the end of the era of analogue photography, darkrooms and chemicals at ERC. All this enabled the photographic team to evolve and specialize in different tasks. For example when Robert Reitmaier took on the

role of Manager of the 3D Imaging Centre, Alvin Aquino took on the role of specialising in general photography which was used in all the hospitals publications and social media channels and Bert Di Paolo became the senior photographer in charge of the section.

Web development

Perhaps the most significant innovation at ERC with an impact for the entire hospital was the establishment the web development function. There had been a huge pioneering effort from Tony Stratford (whose full-time day job was as a Nurse Unit Manager) in which he voluntarily set up RCH's first web presence in 1992 and continued to do this for a number of years. In fact RCH was one of the first hospitals with a web presence. This embryonic start proved that the web had the potential to be an excellent communication tool to both the internal and external audience. However there was no funding, and therefore no strategy.

There were several attempts to gain funding – in 1998 a joint proposal between ERC and Public Affairs unfortunately failed. So ERC started using external revenue to start a three day a week service as a staff member had recently qualified in this area. A further joint proposal this time between ERC and IT kindled some interest but funding was again the real issue. The Foundation and Prof Mike South, then Head of General Medicine, became involved and sought, and secured, funding (\$1m) from Tattersalls which would fund a webmaster and the work of the RCH web team for five years. In 2000 after an external process of appointment, Adam Leadoux was appointed our first full-time webmaster.

It had been decided that because of the strong synergies with graphic design, video and photography the webmaster would report through ERC. The web was seen as a means of communication and business efficiencies. The content, communication design and publication were ERC's expertise; business efficiencies were ICT's expertise therefore ICT provided the infrastructure whilst ERC provided the web team. In addition, a Web Advisory Committee (WAC) was established with representatives from the Executive, ICT, Medical and Nursing, the library, and ERC, and this was to be the overriding advisory forum.

The aims of WAC were to develop a web strategy and implement priorities. Key questions were asked about why we needed a web site and what were we trying to achieve; who our stakeholders were and who should have access; as well as what image we were trying to convey – what was our communication strategy/corporate identity?

We also of course needed to determine what the best back-end solution was. All this needed to be across both the Royal Children's Hospital and the Royal Women's Hospital as we were the Women's and Children's Healthcare Network at the time and ERC was a shared service.

We interviewed staff at both sites and the results determined that we needed individual sites for RCH and RWH and a smaller overriding one for the Women's and Children's Healthcare Network (the first iteration which can be seen here).



Over time the web team grew to four full time staff servicing both RCH and RWH, with two positions funded by ERC from external revenue. Tony Stratford assumed the role of system administrator for the web servers (approx a 0.2 EFT). The addition of the cost recovery positions allowed ERC to meet the high demand for web services beyond what the allocated EFT could support, which greatly benefited both hospitals.

We purchased a content management system (CMS), which enabled departments and other content owners to manage their own sections of the website; designed a new look which was stakeholder-centric and concentrated on the intranet first.



We gave a number of presentations to each hospital including a Grand Rounds and by 2002 we asked 200 staff to trial the intranets which had important information on them including Emergency Procedures and Clinical Practice Guidelines as well as hospital policies and enterprise agreements. By 2003 Clinical Practice Guidelines at RCH (driven by Mike South) was alone seeing 19,000 sessions a month and 170 departments had their own website. These were all completely co-ordinated and all produced in-house, with 4,000 pages in the content management system, an average of 4,700 visits/day and 280 staff trained in CMS.

In 2005 at the completion of the Tattersall's funding ERC's external work continued to support 1.8 EFT of the web team. In 2006 the Women's and Children's Healthcare Network was disaggregated and ERC returned to just providing our services to the RCH.

The RCH website was acknowledged as the best in the country; achieving the #1 ranking in the category of Health and Medical - Hospitals from the annual Hitwise Online Performance Awards. From the award's inauguration in 2005 RCH was listed number one for the following seven consecutive years. A remarkable achievement from such humble beginnings and a true testament to the incredible content providers.



In 2010 we redeveloped the RCH intranet and in 2011, in time for our move to the new hospital, applied a completely new look and feel to the internet under the expert direction of Christine Goerner, one of our senior graphic designers (image bottom left).

In 2012 we implemented a new content management system that involved 12 months of intensive work migrating thousands of pages of content from one system to another. This meant that access to information on over 200 RCH departments and services including maps and virtual tours to alleviate anxiety; information to assist children prepare for their visit to hospital; and critical information about the new RCH was all available in a medium that reflected the world class facilities.



In addition, on "Move Day" the web team office could be likened to mission control. It pulled all the images and footage taken from our photographers and video staff and put them on a secure website moments after they had been captured. Working with Corporate Communications this enabled the media to acquire content and report progress regularly, without disruption to patient privacy or operational activity.

As a bonus, the move from hard-copy to the web served to reduce costs such as printing and distribution especially the Kids Health Info (KHI), and also enhanced RCH's reputation with Clinical Practice Guidelines (CPGs) that received over 125,000 visitors/month from all over the world. This was also true of policies and procedures, the specimen collection manual, pharmacopeia and the emergency procedure manual.

'App' development was the next exciting thing to be working on and the web team developed companion apps for the KHI and the CPGs amongst others. Another initiative that was being investigated was an 'RCH shop on-line'.

The website's size, breadth and relevance has made it an authoritative and valuable source of information both Australia-wide and around the world: our Kids Health Info site provided community health professionals and parents with crucial information about their child's condition; and our on-line Clinical Practice Guidelines were regularly accessed by clinicians across the world including at other leading children's hospitals such as Great Ormond Street Hospital in London, and Children's Hospital of Philadelphia.

By 2015 the site had over 9000 pages with 400 CMS trained content contributors and, according to Hitwise/Experian, (the industry measurement body) it was the most popular Australian hospital website and second internationally only to the Mayo Clinic. The most popular

sites were the Clinical Practice Guidelines (CPGs) and the Kids Health Info (KHI) sites. The ability for so much information to be available at a moment's notice changed the way clinicians operated. Mike South says the web with its clinical guidelines on-line has 'aided in the clinical care of children and saved many lives around the world'.

With thanks to Prof Mike South, Bert Di Paolo, Robert Reitmaier and Alvin Aquino for assisting with this article

Gigi Williams FRPS, FBCA, FAIMBI, BAppSc was on staff at RCH for 33 years from 1982 and was Director of the Educational Resource Centre from 2004-2015. View her [full profile](#).

An historical perspective on record keeping and computers

Bronwyn Hewitt

With space available after the move to the new RCH hospital in 2011, it became possible for the Archivist to process a large series of records held in the RCH Archives Department. These had been created by the Medical Staff Association (MSA) and its predecessors, (Honorary Medical Staff or HMS, and Senior Medical Staff or SMS), for the period 1891-1989. Apart from the RCH Board Minutes, this was the longest continuous series of records held in the Archives and there was a great volume of them. The records had languished in various storage spaces with awkward access at the original Parkville hospital and there had previously been no adequate space available for the Archivist to appraise and process them as would normally happen - until after the move.

The MSA records, including those of the HMS and SMS, since processed and transferred to permanent storage at the Public Record Office of Victoria (PROV), are a comprehensive series of records comprising 47 separately catalogued titles. One of these is an excellent alpha card index to the records for a period of 50 years (1930-1980). Other titles include Minutes of their meetings and papers tabled at them, inwards and outwards correspondence files (both general and many subject based categories), business with the Medical Advisory Board, appointments and resignations, reports

from various internal committees and government (e.g. Planning Committee for the 1963 Parkville hospital), a collection of published staff clinical papers, medical research progress, clinical teaching and other internal business matters, legal issues and financial records. They are a fascinating window into the major role that the MSA played at the RCH for almost 100 years.

These paper-based records had been meticulously filed in various ways since 1891 when the MSA began. The incumbent Secretary in 1989, and for some time previously, had been Peter Campbell and the records under his stewardship were very easy to process due to the orderly method with which they had been carefully filed.

But where were the records post-1989? Having phoned around the then more recent office bearers of the MSA, I discovered something which I had not previously come across with any other administrative records at the RCH.

After 1989 the MSA's records went electronic! Everything then became clear to me. There were no longer carefully filed records to be found, except perhaps on some superseded computer still hiding in the corner of an office or back room, but there were precious few of those following the move. With the help of some very diligent staff, I eventually received a CD with the only MSA files extant which could be extracted from a few computers still able to be accessed. This was by no means a complete record, with a mix of all types of files like those described above, but none of these files had consistent naming protocols, so there was no way of grouping them into some sort of meaningful order without opening each one and examining it, which became an extremely time-consuming task. (When processing paper-based records an Archivist would never read each file).

