Final Report on Doctor Work Reform 2009/10

Quality Care

Patient Safety

Teamwork

Quality Hours

醫院管理局
HOSPITAL AUTHORITY

Steering Committee on Doctor Work Hour
Hospital Authority

Message from the Chairman
Steering Committee on Doctor Work Hour
Hospital Authority

Doctor Work Reform came into being when the Hospital Authority ("HA") established the Steering Committee on Doctor Work Hour in October 2006 charged with a mission to improve doctors' morale and working conditions while ensuring the quality and safety of patient care in public hospitals.

The reform is not about mere injection of resources, nor was it meant to play around figures and nourish a clock-watching culture among the healthcare professionals. Rather, it entails a bundle of service transformations which are targeted to provide quality care through teamwork, enhance patient safety by managing operational risks and attain quality hours for service and training.

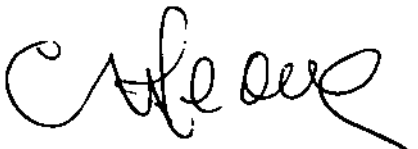
Spanning across these years, the reform has met with encouraging results and successes, not only in reducing doctor work hours, but also in modernising the workforce, improving the clinical effectiveness of its health services and fostering teamwork in care delivery. Despite the variable reform outcomes in the pilot phase, patients can in general enjoy timely and safer care while the health carers have sharpened core competencies and better career opportunities. Besides, HA has in some areas outrun its overseas counterparts with improved care and enhanced risk management. All these are attributable to extensive stakeholder engagement, pragmatic work reform strategies, unfailing management support and clinical leadership, professionalism and dedication of the health carers and, above all, concerted efforts and collaboration of all who have partaken in the pilot work reform programmes.

The Steering Committee is cognizant of the rising demand for public hospital services under the global financial tsunami and the possible epidemic outbreaks in the community. It also recognises the legal impacts of the recent Court of Final Appeal's judgment on doctors' claims and the upcoming Minimum Wage Bill on revamping the conventional mode of on-call services and monitoring of doctor work hours.

As HA has gathered the momentum of work reform in the past years, the management may take forward the reform further and deeper for the ultimate benefits of both patients and health carers in the entire organization. The healthcare resources should be properly used at all times and be prioritised for initiatives that can truly increase the system efficiency, optimise workload, enhance the quality of care and improve staff morale. HA may consider prudently extending its workforce reform to other non-medical disciplines as well so as to attain greater synergy for better care and professional development of its healthcare staff.

Last but not least, I would like to express my deepest thanks to the HA Board and the corporate management, the Steering Committee and advisory committee members, pilot programme task groups, cluster and hospital management, all frontline doctors as well as the Hong Kong Academy of Medicine and its member colleges. Their enormous support, candid sharing, valuable advice and dedicated contribution are all pivotal on the accomplishments of Doctor Work Reform, and fundamental to HA's further attainments in its work reform and workforce development.

I wish HA every success in its coming endeavours. Thank you!



Dr C H LEONG, GBS, JP
Chairman
Steering Committee on Doctor Work Hour
Hospital Authority

CONTENTS

Message from the Chairman
Steering Committee on Doctor Work Hour, Hospital Authority 1

Executive Summary
Final Report On Doctor Work Reform 5

Key Outcomes of Pilot Programmes
Doctor work Reform, Hospital Authority 28

1 Preamble and Evolution of Doctor Work Reform 33

2 Deployment of Doctors to Pressurised Areas 43

3 Re-engineering of Emergency Operating Theatre Services 53

4 Establishment of Emergency Medicine Wards 65

5 Introduction of Care Technician Services 79

6 Other Supportive Work Reform Strategies 87

7 Key Success Factors to Improve Work Hours 111

8 Targeted Deployment of Resources 135

9 The Way Forward 143

APPENDICES

I	Membership of Task Force on Doctors' Work Hours Hospital Authority	A2
II	Membership of Steering Committee on Doctor Work Hour Hospital Authority	A3
III	Membership of Cluster Administration and Specialty Advisory Committee on Doctor Work Hour, Hospital Authority	A4
IV	Membership of Doctors Staff Group Consultative Committee Hospital Authority	A6
V	Membership of Emergency Operating Theatre Task Group Hospital Authority	A8
VI	Membership of Emergency Medicine Ward Task Group Hospital Authority	A9
VII	Membership of Technical Services Assistant (Clinical Assistant) Task Group, Hospital Authority	A10
VIII	Key Milestones of Doctor Work Reform, Hospital Authority	A11
IX	Summary of Doctor Work Hour Monitoring Surveys Hospital Authority	A15
X	Consolidated Feedback on Doctor Work Reform, Hospital Authority (2007/08 – 2009/10)	A19
XI	Summary of Consultation Feedback on Draft Final Report on Doctor Work Reform (23 Nov – 19 Dec 2009)	A24
XII	Comparison of Steering Committee's Recommendations in Interim Pilot Review Report (2008/09) and Final Report on Doctor Work Reform (2009/10), Hospital Authority	A28
XIII	Doctors' Headcount in Various Specialties, Hospital Authority	A36
XIV	Allocation of Resident Trainees for Doctor Work Reform Purposes in 2008/09 and 2009/10	A37
XV	Summary of Turnover Rate of Doctors in Different Clinical Specialties, Hospital Authority	A38
XVI	Intake and Turnover Rate of Nurses, Hospital Authority	A39
XVII	Acknowledgement	A40
XVIII	Glossary	A41

Executive Summary

Quality Care Patient Safety
Teamwork Quality Hours

醫院管理局
HOSPITAL AUTHORITY

EXECUTIVE SUMMARY

Final Report on Doctor Work Reform
by
The Steering Committee on Doctor Work Hour
Hospital Authority

INTRODUCTION

001 The Hospital Authority ("HA") was committed to improving the working conditions of frontline doctors and enhancing the quality of care for patients in public hospitals. Following a doctor work hour survey conducted in September 2006, it was estimated that 18% of public hospital doctors (i.e. about 900) worked for more than 65 hours per week on average while 35% of overnight on-site on-call doctors (i.e. about 120) did not have immediate post-call time-off. HA established the Steering Committee on Doctor Work Hour ("Steering Committee") in October 2006 under the lead of Dr C H LEONG, GBS, JP, Former Chairman of HA, to look into matters related to doctors' long working hours and oversee the implementation of various pilot work reform strategies since the fourth quarter of 2007. Two advisory committees, namely, the Cluster Administration and Specialty Advisory Committee and the Doctors Staff Group Consultative Committee, were also set up to solicit feedback on the impacts of the work reform strategies on doctors' work, training and patient services.

REFORM OBJECTIVES AND TARGETS

002 The whole premise of Doctor Work Reform was not merely to reduce doctor work hour but also to streamline workflow, reshuffle work activities and ensure the quality and safety of patient care. HA's Doctor Work Reform carried the three-fold objectives of quality patient care through teamwork, risk management for enhanced patient safety as well as quality doctor hours for service and training. It sought to manage the undesirable phenomena of long weekly and continuous work hours, high intensity activities and low morale of the frontline doctors while

not compromising the quality of their specialist training in HA. It was HA's target to reduce public hospital doctors' average weekly work hours to not exceeding 65 by the end of 2009 and their continuous work hours to a reasonable level in the long run while ensuring the quality of care and patient safety.

BELIEFS AND DIRECTIONS

003 The Steering Committee believed that Doctor Work Reform could not be taken along without improving staff morale. Corporate reform in the following directions could thus address issues related to doctor's excess work and boost their morale:

a) The weekly work hours of doctors should not exceed 65 in general while those currently working for fewer than 65 hours should also be benefited from the reform.

b) Doctors should not work continuously for more than 16 – 24 hours.

c) Overtime work of doctors exceeding their conditioned hours should be recognised financially.

d) Manpower should be rationally increased in certain clinical specialties on a need basis.

e) Promotion of doctors should be encouraged in HA, taking into consideration their competency, qualifications and years of service.

COMMUNICATION AND CONSULTATION – LOCAL MODEL OF REFORM

004 The Steering Committee strategised for HA's Doctor Work Reform with due consideration of its "People First" culture, patient safety, reform workability and rationality, affordability as well as service sustainability. Reference was drawn from overseas experience and findings of local studies; and a local model of reform was adopted upon wide consultation and on-going communication with the stakeholders and professional organizations, including frontline doctors and nurses, specialty representatives, patient groups, hospital management, senior executives of the HA Head Office as well as the Hong Kong Academy of Medicine ("HKAM"). The Doctor Work Reform Strategic Planning Workshop held on 23 March 2007, involving more than 40 frontline staff and 9 specialties, framed the reform discussion while the ensuing HA-wide consultation paper sent to every doctor in HA and the HKAM in May 2007 laid the foundation of reform. Since 2007, HA had convened

over 262 communication sessions, with a cumulative attendance of over 5,660 staff members, with a view to collating their feedback on the work reform strategies and communicating on the reform implementation; and sharing forums with overseas and local experts' input were also conducted to exchange views on the work reform and refine the strategies for rollout in public hospitals. Around 200 feedbacks had been received from staff in various disciplines; and these had been considered and addressed by the Steering Committee in formulating its reform and implementation strategies.

005 The Steering Committee first submitted its Doctor Work Reform Recommendation Report to the HA Board for deliberation on 29 November 2007 and furnished an Interim Pilot Review Report on Doctor Work Reform for review on 26 February 2009. The HA Board welcomed the work reform strategies and supported the direction of reform in general. On the other hand, progress updates were made to the Health Services Panel of the Legislative Council of the Hong Kong Special Administrative Region in March and July 2008 as well as May 2009. Close liaison and collaboration were also maintained with patient groups, community leaders as well as the HKAM in order to keep links on the work reform strategies and implementation progress, and collate their feedback on the reform impacts on patient safety and doctors' specialist training in public hospitals.

WORK REFORM STRATEGIES AND PILOT PROGRAMMES

006 HA's Doctor Work Reform was developed and implemented along four strategic directions, viz., targeted deployment of resources, optimising total workload, changing doctors' existing work patterns as well as enhancing the core competencies of healthcare professionals working as one care team. **While it was an attempt to rationalise doctor work hours that triggered this exercise, the reform itself was not a number's game nor was it aimed to nourish a clock-watching culture in clinical practice. The whole reform was about better teamwork and explicit sharing of responsibilities to provide better and more efficient patient care.** It entailed a cultural change in the work practice of doctors and modernising the roles of healthcare workers while revamping the conventional mode of care delivery for patients in public hospitals.

007 To verify the effectiveness of the work reform strategies in attaining the corporate targets and objectives, HA had embarked on four key pilot programmes in selected acute hospitals since the fourth quarter of 2007, namely, deployment of doctors to pressurised areas, re-engineering of emergency operating theatre ("EOT") services, establishment of Emergency Medicine Wards ("EMWs") as well as introduction of care technician services. Reform Task Groups were formed to review the pilot work reform outcomes, share good practices and recommend the rollout strategies for the Steering Committee's consideration. Besides, supportive work reform programmes were in place to further relieve the workload of frontline doctors without compromising the quality of care and patient safety.

A. Deployment of Doctors to Pressurised Areas

008 Deployment of resources and manpower was a key strategy under Doctor Work Reform to improve the working conditions of doctors and ensure the quality of care and patient safety. HA set aside a total of $182 million from 2007/08 to 2009/10 and supported the creation of 348 new posts, including 38 doctors, to launch various reform-related programmes. There was a net increase of 289 doctors (i.e. 6%) in HA from July 2007 to July 2009, with 121 doctors (i.e. 42% of 289 doctors) deployed to the six pressurised specialties with prolonged doctor work hours. Besides, HA allocated a total of 70 new Resident Trainees to different specialties in 2008/09 and 2009/10 and acceded to all hospital clusters' requests for allocating Resident Trainees in 2009/10 in order to attain the work hour targets. Despite the hiccups encountered by the pilot hospital in recruiting part-time private practitioners to help out in the surgical out-patient clinics under the booming private market, HA kept on drawing in private expertise through the contemporaneous flexible employment strategy and public-private partnership programmes to tackle both the increasing workload and staff wastage in public hospitals. The number of part-time doctors employed by HA had risen from 29 in March 2007 to 44 in July 2009.

B. Re-engineering of Emergency Operating Theatre ("EOT") Services

009 Four acute public hospitals expanded their day-time emergency operating theatre capacity on weekdays in order to clear their backlog emergency operations formerly performed at the night time. At certain pilot sites, EOT services were also re-engineered as to manage cases of genuine emergency at night only while semi-urgent and elective operations were reshuffled to the day time with greater manpower and facility support. Patients could then have safer operations while the workload of on-call doctors would be reduced at night. It was targeted that patients' waiting time for emergency operations could be shortened by expanding the EOT capacity in the extended day. In the review period, more than 30% of backlog operations were cleared in the pilot hospitals while the utilization ratio of EOT time at night, relative to the total EOT time used throughout the whole day, had dropped by 10% – 50%. The outcome varied among the pilot sites and was more conspicuous in acute secondary than acute tertiary hospitals. However, patients could in general enjoy better hospital care by having earlier operations, stronger clinical supervision and other clinical support for day-time surgeries as well as fewer complications. Besides, hospitals would benefit from shorter patient stay and a higher level of patient satisfaction. The pilot programme was supported by the health carers for further rollout to other hospitals.

C. Establishment of Emergency Medicine Wards ("EMWs")

010 Three acute public hospitals piloted the EMW initiative to reduce avoidable admissions, improve the quality of short-stay patient care and the efficiency in handling acute patient admissions. Since commencement of the programme, admissions to medical wards via the Accident and Emergency Departments had dropped by 4.8% – 19.7% in the pilot hospitals. A new model of patient care emerged in an acute public hospital where its newly established EMW served to buffer hospital admissions at night while patients, upon receiving initial investigation, treatment and stabilization in the EMW, would be discharged or transferred out the following day. Under this new model, the emergency medical admissions at night and the total medical admissions had been reduced by 51% and 33% respectively in the review period. Despite the confounding factors and teething problems that were encountered in the pilot phase, EMWs had improved the quality of care in terms of service timeliness and shortened hospital stay; and provided a suitable platform for multi-disciplinary and cross-specialty collaboration in managing selected acute conditions. Besides, EMWs had reduced much of the

disturbance caused to the other clinical specialties by centrally managing patients suffering from psychiatric problems as well as violent and drug overdosed patients; and were deemed to have considerable potential for tackling the rising service volume and reducing avoidable hospital admissions, hence workload of other clinical specialties.

D. Introduction of Care Technician Services

011 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.

E. Other Supportive Work Reform Programmes

012 Apart from the key pilot work reform strategies, HA also set in the following supportive work reform programmes to improve the quality of care and patient safety:

a) Enhancing the senior nurse coverage in an acute secondary hospital

- A team of trained and experienced nurses was set up to provide advanced clinical nursing advice and support, undertake protocol-based patient assessment and clinical interventions, and coordinate response to clinical emergencies during out-of-hours. Clinical risks due to slimmer manpower at night were reduced and the workload of on-site on-call doctors was lessened with improved continuity of patient care. Although there were local staff concerns and varied legal views about the extended roles of nurses, most clinical specialties and clinical support departments in the pilot hospital were supportive to this pilot work reform programme.

012 **b) Introducing a common ward language to all of HA's hospital clusters**

– The initiative involved use of an integrated observation chart with Modified Early Warning Score (MEWS) and a unified approach of communication using SBAR (i.e. situation, background, assessment and recommendation for patient management) to facilitate early detection of potentially critical conditions for timely specialist intervention. On the whole, the quality of patient monitoring and assessment was improved, as was the communication in a multi-disciplinary team for safer and more effective patient management. However, local data were yet to be gathered to support its effectiveness, thus hindering wider launch of the track-and-trigger system for improved patient safety.

c) Piloting an electronic handover system in selected acute public hospitals

– HA built an electronic handover platform in order to facilitate structured and comprehensive multi-disciplinary handover of critically ill and unstable patients, ensure continuity and safety of patient care and improve out-of-hour clinical supervision. Three acute public hospitals piloted this programme via the current Clinical Management System ("CMS"). User surveys showed that the great majority of respondents found it easily accessible, user-friendly and able to streamline the care process; and most had opted to build this electronic handover function in the CMS (Version III) in future.

d) Strengthening the core competency of health carers

– Finally, to ensure patient safety and control risks during out-of-hours, HA conducted a cluster-based training course, in collaboration with the HKAM specialty colleges, for 91 basic trainees and 14 nurses in the surgical stream of specialties in the past two years. In addition, three commissioned clinical skills enhancement programmes were organised in 2008/09 to equip 287 experienced nurses with enhanced clinical skills and professional competency in acute care management and clinical supervision. 95 care technicians were also trained to take up basic care duties from the healthcare professionals. These training programmes were well received by the clusters as a means to strengthen the health carers' core competency and enhance the quality of care and patient safety in public hospitals.

ATTAINMENT OF REFORM OBJECTIVES

A. Quality Patient Care through Teamwork

013 With the implementation of Doctor Work Reform in the pilot hospitals, the quality of patient care was in general enhanced on the following aspects:

a) improved access to emergency operations at the daytime with augmented operating theatre capacity and greater manpower and facility support while patients in emergent and urgent conditions having proper care and management at night;

b) enhanced quality of care for short-stayed patients and reduced length of hospital stay without a corresponding rise in the unplanned re-admission rate through provision of fast-track services and multi-disciplinary care in the EMWs;

c) timely care upon introduction of round-the-clock care technician services and due assessment given by senior nurses with enhanced roles during out-of-hours;

d) better continuity of care for critically ill and unstable patients through implementation of a structured electronic handover system among health carers in various disciplines and specialties; and

e) general improvement in hospital care by more vigilant and trained doctors resulting from a strengthened workforce, less intense workload and reduced work hours.

