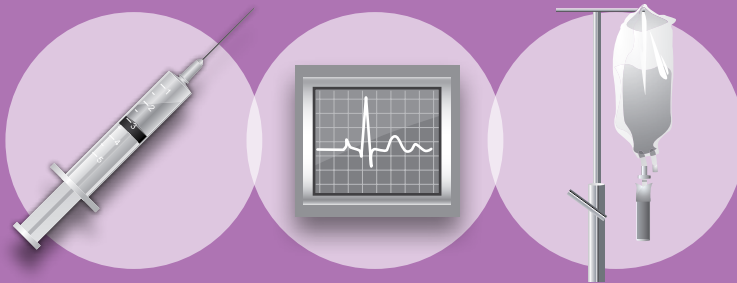
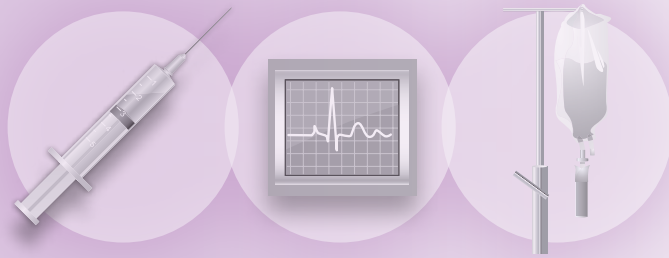


5

Introduction of Care Technician Services



Shared responsibilities for timely and quality basic care



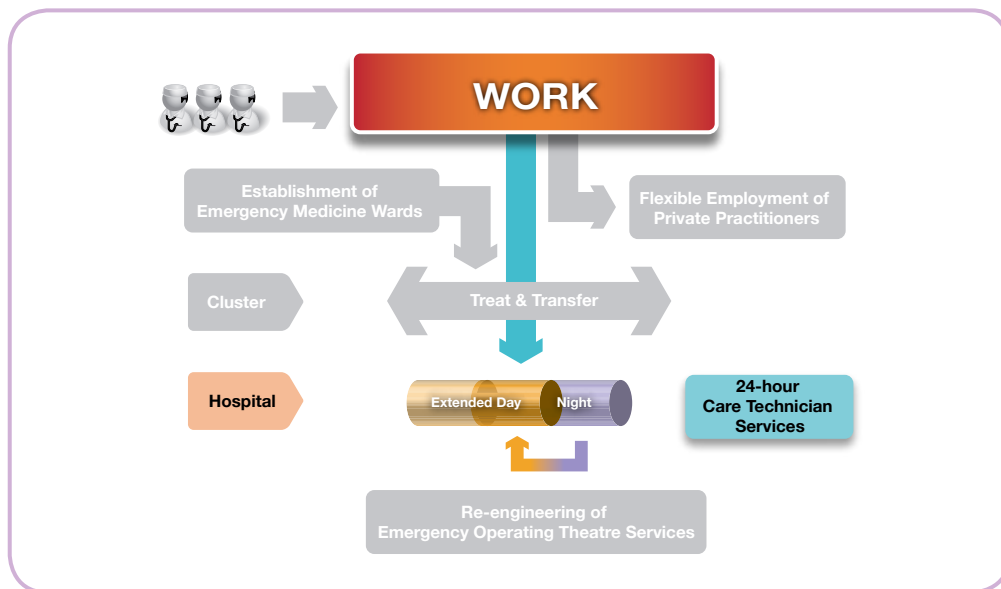
EXECUTIVE BRIEF

- 501 *To relieve doctors and nurses from technical tasks and mundane activities, 95 care technicians were recruited and trained to provide round-the-clock blood-taking, electrocardiogram and intravenous cannulation in six acute public hospitals. The programme was well received by both healthcare professionals and patients, for doctors and nurses could refocus their time on core clinical decision making and professional duties while patients would benefit from timely and safe fast-track services in public hospitals. It was estimated that a total of 11,117 doctor hours per month were saved in the pilot hospitals. Patient safety was assured with nil critical incidents reported so far; and there was great potential for HA to develop and expand the functions of well-trained non-medical staff to relieve the heavy workload of healthcare professionals in public hospitals.*
- 502 *HA was recommended to extend round-the-clock care technician services to all acute hospitals in order to improve patient services and relieve doctors and nurses for their core clinical and professional duties. Besides, HA was recommended to regularly review the scope of functions of non-medical staff, provide appropriate competency and refresher training and conduct periodic safety reviews with reference to the prevailing practice in overseas countries and the local private market, in order to further alleviate the workload of healthcare professionals and ensure that safe and quality services were provided as in line with the evolving healthcare needs of the society.*