The lack of file naming protocols in the early days of computers created a future nightmare for archivists,

records managers and the researchers who would need to use them. The files on the CD also included many versions of the same documents. It was impossible to know which was the draft and which was the final version that should be included as the master record. In fact, the time taken in trying to appraise and process the files from this one CD took longer than appraising and processing the paper-based records for the whole of the previous 98 years; indeed, it took so long that it was not possible to finish the task due to the issues outlined. In subsequent years I have stumbled across another alarming feature of earlier electronic records. The professional secretarial staff had the facility to set up a letter or document so that every time it was opened the current date would appear in the usual place. This was convenient when they were typing so many documents every day. However, beware opening those same documents in an electronic format today as that setting remains embedded in the document. Letters typed in say 2007 will have a 2020 date in the header when you open them! Not very useful when they are being used for historical research purposes which would never have been foreseen at the time.

So as a result of the wide introduction of computers in the late 1980s, one downside for historical research may be that there are likely gaps in corporate information which would apply to records across the board and across many government agencies. This deficiency could make evidence based historical research much more difficult than it has been during the paper-based era unless good record keeping practices prevailed after the introduction of computers, as did happen in a number of critical areas of government. However, oral history may become the main way that much of the history from this period can be uncovered. The upside of course is that the digital age has brought access to an enormous amount of historical information to people around the world who would not otherwise have been able to see that material. It must be noted though that this has mostly only been possible because the paper-based records were there to be digitised in the first place.

Anyone who is interested can arrange to visit the Public Record Office of Victoria (after COVID-19 restrictions have lifted) to view any of the MSA, HMS or SMS records held permanently there for the RCH. This is a service which the PROV offers to all State Government Agencies. The link to the specific series mentioned above on the PROV website can be found here.

Searching using the term 'RCH' on the PROV website (pictured top, right) and then selecting the 'Explore the Collection' tab will bring up a listing of dozens of other RCH records held at PROV, including Committee of Management/Board Minutes for a substantial period.

Home > Search Results

Showing results for "RCH, MSA"

Filter Results by:

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Series

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CITATION: VPRS 16804/ P1 unit 11, item HMS/MSA Correspondence/Subject Files - Letters 1936 - 1949

HMS/MSA Correspondence/Subject Files - Board of Research 1951 - 1954 PHYSICAL ITEM

DATE: 1951 to 1954
SERIES: Minutes and Correspondence of the Medical Staff Association
AGENCY: The Royal Children's Hospital also known as RCH
CITATION: VPRS 16804/ P1 unit 12, item HMS/MSA Correspondence/Subject Files - Board of Research 1951 - 1954

HMS/MSA Correspondence/Subject Files - Internal Correspondence 1952 - 1954 PHYSICAL ITEM

DATE: 1952 to 1954
SERIES: Minutes and Correspondence of the Medical Staff Association
AGENCY: The Royal Children's Hospital also known as RCH
CITATION: VPRS 16804/ P1 unit 13, item HMS/MSA Correspondence/Subject Files - Internal Correspondence 1952 - 1954

HMS/MSA Correspondence/Subject Files - Medical Staff Appointments 1975 - 1979 PHYSICAL ITEM

DATE: 1975 to 1979
SERIES: Minutes and Correspondence of the Medical Staff Association
AGENCY: The Royal Children's Hospital also known as RCH
CITATION: VPRS 16804/ P1 unit 14, item HMS/MSA Correspondence/Subject Files - Medical Staff Appointments 1975 - 1979

HMS/MSA Correspondence/Subject Files - General Correspondence 1977 PHYSICAL ITEM

DATE: 1977 to 1977
SERIES: Minutes and Correspondence of the Medical Staff Association
AGENCY: The Royal Children's Hospital also known as RCH
CITATION: VPRS 16804/ P1 unit 14, item HMS/MSA Correspondence/Subject Files - General Correspondence 1977

Alphabetical Card Index to all HMS/SMS/MSA records PHYSICAL ITEM

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Series VPRS 16804

Minutes and Correspondence of the Medical Staff Association

About this Series | **Related Series** | **Accessing the records in this Series**

Date Range: Series ? 1890 - cont
Series in Custody 1891 - 1989
Contents 1891 - 1989

Public Access: Open
Location: North Melbourne
Format of Records: Physical

- Agency which created this Series
- Agency currently responsible for this Series
- Description of this Series
- How to use the Records
Consult the Records Description List to determine which unit contains the minutes or correspondence for the period in which you are interested.
Researchers may also use the indexes located in VPRS 16925.
- Function / Content
This series comprises the minutes of meetings and papers from 1891 to 1989, sub-committee minutes and papers, and inward and outward correspondence & subject files that were created by the Medical Staff Association and its predecessors: the Honorary Medical Staff and the Senior Medical Staff.
Prior to transfer to Public Record Office Victoria, the records in this series were maintained as part of the Royal Children's Hospital (RCH) Archives. They were part of RCH accession number 2007/002.
- Recordkeeping System
Minutes of meetings were arranged in chronological order by date of meeting and correspondence was arranged in chronological order by date, file number and file title.
- More research resources

Bronwyn Hewitt
Former RCH Archivist,
1991-2017



A tangled web

Garry Warne

*"O what a tangled web we weave /
When first we practise to deceive"*

(Sir Walter Scott. Marmion: a tale of Flodder Field)

The World Wide Web, the system of links that converted the internet into the vast network of computers that we use today, was invented in 1989 by Tim Berners-Lee, a British computer scientist, and it has been hailed as one of the greatest inventions of the 20th century.



As we have all discovered, however, it is a two-edged sword. My own experience, dating from the 1990s, bears this out.

My field of expertise as a paediatric endocrinologist was in the management of children with intersex conditions, which means that from birth, the anatomy of their reproductive tract and/or external genitalia was neither typically male nor typically female. There are many causes and making an accurate diagnosis involves complex hormonal and genetic investigations. Some babies require life-long treatment with hormones to sustain life. There are implications for fertility and sexual function. It was all extremely difficult for parents to come to terms with and they needed a lot of support, because decisions had to be made by the parents, advised by the team, about whether to raise the child as a boy or a girl and what name to give the child. Following that decision, surgery to make the genital appearance more masculine or more feminine would be offered and in general, this surgery was carried out in the first months of the child's life. All patients required long term follow up in our clinic.

Discussions with parents about such matters involved giving them information, but by the mid-1980s, we realized that the clinicians from the different specialties involved (endocrinology, surgery, gynaecology, genetics) were all disclosing parts of the total picture, but not necessarily the same parts. A particular stumbling block was that in one group of intersex conditions, a baby with typical female genitalia can be found to have not only the XY chromosomes usually associated with the male sex but internal testes instead of ovaries. Explaining this to parents is not straightforward. We needed to meet as a group of doctors and social workers on many occasions over more than a year before we were able to work out how to tell the whole truth in ways that would be helpful, understandable and not damaging. This was a valuable and long overdue exercise.

Starting in 1980, I had inaugurated a number of parent support groups and in 1985, we began holding meetings for the parents of intersex children who had received our newly minted, truthful explanation. These proved to be cathartic for both parents and clinicians alike and the discussions that occurred at those meetings were totally enlightening for me. These meetings were organized from the hospital and notification was by letters sent through the post. We had not yet worked through what we perceived to be greater difficulties related to explaining the same things to the patients themselves and we recognized that counselling adolescent girls and boys about their sexual development would have to be done with great sensitivity.

We also began to realize that some of the children who had had genital surgery as infants were deeply unhappy as they grew up and the focus of their unhappiness was a profound and persistent discomfort about their gender identity and confusion about what had led to their situation.

Meanwhile, the 1990s arrived and so did email and the internet. At the hospital, we quickly learned that email could be written rapidly and delivered instantaneously to one or even multiple recipients. We also saw that those recipients could just as easily and speedily forward what you had written to countless numbers of others. Sometimes we would realize with horror that an email intended for one person, perhaps written on an impulse and charged with strong emotion, had inadvertently been sent to the wrong address, even to the very last person you would want it to go to. Having hit the button, however, you could not recall that email. Mistakes like that could have consequences. An email was different from a carefully composed letter sent through the postal system in that it conveyed a less formal and what could be perceived as a less respectful tone. An email could cause offence more easily than a letter, even when none was intended.

Email began to be used widely in the community as well. The internet made it possible for virtual communities to form, as people with common interests found that they could link up with one another and with people like themselves all around the world.

In 1997 patient advocacy groups for people who identified as intersex formed in the U.S. and vigorously challenged the ethics of carrying out genital surgery during infancy for infants born with ambiguous genitalia. They advocated deferring surgery until the patient was old enough to choose for themselves. The Intersex Society of North America (ISNA) published a newsletter wonderfully entitled "Hermaphrodites with Attitude". Various websites appeared and advocates became activists, picketing medical conferences, lobbying politicians and deans of medical schools, and making appearances in the media.

This was a time of great empowerment for patient advocates who could communicate freely without doctors being able to stop them. Insults were traded, offence was taken and for a considerable time, neither side was willing to compromise.