B. Risk Management for Enhanced Patient Safety

014 With the introduction of various work reform strategies, the potential risks of clinical errors that were associated with sleep-deprived doctors and incongruent deployment of healthcare resources to meet clinical needs at night had been tackled. The Steering Committee was glad to learn that there was no critical incident related to the work reform strategies and it was anticipated that patient safety could be further enhanced when the work reform programmes were strategically rolled out to other public hospitals in phases. In the pilot phase, patient safety had been enhanced in the following respects:

a) reduced doctors' on-call frequency by changing the overnight on-site on-call system into a partial shift system supported by off-site specialists and cross-coverage of doctors in certain specialties;

b) pooled medical staff to manage acute patients in EMWs according to established care pathways with a corresponding drop of repetitive activities in other specialties at night;

c) protocol-based assessment of acutely admitted patients and response to clinical emergencies under the supportive work reform programme of enhanced senior nurse coverage at night;

d) timely specialist intervention upon introduction of a common ward language to facilitate early detection of potentially critical patient conditions; and

e) enhanced core competency of doctors in recognising, assessing and managing patients in critically ill and unstable conditions in both emerging and urgent situations through structured training in collaboration with different clusters and clinical specialties.

C. Quality Doctor Hours for Service and Training

015 HA, as per the Steering Committee's recommendations, set in a corporate mechanism to monitor doctor work hour in a structured, broad-brush and prospective approach in 2009. Doctors' rostered hours of on-site work were monitored over a 26-week reporting cycle while off-site calls and called-back duties were also recognised as work in monitoring doctor work hour. Moreover, flexibility was allowed for clinical departments to adjust the duration of their daytime duty hours in the monthly call roster so as to reflect doctors' work patterns in the departments. The doctor work hour monitoring exercise was completed in 2009 with the support of a centrally-designed Doctor Work Hour Calculator; and a corporate Central Doctor Work Hour Monitoring System was developed to facilitate data submission and management reporting on doctor work hour.

016 HA made great strides in improving doctors' working conditions in the past years as a result of the pilot work reform programmes and the clinical departments' initiatives to revamp doctors' on-call arrangements and granting of protected rest time during doctors' on-site on-call duties. Doctors were thus able to deliver better patient care and acquire quality professional training in higher vigilance.

016 **a) Average Weekly Work Hours**

i) The proportion of doctors working for more than 65 hours per week on average dropped from around 18% in September 2006 (involving around 900 doctors in 12 clinical specialties) to 4.8% by the end of December 2009 (involving 252 doctors in 10 clinical specialties). The proportion of doctors working for more than 70 hours per week on average also dropped from 10% to 1% in the same period.

ii) The proportion of outliers (i.e. doctors working for more than 65 hours per week on average) in the rank of Medical Officer / Resident dropped from 24% to 7% whereas that of outlying senior doctors dropped from 3.6% to 0.6%.

iii) The drop in the proportion of outliers was most significant in Neurosurgery (from 73% to 13%), Paediatrics (from 40% to 7%), Surgery (from 45% to 19%), Oncology (from 26% to 0%), Obstetrics & Gynaecology (from 40% to 18%) and Internal Medicine (from 21% to 2%).

b) Continuous Work Hours

i) The number of doctors undertaking on-site on-call duties for more than 24 hours at one go dropped from 340 in September 2006 to 244 and 221 on the snapshot holiday (July 1) and weekday (July 8) respectively in 2009.

ii) The proportion of overnight on-site on-call doctors having immediate post-call time-off rose from 65% in 2006 to 85.2% and 82.4% on the snapshot holiday and weekday respectively in 2009.

iii) The number of overnight on-site on-call doctors who did not have immediate post-call time-off dropped from 120 in September 2006 to 36 and 39 on the snapshot holiday and weekday respectively in 2009.

017 The Steering Committee was not entirely contented with the outcomes and recognised that the data, while not representing doctors' actual work hours which also included overrun work beyond rostered hours and unreported called-back hours, furnished an index of their average working conditions in public hospitals. Given the limited scale of pilot work reform implementation and the various confounding factors that presented increasing workload and rising challenges to HA in the past years, like outbreak of human swine influenza and financial tsunami, continued wastage of doctors in pressurised specialties as well as the corporate initiative to reduce untaken annual leave of all staff hence accrued liability towards the end of the year, the current outlying situation could be the best attainable outcome in the meantime. On the other hand, it was noted that the majority of overnight on-site on-call doctors who did not have immediate post-call time-off involved senior calls or less intense on-site workload at night. These on-call doctors should have more uninterrupted rest time during their on-site call and were more able to take longer hours of post-call work.

018 It was anticipated that, when the work reform strategies were rolled out to all hospital clusters, coupled with a rational increase in workforce for certain pressurised specialties, and pragmatic work arrangements were introduced to revamp doctors' on-call systems, the number of outliers should be further reduced in different clinical specialties and the entire organization should be able to fully attain the corporate work hour targets with corresponding improvements in both doctors' work-life balance and professional training. The quality of care and patient safety would also be enhanced in public hospitals. On the other hand, the Steering Committee was cognizant of the extra work and call duties performed by certain frontline doctors, especially those in the middle call layer in busy specialties, in order to attain the work hour targets. Their exemplary performance, professionalism and dedication were highly appreciated.

019 As far as doctors' training was concerned, the HKAM had expressed concerns over the work reform impacts on doctors' training. Although it supported rolling out the work reform strategies to all public hospitals and reiterated that limiting doctors' average weekly work hours to 65 should not have major impact on their postgraduate medical training, a further reduction in the work hour target would in principle have long-term impacts. The Steering Committee was given to understand that the HKAM would take a more comprehensive approach and use simulation technology to enhance the quality of postgraduate medical education. Besides, HKAM had commissioned an internal working group to study the correlation between work hours and specialist training. It would define the core competencies of trainee doctors before conducting a cohort study to assess the long-term

impacts of work reform on doctors' training. Consultations and surveys with fellows, trainees and trainers would also be conducted while a combination of competency and time-based training using simulation technology would be provided to ensure the quality of postgraduate medical education under HA's new work hour arrangements.

KEY SUCCESS FACTORS TO IMPROVE WORK HOURS

020 The Steering Committee had identified a number of key success factors to improve the working conditions of frontline doctors without compromising the quality of care and patient safety, namely, determined clinical leadership in changing doctors' existing on-call systems, launch of effective work reform strategies as well as frontline doctors' accommodation of new models of operation and care delivery. Upon review of the latest doctor work hour data, the Steering Committee also came up with the following recommendations in order to improve the outlying situation of doctors working beyond the cap of 65 hours per week on average in a pragmatic manner:

a) For pressurised specialties with a relatively high level of staff wastage in recent years – the deficiency could be made up by robust staff retention strategies, revamping their on-call systems and prompt replacement of the vacancies.

b) For specialties where the work reform strategies might not fully address the prolonged work hour issues and the night-time activities could barely be reshuffled to the daytime (e.g. Paediatrics and Obstetrics & Gynaecology) – the deficiency could be made up by rationally deploying additional doctors and streamlining workflow and the care procedures so as to optimise workload.

c) For highly sub-specialised units that had grave patient safety concerns over reducing the number of on-site on-call doctors at night (e.g. Cardiothoracic Surgery and Neurosurgery) – the deficiency could be made up by enhancing frontline doctors' core competency and launching crossover on-site on-call cover among specialties in the same service stream.

d) For other outlying specialties (e.g. Ear, Nose, Throat, Ophthalmology, Intensive Care Unit and Internal Medicine) – the deficiency could be made up by revamping doctors' on-call system and strengthening off-site specialist support for on-site on-call doctors.

CONFOUNDING FACTORS AND ISSUES OF CONCERN

021 While commending the valuable efforts made by different clinical departments in piloting the work reform strategies and revamping their on-site on-call systems, the Steering Committee had also identified a number of factors that had crucial impacts on full attainment of the work hour targets in the entire organisation and maximising the impacts of the work reform strategies at the reform sites in the pilot phase:

a) Socio-economic Factors

i) downturn of the global economy which brought forth greater reliance and more utilisation of public hospital services, hence increased workload for clinical departments and frontline doctors but reduced difficulties in employing part-time private practitioners to support the hospital operation;

ii) outbreak of the Human Swine Influenza (H1N1) in the local society since May 2009 which had pushed up emergency admissions, hence workload, to different specialties, in particular the medical wards; and

iii) the Court of Final Appeal's judgment on doctors' claims, which ruled that doctors were entitled to a holiday for being on-call on rest days and statutory / public holidays and had impacts on the implementation of on-call systems in public hospitals on the said days.

b) System Factors

i) delineated roles of acute tertiary hospitals in providing acute trauma as well as certain neurosurgical and obstetric operations, which made them less malleable to reshuffle their night-time activities to the extended day;

ii) adequacy of day-time operating theatre capacity for elective procedures which drove Surgeons to take on the EOT sessions at night to perform semi-elective procedures; pre-existing set-up and inadequate provision of hospital beds in EMWs which had direct impacts on their effectiveness in reducing both avoidable hospital admissions and workload in related clinical specialties at night;

iii) extent of service networking for certain specialties and absence of a comprehensive treat-and-transfer mechanism among the cluster hospitals, thus lessening the efficiency in transferring patients between hospitals for managing complicated problems;

021

iv) varied views as to the legality of extending the professional roles of trained non-medical staff in healthcare delivery, despite the increasing trend in overseas countries, thus limiting the scope of functions performed by the senior nurses and care technicians in the pilot hospitals;

v) increasing wastage of professional staff under a booming private market in recent years which affected the sustainability of service targets and succession planning in delivering quality healthcare services;

vi) shortage of medical graduates in the coming years which affected the manpower deployment to the pressurised specialties and the flexibility of refining the on-site on-call systems in different clinical departments; and

vii) provision of core competency and refresher training which was essential for health carers to deliver safe care, proper patient assessment and management as well as mutual on-site on-call cover among specialties in the same service stream at night.

c) Operational Factors

i) different modes of operation customised for local needs which rendered various degrees of success in launching the same work reform strategies at different pilot sites;

ii) conventional work practice of frontline doctors, like certain surgeons performing elective operations at night, thus prolonging the work hours of on-site on-call doctors; and

iii) varied views among the frontline doctors and staff union representatives as to the scope and means of doctor work hour monitoring, like discount of statutory / public holidays from the recommended calculation formula, capture of rostered versus actual work hour, handling of off-site telemedicine in certain specialties, etc.

d) Cultural Factors

i) collaboration among clinical specialties which affected the provision of fast-track care in a multi-disciplinary setting and their success in revamping doctors' work patterns with reduced on-site on-call frequency;

ii) clinical leadership and determination which were vital to revamping the on-site on-call duty hence improving the working conditions and morale of frontline doctors in clinical departments; and

iii) reservation of certain health carers to accept the enhanced roles of trained non-medical staff and certain doctors' reluctance to change their work practice and call systems as to reduce both their workload and work hour.

THE STEERING COMMITTEE'S RECOMMENDATIONS

022 Following a thorough review of the pilot work reform strategies and other supportive work reform programmes, the Steering Committee put forward the following recommendations for HA's consideration:

Rollout of Work Reform Strategies

023 A. Deployment of Doctors to Pressurised Areas

a) HA was recommended to continue deploying additional doctors to the pressurised specialties with prolonged work hour issues via the established Resident Trainee allocation mechanisms and plan its workforce with reference to the competing service demands, supply of medical graduates, trainee admissions in different specialty colleges, manpower wastage, doctors' working conditions as well as service sustainability for the entire organization. This would even out the average workload of frontline doctors in different specialties and improve their working conditions and morale. Moreover, better and safer care could be delivered by more vigilant doctors in public hospitals. [Para 217 a]

b) HA was recommended to continue exploring different means of collaboration with the private healthcare sector, developing Family Medicine Specialist Clinics and engaging in further public-private partnership programmes, in order to alleviate the workload in the public sector and ensure the quality of care and safety for public hospital patients. [Para 217 b]

c) HA was recommended to continue rationalising its hospital services, streamlining work procedures, reviewing its manpower level and work arrangements, and fostering multi-disciplinary collaboration in care delivery in order to identify any possible room for optimising workload and improving doctors' working conditions in public hospitals. [Para 217 c]

024 B. Re-engineering of Emergency Operating Theatre ("EOT") Services

a) HA was recommended to re-engineer the EOT services in all acute public hospitals with 24-hour emergency services in order to clear the backlog emergency operations and optimise patients' access to emergency services. Different modes of EOT services could be introduced after 22:00 hours to support emergency operations at night. In order to maximise the service outcome, additional funding, if any, should first be allocated to expand the EOT capacity of acute secondary hospitals in the extended day. [Para 319 a]

b) HA was recommended to manage the issues of inadequate day-time operating theatre capacity in order to clear the backlog elective operations, avoid exploitation of EOT slots for non-emergency operations and reduce the night activities of surgeons and their work hours. [Para 319 b]

c) HA was recommended to review the work practice and institute changes in the work practice in the surgical stream specialties in order to optimise the need for operation at night, improve patient safety by operating in the extended day and reduce the number of overnight on-site on-call doctors in public hospitals. [Para 319 c]

d) HA was recommended to delineate the roles and service scopes of different hospitals, explore further room for service networking, formulate acute trauma and neurosurgical diversion mechanisms and develop protocol-based escort medicine service in all hospital clusters in order to ensure patient safety and support the treat-and-transfer arrangement. [Para 319 d]

e) HA was recommended to explore the feasibility of providing general resident call coverage for patients who were physiologically unstable in the surgical stream specialties with reference to the global trend and the practice in the private healthcare market. [Para 319 e]

025 C. Establishment of Emergency Medicine Wards ("EMWs")

a) HA was recommended to adopt appropriate modes of emergency care for acutely admitted patients in accordance with the local situations and the pre-existing set-ups of different Accident and Emergency Departments. For those acute hospitals that had already set up their EMWs, HA was recommended to continue refining the service models in order to augment their impacts on reducing avoidable hospital admissions, alleviate the workload of clinical specialties and improve the quality and safety of emergency care. [Para 422 a]

b) HA was recommended to address the critical issues of disproportionate hospital beds and system support, inadequate collaboration among the clinical specialties and the need for strengthened core competency training of EMW physicians in order to maximise the service outcome and synergise for greater success in providing quality emergency care for selected acute patient conditions. [Para 422 b]

c) HA was recommended to expand the scope of community care in order to reduce avoidable admissions and enhance the service efficiency of public hospitals. [Para 422 c]

026 D. Introduction of Care Technician Services

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. [Para 513 a]

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. [Para 513 b]

Improving the Quality of Care and Patient Safety

027 a) HA was recommended to enhance the professional and core competency of all nurses in acute care coordination, patient assessment, responsiveness and emergency stabilization through development of clinical protocols and regular training. The roles of other allied health professionals, where appropriate, could also be extended in order to relieve the workload of doctors and improve the healthcare services in public hospitals. [Para 638 a]

b) HA was recommended to enhance the senior nurse coverage, supplemented by regular safety audits, so as to provide advanced, protocol-driven and competency-based nursing support for clinical departments in all acute hospitals at night. HA might look to the manpower supply and the peculiar situations in different hospitals and set up teams of senior nurses or gear up all night nurses to perform the enhanced functions. Both approaches could improve the continuity of care and patient safety while lessening frontline doctors' workload and ultimately their on-site on-call frequency and work hours. [Para 638 b]

c) HA was recommended to extend the common ward language to all public hospitals as appropriate and establish a uniform approach of multi-disciplinary communication in the care process. A sound track-and-trigger system, supported by clear protocols and detailed guidelines, should be set up to ensure that deteriorating and potentially critical patient conditions could receive timely specialist intervention. Besides, regular compliance audits and user reviews should be conducted in order to build evidence of system effectiveness and ensure that both doctors and patients could benefit from the work reform programme for reduced workload and safer service. [Para 638 c]

d) HA was recommended to continue formulating, updating and promulgating both intra and inter-departmental clinical management protocols and electronic patient pathways which involved multi-disciplinary healthcare professionals, coupled with regular clinical audits and performance management, in order to optimise and improve care through teamwork. [Para 638 d]

e) HA was recommended to clear with relevant professional bodies on the core competency of health carers in different disciplines and develop a framework to facilitate enhancing their scope of professional duties in delivering quality healthcare services. Continuous stakeholder communication and engagement would definitely smooth out the knotty issues. [Para 638 e]

f) HA was recommended to integrate the electronic handover platform into the upcoming Clinical Management System (Version III) and extend its application to all clinical specialties and hospital clusters in order to facilitate structured and comprehensive handover of critically ill and unstable patients between shifts, ensure continuity and safety of patient care and strengthen clinical supervision during out-of-hours. A designated team should be identified to coordinate the system development and rollout arrangement. [Para 638 f]

Attaining Quality Doctor Hours for Service and Training

028 a) HA was recommended to continue monitoring doctors' working conditions in a structured, broad-brush and prospective approach and incorporate doctor work hour reported for different specialties as a key consideration in its workforce planning. A long-term doctor work hour monitoring mechanism was recommended to be set up with the following arrangements, and a designated team should be set up to coordinate the work hour monitoring exercise:

i) For departments that were yet to fully attain the 65-hour cap for all its doctors in 2009 and those having reported prolonged continuous work hours in the second reporting cycle in 2009, HA was recommended to review their work hour data every half year until the work hour targets were attained.

