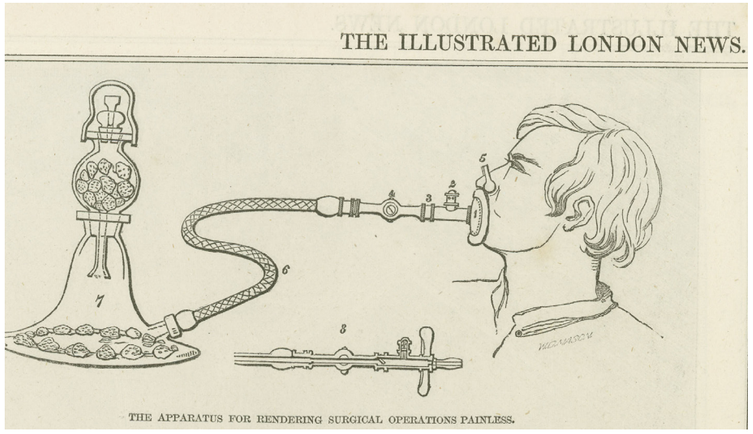
Knocked Out: developments in anaesthesia

MARIA DROSSOS, MUSEUM OF ANAESTHETIC HISTORY

Below: **diagram of 'the apparatus for rendering surgical operations painless' that is on display in the current *All in a Day's Work* exhibition at the Museum.**

Thankfully, remarkable developments have been made to make anaesthesia an indispensable and reliable medical practice but not after much experimentation and the sharing of knowledge between doctors. Medical collections are invaluable resources that remind us of how much things have improved on past imperfections.


THE ILLUSTRATED LONDON NEWS.

THE APPARATUS FOR RENDERING SURGICAL OPERATIONS PAINLESS.

Dr Geoffrey Kaye, together with his colleagues in the Department of Anaesthesia at The Alfred Hospital, Melbourne, published detailed guides for specialist and non-specialist anaesthetists. These books, currently on display at ANZCA, are the first textbooks on anaesthesia published in Australia - *Practical Anaesthesia* (1932)[1] and *Anaesthetic Methods* (1946)[2].

Dr Kaye was one of the most influential anaesthetists in Australia. He was the second full time anaesthetist in Australia (the first being Dr Rupert Hornabrook, 1871-1951, and a driving force behind the establishment of the Australian Society of Anaesthetists (ASA) in 1934 and the Faculty of Anaesthetists in 1952.[3] These organisations paved the way, allowing anaesthesia to be recognised as a serious and significant specialty, requiring formal education and examinations, promoting Australian based research, and leading to the development of professional standards.

In 1935 Kaye began collecting contemporary and historic anaesthetic objects and equipment. His vision was to develop a strong education and research facility, a 'centre of excellence' with its own library, museum and journal; a legacy that continues today at the Australian and New Zealand College of Anaesthetists (ANZCA). Formed in 1992, after forty years of operation as a Faculty within the Royal Australasian College of Surgeons, ANZCA is directly responsible for the training, examination and specialist accreditation of anaesthetists and pain medicine specialists, and for the standards of clinical practice in Australia and New Zealand.

The internationally recognised Geoffrey Kaye Museum of Anaesthetic History, established in 1939 and named after Dr Kaye in 1958, currently consists of over 8000 objects, providing a significant insight into the many developments of this specialty.

As is the message conveyed to the Museum visitor, many of today's operations on the very young, old and ill have been made possible by the continuing advancement and improved safety of anaesthetic techniques. Anaesthetic practice today is a far cry from the comparatively unsophisticated practices of the past.

The Museum, in addition to holding many objects 'traded' by Kaye with his contemporaries from America and Europe, also holds many of his personal papers and manuscripts. These papers contain a great deal of information, including his recollection that, in 1927, Australia had only three full time anaesthetists.[4]

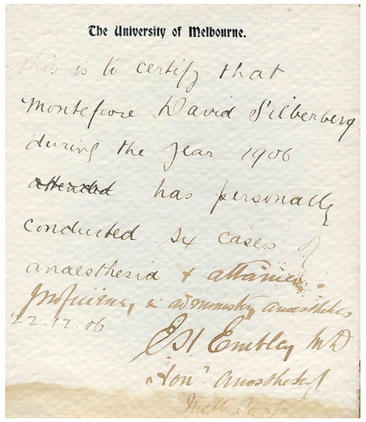
In the early 20th century, there was no formal training or examinations and one learnt how to administer anaesthetics by following the more senior anaesthetists around the hospital and learning by example. There was little formality about the process as indicated in the illustrated 1906 certificate of proficiency.[5]

Anaesthesia was introduced into Australia in 1847. From this time, most anaesthetics were administered by general practitioners, usually ether and chloroform simply administered by the open drop method. Today there are a little over 5000 active Fellows and just under 1700 trainees, at various stages in their five year training program; a training program that commences only after the candidate has already graduated as a medical practitioner and practiced for a minimum of three years!

