Perspectives – What's great about teaching hospitals?

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Hospitals offering formal clinical training to future and current health care professionals, while at the same time delivering patient health care, are referred to as teaching hospitals. Teaching hospitals date back to antiquity. For example, the Academy of Gundishapur in Persia was arguably the most important medical center during the 6th and 7th centuries. The academy not only systematized medical treatment and knowledge, but also introduced huge advances in medical education. Its students were required to work in the hospital under the supervision of the whole medical faculty, instead of simply apprenticing with just one physician, and its graduates had to pass exams in order to practice as accredited physicians.

The year 2012 marked another milestone in medical education in Brunei, with the formal accreditation of the two largest public hospitals in the country as teaching hospitals by the University Brunei Darussalam (UBD). Both the RIPAS (Raja IsteriPengiranAnakSaleha) Hospital and the Hospital SSBKualaBelait (Suri Seri Begawan Hospital) have a long history of active involvement in undergraduateas well as postgraduate medical education.For example, some departments in R.I.P.A.S. Hospital have beenaccredited by the Royal College of Physicians, Royal College of Surgeons, and Royal College of Paediatrics and Child Health of the United Kingdom for specialist training since 1982 onwards. In the year 2000, the hospital was accredited as a teaching hospital by Queensland University Hospital. (http://www.moh.gov.bn/medhealthservices/ripas02.htm) However, this is the first formal accreditation of both sites as teaching hospitals by the national university in Brunei Darussalam.

The accreditation process to be a teaching hospital is rigorous, and involves the attainment of 6 main criteria, viz.

- Adequacy of educational resources such as teaching personnel, teaching and research facilities and equipment and clinical training environment
- Evidence of teaching and training plans and outcomes, in particular the execution and results of teaching and training plans for students
- Conduct of research and documentation of results of research in the hospitals
- Development of clinical faculty in professionalism and pedagogy and their continuing education

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- Academic exchanges and community education, especially evidence on practical training collaboration domestically and continuing education of primary care physicians in the community
- Administration aspects e.g. the establishment of health education committees and performance assessment of teaching and research and subsequent improvement

This accreditation by the UBD is valid for 3 years, and will be a continuing process.

Given that the accreditation process is tedious and time consuming, and that additional resources are required for a hospital to fulfill its teaching role, it would be pertinent to ask "What is great about being a teaching hospital ?"Teaching hospitals are generally favorably regarded by not only the public and also colleagues in health care.For example, in the United States, major teaching hospitals are highly ranked in the top listing of "America's Best Hospitals". This list is prepared partly from theopinions of peer physicians. Both public and professional views may reflect features of teaching hospitals that are perceived to foster a higher quality of care. These include the ability to treat rare diseases and complex patients, the provision of specialized services and advanced technology, andconduct of biomedical research by teaching hospitals (Neely and McInturff 1998). Besides these characteristics, medical education and training is another distinctive mission of teaching hospitals, and that often includes innovations in clinical care.

However, there are potential downsides to teaching hospitals. Some hospital staff may feel that the time devoted to teaching, and the efforts expended to attain the requirements of being a teaching hospitalmay detract from their primary clinical duties and have an adverse impact on patient care. From the patients' viewpoint, some patients, and also their family members, may not like the idea of the patient being examined or cared for by trainee doctors, nurses or other health care professionals. Furthermore, patients with rare or interesting medical conditions might be subjected to repeated examinations by the trainee health professionals.

Quality of care in teaching hospitals

Ayanian and Weissman (2002) examined the most rigorous peer-reviewed studies published from 1985-2001 that assessed the quality of care and hospital-teaching status in USA. They found moderately strong evidence of better quality and lower risk-adjusted mortality in major teaching hospitals for elderly patients with common conditions such as acute myocardial infarction, congestive heart failure, and pneumonia. They suggested that some factors related to teaching status, such asorganizational culture, staffing, technology, and volume, may lead to higher-quality care. However, a few published studies found nursing care, pediatric intensive care, and some surgical outcomes to be better in nonteaching hospitals.

Teaching hospital culture and Student resources

Teaching hospitals have organizational cultures which possibly better address important quality of care issues such as system errors for patient safety, and the work environment for stasafety. In addition, the students in a teaching hospital can also be a valuable resource for service delivery and improvement of health care.

Taking the example of medical errors, residents in a teaching hospital highlighted what they perceived were remediable problems in teaching hospitals that contribute to medical errors, and proposed remedies for system flaws which contributed to the medical errors. (Volpp and Grande 2003) It is known that medical errors are often related to design of systems and are not directly the fault of front line persons. Such system design errors, or latent errors, reflect organizational flaws that increase risk of errors. On the other hand, active errorscan be thought of as directly attributable to the actions of persons. These two types of errors not mutually exclusive, and can exist concurrently. In general, health care systems have largely focused on corrective actions at individual level and often fail to adequately look at system-level approaches to preventing errors.

