Challenges in academic medicine in Brunei Darussalam

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INTRODUCTION

There can be no doubt that research i.e. the endeavour towards the resolution of scientific uncertainty for the advancement of knowledge, is fundamental to patient care. However what may be less certain is how such endeavours can succeed in the face of limited human resources and physical infrastructure coupled with newly developing research governance. In addition, there are specific challenges facing researchers worldwide which include maintaining quality of healthcare as well as challenges of translational research i.e. utilising basic science discoveries in improvement of patient care.

A previous editorial has touched on the fact that research in Brunei Darussalam is in its infancy. [1] In particular it was stated that the establishment of the Clinical Research Unit (CRU), Ministry of Health (MOH) and the re-launch of the BIMJ is hoped to have resurrected the drive towards publication. However as the BIMJ approaches the 1st anniversary of its re-launch, it seems timely to ask ourselves whether we are succeeding in terms of producing more research of high quality and pertinent in directing our response to the health needs of Brunei Darussalam.

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The state of research in Brunei Darussalam is at an important stage; the MOH is in the process of determining the research blueprint for Vision 2035 [2], building research capacity strength at academic institutions such as Universiti Brunei Darussalam (UBD) is gaining momentum whilst individual health researchers continue to produce research and publish in peer-reviewed journals. Amongst all of this there is potential for a waning of ethics, inefficient use of limited resources and misdirection of research effort.

REGULATION OF RESEARCH

It is interesting to note that in a commentary on strengthening research capacity in India published in the Lancet in 2007, regulatory reform and ethical practices had failed to keep pace with advancement in research capacity. [3] It will be important that there is ongoing support for the MOH's Medical and Health Research Ethics Committee (MHREC) and other important bodies such the CRU. Regulatory bodies such as these will need to

strengthen their roles in safeguarding patients at the same time as the MOH develops guidelines of clinical governance and ethics which will encompass issues such as consent and confidentiality.

Increased research funding will demand increased activity and thus closer scrutiny. Hence there is the constant need to ensure quality of research produced as well as robust ethics. Tools that can be utilised to improve the quality of publications include the Consolidated Standards of Reporting Trials (CONSORT) [4] for randomised clinical trials, Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) [5], for observational studies and the Standards for Reporting of Diagnostic Accuracy (STARD). [6]

FINANCIAL CONSIDERATIONS

Budget remains a major consideration for many researchers, particularly in the clinical setting. Currently, the United States and Japan have the highest budget allocations worldwide earmarked solely for research, including health research. This is reflected in the number of scientific publications that comes from these two countries. Research budget allocations are shown in Table 1. [7-13] Apart from government agencies, other important sources of funding are charitable organisations and pharmaceutical companies.

Due to many competing needs, research is often neglected in budget priorities. However, one cannot escape the fact that research requires significant investment. In the United Kingdom which has a long history of research, the National Health Service (NHS) provides a rich source of research opportunity. It is well recognised that clinical research, unlike other types of research, requires close collaboration between the NHS and the universities because it is only with the support and integration of academic centres into the NHS that such work can occur. Financial incentives are essential, in that such partnerships need to be financially neutral (or beneficial) for the clinical institution and the academic institution has to have sufficient financial resources to support this activity. [14]

ACADEMIA AND CLINICIANS

In this issue of the BIMJ we read about the commendable efforts of UBD in their research efforts by way of 10 different research

Table 1: Allocated budget for Medical and Health Research in different countries.

Countries	Institution	Year	Amount	BND equivalent *
United States	National Institute of Health	2010	31.2 billion	39.31 billion
United Kingdom	Medical Research Council	2005	£546 million	1.1 billion
Canada	Canadian Institutes of Health Research	2009	917 million	1.2 billion
Japan	MHLW, MEXT and METI	2007	¥215.5 billion	2.16 billion
Sweden	Swedish Research Council	2006	570 million Kronor	114 million
Australia	National Health & Medical Research Council	2009	703 million	920.9 million
Singapore	National Research Foundation & National Medical Research Council	2010	57 million	57 million

Note: Figures provided are government allocated budgets excluding funding from charitable organisations and pharmaceutical companies.
BND: Brunei dollar; MHLW: Ministry of Health, Labour, and Welfare; MEXT: Ministry of Education, Technology, and Science; METI: Ministry of Economy, Trade and Industry.
* Based on currency exchange rate on 2nd April 2011

clusters (the three in health being obesity, ageing and cancer) that bring together trans- and multi-disciplinary collaborators to promote research. [15] Hopefully this report will showcase areas of potential collaboration between academia and our own NHS which does indeed have a wealth of potential data. Importantly however, attention should be given to how academic institutions in Brunei Darussalam can identify ways in which clinicians can benefit from this collaboration, not just in research expertise but also in terms of infra–structure and financial support. This too will collectively contribute to better patient care.

The research cluster report also introduces UBD's intellectual property policy intended to safeguard research invention and innovation at the University. This raises the issue of data management and utilisation in any collaboration between MOH and UBD. There will therefore need to be prior thought given to data management and utilisation so that this does not become an area of dispute or conflict at a later stage.