The ethical challenge quickly spread to other countries, including Australia and New Zealand. RCH became a target for criticism and the criticism stung all the more because a few of the loudest critics had been our former patients. Some of the criticisms were personal but once they appeared on websites, even though the accusations were entirely false and very hurtful, it was impossible to have them taken down. We could not defend ourselves

because we accepted that the former patients had a right to speak and a right to be heard based on the authority of lived experience. As doctors we were not prepared to break patient confidentiality or to do anything that might harm our patients.

At the same time, the internet was becoming the repository of exciting data from scientific research, particularly in molecular genetics, revealing much about the regulation of sex differentiation and the mutations underlying the intersex conditions that clinicians were dealing with. All of this information was generally available and could be searched on the internet from one's office. It was, however, yet to have a big impact on clinical practice and clinicians were much more engaged in working through the ethical challenges from advocacy groups that were making headline news. To draw attention to the irony of the situation, I published a paper in 1998 entitled "Androgen insensitivity syndrome in the era of molecular genetics and the internet: a point of view".

A community-based advocacy group with a website and the ability to send critical emails could claim to represent the majority of those affected while being, in reality, just a few passionate individuals. The leaders could, and did, use pseudonyms, so we could not be sure who we were dealing with. There was certainly some practised deception. It was never possible to see membership lists or even numbers of members. Did the group which was the most vocal represent a small minority, or were the overall results much worse than we thought they were?



Our impression at RCH had always been that most of our patients did well. Because of that, we decided that what we needed to do was to carry out long-term outcome research on our overall patient group and try to find out how many enjoyed a good or acceptable quality of life and how many did not. With a theme grant from the MCRI, we set up a large research team incorporating all of the disciplines involved in caring for and making decisions about children with intersex conditions. The publication in 2005 from this large study, "A long-term outcome study of intersex conditions" concluded that "Most patients with intersex had positive psychosocial and psychosexual outcomes, although some problems were reported with sexual activity". The findings were reported in a plenary session at an international congress were generally well received.

I had very positive interactions via email with other patient advocacy groups, particularly the Androgen Insensitivity Syndrome Support Group (UK). During the preparation of a patient and parent information booklet about AIS, I had a very helpful and deep correspondence with the coordinator of that group which changed my thinking about many issues and which resulted in many changes being made to the book.

I was also able to meet several representatives of the militant Intersex Society of North America and was able to have a cordial relationship with them, once they knew that I respected their right to protest against treatment

that they believed had harmed them and was prepared to listen to them.

With many and diverse intersex advocacy groups being active on the internet, arguments between the groups started to occur and a power struggle ensued. As the people in those opposing groups never actually met face to face, the battles resembled modern warfare using remotely controlled weapons. Some dialogue involving medical professionals did occur once the abusive language was moderated and progress has been made, although the field of intersex remains highly controversial and practitioners today are still involved in making submissions to bodies such as the Australian Human Rights Commission and the Australian Senate.

The internet has been a marvelous resource for all kinds of research and for access to vast amounts of information. It has enabled communication and better understanding between people in every country on earth on a scale never previously imagined. Those of us who were the first generation to make full use of it also know that it has changed medical practice forever and that it can be either a miracle or a minefield, depending on the circumstances.

Dr Garry Warne AM was Director of Endocrinology & Diabetes at RCH from 1980-1999 and Director of RCH International from 1999-2012. [View his full profile.](#)

Garry with activist Cheryl Chase



Random reflections on computers in the RCH Emergency Department

A terminal tale of epic proportions.

Simon Young and Peter Barnett

It is now difficult to imagine treating a child with a medical emergency without rapid and reliable access to their computerised hospital medical record. It was not that long ago when the only immediate information available in this situation regarding recent diagnoses, recent tests and the thoughts and plans of the child's consultants being what the parents could remember in a hurry.

Never complete, possibly accurate and sometimes misleading it was of course all you had: so you went with the "best guess". The relief when the parents thrust a dog eared letter from the recent outpatient appointment or a list of medications from the pharmacy into your hand was often overwhelming.

The actual paper medical record was of course nicely filed (and sometimes misfiled) in the medical records department or it was carefully hidden on some "upstairs" consultants desk awaiting dictation of a letter or tomorrow's outpatient appointment.

Of course, even if you were lucky enough to actually get your hands on the paper record it was massive, clogged with pages of "observations" and drug charts with the gems of clinical information you were after buried somewhere within its bowels.

Your woes did not end there as the recent X-Rays were lost or at least not reported yet, pathology took ages to answer the phone and give you those test results from last week and perish the thought you had to look up a book to find the causes of itchy rashes in children. This book being strategically tethered to the desk by a chain as the last three books had been stolen.

Ahhh those were the days – and then along came the computer.

In December 1994, back in the days when a window was made of glass, bugs were insects and an icon was a religious work of art, the emergency department



started collecting clinical data in real time on a computer. Data was entered by clerks, doctors and nurses using a program called "HAS Solutions": this was our first shot at an "electronic medical record".

Stand alone, rudimentary, slow and initially unreliable, HAS was however a necessary first step in a process that 25 years later has resulted in almost total computerisation of everything that we do.

The ED had in fact been collecting and analysing clinical data for many years before 1994, utilising the time honoured "write it on a piece of paper and get a clerk to type it into a computer" technique.

These precious pieces of paper were also used by our nursing staff to assign patients to various cubicles and track patients around the department, requiring a nurse to sit at a desk shuffling paper all day to have at least a vague idea what was going on within the department. As fond as we were of this paper shuffling, an electronic system seemed much more desirable.

The "HAS Solutions" software was written by Dr Rob Pitt, a paediatric emergency physician from Brisbane, and was based on the RCH paper system.

This program allowed us to enter triage, clerical, injury surveillance and some basic clinical data into the program in real time.

One brave day we implemented HAS, leaping from an ED totally reliant on a large whiteboard with lots of smudges, multicoloured marker pens and pieces of paper that everyone recognised and understood to a computer-based system that came from an alien planet: what could possibly go wrong??

Well - the computers were slow, the number of computer terminals inadequate, the printers temperamental and the staff often unenthusiastic. Running through good old Windows 3.1 and a 386 processor meant that HAS just chugged away and sometimes it got tired and just stopped.

"Why should we move to a computer system that is so slow when I can do it better and more efficiently the old way." was heard many times. "HAS has crashed" became a common phrase and entered the standard lexicon of ED speak. Frustration was common and trying to demonstrate the benefits of the system and remind people that the old paper based was not actually that good anyway was difficult, but we persevered.

In subsequent years HAS expanded, upgraded and, after being taken over by a bigger software company, became used in many ED's around the country. The program improved, stability got better and useful data began to emerge. Who would have ever believed (especially the government and hospital management) that the Emergency Department was so busy and did so much? We were finally getting proof of what we had known for so long - we were busier than ever before and the numbers proved it.

In the mid 1990's the Health Department as it was known then decided to "improve" emergency department care by setting targets. Time to be seen by doctor, time to admission to ward, minimising "fail to waits" and other parameters were all to be measured, publicised, rewarded if above the target and penalised if below. With hospital income being tied to ED performance an accurate and reliable computer system was now essential rather than a luxury.

The importance of HAS solutions for the ED in the 22 years that we used it cannot be overstated. Clinically it allowed the treating team immediate access to a record of previous presentations and admissions, old diagnoses, previous tests performed and letters to GP's. Details in HAS were often scarce but even a little information available early was often helpful. It was a beginning.

In reality however HAS was still a collection of non-clinical and clinical data organised more for the running of the ED and the generation of statistics than a complete electronic medical record.

Handwritten notes were still produced and added to the burgeoning paper medical records but as with all electronic systems there were work arounds using functions for things they were not quite designed for. For example typing a letter to the patient's GP (with two fingers for most of us) was possible in HAS and storing it as part of the HAS record as well as printing it for the

paper record was not only time efficient, it effectively created an "electronic record" of the interaction. Non-searchable with no templates or prompts and isolated from the rest of the hospital, it was far from ideal but this was indeed another step along the way. Additionally HAS also did not talk with any of the other computer systems that were used within the hospital and toggling between CLARA, radiology and other systems and double entry of data and search parameters created not only inefficiencies but potential sources of error.

We transitioned from HAS solutions to EPIC in 2016. The "EPIC go live" date coincided with the last day in the hospital for one of the authors (SY) - whether this was purely chance or spectacularly good timing is a matter of conjecture.

The emergency department transitioned smoothly and successfully (all thanks to PB and the others on the ED and hospital teams). Careful preparation, clever customisation and a general staff familiarity with an electronic medical record all contributed to this success. Many of the limitations of HAS that we were so used to vanished instantly.

The ability to rapidly view the complete RCH clinical medical record including radiology and pathology results for any individual patient along with a "whole of ED" information and tracking package has revolutionised the way that we function. As EPIC rolls out in other hospitals such information sharing can only improve the health system and the care delivered to individual patients.