ii) For other clinical departments, HA was recommended to review their work hour data at an interval of 3 years. [Para 735 a]

b) HA was recommended to apply appropriate means of operation and viable work patterns to various clinical specialties and hospital clusters in order to enhance the frontline doctors' work-life balance without compromising their training opportunities and the quality and safety of patient care. Pragmatic solutions should also be worked out for different clinical specialties in order to gradually attain the long-term targets of reducing doctors' continuous work hours to 16 on weekdays and 24 at weekends and holidays. In the interim, HA was recommended to grant post-call half-day time-off to doctors on overnight on-site call and arrange mutual-cover sleep time of 4 consecutive hours for

those who were on overnight on-site on-call duty exceeding 24 hours, subject to adequate manpower, operational practicability and service sustainability. [Para 735 b]

c) HA was recommended to continue its efforts to reduce doctor work hour to a reasonable level and review clinical departments' manpower arrangements, instead of recompensing the outliers with time-off for work done in excess of 65 hours per week on average. HA was recommended to continue engaging different stakeholders in formulating viable solutions, balancing the need for granting day-offs for on-call duties against the need for up-keeping patient safety in public hospitals, and ensure that public money was properly used at all times. [Para 735 c]

d) HA was recommended to continue facilitating doctors' training, organising refresher courses in collaboration with different clusters and specialty colleges, and introducing various supportive modes of training in order to strengthen the core competency skill set of frontline doctors in acute care management under a multi-disciplinary setting. HA was also recommended to work closely with the HKAM in evaluating the work reform impacts on doctors' training in different specialties. [Para 638 g]

Targeted Deployment of Resources

029 a) HA was recommended to prudently deploy its limited resources to pressurised areas, with due regard to equity, right incentive and sustainability of the work reform initiatives. Given a limited healthcare budget, coupled with the engulfing financial tsunami and the epidemic outbreak in the community, the demand for public healthcare services, hence service volume and workload, would definitely rise in the coming years. Resource utilisation should therefore be prioritised for those programmes that had a greater potential for increasing the system efficiency, optimising workload, enhancing the quality of care and patient safety as well as improving staff morale. Meanwhile, HA was recommended to continually explore different ways to reconfigure its hospital services and rationalise its service provision for the ultimate benefits of patients and the society. [Para 810 a]

b) HA was recommended to develop a sound and appropriate honorarium system, with due regard to affordability and sustainability concerns, in order to financially recognise doctors' excess work hours in a broad-brush and nominal approach. In this connection, an enhanced honorarium system using doctors' average weekly work hours to differentiate bandings of doctors in different call tiers, specialties and hospital settings should serve the purpose while not incentivising them to over-roster or self-generate overwork for more pay. On the other hand, HA might consider supplementing the enhanced honorarium system with the established special honorarium scheme in order to recognise frontline doctors' contribution to ad hoc clinical activities. [Para 810 b]

The Way Forward

030 a) HA was recommended to keep the momentum of reform, roll out effective work reform strategies to other public hospitals in phases and continue its various service rationalization initiatives in order to improve doctors' work-life balance and ensure the quality of patient care, taking into account the "People First" culture, patient safety, prudent use of public money, rationality, operational practicability and service sustainability. [Para 904 a]

b) HA was recommended to continue developing a flexible workforce with extended roles to meet the evolving healthcare needs of the society, reinforcing risk management through protocol-based care and technology-based pathways, as well as fostering teamwork among the healthcare professionals in order to deliver quality and safe care in public hospitals. [Para 904 b]

c) HA was recommended to extend its scope of community and ambulatory services with improved system support and expand its public-private partnership programmes in order to reduce avoidable admissions and workload in public hospitals and manage patients in a safer, more convenient and cost effective manner. [Para 904 c]

d) HA was recommended to keep track of doctors' working conditions and introduce pragmatic work arrangements in the light of different clinical specialties' readiness and operational practicability in order to gradually attain the continuous work hour targets of 16 hours on weekdays and 24 hours at weekends and holidays in the long run. [Para 904 d]

e) HA was recommended to keep in close liaison and communication with stakeholders at all levels in revamping its on-call systems while not compromising the quality and safety of patient care in public hospitals. Collaboration with the HKAM should also be continued in monitoring the impacts of reduced work hours on doctors' specialist training. [Para 904 e]

Steering Committee on Doctor Work Hour
Hospital Authority
February 2010

Key Outcomes of Pilot Programmes
Doctor Work Reform, Hospital Authority

I. Overall Assessment of Doctor Work Reform Strategies

Work Reform Strategy	Quality Care	Enhanced Safety	Night-time Workload
1. Deployment of Doctors to Pressurised Areas	👍👍	👍	👍👍👍
2. Re-engineering of Emergency Operating Theatre Services	👍👍	👍	👍
3. Establishment of Emergency Medicine Wards	👍👍	👍	👍👍
4. Introduction of Care Technician Services	👍👍	👍	👍👍👍
5. Core Competency Training of Doctors	👍👍👍	👍👍	
6. Enhanced Roles of Nurses	👍👍👍	👍	
7. Common Ward Language	👍	👍👍👍	👍👍
8. Electronic Handover System	👍	👍👍👍	

* *The symbols show the relative impacts of different strategies on quality care, enhanced safety and night-time workload.*

1. Deployment of Doctors to Pressurised Areas

(For All Pilot Reform Sites and Hospital Clusters)

- $182 Mn injected from 2007/08 to 2009/10, supporting 348 new posts
- Net increase of 289 doctors from Jul 2007 to Jul 2009 in all clinical specialties, with 121 doctors deployed to the six pressurised clinical specialties with prolonged work hour issues
- 70 Resident Trainees allocated to pressurised clinical specialties for reform-related purposes in 2008/09 and 2009/10

2. Re-engineering of Emergency Operating Theatre Services

(Pilot Sites: Caritas Medical Centre, North District Hospital, United Christian Hospital and Yan Chai Hospital)

- Proportion of emergency operating time used at night, relative to the total EOT time used, reduced by 10% – 50% in the pilot hospitals
- More than 30% of backlog operations cleared

3. Establishment of Emergency Medicine Wards

(Pilot Sites: Caritas Medical Centre, Pamela Youde Nethersole Eastern Hospital and Princess Margaret Hospital)

- Avoidable admissions to clinical specialties reduced by up to 19.67% (Medicine), 7.26% (Surgery) and 5.18% (Orthopaedics & Traumatology)

4. Introduction of Care Technician Services

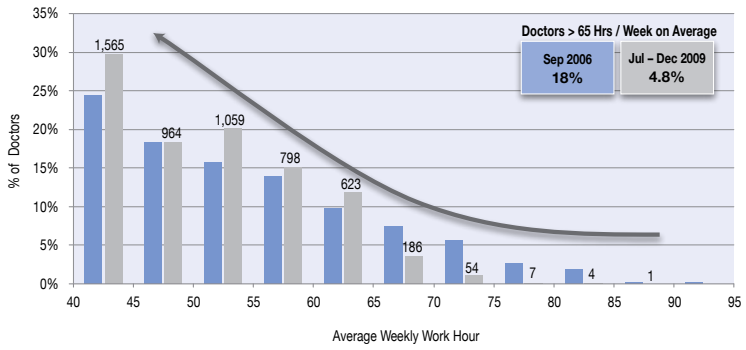
(Pilot Sites: Alice Ho Miu Ling Nethersole Hospital, Caritas Medical Centre, Pamela Youde Nethersole Eastern Hospital, Princess Margaret Hospital, United Christian Hospital and Yan Chai Hospital)

- Estimated doctor work hours saved in 6 hospitals: 11,117 hours / month on average

II. Improvements in Doctors' Working Conditions

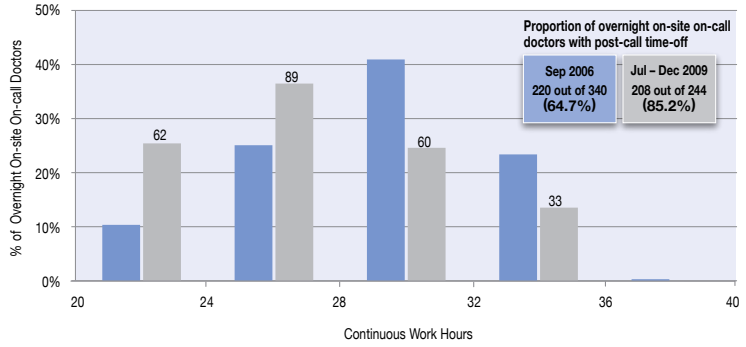
	September 2006	July – December 2009
Doctors working for > 65 hrs/ wk on average	18%	4.8%
Overnight on-site on-call doctors with immediate post-call time-off	65%	85.2% (Holiday) 82.4% (Weekday)

Doctors' Average Weekly Work Hour (Sep 2006 Vs Jul – Dec 2009)



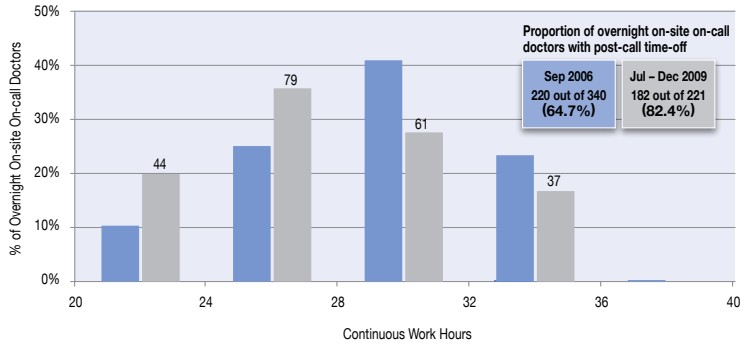
Methodology: Sep 2006 – self-reporting, Jul – Dec 2009 – duty roster based + self-reporting of called-back duties

Continuous Work Hours of Overnight On-site On-call Doctors (Holiday)



Methodology: Sep 2006 – self-reporting, Jul – Dec 2009 - duty roster based + self-reporting of called-back duties

Continuous Work Hours of Overnight On-site On-call Doctors (Weekday)



Methodology: Sep 2006 – self-reporting, Jul – Dec 2009 - duty roster based + self-reporting of called-back duties

1. Average Weekly Work Hours > 65

Specialty	Sep 2006	Jul – Dec 2009
HA Overall	**900 (Around 18%)**	**252 out of 5,261 (4.79%)**
Neurosurgery	73%	12 out of 96 (12.5%)
Surgery	45%	90 out of 483 (18.63%)
Obstetrics & Gynaecology	40%	39 out of 218 (17.89%)
Paediatrics	40%	23 out of 329 (6.99%)
Orthopaedics & Traumatology	29%	51 out of 327 (15.6%)
Oncology	26%	0%
Cardiothoracic Surgery	22%	2 out of 36 (5.56%)
Internal Medicine	21%	19 out of 1,241 (1.53%)
Ear, Nose, Throat	16%	4 out of 82 (4.88%)
Ophthalmology	13%	10 out of 149 (6.71%)
Psychiatry	12%	0%
Intensive Care Unit	4%	2 out of 131 (1.53%)

* *Methodology: 2006 – retrospective self-reporting*
2009 – prospective & duty-roster based + self-reporting of called-back duties

2. Continuous Work Hours

(Proportion of overnight on-site on-call doctors with immediate post-call time-off)

Sep 2006	Jul – Dec 2009 (Holiday)	Jul – Dec 2009 (Weekday)
220 out of 340 (64.7%)	208 out of 244 (85.2%)	182 out of 221 (82.4%)

* *Methodology: 2006 – retrospective self-reporting; 2009 – prospective & duty-roster based*

III. Quality Patient Care through Teamwork

1. Improved access to emergency operations at daytime and proper care and management of patients in emergent and urgent conditions at night
2. Enhanced quality of care for short-stayed patients and reduced length of hospital stay in Emergency Medicine Wards
3. Timely care technician services and due patient assessment during out-of-hours
4. Better continuity of care for critically ill and unstable patients through the electronic handover system in a multi-disciplinary team
5. General improvement in hospital care by more vigilant and trained doctors resulting from a strengthened workforce, less intense workload and reduced work hours

IV. Risk Management for Enhanced Patient Safety

1. Reduced doctors' on-call frequency through a partial shift system supported by off-site specialists and cross-coverage of doctors in certain specialties
2. Management of acute patients in Emergency Medicine Wards according to established care pathways
3. Protocol-based assessment of acutely admitted patients and coordinated response to clinical emergencies
4. Timely specialist intervention for potentially critical patient conditions detected through application of an integrated observation chart and a standardised communication tool
5. Enhanced core competency of doctors in recognising, assessing and managing patients in critically ill and unstable conditions in both emerging and urgent situations through structured training

1

Preamble and Evolution of Doctor Work Reform

Localised reform with stakeholder engagement for
better care, patient safety, quality hours and improved morale

Doctor Work Reform

INTRODUCTION

101 In its long history of providing quality healthcare services for the general public in Hong Kong, the Hospital Authority ("HA") always took pride in its highly dedicated and professional workforce. In order to cater for the evolving needs and rising community expectations, HA had made strenuous efforts in the past two decades to enhance the quality of care and maintain a competent and highly vigilant workforce of health carers in public hospitals. Improving the work-life balance of frontline staff, in particular doctors who used to work for prolonged hours, always sat among the top agenda items under HA's "People First Strategy". In September 2006, HA conducted a doctor work hour survey which suggested that around 18% of public hospital doctors (i.e. about 900) worked for more than 65 hours per week on average while 35% of the overnight on-site on-call doctors (i.e. about 120) did not have immediate post-call time-off. Figures 1.1 and 1.2 below showed the survey results on doctors' average weekly and continuous work hours in 2006 respectively.

Fig. 1.1 – Average Weekly Work Hours of HA Doctors (Sep 2006)

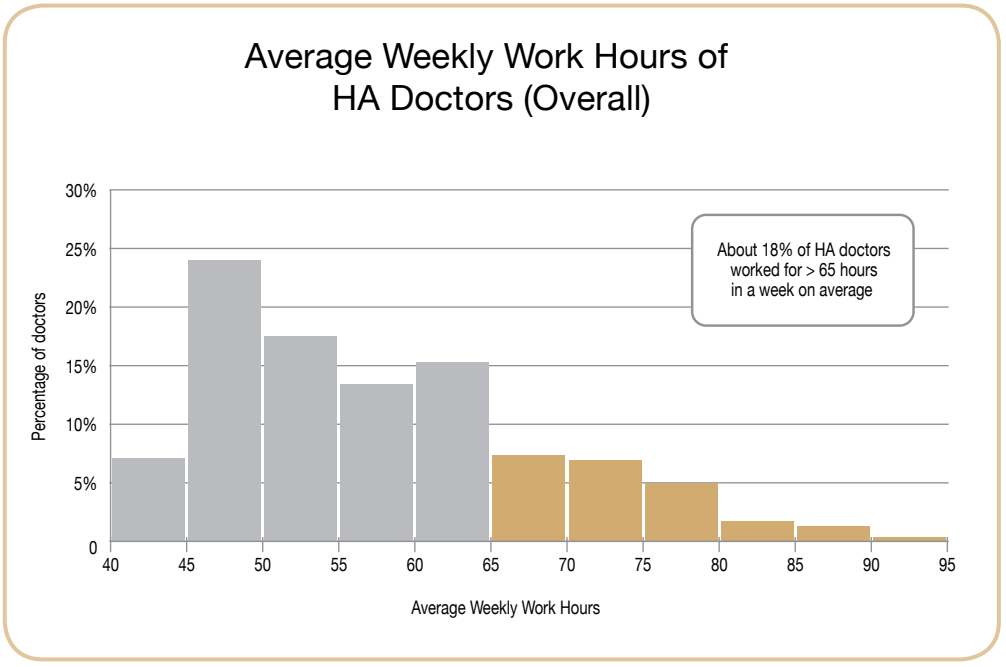
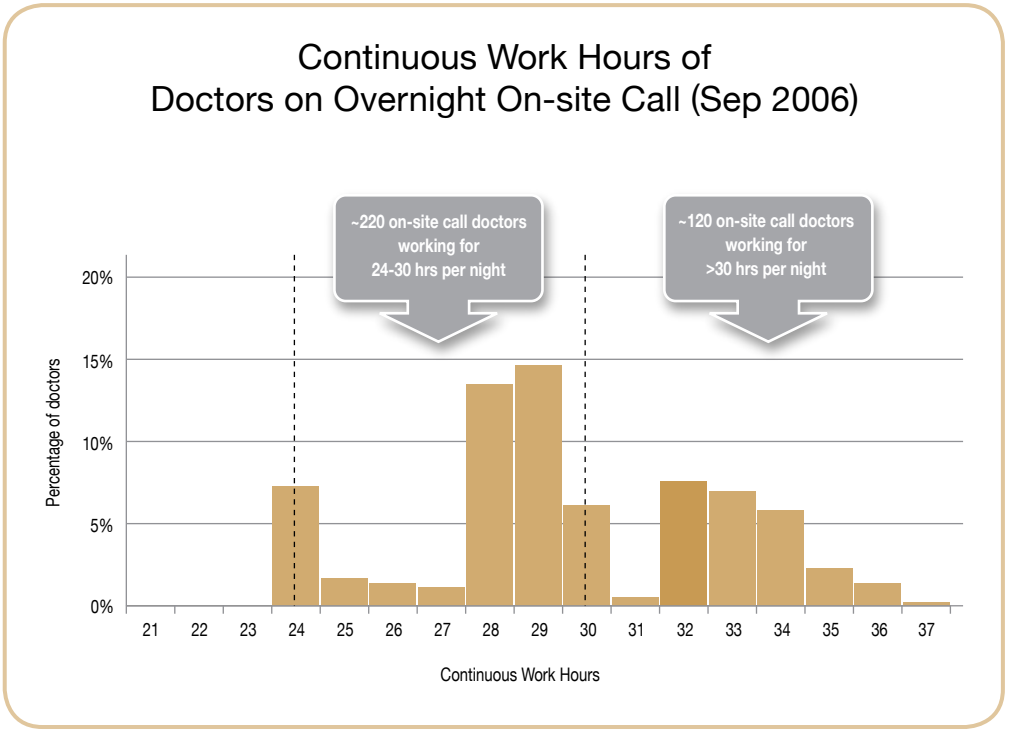


Fig. 1.2 – Continuous Work Hours of Doctors on Overnight On-site Call (Sep 2006)



102 To address the issues of doctors' prolonged work hours, highly intense activities and low morale, HA established the Steering Committee on Doctor Work Hour ("Steering Committee") under the lead of Dr C H LEONG, GBS, JP, Former Chairman of HA, in October 2006. Two overseas experts, namely, Dr Sherene Devanesen from Australia and Mr Andrew Foster from the United Kingdom[1], were invited to join the Steering Committee for experience sharing and wisdom tapping on implementing the work reform strategies. Representatives from the Hong Kong Academy of Medicine ("HKAM") and local medical training universities were also enlisted. Two advisory committees were also set up to collate feedback from the hospital cluster administration, clinical specialties as well as the frontline doctors on any work reform related issues. The memberships of the Steering Committee and the two advisory committees could be found in Appendices II to IV.