PILOT WORK REFORM PROGRAMME

503 Earlier surveys on doctors' on-call activities revealed that as much as 16% of doctors' work at night was devoted to technical and mundane tasks that did not necessarily require their level of skill and would lengthen their work hours and affect their discharge of clinical duties¹⁶. With a view to relieving the heavy workload of frontline doctors and enabling them to refocus on core clinical services and professional training, HA set aside a total of \$23 million from 2007/08 to 2009/10¹⁷ and recruited 95 care technicians in the rank of Technical Services Assistant (Care Assistant) ["TSA(CA)"] to deliver round-the-clock blood-taking, electrocardiogram and intravenous cannulation in six acute public hospitals since December 2007¹⁸. A well-structured training programme was in place, alongside a variety of care management protocols and safety assurance mechanisms to ensure safe and timely fast-track services delivered to patients. Moreover, by providing a comprehensive system of technical support, more room could be created to revamp the work arrangements and on-site on-call systems of doctors in the concerned clinical specialties so that their work hours could ultimately be reduced. Figure 5.1 and Table 5.1 contained the gist of the work reform strategy and the implementation details in the pilot hospitals.

Fig. 5.1 – Introduction of Care Technician Services



¹⁶ The survey on doctors' on-call activities was conducted in 3 HA hospitals in February and March 2007.

¹⁷ Breakdown of the pilot funding as follows: \$4.2 Mn in 2007/08, \$9.5 Mn in 2008/09 and \$9.3 Mn in 2009/10 for recruitment of 1 nurse and 55 care technicians. The other care technicians were upgraded from serving supporting staff in the pilot hospitals.

¹⁸ The six acute public hospitals included Alice Ho Miu Ling Nethersole Hospital ("AHNH"), Caritas Medical Centre ("CMC"), Pamela Youde Nethersole Eastern Hospital ("PYNEH"), Princess Margaret Hospital ("PMH"), United Christian Hospital ("UCH") and Yan Chai Hospital ("YCH").

Table 5.1 – Implementation of Care Technician Services in Pilot Hospitals

	AHNH	CMC	PMH	PYNEH	UCH	YCH
Commencement of 24-hr care technician services	Mar 2008	Apr 2008	Feb 2008	Dec 2007	Mar 2008	Jan 2008
Size of care team* (Excluding SOPD service)	11	10	18	17	24	15

* As at June 2009

- 504 At the corporate level, the Central Work Group of Training on TSA(CA), comprising members in the medical, nursing and human resources disciplines, was set up to oversee the training needs, develop training strategies, ensure consistent training across hospital clusters and set standards of staff competence for delivering the care technician services in the pilot hospitals. On the other hand, the TSA (CA) Task Group under the Steering Committee would monitor the pilot programme implementation, share experience among the pilot hospitals and recommend the reform rollout plan to other HA hospitals.
- 505 In general, care technicians would undertake a 12-week mentored training programme, where they would be taught on blood-taking, electrocardiogram and intravenous cannulation. Work practicum, written tests and clinical assessments were arranged and trainees were required to perform blood-taking service for 230 hours and complete 50 cases of both electrocardiogram and intravenous cannulation under supervision before they would perform the tasks independently. Save for a few staff designated for certain busier acute units in the pilot hospitals, most of the care technicians were placed in the central pool under the management of professional staff, like nurses. Clinical management protocols and detailed work guides were formulated to delineate responsibilities and warrant safe service delivery, while patient-related incidents were tracked and rectified for service improvement. Moreover, refresher training and work assessments were planned to ensure staff competence and sustain service standards in the daily operation. Apart from the corporate training programme, different hospital clusters also organised similar training programmes for their serving staff and new recruits in order to build a pool of competent and trained personnel to meet the rising service needs and further relieve the healthcare professionals from the technical and basic care duties. It was estimated that more than 300 care technicians would be required in order to run the service in full scale in all acute public hospitals.

