

Title: Derek Hoy: a legacy for Nursing Informatics in Scotland

Authors:

Siobhan O'Connor (B.Sc., RN, FHEA)^a

a School of Health and Social Care, Edinburgh Napier University, Edinburgh, United Kingdom

Nick Hardiker (RN, PhD, FACMI)^b

b School of Nursing, Midwifery, Social Work and Social Sciences, University of Salford, Salford, United Kingdom

Corresponding Author: Siobhan O'Connor, Room 4.B.29, School of Health and Social Care, Edinburgh Napier University, Edinburgh, EH11 4BN, United Kingdom. Email address: S.OConnor@napier.ac.uk. Twitter: @shivoconnor

Abbreviations:

A Generic Nursing Information System (AGNIS)

Access to Local Information Systems to Support Self-Management (ALISS)

Effective Purchasing and Providing in the Community (EPPIC)

Information Technology (IT)

National Health Service (NHS)

Letter to the Editor

Nursing informatics as a recognised discipline within the nursing profession began to emerge in the 1950s and 1960s as information technology (IT), like electronic health records and other computer systems, began to be used in hospitals and healthcare facilities in the United States [1]. From here the speciality expanded internationally as nurses in other countries saw the potential for technology to improve nursing and patient care in acute and community settings. In Scotland, an innovative intensive care nurse based in Edinburgh, Derek Hoy, realised the benefits electronic health records and other forms of IT could bring to nurses working in the National Health Service (NHS) (see Figure 1). A Florence Nightingale Foundation Scholarship enabled Derek to spend time in the United States studying information systems, with eminent scholars such as Dr Virginia Saba, Dr Susan Grobe and Dr Diane Skiba. He returned with in-depth knowledge of nursing informatics and health informatics more broadly, which he quickly applied in the development of a number of novel initiatives that improved frontline services and patient care in Scotland and beyond [2].

In the early 1990s, Derek joined the national IT department of NHS Scotland to develop nursing information systems and his knowledge of programming enable him to create a prototype application called 'A Generic Nursing Information System' (AGNIS) to capture nursing assessments, interventions and care plans. This went on to be widely used in a number of countries as an educational tool for nursing students. He followed this with work on the Scottish Health Service EPPIC (Effective Purchasing and Providing in the Community) project to use minimum patient and nursing datasets in combination with mobile devices (a DOS palmtop computer at that time) to improve community health services [3]. This led to the creation of electronic discharge summaries and care summaries that are still in use today, to

improve communication and coordination between health professionals. A few years later, Derek led on the development of the ‘Access to Local Information Systems to Support Self-Management’ (ALISS, <https://www.aliss.org/>) portal, which was created to support people with long-term health conditions to access information and services in their local community via online resources and this tool is still widely used in Scotland today [4].

Derek also made an impact on the international nursing informatics scene through initiatives like Telenurse, which promoted the adoption and use of the International Classification for Nursing Practice and a clinical nursing minimum dataset. These data standards for digital patient care and nursing records were important to lay a common electronic documentation infrastructure for nurses across Europe. This enables nursing activities to be recorded and monitored to improve the care delivered [5-6]. He also helped spearhead the WiseCare (Workflow Information Systems for European Nursing Care) programme which brought together clinical experts with people from computer science to build a knowledge management system that captured and shared the experience and work of oncology nurses to improve the care of cancer patients [7]. Derek’s vision to put technology at the centre of the health service to support patients and nurses in various settings makes him stand out from his contemporaries in Scotland and the United Kingdom, many of whom still do not appreciate the value IT can bring to healthcare and nursing today.

Outside work, Derek was an accomplished fiddle player. However, even in this unlikely space he saw opportunities for informatics and developed a number of applications that continue to support Scottish folk music. From the early innovations in nursing informatics, Derek moved into education as a Research Fellow at Glasgow Caledonian University and he also provided

consultancy services to the Chief Nursing Office and the Scottish Government [8]. He was heavily involved in the Nightingale project to create educational material and textbooks on informatics for nursing students all over Europe [9]. Later in his career he continued to work through the Snowcloud partnership (<http://www.snowcloud.co.uk/>) with international nursing researchers, for example from the Netherlands, to develop quality information tools for clinicians. Derek had brief forays with private industry in the health informatics space and did some work with Ocean Informatics in the late 1990s, which continues to develop open access electronic health record archetypes.

After a decade or more of work in nursing informatics, he was commissioned by the Scottish Executive in 2005 to explore the feasibility of national electronic clinical templates for nursing in the community. For this, he and others developed an open source web framework for collaborative development of clinical templates and other information standards to get clinicians engaged in this process of standards development [10]. While it was not possible to fully implement this solution for many practical reasons, it led to improvements in the development of health information standards in Scotland. Derek also won a prize for best paper on this project at the 2007 MEDINFO conference in Australia [11].

Derek Hoy's writing spans a twenty year timeframe from the early 1990s right up until his death in 2012, demonstrating his commitment to developing nursing informatics in the United Kingdom and further afield. His contribution will extend for many more years to come as the initiatives he started spawn further improvements in health information systems and he continues to inspire the next generation of nurses to take up leadership roles in informatics in the health service. His article in the Nursing Standard in 2009 advocates for paperless clinical

environments so nurses have good quality, timely information to deliver safe, effective patient care which is a goal nurses and others are still working towards in the NHS today [12]. The British Computer Society - Health Scotland group set up a memorial lecture to honour the great contribution Derek made to his field throughout his career. Notable speakers at this annual memorial lecture series have included Paula Procter, from Sheffield Hallam University, and more recently Professor Nick Hardiker from the University of Salford, who continue to promote nursing informatics in the UK and internationally to ensure Derek's great legacy lives on.

Conflict of Interest

None

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