In their paper, Volpp and Grande (2003) cited examples of organizational changes that can be made to reduce error rates in teaching hospitals by using technology, improving the work environment and changing the academic culture. They offered a wide and diverse selection of recommendations, including:

- Administrative changes to paging systems to reduce interruptions with patient care by routine and non-urgent paging
- Use of computerized health information management systems to reduce medication errors
- Review and improvements to Information transfer e.g. improvements in signing out procedures, and handing over processes for continuing patient care
- Standardization of location of medical charts and layout of work environments to minimize unfamiliarity of staff who have to cover different wards in the hospital
- Encouraging hours of work that reduce likelihood of staff fatigue
- Standardization of training for procedures in health care
- Improving the organizational culture for reporting of errors, to encourage reporting practices
- Offering training in leadership and co-ordination of health care teams

To expand on the last two suggestions, it is known that many medical errors go unreported. A study showed that only 54% of house officers told their attending physician about the most serious errors they committed in the previous year (Wu, Folkman, McPhee and Lo 1991). Of the errors reported in that study, 31% had resulted in death. As these are major or the most serious errors, it is very likely that an even larger proportion of the less severe errors would have been reported. On a positive note, the authors reported that house officers who discussed their errors and accepted responsibility were more likely to report constructive changes in practice, compared to those who did not openly acknowledge their errors.

Having an organizational culture that encourages reporting and discussion of errors will allow effective error surveillance systems to be developed. Such systems can collect large amounts of data in an anonymous manner, and allow analysis of aggregate surveillance data. Such analysis often reveals patterns associated with system errors, which can then be addressed. Yet there is a valid concern that if errors are attributed primarily to systemic causes, health care workers may not learn from their errors. A balance must therefore be achieved that allows hospital staff and students to take personal responsibility for their errors, and to discuss them constructively as a means of facilitating collective learning and clinical practice improvement. (Casarett and Helms 1991)

Teamwork and Co-ordination among Health Care Workers

In hospitals, health care is delivered by teams of health care professionals instead of individuals. These teams require good leadership, communication, and coordination to function well and to minimize the risk of error. There may be little coordination among medical staff, nurses, pharmacists, therapists, social workers, and other allied health team members, with no system of organized interaction. This often stems from the circumstances where various health care workers are trained separately and then subsequently made to work together in the hospital environment. Perhaps there is a place for team based learning for the different health professionals starting from university education. In a multidisciplinary Institute of Health Sciences in UBD, medical, nursing and allied health students study together. A planned approach to coordination and communication among the various caregivers in the health care team can begin with team based training at the university level.

Work Environment and Staff Health and Safety

The hospital is a hazardous work environment. Demands for patient care can result in long working hours and work at a rapid pace. Thus, providing a safe and healthy work environment will be critical in order to boost wellbeing, morale and productivity of health care workers. Poor safety and health practices can contribute to illness, absenteeism, productivity loss, disability, even death - all of which can be prevented. Many occupational health functions already exist in various parts of the hospital e.g. infection control and biosafety, radiation protection, handling of cytotoxic drugs, hospital waste management, medical administration etc. However, these activities may not be co-ordinated under a central unit or managed by persons adequately trained in occupational health. Occupational health in hospitals is important, as all hospitals in Brunei have to comply with the Workplace Safety and Health Order of 2009.

Benchmarking and Accreditation

Benchmarking and accreditation of hospitals, including accreditation of its teaching status, will improve public trust and perception of the

organization. Such accredited hospitals build cultures that are open to learning from adverse events and safety concerns. Their collaborative leadership strives for excellence in quality and patient safety as well as staff safety and understand how to continuously improve clinical care processes and outcomes. The promotion of biomedical research in teaching hospitals will create knowledge that is directly applicable and benefit the local population.

In conclusion, what is great about teaching hospitals? They provide specialized services and advanced technology to treat rare diseases and complex patients, offer high quality of care and focus both on patient safety as well as staff safety, have a productive and collaborative university partnership with access to university resources and have the capability to conduct of biomedical research of national relevance. Such hospitals are benchmarked and accredited, and as a result are getting better all the time!

We congratulate RIPAS and SSB hospitals on their attainment of UBD teaching hospital status, andlook forward to continue working with them for delivery of quality care to Bruneians, and to develop the nation's healthcare workforce of the future.

References

1. Ayanian JZ and Weissman JS. (2002). Teaching Hospitals and Quality of Care: A Review of the Literature. Milbank Quarterly, 80: 569–593.

2. Casarett D and Helms C. (1999). Systems errors versus physicians' errors: finding the balance in medical education. Acad Med; 74:19-22.

3. Ministry of Health, Brunei Darussalam. (2012) Hospital RIPAS. (Raja IsteriPengiranAnakSaleha Hospital) http://www.moh.gov.bn/medhealthservices/ripas02.htm Accessed on 30 June 2012.

4. Neely SK and McInturff WD. (1998). What Americans say about the nation's medical schools and teaching hospitals. Report on public opinion research, Part II. Washington DC. Association of American Medical Colleges.

5. Volpp KGM and Grande D. (2003). Residents suggestions for reducing errors in teaching hospitals. New Engl J Med 348; 9: 851-55.

6. Wu AW, Folkman S, McPhee SJ and Lo B. (1991). Do house officers learn from their mistakes? JAMA; 265:2089-94.