Of course EPIC is not static and will change with time and circumstances. Introduction of a system change whether it be a new tracking board, a new map of the department, collection of a new piece of information or a introduction of a new process will likely provoke some resistance and pushback from staff.

With upgrades come "bugs", things fixed in previous upgrades inexplicably return and the perception is often that things are harder than they were before. Involving staff in the process of change, providing training and allowing time for change to be assimilated is all vital.

So let us look forward to ED patients being tracked with RFID bracelets, accurate voice recognition software eliminating typing and artificial intelligence flagging children with a high risk of serious illness such as sepsis. And of course all those other changes and improvements that we have not even dreamt of so far.

Simon Young OAM was previously Director of the RCH Emergency Department. Peter Barnett is its current Director.

Alumni celebrate the festival of light in different cultures

Towards the end of December, Jews light the candles on the menorah to celebrate Hanukkah. This year, Hugo Gold was joined by his granddaughters Miya (17) and Ashleigh (13) to light the menorahs and then eat the doughnuts – traditional oily food to commemorate the miracle of the lights.

Hindus call their festival of light Diwali. Our member Anurag Bajpai sent this picture from Kanpur in northern India.

Christmas is associated with lights, candles and Christmas trees. This is Rosamaria Guthrie's tree.

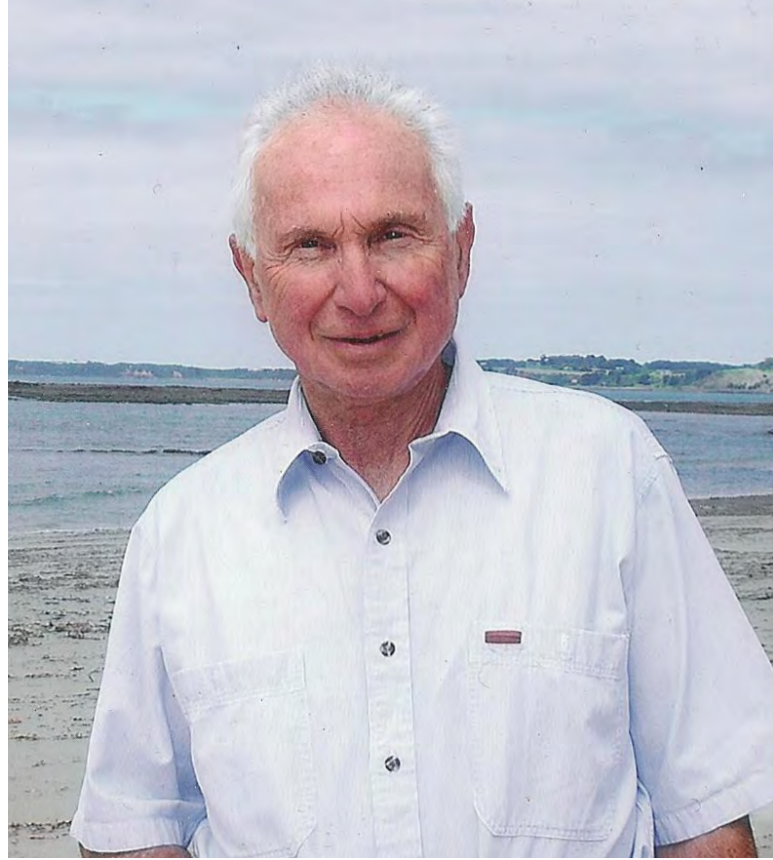


Haemophilia Miracle; from misery to virtual cure witnessed in one professional life time

Henry Ekert

To me nothing illustrates the progress of modern scientific medicine more than the amazing progress in the treatment of Haemophilia A, a sex linked disorder. It is the commonest bleeding disorder in childhood with some 200 boys in the clinic and which is 10 times more common than a similar one called Christmas disease which is also sex linked and due to a failure to produce another protein namely Factor IX.

It is an ancient congenital disorder of the haemostatic process which results in failure to produce a protein called factor VIII that is essential to induce blood coagulation. Like all disorders it knows no boundaries between races and classes. We know it's ancient because in the Jewish law on circumcision it is stated that if the first born male child bleeds to death with circumcision the second does not need to be circumcised. This law was written at least 5500 years ago. It is also known as a Royal disease because Queen Victoria had the mutation and transmitted it to some of her daughters and granddaughters one of who was the wife of Czar Nicholas II and her only boy was afflicted with it and cared for by none other than the notorious Siberian monk, Rasputin. The lack of a vigorous and healthy inheritor to Czardom accelerated disillusionment with the monarchy and gave significant impetus to the Bolshevik revolution.



When I was a JRMO at RCH in 1962 boys with haemophilia received treatment with either direct blood transfusion or plasma. Their life time was short, into late teens or early 20's and debilitated by painful bleeding into large joints, life threatening bleeds after minor dental procedures and the most common cause of death was intracerebral haemorrhage.

In short, it was a life of misery for the child and his parents, more specifically the mother who apart from bearing the brunt of treatment also carried guilt for transmitting the faulty gene. The usual treatment was the use of fresh frozen plasma which required admission to hospital and close monitoring. It was not unusual for the boy to be admitted 5-8 times in one year and to stay in hospital for almost a week each time. Physiotherapy in hospital was required to rehabilitate the joint. This treatment meant a considerable loss of time from school and in general low academic achievement and low financial prospects because of inability to work in physically demanding jobs.



In the late 1960 the first step to improve treatment was pioneered in the USA. Freezing and thawing plasma was found to preserve and concentrate factor VIII in the frozen precipitate and did not destroy the biological activity of Factor VIII. The thawed precipitate was of small volume (30-40 ml) and thus much more easily infused than Fresh frozen plasma. Furthermore 4-8 units of plasma could be pooled so reducing the time required for hospital admissions.

As a fellow in haematology in Los Angeles it appeared like a miracle compared with what I had experienced at RCH. When I returned to RCH nothing much had changed in the management of these poor boys. John Colebatch was aware of the progress in treatment and encouraged me to introduce it to RCH.

The first hurdle to overcome was that multiple clinicians had one or two of such boys under their care and change in treatment could not be achieved until there was a centralised and adequate laboratory for measurement of clotting factors. It fell to me to do so and with the help of young scientists we accomplished it.

The next hurdle was to centralise management of these boys. This was achieved by the creation of a Haemophilia Conference. The Conference title was meant to preclude transfer of patients to a clinic. The conference included orthopaedic surgeons, radiologist, physiotherapist and social worker and was chaired by me. It met once a month with little impact on the day to day management of these boys.

Fortunately most of the general paediatricians who had small numbers of these boys under their care were only too happy to transfer them to my care and after one tragic instance when a boy with haemophilia was lumbar-punctured without infusing Cryoprecipitate prior to the Lumbar puncture and had a fatal haemorrhage into the spinal canal all of these boys were referred to me. The conference had by default become a clinic.

Cryoprecipitate remained standard treatment throughout the sixties and into the early seventies and even used for home treatment after teaching the parents methods of storage in a freezer, safe thawing in a home-made water bath and intravenous administration. However, it was cumbersome, required a major effort and could only be used after a bleed had occurred and not to prevent it. In addition the requirements for Cryoprecipitate far exceeded its supply so that very little surgery could be performed on the severely impaired joints.

Cryoprecipitate was the starting product for more sophisticated biochemical techniques which eventually resulted in a highly purified powder form of Factor VIII. This could be obtained from large batches of plasma varying between 4000 – 8000 litres thus easing the problems of supply and making a product which was much easier to administer.

We thought we were in heaven. It was so convenient and now enabled the possibility of preventing most forms of bleeding by 3 times a week intravenous home administration, a programme we called “prophylaxis”. The frequency of injections is due to short half-life of the infused factor VIII of about 8 hours. However, as with Cryoprecipitate demand far exceeded supply.

Then out of the blue AIDS struck. It was a disaster with many contracting the disease from the large batches of plasma that were used to produce the product. Patients and families lost trust in the product, prophylaxis ceased and many bleeding episodes into joints were left untreated resulting in pain and deformity. In the clinic virtually all progress ceased and many of us contemplated with dread that we may have to return to the days of single unit cryoprecipitate.

In 1982 a group of brilliant scientists cloned the factor VIII gene and from this discovery eventually a genetically engineered non plasma derived factor VIII was produced, called recombinant Factor VIII. Patient trust returned and because the product was not derived from blood donations there was no longer a problem with supply. Prophylaxis and surgery resumed.

But another hurdle remained. The recombinant product still had to be given intravenously and since prophylaxis at an early age was the gold standard of treatment insertion of central line intravenous devices was required in the young boys. These devices were very successful but also had complications of infection and thrombosis.

Nevertheless it was great progress, albeit at the cost of many lives lost due to HIV. It eliminated the risk of HIV infection and other blood borne viruses e.g. HCV and offered a much better quality of life and longevity equal to other men without haemophilia. Furthermore chemical manipulation of the factor VIII extended its duration in the circulation reducing the frequency of “prophylaxis” to twice weekly.

