

70 Years of Healthcare Science fit for a Queen!

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As we celebrate The Queen's Platinum Jubilee, it gives us a moment reflect on how healthcare science has changed in those 70 years.

Naturally, the greatest obvious development has been the change from analogue to digital data recording and analysis and arguably the birth of bioinformatics around that. However, Table 1 (Source: Wikipedia, May, 2022) shows some pivotal (or just interesting) events from the last 70 years relevant to our current practices as healthcare scientists. Many of these steps only happened because of the amazing science and scientists in the background testing the theory and practice.

TABLE 1.

Year	Key event	Key people
1952	First identification of Haemophilia B	Robert Gwyn Macfarlane et al.
1953	Publish "Molecular Structure of Nucleic Acids: A Structure for Deoxyribose Nucleic Acid"	Watson, Crick & Rosalind Franklin
1955	A German IBM typewriter salesman, coins and popularizes the term "Textverarbeitung" ("word processing")	Ulrich Steinhilper
1957	A report by the Medical Research Council (UK) reveals evidence to support a link between tobacco smoking and lung cancer	Doll and Peto et al
1958	First clinical implantation into a human of a fully implantable artificial pacemaker takes place at the Karolinska Institute, Sweden.	Pacemaker designed by Rune Elmqvist and surgeon Åke Senning.
1961	The first Poly-U-Experiment in the United States, opening the way to solution of the genetic code, a key event in modern genetics (MRSA) is first discovered, in the United Kingdom.	J. Heinrich Matthaei

1962	An English orthopaedic surgeon makes the first successful whole hip replacement operation at Wrightington Hospital, Wigan.	John Charnley
1963	The first lung transplantation	James D. Hardy
1966	An artificial heart is installed in the chest of in a patient in a Houston, Texas.	Adrian Kantrowitz
1967	The first successful human heart transplantation, at Groote Schuur Hospital in Cape Town, South Africa, on Louis Washkansky.	Dr Christiaan Barnard and team
1968	In what becomes retrospectively known as "The Mother of All Demos" at Stanford Research Institute's Augmentation Research Center demonstrates for the first time the <u>computer mouse</u> , the <u>video conference</u> , <u>teleconferencing</u> , <u>hypertext</u> , and a collaborative real-time editor	Douglas Engelbart
1971	X-ray computed tomography, is first used on a patient with a cerebral cyst at Atkinson Morley Hospital in Wimbledon, London.	Godfrey Hounsfield
1973	Production of monoclonal antibodies involving human–mouse hybrid cells is first described	Jerrold Schwaber
1976	Dementia with Lewy bodies is first described by Japanese psychiatrist and neuropathologist	Kenji Kosaka
1977	The first magnetic resonance imaging body scan of a human performed.	Dr Raymond Damadian with Larry Minkoff and Michael Goldsmith
1978	Louise Brown becomes the world's first human born from in vitro fertilisation, in England	Mr Patrick Steptoe and team
1979	The World Health Organization certifies the global eradication of smallpox.	WHO

1980	First clinically useful image of a patient's internal tissues using magnetic resonance imaging (MRI) is obtained using a full-body scanner at the University of Aberdeen	John Mallard
1985	DNA is first used in a criminal case	Alec Jeffreys
1990	The Human Genome Project is founded.	Dr Francis S. Collins
1993	The Cochrane Library launched	Archie Cochrane
2000	'Rough draft' of the human genome is announced	Genome Reference Consortium (GRC)
2010	Cambridge University researchers develop an artificial pancreas to help regulate blood sugar levels in children with Type 1 diabetes.	Roman Hovorka, PhD, Janet M Allen, RN Daniela Elleri, MD et al
2015	Nobel Prize for Medicine: Discoveries concerning a novel therapy against infections caused by roundworm parasites and Discoveries concerning a novel therapy against Malaria.	William C. Campbell and Satoshi Ōmura Tu Youyou
2020	Coronavirus Sars2 Pandemic begins outside China	Everyone
2021	Global pandemic leads to creating vaccines in record time	Multiple scientists
2022	Queen's Platinum Jubilee – UK scientists continue to change the world of healthcare.	All healthcare scientists

Also during the last 70 years, healthcare scientists have evolved themselves. In 2011 the Academy for Healthcare Science (AHCS) was established to act as an overarching professional organisation to represent all healthcare science profession collectively, by becoming greater than the sum of its parts and representing all our professions.

Since 1952 there has been a large increase in professional bodies to mirror the huge development in technology and scientific disciplines as the NHS and healthcare generally has expanded.

It is very likely that the next 70 years will see even more “new sciences” and professions emerging in healthcare.

We have an enormous legacy created in the last 70 years which the Queen has overseen. Many of our scientists from all backgrounds have been honoured by the Queen with MBEs, OBEs and knighthoods/damehoods, but this only touches the surface of the amazing scientific contribution we have all made to our professions and patients since 1952.

We congratulate Her Majesty on her achievements and for witnessing and recognising so many of ours.