PILOT OUTCOME AND OBSERVATIONS

506 Workload statistics captured from May 2008 to June 2009 revealed that blood-taking occupied more than 70% of the care technicians' daily duties (Table 5.2). On the assumption that each blood-taking, electrocardiogram and intravenous cannulation task took around 10, 15 and 5 minutes respectively to complete, the pool of 95 care technicians had saved a total of 11,117 doctor work hours per month, indicating a significant workload reduction for frontline doctors in the pilot hospitals. There were no critical incidents related to care technicians' services to date, and only an insignificant number of minor blood-taking incidents had been reported so far¹⁹. The pilot hospitals had also stepped up refresher training and safety reviews in order to ensure the quality and safety of care technician services.



Table 5.2 – Workload Statistics of Care Technicians in Pilot Hospitals (Monthly Average from May 2008 – Jun 2009)

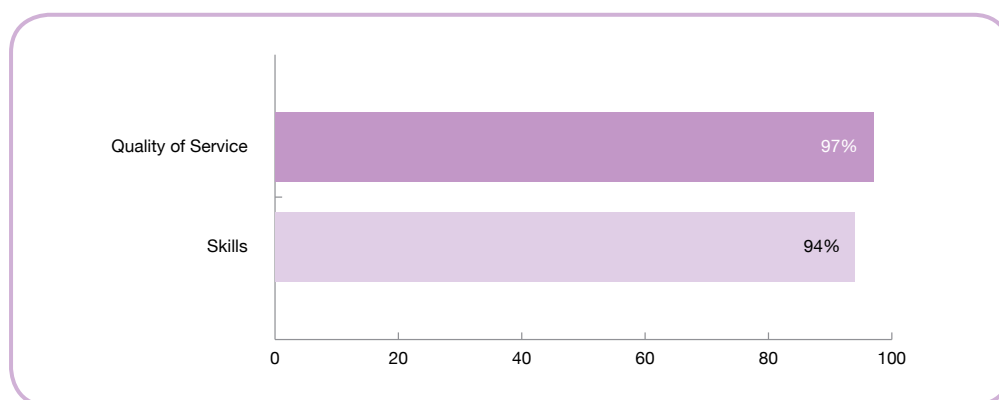
	AHNH	CMC	PMH	PYN	UCH	YCH	Total (%)	Doctor Hours Saved
Blood-taking (10 min / task)	3,731	4,811	10,146	12,511	11,591	6,748	49,538 (74%)	8,256 hours
Electro-cardiogram (15 min / task)	1,796	1,935	1,219	19	2,388	890	8,247 (12%)	2,062 hours
Intravenous cannulation (5 min / task)	–	1,621	3,725	1,046	2,346*	846	9,584 (14%)	799 hours

* Workload statistics for Nov 08 – Jun 09 only

¹⁹ On average, there were around six minor blood-taking related incidents in each month in the six pilot hospitals (i.e. 0.01% of all blood-taking tasks performed by care technicians). The majority of incidents were related to inappropriate sending of blood specimens, wrong identification and needle prick injury.

507 The Steering Committee was pleased to note that, in a recent patient satisfaction survey on the care technician services conducted in a pilot hospital as shown in Figure 5.2, 94% and 97% were satisfied with the care technicians' blood-taking skills and their quality of services respectively²⁰. The results showed that care technicians would not only relieve the heavy workload of healthcare professionals, but provide quality and fast-track care for patients as well.

Fig. 5.2 – Patient Satisfaction Survey on Care Technician Services



ISSUES OF CONCERN

508 The pilot work reform strategy was in general well received by the stakeholders, for it provided a highly effective and easily measurable device to transfer lower-skilled tasks from the professional workforce to the newly created and trained care technicians. Doctors and nurses could thus refocus their time on core clinical decision making and professional training; and more room could be created to improve the on-call systems of different clinical specialties, thereby rendering more vigilant doctors to deliver quality care. Patients also benefited from timely and safe fast-track care technician services in public hospitals. On the other hand, with the extension of care functions to more specialised areas, the career opportunities for non-medical staff were also improved. This example of workforce flexibility demonstrated the potential of HA to go further, for example by extending the roles of nurses and allied health professionals so that they might conduct tasks that were previously performed only by doctors. Finally, although care technician services was not initiated for cost saving purpose, HA had actually made more efficient use of its resources by delivering better care at a reduced cost and preserving its professional assets for targeted clinical areas.

