By Dr Jeremy Lim, Editorial Board Member

Academic Medicine versus Public Healthcare – A False Dichotomy

There is a fear that despite the potential benefits of academic medicine, its promotion will lead to a spiralling of societal healthcare costs. Concerns also abound that academic medicine in the public sector will be buffeted by unwarranted demand that we politically cannot turn away. The author offers an alternative view that seeks to disabuse the notion that academic medicine is expensive and cannot be part of the public healthcare offerings.

SOCIETY BENEFITS FROM ACADEMIC MEDICINE, BUT...

The medical community has been abuzz with murmurings of academic medicine being the next frontier of medicine in Singapore. The gist of the argument for academic medicine is three-fold: it will allow realisation of the investments in biomedical research through clinical improvements, and secondly, cutting edge high-end medicine as exemplified by academic medicine must be Singapore's value proposition to the sought-after one million foreign patients targeted in the SingaporeMedicine initiative. Finally, the rigour and scholarship associated with academic medicine will elevate the standards of healthcare in general[1].

Despite the rosy scenario, there are concerns that academic medicine will create unrealistic expectations and demands amongst the public and that the emphasis on research and education inherent in academic practice will translate into a general elevation of healthcare costs. Some authors have thus voiced the possibility that any proposed academic medical centre (AMC) be metaphorically situated in the mountains, distinct from the public hospitals and functioning in exclusivity. I would argue that this dichotomy is artificial and unsound and that academic medicine and public healthcare actually go hand-in-hand; they can and must be mutually catalytic for each to reap the full benefits of academic medicine for Singapore and Singaporeans.

Let us discuss the issues as two distinct ones: the first that academic medicine is expensive and the second that academic medicine should be practised distinct from the public hospitals.

IS ACADEMIC MEDICINE REALLY MORE EXPENSIVE?

The instinctive answer is 'YES', and it is natural that the cost of care delivery in an AMC should be higher in view of the additional duties of research and education. In fact, in South Korea, university hospitals enjoy 20% more in reimbursements for the same case compared to a district general hospital. However, this simplistic computation fails to take into account the positive externalities that AMC effect and the opportunity cost of poor care in hospitals ill-designed to manage complex cases. If we optimise the utilisation of AMC and the discoveries emanating from them, academic medicine may actually lower costs.

CONCENTRATING EXPERTISE AND COMPLEX CASES IN THE AMC

The scientific literature is replete with studies illustrating the better outcomes and lower costs for complex procedures carried out in high volume centres. The business world calls this 'the experience curve' as coined by the Boston Consulting Group, but the principle is intuitive: the more one does of anything, the better and cheaper one can do it. There is a severe opportunity cost to sub-optimal care. Can we reduce the global costs of medical complications and poor outcomes if we encouraged centralising of care of complex cases in the AMC? The published data is promising: a recently released meta-analysis of carotid endarterectomies found "significantly lower mortality and stroke rates"[2] in higher volume centres while another review of knee arthroplasties suggested that low volume centres may have 26% higher expected mortality compared to high volume centres[3].

Dr Lim is Director, Policy and Research for Singapore Health Services and heads the health services research programme for the cluster. This commentary is contributed in his personal capacity.

Page 30 ►

◀ Page 29 – Academic Medicine versus Public Healthcare – A False Dichotomy

DIFFUSING RAPIDLY BEST PRACTICES

It has been estimated that the lag time between discovery and widespread dissemination and practice changes in medicine can be as long as 16 years. If we are able to diffuse the best practices discovered by Singapore AMC quickly to other hospitals, say in one rather than 16 years, is it not inconceivable that the quickened practice changes in other hospitals will result in better care at lower costs to patients and society? A rising tide will carry all ships and AMC can play a very powerful role in raising standards across the country.

MUTUALLY CATALYTIC

The public sector must be the home of the AMC. Public hospitals and AMC are inextricably linked in four ways which are also mutually catalytic: Firstly, without resonance and relevance to the average Singaporean, the heartlanders in Ang Mo Kio, AMC will not be able to recruit sufficient numbers of patients for education and research. Secondly, without a strong social mission of caring for the under-privileged, AMC run the risk of producing for Singapore technocratic physicians for whom patients are simply subjects or specimens. Thirdly, academic practice is the only value proposition that the public sector can offer to its best doctors to counter the financial allure of the private sector. The opportunity to do cutting edge medical research and leaving through teaching and mentoring, a human legacy of a whole generation of fine physician practitioners and scholars are what motivates the very best and brightest to remain and produce social goods that benefit the entire nation and the world[4]. Finally and very pragmatically, without a social mission impacting very tangibly on the man in the street, AMC which typically relies heavily on philanthropy for financial viability[5] must remain dependent on government largesse in perpetuity.

OVERCOMING UNWARRANTED DEMAND

How then do we address the concern of overwhelming demand for the services of the AMC, regardless of how inappropriate these demands may be? The answer may lie in clinical triage – access to AMC based on clinical indications. Oesophageal tumours and rare cardiac arrhythmias can and should be treated only in an AMC setting. Conversely, the majority of groin hernias can and should be managed in district hospitals with only some gravitating to AMC to meet training needs.

If the rules are established and adhered to through public education and strict controls, we can optimise the scarce resources of the AMC to best serve societal needs. To keep our end of the social compact with the people however, AMC must work with the Ministry of Health and philanthropic bodies to ensure that Singaporeans who need AMC-levels of care are not deprived due to financial reasons. The AMC will be a doomed enterprise if its value is confined to only the rich.

THE BEGINNING OF THE BEGINNING

We are beginning our journey towards establishing world-class academic medical centres and it will be a long and difficult one. Nonetheless, it is the right path for Singapore to take. The potential benefits of academic medicine for all Singaporeans are clear enough while the concerns over costs and organising structure can be overcome. Academic medicine can raise healthcare to the next level as it has done in so many other countries and Singaporeans deserve no less. ■

References:

1. ***Academic medicine is described by Flexner as thoughtful clinicians pursuing research stimulated by the questions that arose in the course of patient care and teach their students to do the same. To Flexner, research was not an end in its own right; it was important because it led to better patient care and teaching. Cited in Cooke et al. American Medical Education 100 Years after the Flexner Report. New England Journal of Medicine 2006, Volume 355:1339-1344***
2. ***Holt PJ et al. Meta-analysis and Systematic Review of the Relationship between Hospital Volume and Outcome Folloing Carotid Endarterectomy. Eur J Vasc Endovasc Surg 2007 March 30***
3. ***Soohoo NF et al. Primary total knee arthroplasty in California 1991 to 2001: does hospital volume affect outcomes? J Arthroplasty 2006 February;21(2):199-205***
4. ***David Blumenthal, Executive Director of the Commonwealth Fund Taskforce on Academic Health Centres, described in an interview in 2000 the social goods produced by AMC as including "basic and clinical research, as well as epidemiology and health services research; they include some components of the education of medical schools – of medical students and other health professions, as well as graduate physicians and graduate training". http://www.pbs.org/newshour/bb/health/july-dec00/amc_blumenthal.html (Accessed 12 April 2007)***
5. ***The Mayo Clinic for example receives approximately USD270 million annually in gifts and private grants from a base of 70,000 donors and well-wishers.***