RESEARCH PRIORITIES

Also in this issue of the BIMJ we have two original reports, one a comparison of automated peritoneal dialysis with standard chronic ambulatory peritoneal dialysis in Brunei Darussalam and the second a case series of fixed appliance orthodontic treatment duration in Brunei Darussalam. This exemplifies the diversity of clinical backgrounds in which research is done in Brunei Darussalam as shown in Figure 1. This wide range does not of course include unpublished research and research published in journals elsewhere. Often research priority areas will focus on perhaps the top few causes of mortality and morbidity. Certainly therefore, the UBD research clusters capture very significant areas of clinical research priorities. However for Brunei Darussalam as a small nation it is important that we do not limit our research priorities neglecting the areas which are not currently categorised as priority. It is also essential that the direction of research will be both effective and sustainable.

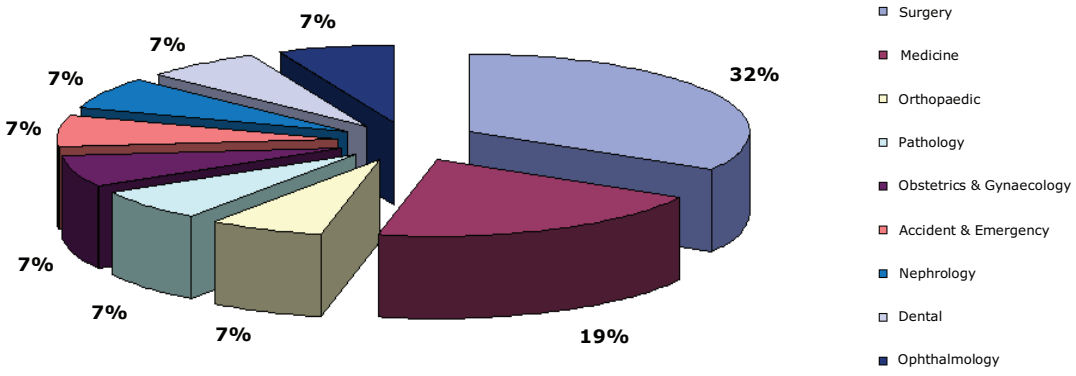

Fig. 1: Distribution by specialty of publications (original articles) in the Brunei International Medical Journal in the past year (Volume 6, issue 1 to Volume 7, issue 2).

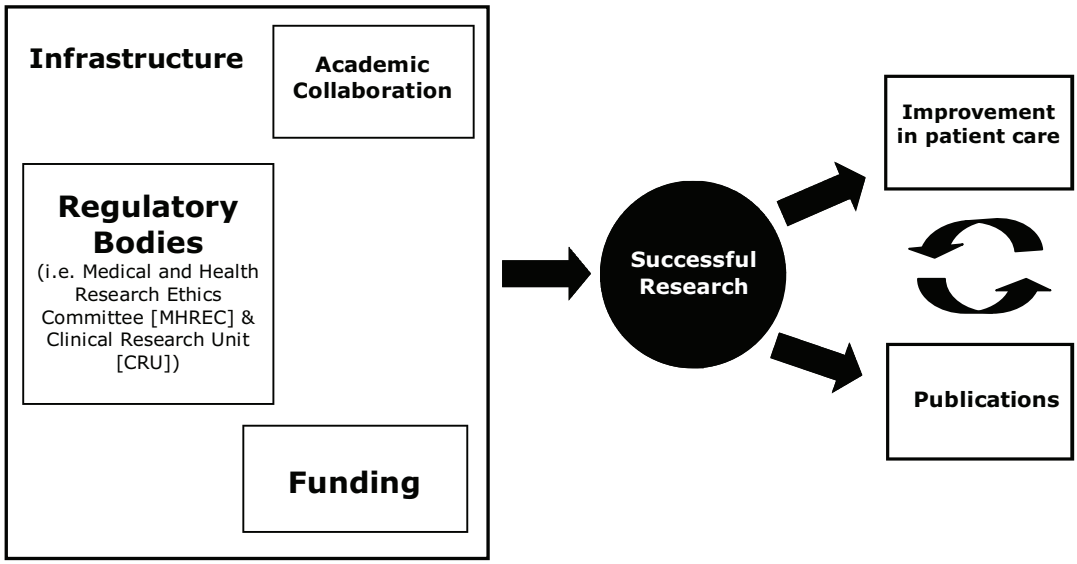

Fig. 2 : A proposed collaborative framework for research in Brunei Darussalam.

CONCLUSION

A concerted effort in broad, innovative capacity building is required at various levels including individual, departmental, institutional, ministerial and national with attention paid to mutually beneficial partnerships. It is important for clinicians and academics alike to campaign for research funding. Finally there is the need for strong research and scientific leadership. There is much that still needs to be done to establish a regulated, collaborative framework for research as shown in Figure 2. Generally, research can be conducted as long as there are those who are willing and interested. However, with the proper support such as funding, good infrastructure and collaborations, high powered scientific research is possible.

It is essential to remember that scientific discoveries or research findings are only useful if they are communicated to the wider community. Hence, it is always important that research findings are submitted for publication. However despite the huge effort required, we should be mindful of the need to maintain research integrity and not cut corners so that ultimately research produced will be ethical and of high quality.

DISCLOSURE

Dr Siti Nur'Ashikin PENGIRAN TENGAH is a member of the Ministry of Health's Medical and Health Research and Ethics Committee. Dr Vui Heng CHONG heads the Clinical Research Unit, Ministry of Health. They are both clinicians working for the Ministry of Health, Brunei Darussalam.

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