And then some very clever scientists had the temerity to ask themselves why bother with Factor VIII. It is after all a protein which functions to bring two other proteins close together in order to activate coagulation. Their work was further spurred by the fact that up to 30% of patients with haemophilia developed anti-bodies to factor VIII and were thus particularly difficult to treat and the results of alternative treatment products were not always successful.

Research going back many years enabled them to produce monoclonal antibodies which could be used to bind the two molecules at the same time. Lo and behold such a monoclonal was produced which could at the same time bind to the two proteins needed to activate clotting without the need for Factor VIII (factors IX and X). Clinical trials with this product showed without ambiguity that they were effective in treating patients

with antibodies for all bleeds and that the activation persisted for at least one week and in some as long as one month. There were no serious side effects in particular excessive clotting.

This new product didn't have to be administered intravenously. Instead all that was required was a simple subcutaneous injection. Further clinical studies published and still proceeding have shown it to be effective in all patients with haemophilia A.

A newly diagnosed infant with haemophilia A no longer faces a life threatening disease and will have the same quality of life and uninterrupted education as any other child. Maternal guilt will be greatly diminished and haemophilia and bleeds could be safely prevented by a subcutaneous injection at home once a week or even a month in less severely affected boys.

So the progress made in my professional life time has seen a virtual cure of an ancient disease and alleviation of suffering for so many children and their families. The

burden of insufficient supply and fear of viral infection through plasma disappear.

Scientific ingenuity, lateral thinking and rapid translation of bench science to the clinic have engendered immense alleviation and near cure of an ancient disease. There will be complications as there invariably are when new treatments are discovered but the story of haemophilia represents a triumph of medicine in which I was fortunate to participate. It offers even greater advances in treatment in underdeveloped countries with risky blood transfusion systems such as in Africa and still some Asian countries where boys with haemophilia still die early, suffer disability and pain and have no prospects of academic and financial achievement.

HOW BRILLIANT IS THIS!

Henry Ekert AM was Director of Haematology and Oncology and Divisional Director of Medicine at RCH

The health, or rather ill health, of World War 2 leaders

Jim Keipert

Winston Leonard Spencer Churchill, born 1874.

He was born in 1874, the year the Suez Canal was opened, and the year of a general election in England. William Gladstone fought it on abolishing income tax, then threepence in the pound. You'd have bet a guinea to a gooseberry that would be a sure winner – at least it would be in Australia – but he lost, making Benjamin Disraeli prime minister for the second time.

Lord Randolph Churchill, third son of the Duke of Marlborough, was one of Disraeli's junior ministers. In April that year he rushed to Paris to marry the American socialite Jenny Jerome. Winston was born in November. To save the readers a lot of finger counting, that was seven months later. This was regarded by polite society as a premature birth, but the fact that the birth weight was 3.2 kg or 7 pounds did raise an eyebrow or two.

His parents were distant and showed little affection for him and had minimal interest in him or contact with him. His father regarded Winston as a bit of a fool. His mother was a social butterfly and her main interest was the social whirl. At the age of 7 he was packed off to boarding



school. He was not much of a scholar and achieved poorly at school. He was a loner, was not athletic and was often bullied. He unsuccessfully tried to gain his parents' attention and affection into young adult life.

Throughout his life he had difficulty in making friends or forming close relationships. He was not particularly interested in people, especially strangers that he met

in the social sphere. He was not good at small talk, and preferred talking – often at great length – rather than listening.

It is tempting to attribute these characteristics to parental rejection, but then how can we explain the enormous strengths he showed especially in later life? His qualities of inspiration, strength of will, tenacity, invincibility, oratory and general personality held the nation together and stopped Britain being overwhelmed during 1940 and 41 when England stood alone against the Axis Powers.



I think that we can best explain it by saying that many of his strengths and weaknesses were mainly due to inherited behavioural characteristics – that is with a significant genetic basis – influenced also by his family environment.

His wife agrees stating “Winston is selfish; he doesn’t mean to be, he’s just built that way. He’s an egotist I suppose, just like Napoleon. You see he’s always had the ability and force to live his life exactly as he wanted it”.

One of his close friends was Lord Beaverbrook. They were travelling in France in 1921 and stopped for the night in Deauville. Lord Beaverbrook developed an intestinal complaint. A French doctor was called and wrote prescriptions for a capsule by mouth and a suppository per rectum. Lord Beaverbrook did not speak French and asked his learned friend to interpret. Winston could not read the French, but didn’t like to admit his ignorance, so he took a guess which resulted in the capsules being administered the wrong way round, despite which the patient recovered.

He suffered for most of his life with depression in the form of the bipolar disorder. This was not surprising,

as of his ancestors, five of the seven previous Dukes of Marlborough had melancholia. This was reflected in his daily rhythm and sleeping pattern. Depending on his responsibilities he would for preference wake later in the morning, have a leisurely lunch, work in the afternoon and have a nap before dinner. After dinner he would burst into life and tend to dominate groups of colleagues or friends with his great conversational skills often into the small hours of the morning.

His alcohol intake was consistently high throughout life. He was alleged to have a bottle of claret for breakfast but this is mainly explainable because his breakfast was frequently his lunch, and the amount might have been exaggerated. Later in life he said he would reduce his alcohol intake but this transpired to be by changing to brandy and Cointreau.

He smoked cigars all his adult life.

He was a hypochondriac and worried excessively about minor symptoms. From the time of becoming prime minister he had Sir Charles Wilson – later Lord Moran – to reassure and advise him. This was at the request of cabinet. Mr Churchill initially made it clear he didn’t want Sir Charles as his medical advisor, but gradually came to depend on him.

He was a great self-prescriber with a variety of pharmaceutical and proprietary medicines. He was travelling to Scotland with the Chiefs of the Army, Navy and Air Force for an important conference. His aide de camp visited the chiefs in the evening and said Mr Churchill thinks it’s going to be difficult to sleep in this rocking train, and as we all need to be alert tomorrow he’s adamant you should take this sleeping pill. He rushed back an hour later to ask if they had taken the pill – which they all had – with profound apologies that by mistake Mr Churchill had given them his strong laxative.

For his visit to Italy in August 1944 Sir Charles strongly advised Mr Churchill to take mepacrine. As usual he refused but asked King George VI for his opinion. Presumably dissatisfied with the royal opinion he consulted General Alexander who told him to bring a pair of Wellington boots and forget the pills.

Churchill had a military career. He was a subaltern in the 21st Lancers Cavalry Regiment in the Battle of Ombura. A force of 8000 British regulars and a mixed force of 17,000 Sudanese and Egyptian soldiers defeated the Mahdi’s Dervishes numbering about 50,000 including some 3000 cavalry.

He was a repository of, often unexpected, knowledge. He was with President Roosevelt and Harry Hopkins who started quoting a poem about Barbara Frietchie, a semi legendary character of the Civil War. He was stuck after two lines, but Mr Churchill completed the lengthy poem even though he had not heard it for thirty years.

They passed a sign to Gettysburg. The prime minister gave a masterly review of the battle, with a lengthy discussion on the characters of Stonewall Jackson and Robert E Lee, two of his heroes, to conclude.

Emerging from the political wilderness, he became prime minister in 1940 at the age of 65 – when many people were retiring.

He performed excellently in 1940 and 1941. Reflecting his initiative and ability to take prompt and decisive action, within five days of the attack on Pearl Harbour on December 7 1941 precipitating the entry of the USA into war against Japan, Mr Churchill sailed in the HMS Duke of York to the USA. He realised how important it was to have the USA in their war, and wanted to cement the relationship. Even though they were sailing in a battleship, because of bad weather Mr Churchill and his entourage were battened down below deck for eight days.

Mr Churchill established excellent relations with President Roosevelt and in an address to Congress. They formulated guidelines for the cooperation of the USA and the UK in the conduct of the war in Europe.

In Washington Mr Churchill had a mild attack of either coronary insufficiency or occlusion. Because the disclosure that the British PM had a heart attack would at least partially undo the good relations he had established Sir Charles did not disclose the matter and it fortunately subsided spontaneously.

Mr Churchill went to Canada and back to Washington. He had a perilous flight back to the UK, almost straying over enemy territory in Europe.

He did an enormous amount of travelling:

- June 1942: 28 hour journey in flying boat to Washington
- August 1942: Flying in an unarmed bomber to Cairo via Gibraltar to Moscow to Cairo to home
- Jan 1943: Flew to Turkey to Cyprus to Tripoli to home
- Feb 1943: 10 hour flight to Casablanca
- May 1943: By sea to the U.S. Returns by plane with General Marshall to Algiers and Tunis.
- August 1943: Queen Mary to Canada to meet President Roosevelt
- November 1943: By sea to Malta and then Teheran with Roosevelt and Stalin. To Cairo, then Carthage and home
- August 1944: Air to Algiers, Naples and Rome

Mr Churchill had 3 attacks of pneumonia between February 1943 and September 1944.