103 The Steering Committee was delegated to strategise for and oversee the work reform implementation in HA hospitals with a view to achieving the corporate targets of reducing all doctors' average weekly work hours to not exceeding 65 hours by the end of 2009 while ensuring the quality and safety of patient care. Regular reports would be made to the HA management for attention and deliberation.

[1] Dr Sherene Devanesen was the Chief Executive of Peninsula Health in Victoria, Australia while Mr Andrew Foster was the Chief Executive of Wrightington, Wigan and Leigh NHS Trust in the United Kingdom.

BELIEFS, DIRECTIONS AND OBJECTIVES OF REFORM

104 The Steering Committee believed that Doctor Work Reform could not be taken along without improving staff morale. Five major reform directions were thus outlined to address issues related to doctors' excess work and boost staff morale:

a) The weekly work hours of doctors should not exceed 65 in general while those currently working for fewer than 65 hours should also be benefited from the reform.

b) Doctors should not work continuously for more than 16 – 24 hours.

c) Overtime work of doctors exceeding their conditioned hours should be recognised financially.

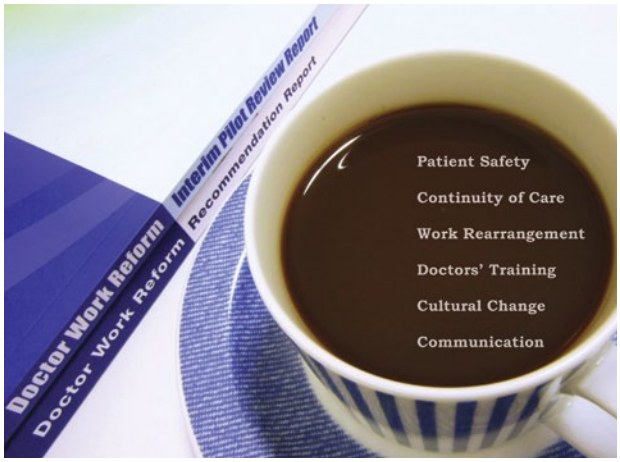
d) Manpower should be rationally increased in certain clinical specialties on a need basis.

e) Promotion of doctors should be encouraged in HA, taking into consideration their competency, qualifications and years of service.

105 HA's Doctor Work Reform carried the three-fold objectives of quality patient care through teamwork, risk management for enhanced patient safety as well as quality doctor hours for service and training. It sought to maintain the work-life balance of doctors and provide better and more efficient patient care through enhanced teamwork and explicit sharing of responsibilities. Yet, while it was the attempt to rationalise doctor work hour that triggered Doctor Work Reform, it was never meant to be a pure number's game, nor should it be perceived to nourish a clock-watching culture in clinical practice. The reform entailed a cultural change in the conventional mode of practice and modernising the roles of health carers; and should be deemed the business of everyone in HA instead of the medical profession only.

CONSULTATION AND COMMUNICATION – A LOCALISED REFORM MODEL

106 Realising the novelty of Doctor Work Reform and with a view to formulating a localised, pragmatic yet sustainable model of service transformation, the Steering Committee kicked off the reform process with an extensive consultation which delivered a consensual selection of leading work reform strategies. Numerous consultative and communication forums were conducted in the past years. The Strategy Planning Workshop held in March 2007, involving more than forty frontline staff and nine clinical specialties, served a head start for the corporate reform. The HA-wide consultations in May 2007, inviting feedback from the HKAM and each and every doctor in HA, as well as the ensuing consultations with the hospital chiefs, clinical specialties, senior executives and the frontline doctor representatives, furnished a reservoir of constructive views and erudite wisdom to enable the Steering Committee to strategise for the corporate reform. Yet, the valuable experiences of the overseas counterparts were never neglected, for they provided great references for implementation of the local work reform in the organization. In particular, the Hospital at Night programme of the United Kingdom had provided the inspirations for certain work reform strategies. Study visits and bespoke sharing by overseas experts were also organised for all concerned stakeholders to exchange views and learn the experiences in work reform implementation.

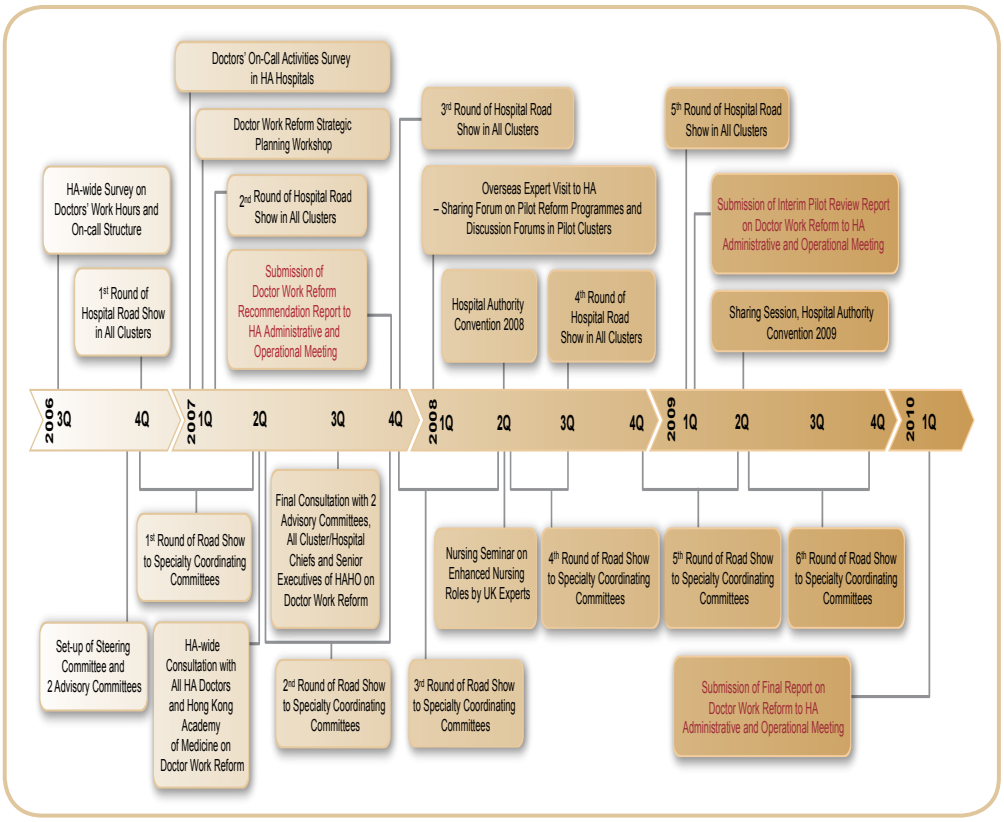


107 Since 2007, HA had conducted 262 communication sessions, entailing cluster and specialty-based road shows, sharing forums, healthcare conventions and management meetings, with a cumulative attendance of over 5,660 staff members. Close liaison and collaboration were also maintained with patient groups, community leaders as well as the HKAM in order to keep links on the work reform strategies and implementation progress, and collate their feedback on the work reform impacts on patient safety and doctors' specialist training in public hospitals. Around 200 feedbacks had been received from staff in various disciplines; and these had been considered and addressed by the Steering Committee in formulating its reform and implementation strategies. The Steering Committee first submitted its

Doctor Work Reform Recommendation Report to the HA Board in November 2007 and made an Interim Pilot Review Report on Doctor Work Reform to the HA Board for deliberation again in February 2009. The HA Board welcomed the work reform strategies and supported the direction of reform in general. Meanwhile, progress reports were made to the Health Services Panel of the Legislative Council ("LegCo") in March and July 2008 as well as May 2009.

108 Figure 1.3 below gave a brief timeline of HA's consultation and communication process, which had laid a solid foundation for the corporate Doctor Work Reform. This Final Report on Doctor Work Reform was also circulated to members of the two advisory committees[2], cluster and hospital chiefs, senior executives of the HA Head Office as well as the Hong Kong Academy of Medicine for comment before publication; and their feedbacks were deliberated by the Steering Committee in refining its recommendations for HA's consideration.

Fig. 1.3 – Milestones of Consultation and Communication on Doctor Work Reform

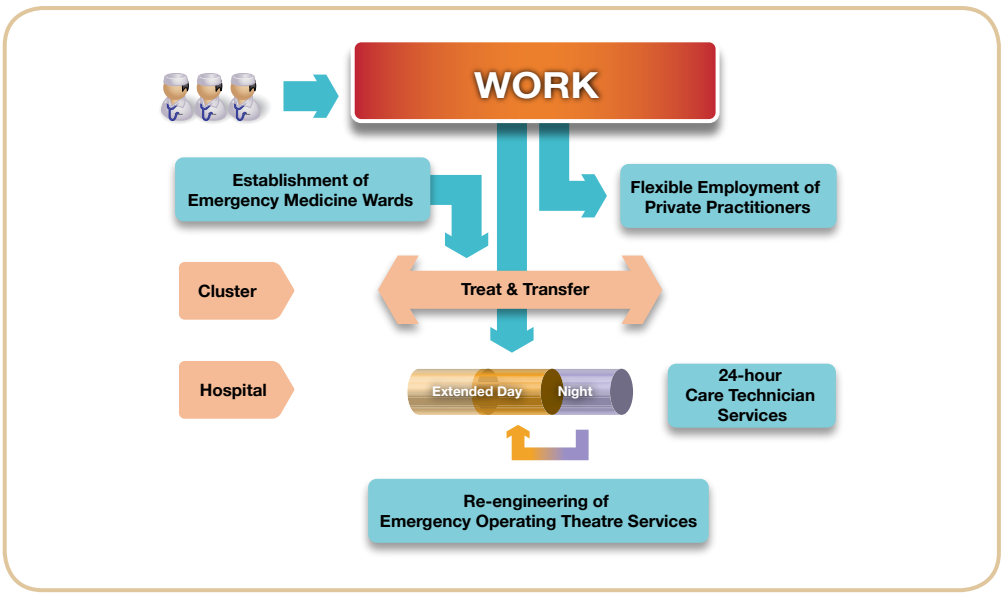


[2] The two advisory committees were the Cluster Administration and Specialty Advisory Committee on Doctor Work Hour as well as the Doctors Staff Group Consultative Committee. All feedbacks received on the draft Final Report on Doctor Work Reform could be found in Appendices X and XI.

PILOT DOCTOR WORK REFORM STRATEGIES

109 Doctor Work Reform encompassed multi-stranded transformation strategies that were aimed to optimise doctors' workload and ensure patient safety through process re-engineering, multi-disciplinary teamwork, engagement with stakeholders and standardization of clinical practice. Since the fourth quarter of 2007, HA had piloted four major work reform strategies, namely, deployment of doctors to pressurised areas, re-engineering of emergency operating theatre services, establishment of Emergency Medicine Wards as well as introduction of care technician services, in order to verify their effectiveness in attaining the stated objectives in selected acute public hospitals. These strategies were complemented with other supportive work reform programmes, like enhancing the senior nurse coverage during out-of-hours, introducing a common ward language, piloting an electronic handover system and strengthening the core competency of healthcare professionals in the pilot hospitals. Each of these work reform strategies had provided a measurable contribution to easing the workload of doctors; and these would be discussed in greater details in the following chapters.

Fig. 1.4 – Pilot Doctor Work Reform Strategies



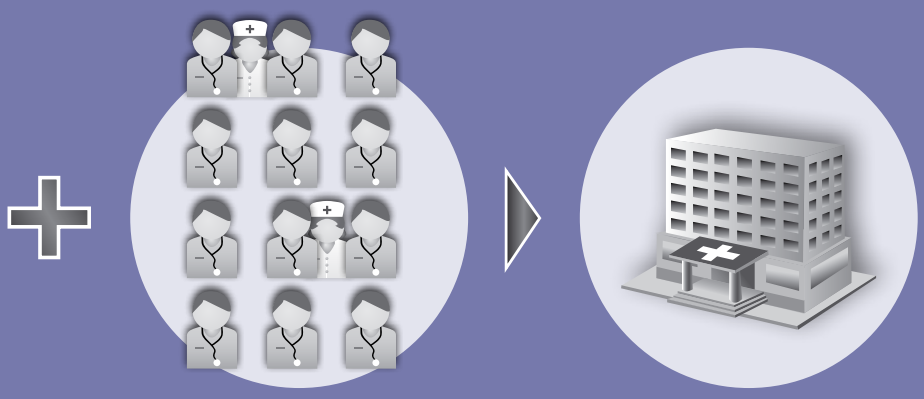
110 As illustrated in Figure 1.4 above, the vertical dimension portrayed the optimization of total workload while the horizontal dimension depicted the rationalization of night activities in public hospitals. Along the vertical dimension, by establishing Emergency Medicine Wards as a gate-keeper for the public hospital system and employing part-time private practitioners to alleviate the workload in specialist outpatient consultations, it was anticipated that the vast workload block would be trimmed down to a reasonable level that was to be borne by the serving HA staff.

111 On the other hand, along the horizontal dimension at the cluster level, selected emergency cases were diverted to certain hospitals while defined highly complex cases were proposed to be concentrated in a few centres across hospital clusters. This would enhance the efficiency of resource allocation and improve patient access to the scarce medical expertise. Besides, by augmenting the extended day capacity of emergency operating theatres, a certain portion of backlog operations could be cleared while patients would be able to undergo earlier and safer operations conducted by more vigilant doctors. Moreover, a pool of care technicians would be trained up with the extended roles of providing round-the-clock blood-taking, electrocardiogram and intravenous cannulation services. This would enable the frontline doctors to refocus their time on core clinical duties and create room for reducing the number of overnight on-site on-call doctors, hence improving their working conditions.

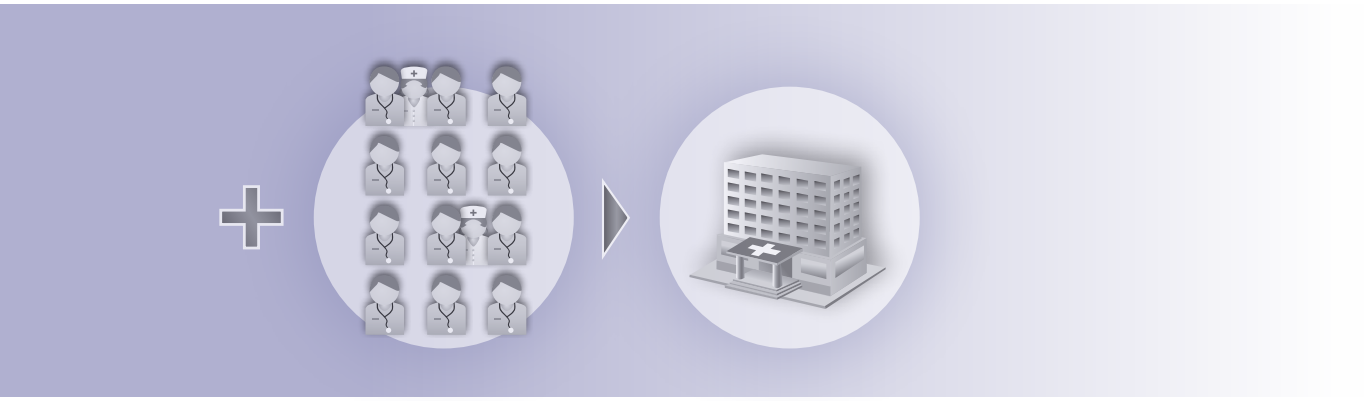
112 The Steering Committee was cognizant that no one model would fit all and there was no fast-track solution to tackle all issues related to Doctor Work Reform. HA had thus delegated the Steering Committee to oversee the work reform implementation, report progress at regular intervals and recommend the final rollout strategies for those effective work reform programmes to other public hospitals.

Blank Page

2 Deployment of Doctors to Pressurised Areas



Strategic workforce deployment and public-private partnership to manage rising workload



EXECUTIVE BRIEF

201 Deployment of resources and manpower was a key strategy under Doctor Work Reform to improve the working conditions of doctors and ensure the quality of care and patient safety. HA set aside a total of $182 million from 2007/08 to 2009/10 and supported the creation of 348 new posts, including 38 doctors, to launch various reform-related programmes. There was a net increase of 289 doctors (i.e. 6%) in HA from July 2007 to July 2009, with 121 doctors (i.e. 42% of 289 doctors) deployed to the six pressurised specialties with prolonged doctor work hours. Besides, HA allocated a total of 70 new Resident Trainees to different specialties in 2008/09 and 2009/10 and had acceded to all hospital clusters' requests for allocating Resident Trainees in 2009/10 in order to attain the work hour targets. Despite the hiccups encountered by the pilot hospital in recruiting part-time private practitioners to help out in the surgical out-patient clinics under the then booming private market, HA kept on drawing in private expertise through the contemporaneous flexible employment strategy and public-private partnership programmes to tackle both the increasing workload and staff wastage in public hospitals. The number of part-time doctors employed by HA had risen from 29 in March 2007 to 44 in July 2009.