In the exhibition *All in a Day's Work*, currently on display at the College, the visitor will see a copy of the January 1847 publication of *The Illustrated London News* article[5] describing the October 16, 1846 demonstration at the Massachusetts General Hospital of 'The new means for rendering surgical operations painless' and the inhaler used. This article, after making the long and often treacherous journey to the colonies, prompted Dr John Belisario (dentist, Sydney) and Dr William Russ Pugh (surgeon, Launceston) to independently make ether, design and make an inhaler, and successfully administer anaesthesia for a painless procedure. Both coincidentally conducted these successful experiments on the same day, June 7, 1847.

Below, top: **a certificate declaring a students progress in leaning anaesthesia says '*This is to certify that [student name] during the year 1906 has personally conducted six cases of anaesthesia and attained proficiency in administering anaesthetics.*'**

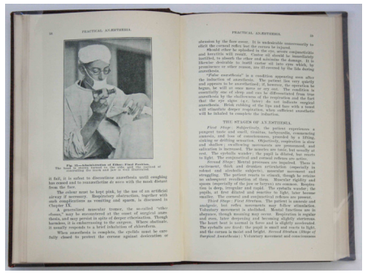
Bottom: **photo from 1932 of Dr Geoffrey Kaye demonstrating the final position of ether administration and instructing the practitioner that '*the colour* [of the patient] *must be kept pink, by the way of artificial airway if necessary.*'**


The University of Melbourne.

This is to certify that Montefiore David Silberberg during the year 1906 has personally conducted six cases of anaesthesia & attained proficiency in administering & administering anaesthetics

12.12.06

P.H. Embley M.D.
Hon. Anaesthetist



The exhibition also showcases the enormous advancement of the practice of anaesthesia since 1847. It demonstrates the continuing developments in equipment, the rapid growth of pharmaceuticals and their affect on human physiology, and the vast improvements in patient safety through sophisticated methods of monitoring.

Maria Drossos, Geoffrey Kaye Museum of Anaesthetic History at the Australian New Zealand College of Anaesthetists (ANZCA). The collection is open during business hours. For more about the Museum visit: http://www.anzca.edu.au/resources/geoffrey-kaye-museum

[1] Kaye G. Practical Anaesthesia. ed. The Baker Institute of Medical Research. Australasian Medical Publishing Company, Ltd, NSW. 1932.

[2] Kaye G, Orton R, Renton D. Anaesthetic Methods. Melbourne: Ramsay Surgical Pty Ltd, 1946.

[3] Westhorpe R. Geoffrey Kaye – a man of many parts. Anaesth Intensive Care, 2007.

[4] Kaye G. Anaesthetics since 1927: people and ideas. 1965. Kaye's personal paper. GKMAH Collection.

[5] The Illustrated London News. 9 January 1847.

Mistakes Were Made and Survived

SEAN KELLEY, EASTERN STATE PENITENTIARY HISTORIC SITE

Below: **Albumen silver print, *Railroad Accident Caused by Rebels*, by A.J. Russell (photographer) [American, 1830 - 1902], 1862 . Image from The Getty through the Open Content Program.**

During the American Alliance of Museums conference in Baltimore this year there was a session called Mistakes Were Made. It was so popular that 150 delegates were turned away from the packed seminar room. INSITE asked the session's Chair, Sean Kelley to tell us some of the take-home messages from the experience.

As museum professionals, we aren't particularly good about admitting our mistakes. There is a reason for this, of course. We answer to our direct supervisors, to our boards of directors, to government institutions, to funders, and to the public we ultimately serve. It's a landscape thick with potential criticsim. But how many times have you sat in a professional conference, watching slide after slide of smiling children in beautiful exhibits and thought, *"No way...tell me how it really went?"*

I started chairing a session at the annual meeting of the American Alliance of Museums called *Mistakes Were Made: Resources Squandered, Deadlines Missed, Stakeholders Alienated* simply to introduce a different tone. The game-show format awards a trophy to the audience member who admits the biggest mistake, and the lesson it taught.

Contemplating mistakes helps us gather our thoughts and reflect on where, exactly, we went wrong. Admitting mistakes steels us against a repeat of the same error- the most painful of mistakes. These discussions allow others to gain from our painful experiences, and they encourage our colleagues to share their own cautionary tales for our benefit.

And admitting mistakes conveys confidence. I've been surprised by how many colleagues have declined the invitation to open the session with me by admitting a big mistake. They say it would reflect badly on them or their institutions. But I think they're mistaken: a carefully-considered reflection on how things went wrong lets our colleagues know that we don't see this as acceptable, and that we're mature and disciplined professionals.

Or does it? I've noticed a second trend in the session. A handful of colleagues will delight in the ineptitude of their institutions. *"We wasted a ton of money! You have no idea!"*

Am I normalizing a lack of accountability in our field? That would be a mistake indeed.

Sean Kelley, Senior Vice President Eastern State Penitentiary Historic Site, Philadelphia
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Read David Reeves' excellent paper on things going wrong at: http://www.registrars.org.au/wp-content/uploads/2008/08/reeves-d_2006_bubble-toil-trouble.pdf