²⁰ The survey was conducted in the third quarter of 2009 and involved 80 patients who had received care technician services.

- 509 Amid the positive feedback to the care technician services, there were a mixture of teething concerns and skepticisms among certain healthcare professionals. In the first place, the accountability and competency of care technicians, most of whom being leanly educated, were questioned in performing intravenous flush with normal saline and handling any exigencies. Besides, some nurses who took up the supervision of care technicians in ex-government hospitals were worried about their inadequate know-how in intravenous cannulation which was formerly performed by doctors. Moreover, certain clinicians were concerned about the possible de-skilling of junior doctors who should be capable of delivering basic care which could be mundane but life-saving in emergencies. A fine balance was thus called for in rationalising and redistributing doctors' work.
- 510 The Steering Committee was well aware of the atop-mentioned issues. For one thing, enhancing the roles of trained healthcare staff was not uncommon in overseas healthcare institutions²¹ and the local private market. In pursuit of skill match for a modernised workforce and provision of right care for the right patients, HA had rightly expanded the scope of practice for its healthcare staff, be they professionals or technicians. The competence of care technicians and the safety of intravenous cannulation were warranted by consistent training, close supervision, protocol-based operations, regular assessments and various risk management measures. Despite the infrequent occurrence of minor incidents related to blood-taking, care technician services were proven safe and reliable; and nil critical incidents had been reported so far in relation to intravenous cannulations performed by the care technicians. HA should keep on developing a flexible workforce and continue to expand its scope of practice where appropriate in order to meet the evolving needs and improve the effectiveness of public healthcare services.
- 511 On the other hand, HA had already fixed the issue of accountability for intravenous cannulation, in that nurses would ensure delivery of the correct fluid of normal saline for flushing while care technicians were accountable to the medical team for their daily duties. Due care should be exercised at all times and the care technicians should report any abnormalities or difficulties in their operation. Refresher training on basic care procedures should be provided for the nursing staff in order to enable them to supervise work and provide necessary support for the care technicians, and to ensure patient safety in the course of service delivery.

²¹ To quote an example, trained technicians of both the Hospital-at-day and Hospital-at-night Teams were allowed to flush the inserted cannula with normal saline in the United Kingdom. Source: Dr Patrick CHU, overseas expert in the Hospital @ Night programme.

512 Finally, regarding the concern over deprived doctors' training, the Steering Committee opined that doctors who had mastered the basic skills of blood-taking, electrocardiogram and intravenous cannulation in their early years of training, should no longer divert their attention and energy to these mundane and technical tasks. Instead, their expertise and professional acumen should be applied to resolve the more complex clinical problems in patient management. HA should continue its communication with different clinical specialties and keep in close liaison with the HKAM in order to assess the impacts of different work reform strategies on doctors' training in public hospitals.

THE STEERING COMMITTEE'S RECOMMENDATIONS

513 The Steering Committee put forward the following recommendations in relation to the introduction of care technician services in HA hospitals:

- a) HA was recommended to extend round-the-clock care technician services to all acute hospitals in order to improve patient services and relieve doctors and nurses from mundane and repetitive technical tasks so that they might refocus on core clinical decision making and other professional duties.
 - i) For major acute hospitals, a team of 17–25 care technicians, with 2 staff running on night-shift, was recommended to provide blood-taking, electrocardiogram and intravenous cannulation for patients.
 - ii) For small to medium acute hospitals, a team of 15–18 care technicians, with 1 staff running on night shift, was recommended to provide blood-taking, electrocardiogram and intravenous cannulation for patients.
- b) HA was recommended to regularly review the scope of functions of non-medical staff, provide appropriate competency and refresher training and conduct periodic safety reviews with reference to the prevailing practice in overseas countries and the local private market, in order to further alleviate the workload of healthcare professionals and ensure that safe and quality services were provided as in line with the evolving healthcare needs of the society.