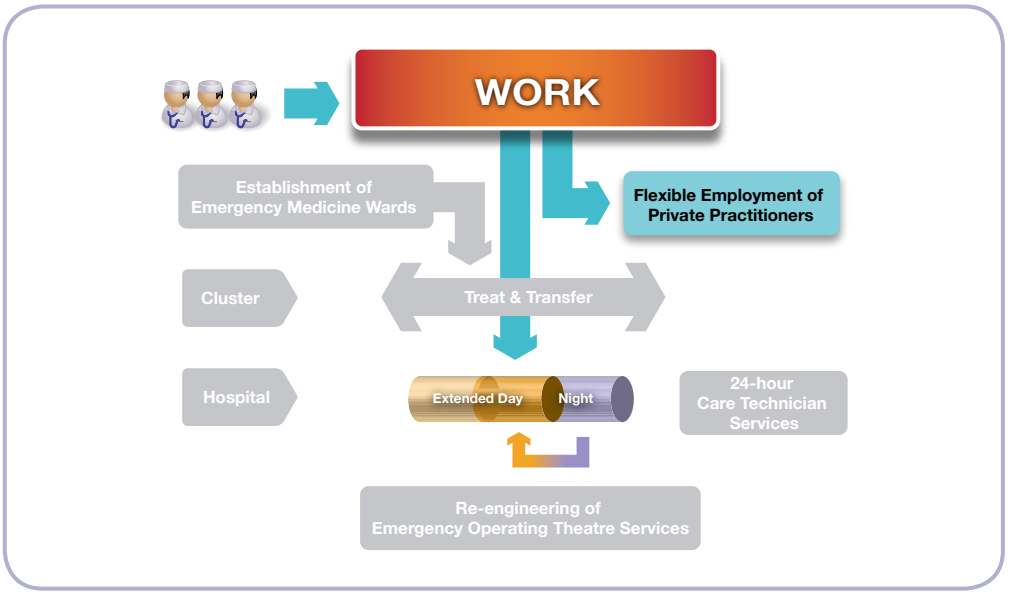
202 HA was recommended to continue deploying additional doctors to the pressurised specialties with reference to the working conditions of doctors in different specialties, alongside the projected growth of service demand and workload as well as the forecasted turnover rate of health carers. Public-private partnership would continue to be the cornerstone for sustaining the public healthcare system in the long run. HA was thus recommended to explore different means of collaboration with the private healthcare sector and develop Family Medicine Specialist Clinics in order to alleviate the workload of public hospital doctors while the manpower level, work arrangements and call systems of doctors in different specialties should

continually be reviewed in order to identify any possible room for optimising workload, streamlining work procedures and improving doctors' working conditions in public hospitals.

PILOT WORK REFORM PROGRAMME

203 HA realised that the undesirable prolonged work hours and heavy workload of public hospital doctors stemmed from an escalating service demand, shortage of manpower and significant public-private imbalance in the healthcare system. Mere changes in doctors' work patterns without additional resource and manpower support could hardly bring about a marked improvement in doctors' working conditions. Thus, to attain the reform objectives, HA adopted three approaches to deploy resources and manpower to pressurised areas, viz. (a) addition of doctors for launching key pilot work reform programmes, (b) addition of doctors to pressurised clinical specialties and (c) employment of private practitioners through the contemporaneous flexible employment strategy. (Figure 2.1)

Fig. 2.1 – Deployment of Doctors to Pressurised Areas



A. Addition of Doctors for Launching Key Pilot Work Reform Strategies

204 HA set aside a total of $182 million[3] from 2007/08 to 2009/10 to launch the key pilot work reform strategies of re-engineering the emergency operating theatre services, establishing Emergency Medicine Wards and introducing care technician services as well as other supportive work reform programmes in various public hospitals. 348 new posts were created under these programmes, comprising 38 doctors, 57 nurses, 21 allied health professionals and 232 supporting grades of staff; and including 26 upgraded posts in various disciplines. In general, the pilot work reform strategies had alleviated the workload of frontline doctors and night-time activities, and created room for revamping the existing work patterns of doctors in different clinical specialties. As a result, doctors had more time to receive training on their core competency which would in turn enhance the quality of care and patient safety. Healthcare professionals also had better promotional opportunities and improved morale. The outcome of the pilot work reform strategies would be discussed in greater detail in the ensuing chapters.

B. Addition of Doctors to Pressurised Clinical Specialties

205 Certain clinical specialties of public hospitals were obsessed by prolonged doctor work hours, grave manpower shortage and high turnover of the medical workforce in recent years. They might not be able to fully benefit from the pilot work reform strategies due to their intrinsic demand nature where night activities did not drop after midnight. This had made trimming or reshuffling of night activities to the extended day immensely difficult. Examples were some obstetric and neurosurgical operations as well as acute paediatric conditions. In this relation, HA had augmented the manpower provision in different pressurised clinical specialties according to their service needs and workforce conditions in the past years. There was a net increase of 289 doctors (i.e. 6%) in HA from July 2007 to July 2009, with 121 doctors (i.e. 42% of 289 doctors) deployed to the six pressurised specialties of public hospitals[4] (Table 2.1 and Appendix XIII).

---

[3] The resource allocations for reform-related programmes in 2007/08, 2008/09 and 2009/10 were $31 million, $77 million and $74 millions respectively.

[4] According to the work hour survey conducted in 2006, the six pressurised specialties were Neurosurgery, Surgery, Obstetrics & Gynaecology, Paediatrics, Orthopaedics & Traumatology as well as Internal Medicine.

Table 2.1 – Headcount Changes in Pressurised Clinical Specialties

	July 2007	July 2008	July 2009	Headcount Change (July 2009 Vs July 2007)
HA Overall	**4,799**	**4,952**	**5,088**	**+ 289 (6%)**
Neurosurgery	77	88	90	+ 13 (17%)
Surgery	441	454	482	+ 41 (9%)
Obstetrics & Gynaecology	203	207	217	+ 14 (7%)
Paediatrics	302	306	318	+ 16 (5%)
Orthopaedics & Traumatology	290	295	303	+ 13 (4%)
Medicine	1,100	1,121	1,125	+ 25 (2%)

206 Besides, HA allocated a total of 70 new Resident Trainees to different clinical specialties in 2008/09 and 2009/10 (Appendix XIV) and had acceded to all hospital clusters' requests for allocating Resident Trainees in 2009/10 in order to specifically address the workload issues of doctors and create room for changing their call systems and work patterns. The Steering Committee was glad to learn that the proportion of outliers working for more than 65 hours per week on average in HA dropped from around 18% in September 2006 (involving around 900 doctors in 12 clinical specialties) to 4.8% by the end of December 2009 (involving 252 doctors in 10 clinical specialties), alongside other pressurised areas that had fully attained the work hour targets by the end of 2009 through deployment of additional doctors and launch of various work reform related programmes. The number of overnight on-site on-call doctors who did not have immediate post-call time-off also dropped from 120 in September 2006 to 36 and 39 on the snapshot holiday (July 1) and weekday (July 8) respectively in 2009.

C. Employment of Private Practitioners through The Flexible Employment Strategy

207 Under this pilot programme, HA planned to employ part-time private practitioners under the flexible employment strategy to take up a certain proportion of specialist outpatient consultation sessions and handle a specified minimum of selected cases at a pre-determined rate of remuneration. It was targeted to relieve the rising service volume and tackle the high turnover rate of public hospital doctors in recent years. Clinical specialties could then lessen the need for doctors to attend outpatient consultations after their overnight on-site on-call duties and have greater room for revamping their work patterns, like granting post-call time-off to the overnight on-site on-call doctors, so that they could concentrate on their core medical and inpatient care duties. Besides, patients would have more service choices in the private market as to relieve the lingering issue of public-private imbalance in healthcare delivery.

208 However, recruitment difficulties were encountered under the booming private market in 2008, despite repeated attempts and promulgation among the private practitioners via the Hong Kong Doctors Union. Since late July 2008, a doctor had been internally deployed from the Accident and Emergency Department to support 8 sessions of surgical outpatient clinics per week in the pilot hospital[8]. The arrangement was in general welcomed by the frontline doctors, for it provided a steady workforce and facilitated granting of post-call time-off for the second on-site on-call doctor in the Surgery Department. The pilot programme ended in July 2009 when additional Resident Trainees were allocated to the said department to attain the work hour targets. All on-site on-call doctors could now enjoy immediate post-call half-day time-off, hence reduced continuous and average weekly work hours for delivering quality and safer patient care.

[5] The deployment was made in Princess Margaret Hospital.

209 The hiccups in recruiting part-time private practitioners to help out the surgical outpatient clinics did not undermine nor impede HA's initiative to draw in private expertise to support the public hospital system. The number of part-time doctors employed by HA had risen from 29 in March 2007 to 44 in July 2009, spreading across 14 clinical specialties like Accident and Emergency, Anaesthesia, Family Medicine, Medicine, Obstetrics & Gynaecology, Paediatrics and Surgery. Moreover, various public-private partnership programmes were also in place, like the Cataract Surgeries Programme[6], the Tin Shui Wai Primary Care Partnership Programme[7] and other shared care programmes, to offload the rising service volume to the private sector with positive outcomes. Given the financial tsunami currently hitting the global economy, it was pondered that there should be less difficulty in recruiting part-time private practitioners, whose service would ultimately benefit both patients and the frontline doctors.

ISSUES OF CONCERN

210 Deployment of doctors to pressurised areas was a pragmatic means to alleviate the workload of frontline doctors. In particular, the overall service volume in public hospitals was alleviated by reducing avoidable admissions, reshuffling non-emergency night operations to the extended day and collaborating with the private healthcare sector to handle part of the specialist outpatient consultations. Frontline doctors in certain clinical specialties could work less intensely at night and for fewer hours at one go, thus able to provide safer inpatient care and receive better training in a more vigilant state.

211 Nevertheless, addition of doctors should not be taken as the single solution to address the workload and work hour issues of frontline doctors in different clinical specialties. HA should keep on rationalising its hospital services, streamlining work procedures, fostering multi-disciplinary collaboration in care delivery, developing service networks across clusters for highly sub-specialised services where appropriate and, above all, introducing practical means of operation and revamping doctors' existing work patterns in order to truly alleviate the service volume and improve doctors' working conditions.

---

[6] The Cataract Surgeries Programme aimed to shorten the central waiting list for cataract surgeries by subsidising eligible patients to get the surgeries done in the private sector. By the end of September 2009, 80 private Ophthalmologists and 8,582 patients had been enrolled in the programme.

[7] Under the Tin Shui Wai Primary Care Partnership Programme, HA would purchase primary care services from private practitioners for specific patient groups, like hypertension, diabetes and osteoarthritis, in the Tin Shui Wai District. By the end of September 2009, 6 private practitioners and 1,123 patients had joined the programme.

212 Besides, since an expanded workforce would bring about career progression hence morale problems among the junior doctors, HA should strategically deploy doctors to pressurised areas on a need basis, taking into account the competing service demands, supply of medical graduates, trainee admissions in different specialty colleges, manpower wastage, doctors' working conditions as well as service sustainability for the entire organization in the long run. Yet, in order to support the revamped arrangement of strengthened off-site specialist support for on-site on-call doctors, and to improve clinical supervision in public hospitals during out-of-hours, HA might consider, subject to resource availability, enhancing the staff mix and creating an appropriate number of senior clinician posts in busy specialties. This would also improve the promotional opportunities and morale of frontline doctors, especially those in the middle call layer who had out of their professionalism taken up extra work and call duties for attainment of the corporate work hour targets.

213 A number of doctor representatives queried HA's manpower deployment strategy and suggested that doctors should be deployed direct to the pressurised specialties rather than to the Accident and Emergency Departments, for the latter's gate-keeping function was questionable and the EMW initiative merely denoted a redistribution of workload from the medical wards without reducing acute admissions to other clinical specialties. The Steering Committee was cognizant of the teething problems and confounding factors, like inadequate hospital beds, varied operational modes, insufficient cross-specialty collaboration and epidemic outbreak since the second quarter of 2009, which hindered full attainment of the programme objectives at certain pilot reform sites. Yet, the EMW was proven effective in providing quality and fast-track care for short-stayed patients and was a suitable platform for multi-disciplinary and cross-specialty collaboration in managing selected acute patient conditions, while the clinical wards would focus on managing medical problems which required respective specialists' expertise. When the confounding factors were resolved (please refer to Chapter 4 for details) and there was closer collaboration among the clinical specialties, deployment of doctors to run the EMW initiative would maximise the patient outcome and the right care could be delivered to patients in the right place.

214 On the other hand, following the feedback of the Family Medicine Coordinating Committee, HA might consider setting up Family Medicine Specialist Clinics in public hospitals with appropriate resource support in order to manage patients with multiple chronic illnesses in a holistic approach. This would not only reduce the specialist outpatient workload of doctors in pressurised clinical specialties, but also improve the professional development and career opportunities for trainee doctors in this specialty. On the other hand, certain hospital management opined that Family Medicine physician training should be geared towards quality patient care which required more training time. The current arrangement of deploying the limited workforce of general outpatient clinics to manage ad hoc clinical activities (e.g. melanine-tainted milk, human swine influenza) could be undesirable for doctors' specialist training. The overlap of work done by the general and specialist outpatient clinics should be avoided.

215 Public-private partnership would continue to be the cornerstone for optimising the total workload and sustaining the public healthcare system in the long run. HA should explore further room of collaboration with the private sector so as to alleviate the workload of frontline doctors and improve the quality of care and patient safety in public hospitals. More promulgation to the patient groups was required, as were well-thought mechanisms to facilitate patient referral to the private sector and enhance system support through information technology, like development of an electronic platform to share health records and information between the public and the private sectors, so that the continuity and quality of patient care could be enhanced. Moreover, development of ambulatory and community care was a global move in the healthcare sector as to reduce avoidable admissions and hospitalised care, hence workload of doctors. HA might consider further development in this direction in order to manage its rising service volume.

216 Finally, as a hospital management staff had expressed, the existing unstable workforce of HA might not be able to sustain the ever increasing public demand. HA might need to define a limit to its scope and depth of service in order not to affect the quality of public healthcare services for the general public.

THE STEERING COMMITTEE'S RECOMMENDATIONS

217 The Steering Committee put forward the following recommendations in relation to the deployment of doctors to pressurised areas:

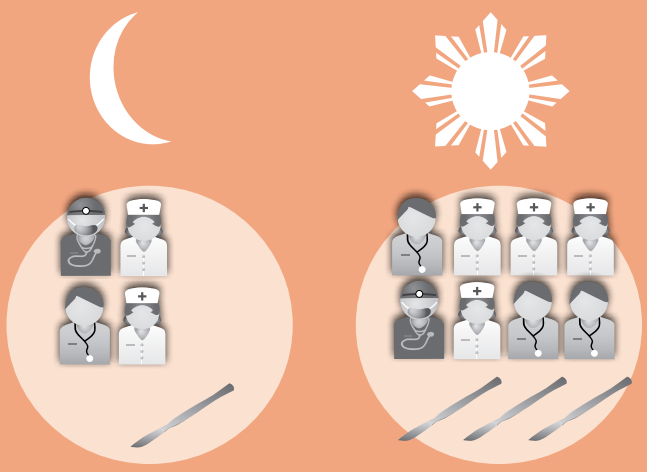
a) HA was recommended to continue deploying additional doctors to the pressurised specialties with prolonged work hour issues via the established Resident Trainee allocation mechanisms and plan its workforce with reference to the competing service demands, supply of medical graduates, trainee admissions in different specialty colleges, manpower wastage, doctors' working conditions as well as service sustainability for the entire organization. This would even out the average workload of frontline doctors in different specialties and improve their working conditions and morale. Moreover, better and safer care could be delivered by more vigilant doctors in public hospitals.

b) HA was recommended to continue exploring different means of collaboration with the private healthcare sector, developing Family Medicine Specialist Clinics and engaging in further public-private partnership programmes, in order to alleviate the workload in the public sector and ensure the quality of care and safety for public hospital patients.

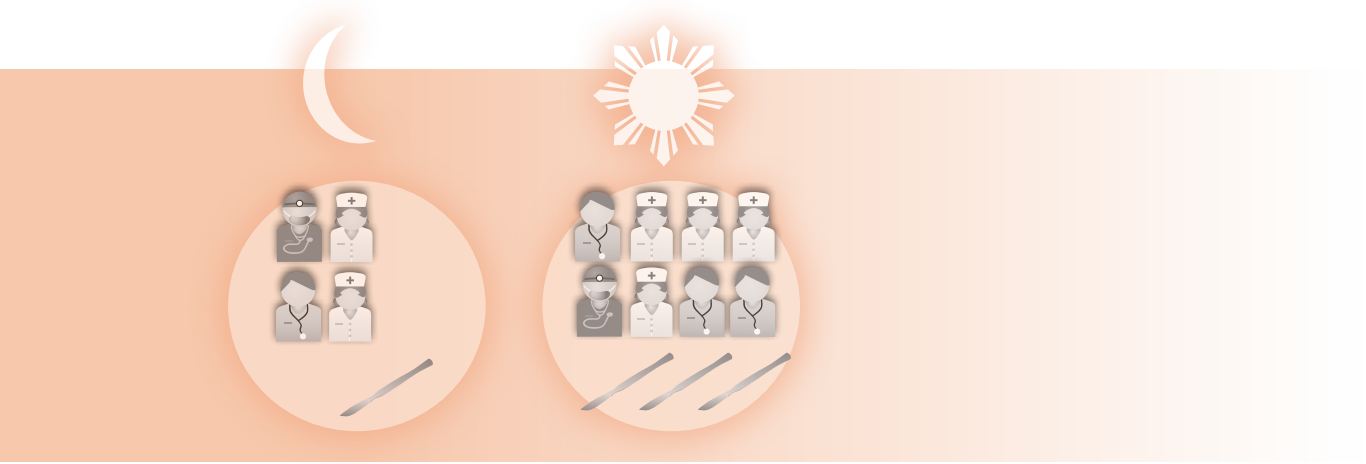
c) HA was recommended to continue rationalising its hospital services, streamlining work procedures, reviewing its manpower level and work arrangements, and fostering multi-disciplinary collaboration in care delivery in order to identify any possible room for optimising workload and improving doctors' working conditions in public hospitals.