The middle attack in December 43 was associated with auricular fibrillation. It was thought he might die

during this attack and four consultant physicians were flown in to assist Sir Charles with his management. This attack was the subject of a seven page article in the Journal of the Royal College of Physicians of Edinburgh in 2017. Following this attack, Sir Charles thought that Mr Churchill was never quite the same man again. He tired easily and became more moody. His concentration decreased. He was irascible. His work deteriorated and he insisted all communications – even 5 pages – being compressed to ½ sheet which is often not possible so he missed a lot of the debate. His verbosity was irritating his colleagues.

He and his party lost office in 1945.

Being in opposition and being able to pursue other activities such as writing probably helped him to recover a little.

In 1949 he had a minor stroke in the sophisticated position of playing gin rummy at Monte Carlo. It was stated he had a chill and needed rest. About 5 days later he lunched at the Hotel de Paris. Everyone rose to their feet as he entered. No one noticed any disability and Mr Churchill was delighted.

This is a slight divertissement for the reader's titillation.

The Hotel de Paris reminds me of the Café de Paris where in a special celebration for Marlene Dietrich, Noel Coward composed a poem for her, which he spoke as she glided gently down the circular staircase in a glittering sea blue gown, which it was said revealed everything but revealed nothing. Noel Coward said:

Now we all know that God
Made the birds and the bees
And the seas for the fishes to swim in

But are you also aware
He had a great flair
For creating exceptional women

When Eve said to Adam
Start calling me madam
The world became far more exciting

Which turns to confusion
The modern delusion
That sex is a matter of liking

Now we all would enjoy
Seeing Helen of Troy
As a gay cabaret entertainer

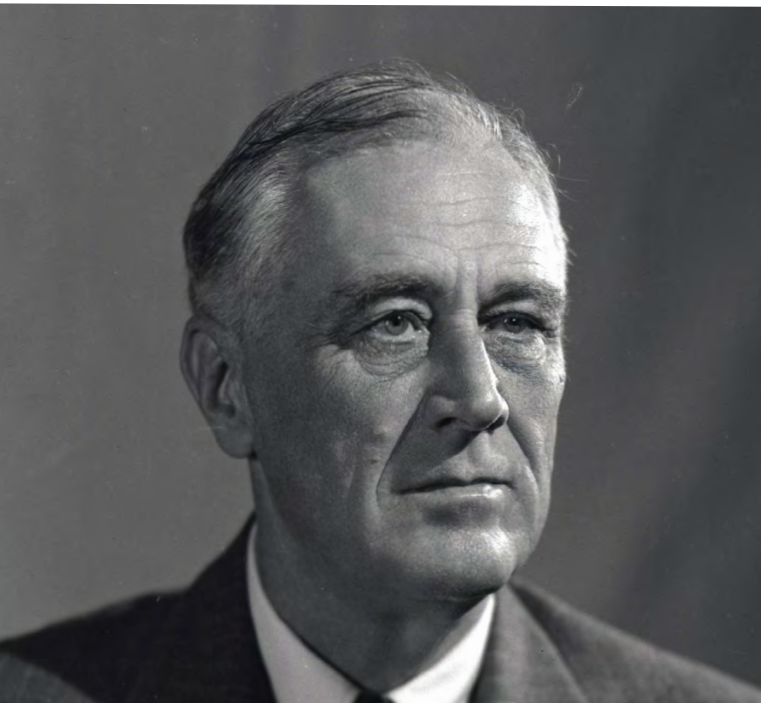
But I doubt that she could
Be one quarter as good
As the legendary, lovely Marlene.

Transient ischaemic attacks occurred in 1950 and 1952. Despite all this he was re-elected Prime Minister in 1951.

In June 1953 a second stroke produced a hemiparesis which was slow to resolve and associated with lack of energy, poor concentration and increased emotional responses and depression. All these features had improved within four months, but he was impaired from then on.

Sir Winston continued in office partly because he couldn't quite bear to give up and partly because his medical and political advisers thought it might well kill him if he had to retire. It's not recorded what they thought might be the effect on the country. Sir Winston retired in 1955. He had increasing incapacity until his death 10 years later, when he was - in Lord Moran's words - committed to English earth, which in his finest hour, he had held inviolate.

Franklin Delano Roosevelt, born 1882.



As a young man he led a very active life. He enjoyed swimming, sailing and golf. He had an impressive physique.

In 1910 he was elected as a Democrat to the NY State Senate. In 1912 he was re-elected. In 1913 he became Assistant Secretary of the Navy. In 1920 he stood as a Vice-Presidential candidate.

In 1921 at the age of 39 he suddenly developed poliomyelitis while holidaying on Campobella Island. It caused paralysis of both legs.

His activities in the 24 hours preceding the onset of poliomyelitis were not optimal to minimise the extent of subsequent paralysis, as he engaged in very strenuous exercise and was exposed to high temperatures fighting a

forest fire, followed by swimming in the ice cold waters of the Bay of Fundy.

He was seen by the octogenarian W.W. Keen, one of the founders of American neurosurgery. He made a diagnosis of thrombosis of the spinal cord, which in a letter to Mrs Roosevelt he later changed to transverse myelitis - together with his account for 600 dollars.

A neurologist Dr Robert-Lovett was called from Boston and diagnosed poliomyelitis. In retrospect a reasonable case has been made that this disease may have been due to Guillain-Barré Syndrome.

The paralysis of both legs persisted throughout Mr Roosevelt's life.

For the next 23 years he could not walk, had to be supported if he stood, got about in a wheel chair, and was often lifted bodily into meetings.

Not surprisingly he became depressed and withdrawn for a significant period. He was stated to have swings of mood at about monthly intervals for the rest of his life.

He derived great comfort from bathing in the Warm Springs in Georgia which became his second home. He organized a Warm Springs Foundation as a hydrotherapy centre.

He established the National Foundation for Infantile Paralysis which at its peak had 2700 branches across America.

He became politically active again. Despite his infirmity he projected an image of good health and mental vitality which was a triumph in overcoming adversity. His political image was enhanced by being a member of an old and respected family and his wealth had not diverted him from leading an active and productive life, and from looking after the less well off in society.

In 1928 he was elected Governor of New York.

In 1932 he became President of the USA and was elected a record four times.

His general health was reasonably good. An illusion of rude good health was created with the cooperation of the press by always photographing him with a happy smile and a cigarette.

In his first 2½ terms of office he was a great achiever. He had a very pleasant personality, talked easily, told a good story, had a good sense of humour, was a great socializer, was a good negotiator, cared for the underprivileged in society and was an excellent president.

He was probably at his peak at the first meeting of the big three in Teheran in 1943. Thereafter his physical and mental health deteriorated gradually but persistently.

Early in 1944 both Sir Charles Wilson and Mr Churchill had noted that President Roosevelt had lost weight and was not participating as much as usual.

Late in 1944 he was having blackouts and was found to have high blood pressure and early heart failure.

At his inauguration for a 4th term in January 1945 and at Yalta in February 1945 he was described as looking old, thin, drawn and shrunken. He had lost a large amount of weight so that his collar looked many sizes too large and his clothes hung on him. He appeared not to be taking things in, or taking an intelligent interest in anything. He intimated on several occasions that his end was approaching. Nevertheless, he and his advisers felt that for the sake of the country he should again run for the presidency, even if only as a figurehead.

Three months after his inauguration he had a massive cerebral haemorrhage and died.

An American physician noted that a pigmented naevus above President Roosevelt's left eyebrow was absent in photographs after 1943 and concluded it had been removed surgically. He presumed that President Roosevelt's terminal illness might have been due to metastatic malignant melanoma.

Surgeons from the Walter Reed Hospital presented a paper on malignant melanoma in 1949. All the slides and specimens shown had a serial number with one exception which showed a large metastatic melanoma in the right hemisphere. It merely bore a date 14th April 1945 which was the day the President's body arrived in Washington from Warm Springs. The official edict was that an autopsy was not performed.

Very interesting, but not conclusive of anything.

I think Mr Roosevelt was the great achiever of the 20th century because of the following initiatives:

1. He introduced the New Deal in the Great Depression greatly reducing the ill effects of the depression. He did this by acts to restore farm property and stimulate business enterprise. He ended depositors' runs on banks. He established Federal Emergency Relief Administration granting funds to state relief agencies. He established Civilian Conservation Corps which at its peak employed 500,000 young men. His mortgage relief aided millions. He established a code of fair practice within industries. He made the US dollar cheaper abroad improving the position of the US in foreign trade. He conveyed to the nation his own unshakeable self confidence.
2. Taking America out of isolation.
3. Before the US entry into the war in Europe he passed the Lend Lease Act allowing the US to give finance to Britain and its allies enabling them to partly hold Hitler at bay.

