

Clinically based research and teaching: the importance of precincts in fostering embedded practice.

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Historically, hospital based research and teaching have played a crucial role in medical science and the development of health care systems. There has, however, been a general neglect of the role of hospital-based embedded research in surveys of innovation systems and in contemporary public policy (and funding models). This reflects a wider neglect of the role of embedded practice in other professional domains as well, especially in architecture and the built environment, and in the arena of sustainable ecosystems. In retrospect and with hindsight I acknowledge that this was one area where there was a gap in the comprehensiveness of last year's Review of the National Innovation System.

Consideration of precinct development around sites like the Pharmacy Australia Centre of Excellence (PACE) and the Princess Alexandra Hospital site in Brisbane provide an important and timely opportunity to address this issue of embedded practice on a systemic and comprehensive basis, linking teaching and research, industrial R&D, with new models and platforms for enhanced health care service delivery and coordination.

The neglect of this area has resulted in inadequate funding support for hospital and related research, as highlighted recently by Professor David Penington:

"Funding for research infrastructure had been secured for universities in 1990, and was also introduced for medical research institutes from 2005, but is not provided for hospitals which struggle even to fund necessary administrative support for their Human Research Ethics Committees. The Australian Health Care Agreements referred to neither research and development, nor bridging the gap between hospitals and community-based care as service. This situation needs to change."²

Penington's reform proposals involve not only redressing this neglect, but going further to expand the cluster of activities around such research. His agenda for the future has immediate relevance to any discussion of precincts in the field and, in fact, Bio 21 in Victoria is a partial step in the right direction. There is, however, the opportunity to go further, with higher prospective returns in fields of interest not only to scientists but also to the community at large.

Proposed solutions to the problems facing health care in Australia³

- Recognition and support should be given to reinvigorating the partnership between major teaching hospitals and universities, in clinical services and related research as well as in education, involving all health services.
- Teaching hospitals must interface effectively with primary care and preventive health. Medical schools with their departments of public health and general practice must support this development, and must work with general practice networks.

¹ Terry Cutler is the Chairman of the PACE precinct development in Brisbane (see <http://www.paceprecinct.com.au/>). During 2008 he chaired the Australian Government's Review of the National Innovation System.

² David G Penington, "Rediscovering university teaching hospitals for Australia", *Medical Journal of Australia*, Volume 189, Number 16, 15 September 2008, p. 334

³ *Ibid.*

- New initiatives using broadband information technology facilities need to become part of this mix, with common patient identifiers and records. They can provide the means to link data across the health care system, support family practice with information, and track health outcomes.
- Existing links between major teaching hospitals, community hospitals and regional hospitals for both medical education and postgraduate training need to be formalised in a “hub and spoke” model so that education, research and development involve a wide network. Better links with general practice are essential for aged care, diabetes care, mental health and overall patient services.
- A portion of new federal government funding foreshadowed for health care should be sequestered and managed through a new agency for health development and quality associated with both the Department of Health and Ageing and the National Health and Medical Research Council. This agency should oversee and fund programs for research and for prevention, in partnership with the state governments and hospitals, with special focus on
 - innovation and assessment of the quality and outcomes of all health services, both public and private, and provide support to university hospitals and other agencies to meet the real costs of service-related research.
- The next Australian Health Care Agreements must commit state governments to collaborate with the new agency in developing Australia’s health system.

Neither *Venturous Australia*, the 2008 report from the Review of the National Innovation System nor the December 2008 – released in February 2009 - Report from the National Health and Hospitals Reform Commission addressed these issues head on, leaving them as an unfinished part of the innovation, economic development, and health care reform agenda. It is noteworthy that this challenge of investment in hospital and community based clinical research has received robust attention of late in the UK. Edward Byrne, the Vice Provost of the University College London Medical School, notes⁴ that:

“Although several models are evolving, they have two common principles. First, the university and affiliated hospital sector will jointly own and plan research and teaching. Second, clinical programmes will be academically aligned, with the belief that research and teaching experience will underpin better clinical outcomes for both hospital patients and communities. This might be a good model for some partnerships between Australian Universities and teaching hospitals”.

In addition, the wider issue of promoting “embedded practice” in teaching and transdisciplinary research is an important, if neglected, aspect of enhanced and more effective industry and research linkages. A fresh and vigorous policy approach to precinct development and activity collocation is an opportunity to address these challenges, and address them in new and innovative ways.

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 March 2009

⁴ Edward Byrne, “UK Initiatives to increase clinical research capacity hold lessons for Australia”, *Medical Journal of Australia*, Vol. 190, No. 4, February 2009, p. 172