3

Re-engineering of Emergency Operating Theatre Services



Expanded theatre capacity and reshuffled operations
for enhanced patient safety and optimised night activities



EXECUTIVE BRIEF

301 Four acute public hospitals expanded their day-time emergency operating theatre ("EOT") capacity on weekdays in order to clear their backlog emergency operations formerly performed at the night time. At certain pilot sites, EOT services were also re-engineered as to manage cases of genuine emergency at night only while semi-urgent and elective operations were reshuffled to the day time with greater manpower and facility support. Patients could then have safer operations while the workload of on-call doctors would be reduced at night. It was targeted that patients' waiting time for emergency operations could be shortened by expanding the EOT capacity in the extended day. In the review period, more than 30% of backlog operations were cleared in the pilot hospitals while the utilization ratio of EOT time at night, relative to the total EOT time used throughout the whole day, had dropped by 10% – 50%. The outcome varied among the pilot sites and was more conspicuous in acute secondary than acute tertiary hospitals. However, patients could in general enjoy better hospital care by having earlier operations, stronger clinical supervision and other clinical support for day-time surgeries as well as fewer complications. Besides, hospitals would benefit from shorter patient stay and a higher level of patient satisfaction. The pilot programme was supported by the health carers for further rollout to other hospitals.

302 HA was recommended to re-engineer the EOT services in all acute hospitals with 24-hour emergency services. Different modes of operating theatre services could be introduced during out-of-hours to support emergency operations at night and additional funding, if any, should first be allocated to expand the operating theatre capacity of acute secondary hospitals in the extended day. Besides,

HA was recommended to manage the issues of inadequate day-time operating theatre capacity and institute changes in the work practice of the surgical stream specialties in order to optimise night-time operations and improve patient safety. It would also be worthwhile to delineate the roles and service scopes of different hospitals, explore further room for service networking, formulate acute trauma and neurosurgical diversion mechanisms and develop protocol-based escort medicine in all hospital clusters. Finally, HA was recommended to explore the feasibility of providing general resident call coverage for patients who were physiologically unstable in the surgical stream specialties with reference to the global trend and local private practice.

PILOT WORK REFORM PROGRAMME

303 In the past decade, HA had echoed the global trend of embracing a risk management culture by reducing clinical risks and ensuring safer management of patients in its daily operation. As former local surveys[8] had shown, doctors' on-call activities generally fell after midnight and genuine emergencies at night accounted to only 5% of their on-call activities. Moreover, critical conditions that required immediate surgical interventions constituted only 4% – 11% of the night operations (i.e. those performed from 22:00 hrs to 08:00 hrs the next day) while 36% – 55% of the cases operated at night could be drawn to the extended day if operating rooms were available.

304 Operating theatres used to be an expensive high-volume resource in modern hospitals so it was critically important to optimise their usage. As night-time activities in public hospitals were usually supported by slimmer supervision and scattered clinical support; and health carers were more prone to experience fatigue and increased chance of injury[9], reshuffling non-emergency operations at night to the extended day with an augmented operating theatre capacity and better staffing support should thus render safer patient care and

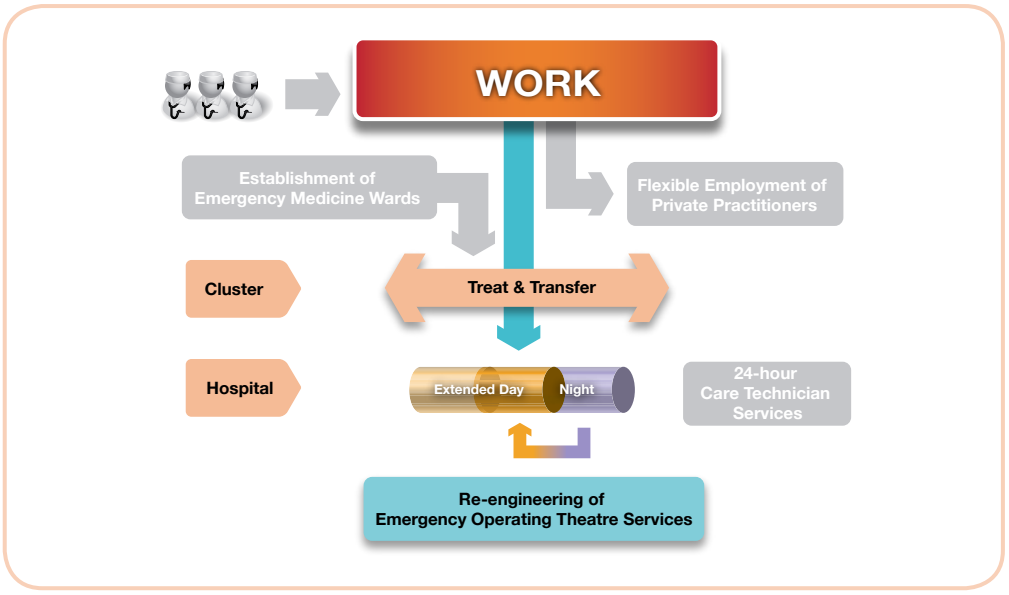
[8] Surveys on public hospital doctors' on-call activities were conducted in September / November 2006 and February / March 2007.

[9] Gander PH, et al. Hours of work and fatigue-related error: a survey of New Zealand anaesthetists, Anaesth Intensive Care 2000; 28:178-83; Uhrich ML, et al. Surg Endosc 2002: 16:635-g: Ava AG, et al. Can J Anaesth 1999; 46:665-g.

higher client satisfaction. Besides, by trimming avoidable clinical activities at night, doctors' workload would be alleviated, thus reducing their need for taking excess overnight on-site calls and improving their work-life balance as well.

305 Four acute public hospitals with 24-hour emergency services, namely, Caritas Medical Centre ("CMC"), North District Hospital ("NDH"), United Christian Hospital ("UCH") and Yan Chai Hospital ("YCH"), took part in this pilot work reform programme. HA injected a total of $30.6 million from 2007/08 to 2009/10[10], involving 9 doctors, 16 nurses, 1 allied health professional and 12 supporting staff. The programme entailed introduction of an extended-day, optimised-night mode of operation where an extra day-time emergency operating theatre ("EOT") session was opened on weekdays to clear the backlog operations while non-emergency operations at night were reshuffled to the extended day for enhanced patient safety. The professional workforce was re-organised and genuine cases of emergency, as per on-site doctors' clinical judgment, would continue to be operated at night. Different models were adopted by the pilot hospitals in accordance with their service scopes, operational arrangements and volume of operations at night. Figure 3.1 below contained the essence of the pilot work reform strategy and Table 3.1 gave a general overview of the re-engineering arrangements in the pilot hospitals.

Fig. 3.1 – Re-engineering of Emergency Operating Theatre Services



[10] The resource injections for the EOT programme were $3.8 million in 2007/08, $14.7 million in 2008/09 and $12.1 million in 2009/10.

Table 3.1 – Profile and EOT Arrangements in the Pilot Hospitals

	UCH	NDH	YCH	CMC
Nature	Acute tertiary	Acute secondary		
Programme commencement	October 2007		August 2007	March 2008
Extra weekday EOT session	Evening		Day time	
OT staffing at night	On-site		Off-site after midnight	
Remarks	Obstetric service provided at night	Neurosurgical operation provided at night	Relatively stable volume of operations at night	

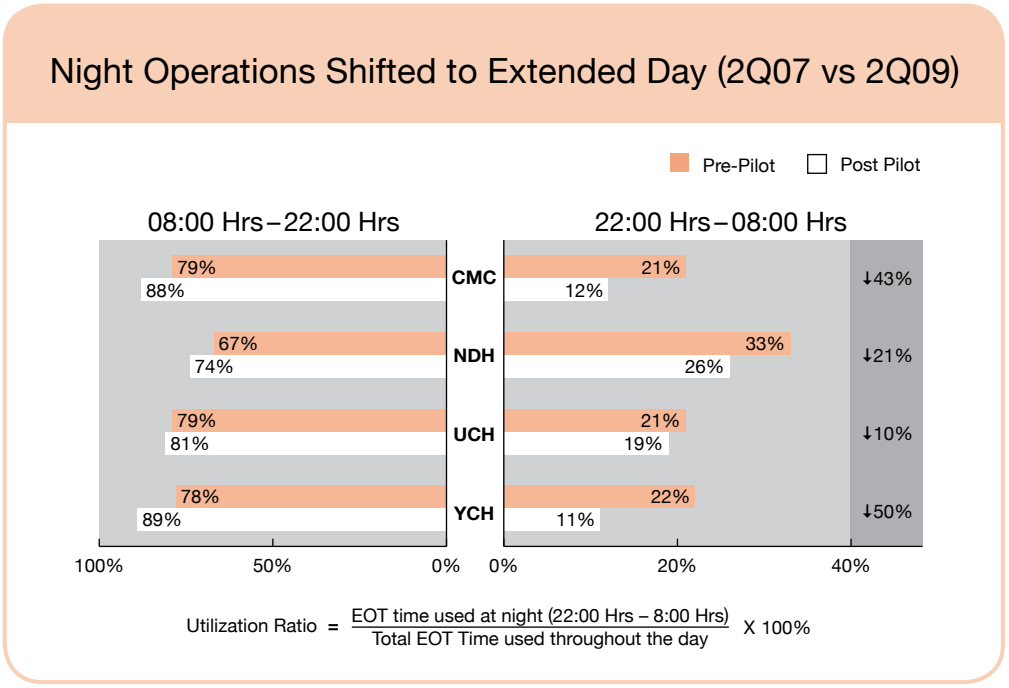
PILOT OUTCOME AND OBSERVATIONS

306 An EOT Task Group, with representations from the four acute pilot hospitals, was formed under the Steering Committee to monitor the pilot work reform outcome, identify the success and confounding factors and recommend the strategy for rollout to other acute public hospitals. The effectiveness of the pilot programme was measured in three perspectives, namely, changes in the utilization ratio of EOT time, queuing pattern of EOTs and impacts on staff composition of the on-site EOT teams at night.

A. Changes in Utilization Ratio of EOT Time at Night

307 Figure 3.2 below displayed the changes in the proportion of EOT time used at both day (i.e. from 08:00 hrs to 22:00 hrs) and night time (i.e. from 22:00 hrs to 08:00 hrs) whereas Table 3.2 showed the reduction in the utilization ratio of EOT time at night, relative to the total EOT time used throughout the day, after commencement of the programme in the pilot hospitals. Data for the second quarter of 2007 and 2009 in the pilot hospitals were compared in order to evaluate the effectiveness of the pilot work reform strategy in reducing avoidable night-time activities through addition of an extra operating theatre session at the daytime.

Fig. 3.2 – Changes in Proportion of Day and Night EOT Time



308 The above data showed that, with an additional weekday EOT session in the extended day and non-emergency operations restricted at night, the utilization ratio of EOT time at night, relative to the total EOT time utilised throughout the day, had been trimmed by 10% – 50% in the pilot hospitals. A gradual change in the work practice of surgeons was thus taking place where non-emergency operations at night were shifted to the day time. Patients could benefit from safer operations with greater manpower and facility support while on-site surgeons could work less intensely at night.

309 The programme outcome was more conspicuous in acute secondary hospitals (i.e. CMC, NDH and YCH) than acute tertiary hospital (i.e. UCH). This was attributable to the peculiar role designated to different hospitals and the clinicians' determination to change their operating practice. In particular, UCH and NDH had to shoulder obstetric and neurosurgical services respectively within their own cluster. Emergency operations in these specialties were more difficult to be reshuffled to the extended day, hence less room and smaller improvement in reducing surgeons' workload at night. By contrast, both CMC and YCH could divert their acute trauma cases to the acute tertiary hospital in the same cluster at night. Their volume of night activities was thus more stable, thus rendering more flexibility and greater improvement in reducing avoidable activities at night.

B. Reduction in Backlog Emergency Operations

310 Table 3.2. below showed the extent of reducing backlog operations (i.e. bookings placed at day time but performed after 22:00 hrs due to unavailability of operating slots) by adding an EOT session in the extended day in the pilot hospitals. In overall terms, the backlog operations saw a drop of around 30% in volume and 39% in hours, with varied performance in the pilot hospitals. NDH and CMC recorded the greatest reductions in their backlog EOT hours at night by around 44% and 43% respectively, while the apparent lesser reduction in YCH was due to its already lower volume of backlog operations in the review period. These data gave evident proof that opening of extra weekday EOT sessions could effectively reduce the backlog operations at night in the pilot hospitals.

Table 3.2 – Reduction in Backlog EOTs at Night (1Q06 – 2Q07 vs 1Q08 – 2Q09)

Nature	Change in	UCH	NDH	CMC *	YCH	Overall
Backlog operations	Case No.	- 20.10%	- 35.80%	- 57.02%	- 23.81%	- 30.34%
	Hours	- 33.07%	- 44.43%	- 42.64%	- 14.86%	- 38.79%

** CMC review period (3Q06–2Q07 vs 3Q08–2Q09)*

C. Changes in On-site EOT Team Composition at Night

311 With reductions in the volume of emergency operations at night and clearance of backlog cases after launching the work reform strategy, the pilot hospitals had made more room for changing the overnight on-site on-call systems of doctors in the surgical stream specialties. For example, the Anaesthetist team in CMC and YCH were put on off-site call to support emergency operations after 22:00 hrs. In addition, the overnight on-site on-call roster was also trimmed in UCH and NDH's Orthopaedics specialty as well as NDH's Surgery specialty, thereby reducing the concerned doctors' continuous work hours by 5 – 18 hours on the weekday. Besides, the nursing support for EOTs at night was also trimmed in YCH subsequent to launching the pilot EOT programme. The pilot hospitals would review the staffing arrangement when the number of emergency operations at night was reduced to a steadily optimal level.

ISSUES OF CONCERN

312 The above analyses had shown that by expanding the EOT capacity in the extended day and re-engineering the EOT services, a substantial volume of backlog operations could be cleared while also minimising avoidable night-time activities in the surgical stream specialties. Better hospital care could be delivered with earlier operations, stronger clinical supervision as well as fewer patient complications. The hospital would also benefit from shorter patient stay and a higher level of patient satisfaction. All these denoted a big stride taken by HA in the delivery of inpatient care and had actually created a tripartite winning situation among the health carers, patients and the entire organization. The frontline doctor representatives supported rolling out this pilot work reform strategy in other acute public hospitals as well in order to improve their workload at night.

313 Yet, the impacts of work reform were confounded, as atop-mentioned, by the designated roles of different acute hospitals and were closely associated with the organization of acute trauma care, neurosurgical operations and obstetric services among the cluster hospitals, as well as the clinicians' determination to change their work practice and overnight on-site on-call system. To attain further success in the work reform strategy, the concerted efforts and collaboration of all were pivotal.

314 Given the huge complexity of patient conditions in acute tertiary hospitals, a large on-site on-call team would be required to cater for any genuine emergencies. Re-engineering of EOT services at night would less likely trim the size of the on-site on-call teams in the general specialties of acute tertiary hospitals. Hence, although the pilot work reform strategy could apparently improve service access and reduce on-call doctors' workload, the Steering Committee would recommend HA prioritising its resource allocation for acute secondary hospitals.

315 Although acute secondary hospitals displayed greater room and flexibility for re-engineering their EOT services at night, greater success of the pilot programme and further reduction in doctor work hour could barely be attained without an enhanced treat-and-transfer mechanism and development of protocol-based escort medicine for transfer of patients with high risks of deterioration among the cluster hospitals. The latest pattern of Anaesthetists being called back once every 4 to 5 days in YCH could therefore be the lowest limit in support of EOTs at night in an acute secondary hospital. The Steering Committee noted the frontline concerns over patient safety

in the course of transfer and their suggestion of providing cross-hospital coverage by an on-site anaesthetic team in order to minimise the need for inter-hospital patient transfer. HA might see to the operational practicability and plan for back-up arrangements for conducting EOTs at night in different acute public hospitals.

316 The Steering Committee was also aware of the inadequate day-time operating theatre capacity for elective procedures and the practice of certain surgeons taking the EOT sessions to perform semi-elective procedures in public hospitals. While there might be increasing backlog of cases pending operations at the day time, genuine emergency cases could be displaced due to exploitation of the EOT sessions. HA might consider augmenting the operating theatre capacity for elective procedures as well in order to rectify the situation and enhance patient safety in operation. Moreover, HA might consider scheduling semi-emergency and elective operations in other non-acute hospitals in the same cluster.

317 For certain surgical stream specialties, an immediate reduction in the number of overnight on-site on-call doctors might not be feasible, unless general resident call coverage was developed in the surgical stream specialties, as was currently practised in some overseas countries and local private hospitals. This would however depend on closer collaboration and service re-arrangements among the hospitals and specialties, strengthened core competency of frontline doctors in emergency care, as well as formulation of clinical management protocols in patient management. These complementary measures would take time to develop and should be implemented in phases with the support and collaboration of all involved parties.

318 Finally, the Steering Committee was delighted to know that, since February 2008, HA had extended the employee compensation coverage for its employees travelling for ad hoc called-back duties at any scene / site (including that outside their normal place of work) beyond their normal working hours. This would definitely give extra protection for staff performing emergency duties and improve their morale.