4. His greatest achievement was taking the US into the war on the side of the Allies. Had it not been for that the world might have been a far different place now.
5. Proposing a system of international cooperation leading to the United Nations
6. Pushing for the end of the European empires and decolonization.
7. Initiating moves for the creation of the World Bank and International Monetary Fund.
8. Encouraging moves towards global trade and lower tariffs.
9. Boosted soil conservation, reforestation, flood control and cheaper hydroelectric power.
10. First president to admit a woman into cabinet.
11. Was elected President a record four times.
12. Initiated the development of atomic weapons – can be debated.

What could he have done if he had not been in a wheel chair for a large part of his working life?

Adolf Hitler, born 1899



Hitler was born in 1899 in Austria. He was awarded the Iron Cross in the First world War. He founded and led the National Socialist Party – the Nazis. He became the German Chancellor in 1933, and led Germany into the Second World War. He is said to be responsible for, or implicated in, an estimated fifty million deaths.

He was a lifelong hypochondriac with a dread of cancer. From an early age he had recurrent attacks of abdominal colic, alternating diarrhoea and constipation and excess intestinal gas.

These features have been considered as manifestations of irritable bowel syndrome, but the early onset is unusual. Hitler had no inhibitions about releasing the intestinal gas from either end.

Many people wore extra clothing to social functions attended by Hitler because they knew hostesses would have more windows open than usual.

Hitler treated these problems with a patent medicine, the basis for which was a gun cleaning oil used in World War I trenches. This was, not surprisingly, later found to be toxic.

For all his adult life he had recurrent depression, insomnia, panic attacks and chronic eczema of the legs. He was seldom without a personal physician. In his last years he chose Dr Theodore Gilbert Morell.

This was an unfortunate choice as Dr Morell had antisocial halitosis and body odour. When friends remarked on this Hitler snapped – I do not employ him for his fragrance but for his medical care of me. More unfortunate was the fact that Dr Morell ordered multiple non-specific treatments for Hitler, most of which were potentially harmful.

For any disease we hope to have treatment aimed at curing the disease, and the more severe the disease the more the necessity of specific curative treatment, whereas non-specific therapy is aimed at making the patient feel better without curing anything. Dr Morell's treatment was aimed at making Hitler feel that he was receiving special treatment.

Dr Morell converted Hitler from a man who had many medical problems, but was in relatively good health and functioning reasonably well, into one taking tablets and injections of every conceivable sort, many with serious side effects.

A number of reputable doctors tried to convince Hitler that Dr Morell was a charlatan but to no effect. A German Army ENT surgeon, Dr Giesing, wanted to know whether Dr Morell's little black antigas pills contributed to Hitler's problems. He sampled one and experienced the same irritability, photophobia, anorexia and abdominal cramps that affected Hitler.

Hitler had 90 varieties of pills, and was taking 28 daily in the last years of the war. An article in the Journal of the Royal College of Physicians of Edinburgh details over two pages 40 proprietary medications prescribed by Dr Morell for Hitler between 1936 and 45.

Preparations mainly given by intravenous or intramuscular injection:

- Glucose 20% 10 ml as a stimulant
- Testosterone also as a stimulant
- Oestradiol valerate to improve the circulation of the gastric mucosa
- Desoxycortisone acetate for muscular weakness and to enhance carbohydrate metabolism
- Extract of seminal vesicles and prostate for depression
- Extract of bovine testosterone, pituitary gland and glycerine phosphates as an aphrodisiac and tonic
- Glucose, vitamin B, nicotinic acid and cardiac glycosides as a tonic
- Iodine 3% solution given intravenously to disinfect inflamed areas
- Amphetamine, caffeine, various vitamins and calcium for depression and fatigue
- Compound of enzymes, amino acids and vitamins B1, B2 and C plus extracts of cardiac muscle, suprarenal, liver and pancreas as a tonic to combat infections
- A preparation made from placenta as a tonic

Some preparations given by mouth:

- A mixture containing 9 ingredients the active ones being bromide and diethyl barbituric acid used as a tranquilliser.
- Bile extract, angelica, aloes, papaverine, caffeine and pancreatine for flatulence and alimentary disorders – had many adverse effects
- A preparation of atropine and strychnine which was highly toxic
- 10% cocaine nasal drops were addictive because of their strength and absorption
- Camomile tea enemata were said to have been requested by Hitler

Dr Morell owned one pharmaceutical company and had interests in several others.

The worst medication was amphetamines by regular IV injection. Started in the morning – producing an immediate increase in alertness and mental and physical activity – and then repeated 3 or 4 times during the day. If excess agitation was produced, sedatives in the form of bromides or barbiturates were given. If they produced excess sedation, coramine was given. Because of tolerance, the amphetamine dose had to be increased several fold.

In the last 4 or 5 years of his life Hitler's health progressively decreased. He developed weakness of his left arm and leg, and tremor of his left hand. He

could only be photographed from his right side. He had decreasing mental activity and disorganised thinking and psychiatric problems in the form of insomnia, increasing depression and outbursts of anger and rage.

I don't think that Dr Morell has ever been given appropriate credit by the British, American or French nations for his great contribution in shortening the war against Germany and possibly helping to ensure an Allied victory. It seems likely that Hitler's catastrophic decision to declare war on Russia resulting in the disastrous invasion was significantly due to the deleterious side effects of Dr Morell's medication on Hitler's thinking and decision making ability which also affected some aspects of the war in Europe.

The day after marrying his long time companion Eva Braun Hitler killed himself by a firearm in Berlin on 30th April 1945.

Comments on these three leaders

1. All were extremely effective leaders in their prime
2. All had depression at some time – in two very significantly and throughout life
3. All had other significant disabilities
4. In their latter period in office all had their competency severely compromised by health issues, despite which all three strongly wished to stay in power
5. Politicians and political parties may not be frank with the electorate about the ill-health of their leaders if they think they may benefit from non disclosure.
6. A case can be made that in a democracy if the health of a leader is compromised to a degree that would interfere with his or her performance, then the electorate should be so informed. One could go further and say that our leaders should be subject to yearly health checks with the findings fully disclosed to the electorate.

Yosif Visarionavitch Dzhugashvili, born 1879.

Joseph Stalin

He took the name Stalin while plotting against the Czarist regime. His complexion was marred by the scars of smallpox. Some insult had caused shortening and instability of the left arm.

World statesmen paid tribute to his admirable efficiency, his considerable skill in hard bargaining, and his knowledge of political, military and technical affairs.

He convinced other world leaders that due to real or more probably imagined disorders he was unable to fly or move far beyond his borders.

That led to Churchill and Roosevelt, who had valid health reasons for not doing so, taking long, dangerous



and arduous journeys to meetings on or much closer to Russian soil, putting them at a disadvantage from the start.

Stalin pushed his guests into drinking endless toasts of strong liquor, impairing their judgement but not his own, presumably because he was drinking something less powerful. These factors allowed Stalin to extract excessive concessions from Churchill and Roosevelt at their last two meetings – especially at Yalta.

Stalin apparently remained in good mental and physical health until about the end of World War II, following which there was a decrease in mental activity, resentment of any disagreement with his views, increasing suspicion, fear and mistrust of others well beyond the degree that is necessary for self-preservation in an autocracy.

These factors led to one last violent purge before his death from a stroke in 1952.

In his latter years Stalin developed a yellowish, sometimes greenish, pallor but often with pink central cheeks. His hair and moustache thinned and he developed a paunch.

The suspicion has been raised that he might have developed myxoedema or hypothyroidism, which can be associated with significant psychological changes, even occasionally progressing to myxoedema madness.

Stalin joins with the previous three leaders in clinging to power inappropriately despite a decrease in mental acuity and significant paranoia leading to his last brutal purge.