THE STEERING COMMITTEE'S RECOMMENDATIONS

319 The Steering Committee put forward the following recommendations in relation to re-engineering the EOT services in HA hospitals:

a) HA was recommended to re-engineer the EOT services in all acute public hospitals with 24-hour emergency services in order to clear the backlog of emergency operations and optimise patient access to emergency services currently provided by a limited number of HA doctors – Different modes of EOT services could be introduced after 22:00 hrs to support emergency operations at night. Additional funding, if any, could first be allocated to acute secondary hospitals to expand their EOT capacity in the extended day.

   i) For acute hospitals shouldering acute trauma, obstetric and neurosurgical services (i.e. Prince of Wales Hospital, Princess Margaret Hospital, Queen Elizabeth Hospital, Queen Mary Hospital and Tuen Mun Hospital), HA was recommended to run two concurrent EOT sessions with back-up arrangement for conducting another emergency operation at night.

   ii) For acute hospitals shouldering obstetric and / or neurosurgical services (i.e. Kwong Wah Hospital, North District Hospital, Pamela Youde Nethersole Eastern Hospital and United Christian Hospital), HA was recommended to keep one EOT session with back-up arrangement for conducting another emergency operation at night.

   iii) For less busy acute hospitals (i.e. Caritas Medical Centre, Tseung Kwan O Hospital and Yan Chai Hospital), HA was recommended to run on-call theatre services (i.e. Anaesthetists and theatre nurses put on-call for ad hoc emergency operations) or transferring patients with high risk of potential deterioration to another acute hospital in the cluster for emergency operations at night.

b) HA was recommended to manage the issues of inadequate day-time operating theatre capacity in order to clear the backlog elective operations, avoid exploitation of EOT slots for non-emergency operations and reduce the night activities of surgeons and their work hours.

c) HA was recommended to review the work practice and institute changes in the work practice in the surgical stream specialties in order to optimise the need for operation at night, improve patient safety by operating in the extended day and reduce the number of overnight on-site on-call doctors in public hospitals.

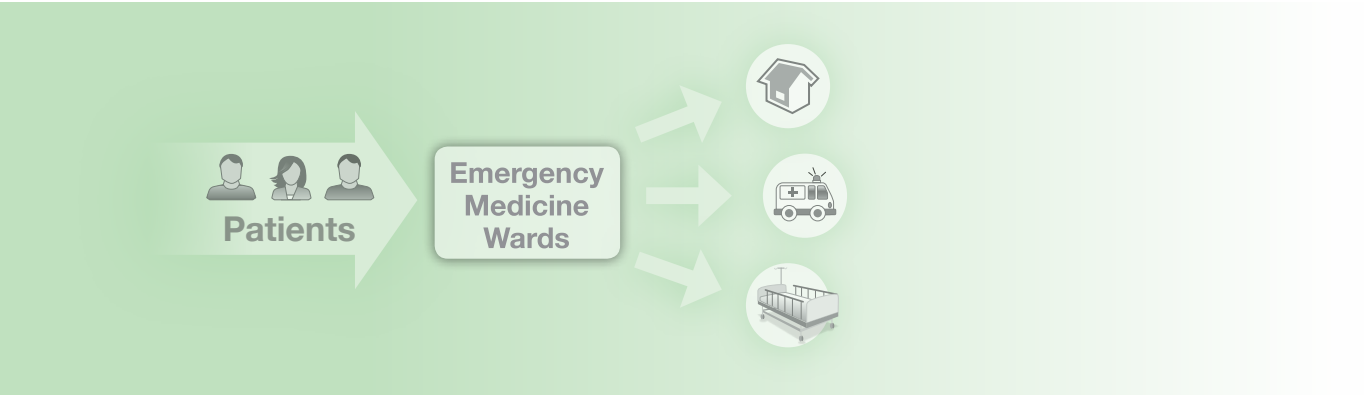
319 d) HA was recommended to delineate the roles and service scopes of different hospitals, explore further room for service networking, formulate acute trauma and neurosurgical diversion mechanisms and develop protocol-based escort medicine service in all hospital clusters in order to ensure patient safety and support the treat-and-transfer arrangement.

e) HA was recommended to explore the feasibility of providing general resident call coverage for patients who were physiologically unstable in the surgical stream specialties with reference to the global trend and the practice in the private healthcare market.

Blank Page

4 Establishment of Emergency Medicine Wards

Integrated, fast-track and
more efficient care through teamwork



EXECUTIVE BRIEF

401 *Three acute public hospitals piloted the Emergency Medicine Ward ("EMW") initiative to reduce avoidable admissions, improve the quality of short-stay patient care and the efficiency in handling acute patient admissions. Since commencement of the programme, admissions to medical wards via the Accident and Emergency Departments had dropped by 4.8% – 19.7% in the pilot hospitals. A new model of patient care emerged in an acute public hospital where its newly established EMW served to buffer hospital admissions at night while patients, upon receiving initial investigation, treatment and stabilization in the EMW, would be discharged or transferred out the following day. Under this new model, the emergency medical admissions at night and the total medical admissions had been reduced by 51% and 33% respectively in the review period. Despite the confounding factors and teething problems that were encountered in the pilot phase, EMWs had improved the quality of care in terms of service timeliness and shortened hospital stay; and provided a suitable platform for multi-disciplinary and cross-specialty collaboration in managing selected acute conditions. Besides, EMWs had reduced much of the disturbance caused to the other clinical specialties by centrally managing patients suffering from psychiatric problems as well as violent and drug-overdosed patients; and were deemed to have considerable potential for tackling the rising service volume and reducing avoidable hospital admissions, hence workload of other clinical specialties.*

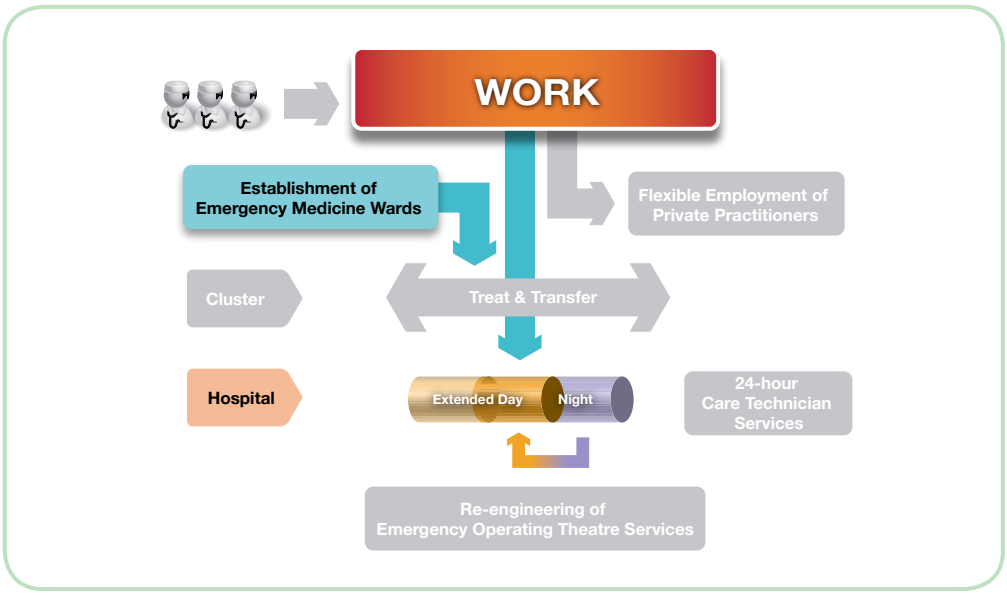
402 *HA was recommended to adopt appropriate modes of emergency care for acutely admitted patients in accordance with the local situations and the pre-existing set-ups of different Accident and Emergency Departments. For those acute hospitals that had already set up their EMWs, HA was recommended to continue refining the service models in order to further reduce avoidable hospital admissions, alleviate the workload of clinical specialties and improve the quality and safety of emergency care. HA was also recommended to address the critical issues of disproportionate hospital beds and system support, inadequate collaboration among the clinical specialties and the need for strengthened core competency training of EMW physicians; and expand the scope of community care in order to maximise the patient outcome and service efficiency in providing quality care for selected acute patient conditions.*

PILOT WORK REFORM PROGRAMME

403 Provision of hospitalised care for a substantial and escalating number of patients had always been a pressing challenge to HA. The demand for public healthcare services had soared high in recent years, owing much to an ageing population with multiple chronic diseases, rising medical costs, ever advancing patient services delivered by HA and, more importantly, the global economic downturn and outbreak of epidemics which had significantly pushed up the reliance on and utilization of public hospital services. To ensure the long-term sustainability while not compromising the quality and safety of its services, HA had an impending need to optimise its service volume and make better use of its resources to deliver quality yet cost-effective healthcare services for the society.

404 Overseas literature had shown that short-stay clinical units, like Emergency Medicine Wards ("EMWs"), had the potential for reducing patients' length of stay, improving the efficiency of emergency departments and enhancing the cost-effectiveness of hospital care[11]. In order to reduce avoidable admissions, improve the quality of short-stay patient care and the efficiency in handling acute patient admissions, HA had established EMWs in three acute public hospitals, viz., Caritas Medical Centre ("CMC"), Pamela Youde Nethersole Eastern Hospital ("PYNEH") and Princess Margaret Hospital ("PMH") since May 2007. By concentrating resources to provide integrated and expedited care, EMWs were aimed at minimising avoidable hospital admissions, improving care for short-stay patients in selected acute conditions and rationalising night activities in different clinical specialties, thereby reducing both the workload and work hours of frontline doctors in public hospitals (Figure 4.1). From 2007/08 to 2009/10, HA had injected an additional sum of $68 million in total to run the pilot EMW initiative[12].

Fig. 4.1 – Establishment of Emergency Medicine Wards



[11] Short-stay Units and Observation Medicine: A Systematic Review, The Medical Journal of Australia 2003, 18(11):559-563.

[12] Funding provision for the pilot EMW programme amounted to $22.7, $30 and $15.4 million in 2007/08 (half-year), 2008/09 and 2009/10 respectively.

405 The EMW operation differed from the conventional mode of observational medicine delivered by the Accident and Emergency Department, in that EMWs took on a treat-and-review approach and served as a hub of multi-disciplinary and community care for patients. Fast-track diagnostic work-up and protocol-driven care were given while regular joint consultations between Emergency Physicians and other clinical specialists were delivered to ensure timely and appropriate patient management. EMW service was targeted at selected acute clinical conditions that would benefit from short-stay care, preferably within 48 hours, like dizziness, abdominal or chest pain, fever, gastroenteritis, asthma, low back pain, drug overdose, onset of psychiatric symptoms and other bone fracture cases that did not require immediate operation. EMWs would thus optimise inpatient activities at night when the manpower and facility support in the hospital was relatively slim, and provide a good buffer for other clinical specialties during out-of-hours.

406 The EMW initiative was not new to HA and its values in reducing avoidable admissions and improving short-stay care were proven in other local public hospitals since 2002[13]. EMWs were thus established in phases in Alice Ho Miu Ling Nethersole Hospital, Pok Oi Hospital, Prince of Wales Hospital, Queen Elizabeth Hospital, Ruttonjee Hospital, Tuen Mun Hospital and Yan Chai Hospital at various times in 2007 and 2008 under different sources of funding. Table 4.1 below illustrated the set-up of EMWs in the three acute pilot hospitals (i.e. CMC, PMH and PYNEH), which were essentially out of conversion of their acute medical wards or renovating the existing observation ward in the Accident and Emergency Department with a bed provision ratio of around 9% – 10% of their daily emergency attendances.

Table 4.1 – Set-up of EMWs in Pilot Hospitals

	CMC	PMH	PYNEH
EMW Commencement Date	November 2007		May 2007
Ward Source	Acute Medical Ward		Observation Ward
No. of EMW Beds (% of Daily Emergency Attendances)	32 + 2 Isolation Beds (8.9%)	32 (8.8%)	20 → 40 (Dec 2008) (4.9% → 9.8%)
No. of Observation Beds (Pre-pilot → Current)	10 → 10	22 → 14	28 → 2

[13] Queen Elizabeth Hospital started the emergency medicine practice in 2002 and an EMW was formally set up in January 2007. Acute admissions to all clinical specialties via its Accident and Emergency Department were steadily reduced from 22.7% in 2002 to 19.4% in 2007/08.

PILOT OUTCOME AND OBSERVATIONS

407 In order to assess the effectiveness of the pilot EMW programme, share the best practice of operation and strategise for further rollout of the initiative, an EMW Task Group was formed under the Steering Committee with representatives from the nine acute hospitals that had established their EMWs. Evaluation was made against two parameters, viz., reduction in acute admissions to clinical specialties and the quality of care tendered to acutely admitted patients. Performance data from January 2008 to June 2009 were compared to those from January 2006 to June 2007 in both the pilot and non-pilot hospitals; and patients' feedback were collated on the EMW services.

A. Reduction in Avoidable Acute Admissions to Clinical Specialties

408 Table 4.2 showed the quantified impacts of EMW services in reducing avoidable acute admissions in the pilot hospitals in the review period. Upon establishment of the EMWEs, the Internal Medicine, Surgery and Orthopaedics specialties saw a salient drop in their acute admission rates by up to 19.67%, 7.26% and 5.18% respectively in the pilot hospitals, while acute admissions to both Internal Medicine and Surgery had actually risen by 12.02% and 1.46% respectively in the non-acute hospitals. On the whole, a portion of the short-stay cases had been redistributed to the EMWs whereas the more complex clinical problems were left to the acute specialty wards for management. The right care would thus be delivered to the right patients at the right place and the public healthcare resources could be utilised more efficiently. However, in order to maximise the effectiveness of EMW service in delivering quality and integrated care for patients, greater support from other clinical specialties would be required in the pilot hospitals.

Table 4.2 – Impacts of EMW on Reducing Avoidable Acute Admissions (Jan 2008 – Jun 2009 vs Jan 2006 – Jun 2007)

	CMC	PMH	PYNEH	Non-EMW Hospitals*
Internal Medicine	- 19.67%	- 12.49%	- 4.80%	12.02%
Surgery	- 5.62%	0.53%	- 7.26%	1.46%
Orthopaedics	- 0.91%	- 3.15%	- 5.18%	- 0.75%

** Non-EMW hospitals included Kwong Wah, Queen Mary and United Christian Hospitals.*

409 The varied outcomes among the clinical specialties and hospitals were also attributable to the pre-existing set-up of EMWs, adequacy of hospital beds as well as competence of the medical team correlated with staff training in acute care management. In particular, the reduction of inpatient capacity due to conversion of the acute medical wards had necessitated closer collaboration between the Medical and Emergency Physicians in order to manage the rising service volume in both CMC and PMH; whereas in PYNEH, the EMW established through renovating the existing observation beds could better balance the needs of different specialties in delivering fast-track and short-stay care. Yet, its limited bed provision, estimated at 4.9% of the daily emergency attendances at the start of its operation, had gravely confounded the impacts of EMW on reducing hospital admissions to different clinical specialties.

410 Moreover, the patient surge during the prolonged cold spell and flu season in the first quarter of 2008 as well as the outbreak of human swine influenza (H1N1) in the second quarter of 2009 had driven medical admissions to new heights in all public hospitals. Despite the much lessened impacts due to the significant patient surge, EMWs had managed a great portion of the short-stay patients, thereby alleviating the workload of medical specialty in these trying periods. It also explained the remarkable difference between the pilot and non-pilot hospitals in reducing their acute medical admission rates after establishment of the EMWs. On the whole, EMWs were deemed to have considerable potential for tackling the rising service volume and reducing hospital admissions, hence workload in other clinical specialties.

B. Quality of Care for Acutely Admitted Patients

411 Despite the varied outcomes of EMWs at different pilot sites which were confounded by the pre-existing set-up of the Accident and Emergency Department and the outbreak of epidemics in the past two years, the integrated care and fast-track services provided by EMWs were in general applauded in the pilot hospitals. Service timeliness was improved and the length of hospital stay was shortened without any rise in patients' unplanned re-admission rate. Operational risks were also better managed through improved documentation. EMWs was considered a suitable platform for multi-disciplinary and cross-specialty collaboration to manage selected acute conditions; and would enhance patient safety by pooling medical staff to manage acute patients according to established clinical management protocols and action pathways. Besides, with the support of psychiatric nurses, EMWs had reduced much of the disturbance caused to the other clinical specialties by centrally managing patients suffering from psychiatric problems as well as violent and drug overdosed patients.

412 It was worthwhile to note that, in a survey conducted in September to November 2008 with 300 patients discharged from the EMWs of the pilot hospitals, 91% of the respondents agreed that the EMW service would improve the quality of care in terms of service timeliness and shortened hospital stay. The majority of respondents were satisfied with the EMW service and preferred their stay in EMW to observation wards. These results were in line with the objectives of establishing EMWs to provide integrated care for patients in selected acute clinical conditions through earlier senior doctor involvement, protocol-driven care, more proactive and expedited patient management and shortened length of hospital stay.

EMW – ANOTHER MODEL OF CARE

413 The Steering Committee was pleased to note that HA kept on revisiting and refining the mode of delivering emergency care for acute patients. In Alice Ho Miu Ling Nethersole Hospital ("AHNH"), for example, a new EMW was established in December 2008 with an initial provision of 20 beds only (i.e. around 6% of its average daily emergency attendances). Instead of providing round-the-clock service, the EMW in AHNH operated as an "owl ward", which opened and admitted all medical cases[14] from 9 pm to 9 am the next morning. Ward rounds were done

[14] Except air borne precaution, renal failure patients on CAPD and patients in critical conditions.

by a senior Emergency Physician and all EMW cases would be discharged home, transferred to the medical ward or another buffer hospital in the same cluster for further management. In a six-month review after establishment of the EMW, the night emergency medical admissions had dropped by 51% whereas the total emergency medical admissions had also been reduced by 33%. The bed alert in the medical specialty, triggered when there were more than 15 patients waiting for hospital beds or when more than 5 patients had waited for more than 8 hours, has significantly dropped from 29 cases in January – June 2008 to only 2 cases in the same period in 2009. The workload of doctors and nurses in the Medical Specialty at night was thus relieved, thereby giving ways for reducing the number of overnight on-site on-call doctors in the specialty. The EMW service in AHNH was a new care model where the night operating mode, alongside senior specialist screening, multi-disciplinary collaboration and ample community support, had reduced acute admissions to clinical specialties; and it also served as a valuable buffer on long holidays and for disease outbreak. The frontline doctor representatives also commended highly the contribution of EMW to reducing clinical specialties' workload in managing selected acute conditions.