Jim Keipert, aged 98, practised as a general paediatrician. [View his full profile.](#)

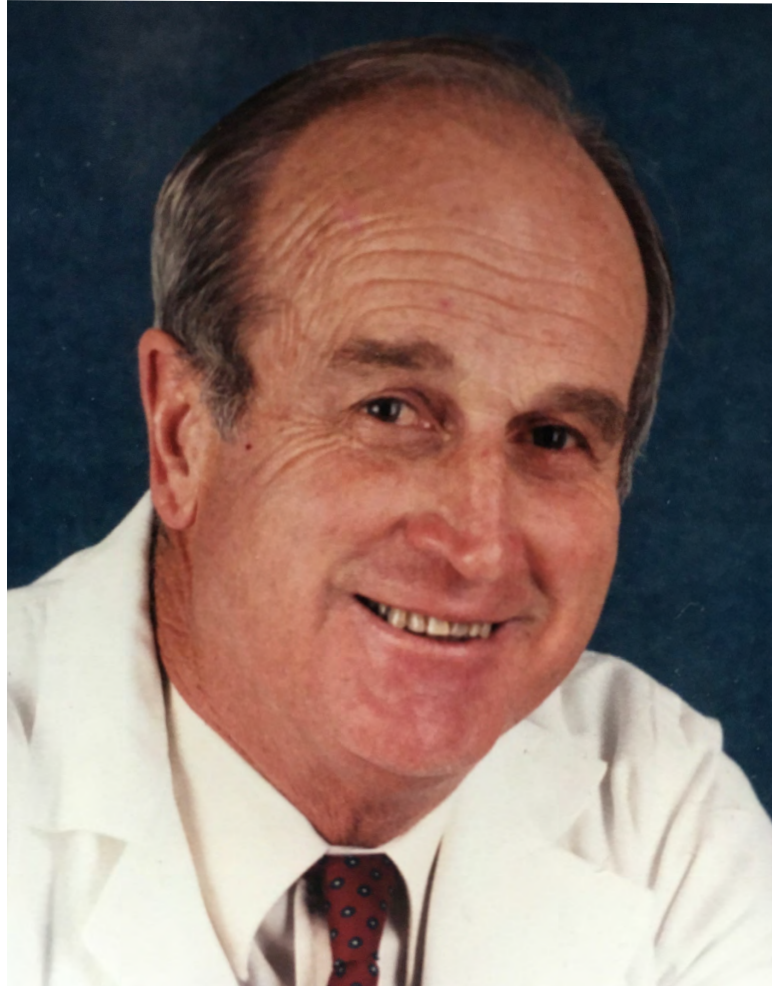
Vale David McCredie: pioneer of paediatric nephrology in Australia

Harley Powell

David Alexander McCredie was a paediatrician and a gentleman. He was a key figure in the early days of paediatric renal medicine in Australasia. During his long and productive career he made a significant contribution to the lives of children with kidney disease as well as to many medical professionals involved in the care of these children. In the 1960's David contributed to the development of the renal replacement treatment of peritoneal dialysis for use in children who suffered severe kidney failure, a condition which previously had been almost invariably fatal within a few weeks.

He commenced his career in paediatrics in 1951 when he joined the Royal Children's Hospital (RCH), Melbourne, as a Junior Resident Medical Officer. He had been educated at Melbourne Grammar School and graduated in medicine and science from the University of Melbourne in 1949. After further training in Melbourne and overseas, including a fellowship in New York and at London's Great Ormond St Hospital for Sick Children, he became an Assistant and then Associate Professor in the University of Melbourne's Department of Paediatrics and Child Health at RCH from 1963. He served as the first hospital Nephrologist from 1973-79, and head of a General Medical Unit from 1979-91. He was a skilled general paediatrician as well as a renal physician and he finally retired from RCH in 2008 at the age of 82 years. Many of his young paediatric patients have grown up and become parents and grandparents, and at least one is a great-grandparent. He maintained a close connection with the RCH Department of Nephrology and the Victorian renal community until his death from heart failure on 17 November 2020.

In the 1950s and early 1960s a diagnosis of end-stage chronic renal failure was a death sentence for the 10-12 children who presented to RCH each year. Peritoneal dialysis for acute renal failure was introduced at RCH by David McCredie in the early 1960's using stiff plastic peritoneal catheters which were inserted by physicians under sedation and local anaesthesia. Dr McCredie trained his research fellows, Drs John Herrin (1967-8), Steve Dixon (1969-70), and Harley Powell (1971-3) in this procedure which worked well, but the technique required a painful tight suture to hold the catheter in place, and the catheters needed replacement every day



or two. Later, introduction of the soft plastic Tenckhoff peritoneal catheter became a major advance and, when surgically inserted under general anaesthetic, allowed for the possibility of long-term peritoneal dialysis for children with chronic renal failure

Renal transplantation was unavailable prior to 1954 when a successful renal transplant between identical twins was performed in Boston, USA, with long term survival without immunosuppressive anti-rejection therapy. Immunosuppression with azathioprine (Imuran) became available from the early 1960s and, with prednisolone, made it possible to consider transplantation between non-identical humans. The first such transplant in Australia was performed from a deceased donor to an adult at the Royal Melbourne Hospital (RMH) in 1964 and soon after paediatric surgeon, Mr Robert Fowler, and David McCredie did 3 renal grafts at the Royal Children's Hospital including one using kidneys from a dead anencephalic newborn. These paediatric grafts all failed to function and were lost. Renal transplantation at RCH ceased for more than 15 years. A few older children were transplanted at RMH in the 1970's, after long-term dialysis at RCH, including one who still had a functioning graft more than 40 years later.

However smaller children needing renal transplants were a major problem at RCH and other paediatric centres around the world. In 1983 it was discovered that smaller children undergoing transplantation needed a very large intravenous fluid push to ensure adequate perfusion of the new kidney. Previously standard practice had been to

dialyse the patient dry in anticipation of the need for fluid restriction during a period of low function with low urine output post-operatively. Renal transplantation at RCH was restarted at RCH in 1983 using fluid loading and was immediately successful. Cyclosporine was introduced soon after and the transplantation program at RCH became as good as anywhere in the world, with better survival than the adult services. Deaths from chronic renal failure in children are now less than one every few years. David McCredie was intimately involved in all these advances.

As well as knowledge of general paediatrics and renal medicine, David McCredie provided specialised experience at RCH of several related medical conditions. He developed protocols for the emergency treatment of shock with low blood pressure, particularly in children with burns or gastroenteritis with dehydration. He provided a consultation service for children with disorders of calcium metabolism like vitamin D resistant rickets, idiopathic juvenile osteoporosis and various salt and calcium wasting conditions. He correctly identified the specific clinical features of Bartter's syndrome of short stature with potassium and calcium wasting, and distinguished it from other tubulopathies with low serum potassium, which required different treatment.

He loved stimulating ideas in his colleagues and enjoyed thinking laterally. He was an enthusiastic researcher and contributed many papers to peer-reviewed journals. His research unit's report of low plasma renin levels in hypertensive acute post-streptococcal nephritis paved the way for use of frusemide diuretic therapy with substantial reduction in patient illness. His paper describing new ways to investigate calcium metabolism remains the definitive guide to this day. His unit's report of low arachidonic acid levels in the red cell membranes of patients with some haemolytic conditions provides insight into a mechanism of red cell destruction, an important component of many renal diseases.

David trained many paediatric nephrologists who went on to establish the specialty in many of the other Australian States as well as in USA, New Zealand, UK, Singapore, China and Indonesia. He was one of the founding members of the International Pediatric Nephrology Association (IPNA) and helped produce the constitution for this organisation in the early 1970's. He was president of the IPNA congress in Adelaide in 2004.

As well as his medical expertise, David maintained an extensive interest in mathematics, literature and moral justice. Once, just before commencing a ward round, he excitedly asked his mystified medical colleagues if they knew about Euler's equation which he had been reading about. Euler is well known to mathematicians but has no relevance to medicine. David expressed great delight and amazement as he explained that the exponential number, e or 2.71828..., an irrational number, when raised to the power of i , the unreal square root of minus 1, times the number π , 3.14159..., also irrational, should equal the simple rational real number -1 . He was interested in a very wide range of social topics and was an enthusiastic francophile. He spoke fluent French and was very involved with Alliance Francaise. He undertook several sabbaticals in Paris where he worked with eminent French physicians Michel Broyer and Rene Habib. His family was influenced by his French connections. He marched in demonstrations against asylum seeker detention and regularly spent a week or two of his annual vacations helping indigenous populations on the Tiwi islands. He loved being outdoors in nature and was an enthusiastic hiker and orienteer which he described as cunning running, finding checkpoints against the clock.

David McCredie was made a Member of the Order of Australia (AM) in 2019 in recognition of his contribution to paediatric nephrology but he was so much more than just a nephrologist. His colleagues remember him as a very supportive friend who contributed much to society and medicine and acted as an ethical role model for all his trainees and associates.

Postscript: The RCH Alumni record the death of Dr John Herrin on 25 October 2020 in Boston, USA. John was David McCredie's first trainee/research fellow at RCH in 1967-8. He spent most of his career as Director of Pediatric Nephrology at Massachusetts General Hospital, Boston, USA.

**Dr Harley Powell FRACP,
was Director of Nephrology
1979-1994 and Senior
Nephrologist 1995-2017**



Mystery insect

Kevin Collins

Is it a bird, is it a plane? Or maybe a bee or a wasp?

NO!

This brightly coloured winged critter is almost certainly a FLY, specifically a HOVERFLY, aka flower fly or common hoverfly (*Simosyrphus grandicornis*).

The bug is a fly because it has a single pair of wings and those massive bulging front-mounted eyes.

It's not furry like a bee and it doesn't have a wasp waist.

It also has short stubby feelers.

The hoverfly is known a a great imitator, protecting itself with its bright wasp-like colouring

It is an entomological good guy - it does not sting, it pollinates flowers and the larvae love to dine on pesky aphids.