SUCCESS FACTORS OF EMW SERVICE

414 Having reviewed the outcomes at different pilot sites and making reference to overseas literature, the Steering Committee identified the following system factors which were essential to the success of the EMW initiative:

a) provision of hospital beds at 8% – 10% of the daily emergency attendances in order to support and maximise the function of these short-stay units – Yet, the optimal number depended on the case mix of patients, experience of the physicians and extent of cross-specialty collaboration.

b) competent workforce with adequate senior coverage for admission screening and supervision – This could be improved through rotational and enhanced core competency training which should be focused on acute care management and teamwork.

c) closer cross-specialty collaboration in terms of joint consultation / reviews and clinical rotations across specialties for Emergency Physicians – This would render more effective management and expedited recovery of EMW patients, hence reduced admissions and workload for other clinical specialties.

d) gradual buy-in and acceptance among the frontline health carers – This would facilitate cross-specialty collaboration in delivering quality care and expediting patient management.

415 Nonetheless, the following operational arrangements were equally important to enhance the effectiveness of EMWs in the pilot hospitals:

a) fast-track system support and integrated care, like diagnostic investigations, endoscopy and imaging support, allied health care, specialist outpatient referrals and community care.

b) protocol-driven and evidence-based care to ensure safe delivery of EMW service.

c) strengthened risk management in infection control, handling of work place violence, fall prevention for elderly patients, etc. to smooth out the operation in EMW which was characterised by high patient turnover and cohort management of patients with psychiatric symptoms.

ISSUES OF CONCERN

416 Since commencement of the pilot programme, certain frontline clinicians were concerned about the EMWs' gate-keeper function and their effectiveness in reducing the workload of other clinical specialties. As certain EMWs were converted from acute medical wards, they were taken to manage medical patients only in order to compensate for the reduced capacity in the medical specialties. The EMW initiative was thus regarded as a relabeling of the medical wards and EMW Physicians were deemed to have inadequate expertise in managing complicated clinical conditions. Besides, avoidable admissions could be reduced through tightened admission screening at the Accident and Emergency Departments instead of injecting extra resources to develop EMWs. Suggestions were thus received to redirect resources to the medical and other clinical specialties, which had thus far rendered lukewarm support to the pilot EMW programme. The frontline doctor representatives were also concerned about the variable outcomes of admission reductions in different hospitals piloting the EMW initiative. Finally, the HKAM was concerned about the impacts of EMW on doctors' training; and there might be a chance to modify the training programme for Emergency Medicine in order to ensure that new fellows had adequate know-how in managing emergency patients.

417 The Steering Committee was cognizant of the clinicians' concerns over the functions of EMWs. As discussed above, the value of EMWs lay not only on reducing avoidable admissions and workload of other specialties, but also on improving the overall efficiency in patient management by providing integrated and fast-track care to reduce patients' length of stay in the hospital. While EMWs would handle selected acute conditions, the other clinical specialties would concentrate on managing the more complicated patient problems. Besides, patients with disturbing behaviour and psychiatric problems were centrally managed in the EMWs, thereby reducing the disturbance caused to both staff and patients in other specialties. Patients' needs were thus matched with the place and expertise of care; and EMWs would render more efficient patient management, as evidenced in the successful models of care taken in CMC and AHNH.

418 On the other hand, the Steering Committee agreed that scrutinised admission screening and enhanced doctors' training could strengthen the gate-keeper function of the Accident and Emergency Departments. It was encouraging to note that HA already had plans to arrange clinical rotations of EMW Physicians among various acute hospitals in order to enhance their competency in managing different disease groups and share the best practices among the EMW hospitals.

419 The Steering Committee noted that, upon conversion of the acute medical wards into EMWs in CMC and PMH, the medical manpower in Internal Medicine was largely maintained. The doctor-to-patient ratio was improved, with lesser workload for each physician on average. Coupled with other pilot work reform strategies like care technician services and enhanced senior nurse coverage during out-of-hours (which would be elaborated in the ensuing chapters), the EMW initiative had enabled the Medical physicians to work less intensely and be more focused on core clinical decisions in patient management. Greater flexibility was also allowed to change their operational practice and overnight on-site on-call system, thereby reducing their work hours.

420 Despite the current limited impacts of EMWs on the surgical stream specialties, the Steering Committee believed that, given adequate hardware (i.e. hospital beds, manpower and facilities), software support (i.e. clinical management protocols and guidelines, staff training, collaboration with other specialties) as well as cultural change and staff acceptance of the new mode of EMW service, there would be room for improving the programme effectiveness in reducing avoidable admissions and the workload of other specialties for the benefits of both the health carers and patients. Moreover, as expressed by some hospital management staff, HA might consider benchmarking and promulgating effective EMW practices among the HA hospitals and conducting audits as to align variations in he EMW practices.

421 Finally, while the pilot programme had produced variable results, there was undoubtedly much to be gained by patient streaming, which was pivotal on reducing patients' length of stay that in turn was an important measure of hospital efficiency. Different models of patient streaming could be tailored to individual hospitals but a feature, in particular from the United States, was how enhanced community care could be used to substantially reduce hospital length of stay. There was much evidence showing that treating patients in their own homes was not only more cost-efficient but also more convenient, safer and more effective[15]. HA should thus consider expanding its scope of community care in order to reduce patients' length of stay and manage the rising workloads in public hospitals.

[15] Information provided by Mr Andrew FOSTER, overseas expert of Steering Committee on Doctor Work Hour.

THE STEERING COMMITTEE'S RECOMMENDATIONS

422 The Steering Committee put forward the following recommendations in relation to the establishment of EMWs in HA hospitals:

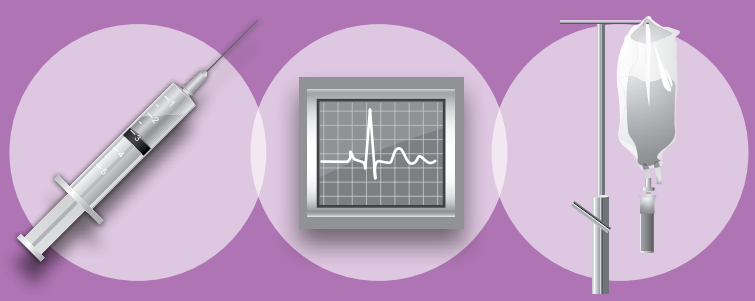
a) HA was recommended to adopt appropriate modes of emergency care for acutely admitted patients in accordance with the local situations and the pre-existing set-ups of different Accident and Emergency Departments. For those acute hospitals that had already set up their EMWs, HA was recommended to continue refining the service models in order to augment their impacts on reducing avoidable hospital admissions, alleviating the workload of clinical specialties and improving the quality and safety of emergency care.

b) HA was recommended to address the critical issues of disproportionate hospital beds and system support, inadequate collaboration among the clinical specialties and the need for strengthened core competency training of EMW physicians in order to maximise the service outcome and synergise for greater success in providing quality emergency care for selected acute patient conditions.

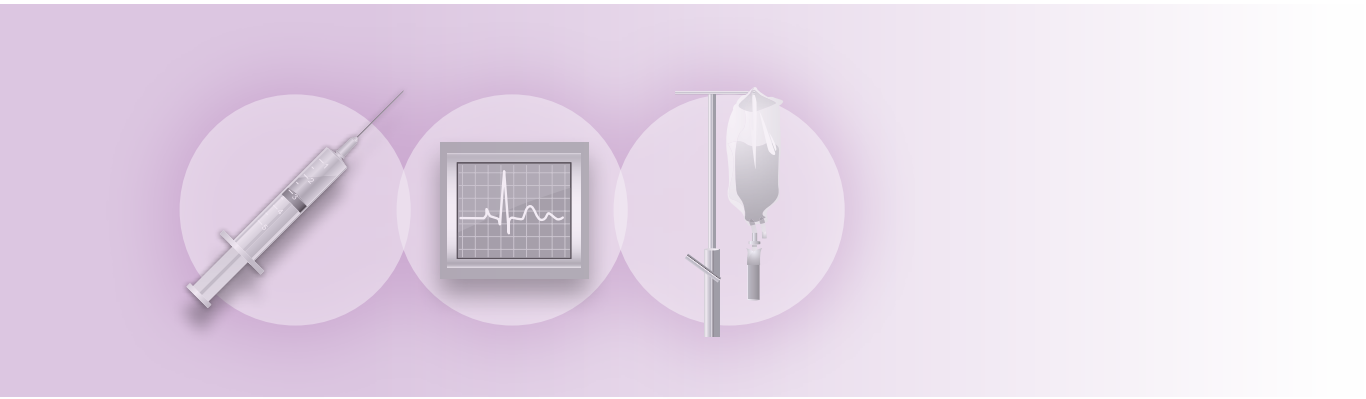
c) HA was recommended to expand the scope of community care in order to reduce avoidable admissions and enhance the service efficiency of public hospitals.

Blank Page

5 Introduction of Care Technician Services



Shared responsibilities for timely and quality basic care



EXECUTIVE BRIEF

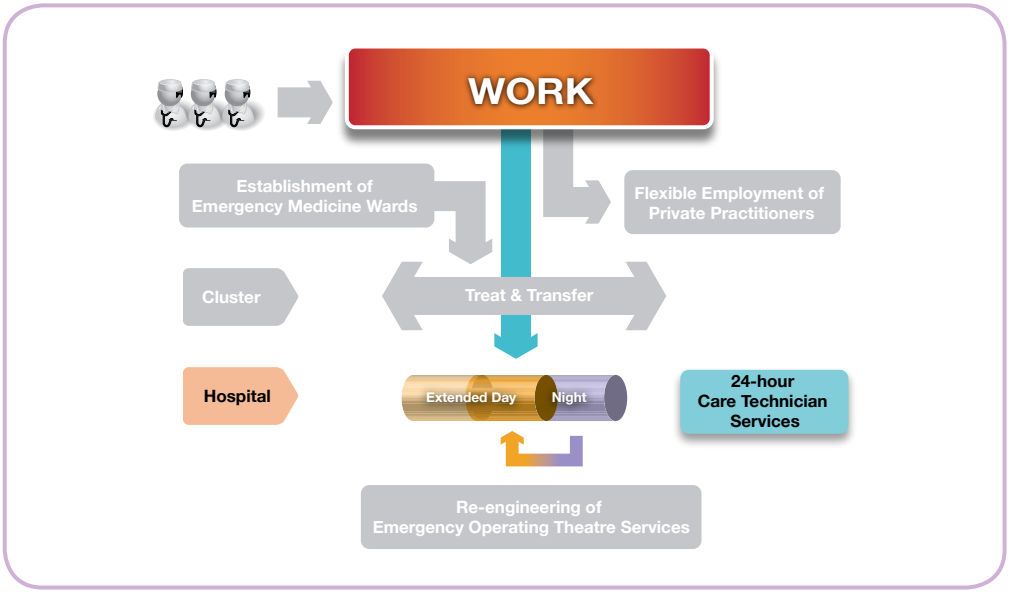
501 To relieve doctors and nurses from technical tasks and mundane activities, 95 care technicians were recruited and trained to provide round-the-clock blood-taking, electrocardiogram and intravenous cannulation in six acute public hospitals. The programme was well received by both healthcare professionals 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 duties[16]. 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 2009/10[17] 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 2007[18]. 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 far[19]. 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)

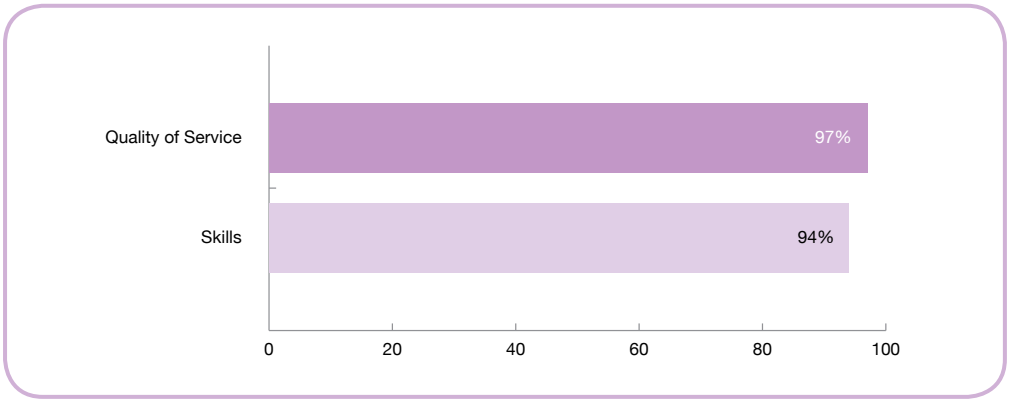
	AHNH	CMC	PMH	PYN	UCH	YCH	Total (%)	Doctor Hours Saved
Blood-taking (10 min / task)	3,731	4,811	10,146	12,511	11,591	6,748	49,538 (74%)	8,256 hours
Electro-cardiogram (15 min / task)	1,796	1,935	1,219	19	2,388	890	8,247 (12%)	2,062 hours
Intravenous cannulation (5 min / task)	–	1,621	3,725	1,046	2,346*	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 respectively[20]. 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 institutions[21] 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.

6 Other Supportive Work Reform Programmes

Modernised workforce Better care and communication
Improved continuity of care
Strengthened core competencies of health carers

EXECUTIVE BRIEF

601 Apart from the key pilot work reform strategies, HA also set in a number of supportive work reform programmes to improve the quality of care and patient safety. In the first place, the senior nurse coverage in an acute secondary hospital was enhanced during out-of-hours. A team of trained and experienced nurses was set up to provide advanced clinical nursing advice and support, undertake protocol-based patient assessment and clinical interventions, and coordinate response to clinical emergencies during out-of-hours. On the other hand, a common ward language was introduced to all hospital clusters, involving use of an integrated observation chart with Modified Early Warning Score (MEWS) and a unified approach of communication using SBAR (i.e. situation, background, assessment and recommendation for patient management) to facilitate early detection of potentially critical conditions for timely specialist intervention.

602 Besides, an electronic handover system was piloted in three acute public hospitals in order to facilitate structured and comprehensive multi-disciplinary handover of critically ill and unstable patients, ensure continuity and safety of patient care and improve out-of-hour clinical supervision. Finally, HA had strengthened the core competency training of health carers. Cluster-based training courses were organised in collaboration with the HKAM specialty colleges for 91 basic trainees and 14 nurses in the surgical stream specialties in the past two years to ensure patient safety and control risks during out-of-hours. In addition, three commissioned clinical skills enhancement programmes were organised in 2008/09 to equip 287 experienced nurses with enhanced clinical skills and professional competency in acute care management and clinical supervision. 95 care technicians were also trained to take up basic care duties from the healthcare professionals.

603 On the whole, clinical risks due to slimmer manpower at night were reduced and the quality of patient monitoring and assessment was improved, as were the communication and continuity of care in a multi-disciplinary setting for safer and more effective patient management. The workload of on-site on-call doctors was lessened with enhanced core competency of the healthcare professionals in acute care management; and no critical incidents had occurred in relation to the supportive work reform programmes in the pilot phase. Although there were staff concerns and varied legal views about the extended roles of nurses, and local data were yet to be gathered to support wider launch of the track-and-trigger mechanism using the integrated patient observation chart, the supportive work reform programmes were in general well received by the clinical departments and frontline healthcare professionals. Moreover, the great majority of survey respondents found the electronic handover system easily accessible, user-friendly and able to streamline the care process; and most had opted to build this electronic handover function in HA's Clinical Management System (Version III) in future. On the other hand, the Hong Kong Academy of Medicine ("HKAM") reiterated its stand that limiting doctors' average weekly work hours to 65 should not have major impact on their postgraduate medical training but a further reduction in the work hour target would in principle have long-term impacts. It would take a more comprehensive approach to enhance the quality of doctors' training, modernise the Fellowship training system and closely monitor the process with the support of HA.

604 HA was recommended to improve the professional and core competency of all its nurses and enhance the senior nurse coverage in all acute hospitals at night. The roles of allied health professionals could also be extended where appropriate. Clearance should be sought with relevant professional bodies on the core competency of health carers in different disciplines; and HA was recommended to develop a framework to enhance their scope of professional duties in delivering quality healthcare services. On the other hand, HA was recommended to extend the common ward language to all public hospitals as appropriate and set up a sound track-and-trigger system, supplemented by intra- and inter-departmental clinical management protocols and electronic patient pathways, to ensure timely specialist intervention for deteriorating and potentially critical patients. Besides, HA was recommended to integrate the electronic handover platform into the upcoming Clinical Management System (Version III) and extend its application to different clinical specialties and hospital clusters in order to facilitate structured and comprehensive handover and ensure the continuity and safety of patient care.

Finally, HA should continue to facilitate doctors' training in order to strengthen their core competency skill set in acute care management under a multi-disciplinary setting. HA was also recommended to work closely with the Hong Kong Academy of Medicine in ensuring the quality of doctors' postgraduate medical education and evaluating the work reform impacts on doctors' training in different specialties at appropriate time points.

PILOT WORK REFORM PROGRAMMES

A. Enhancing Senior Nurse Coverage during Out-of-hours in an Acute Secondary Hospital

605 In pursuit of the right skills for the right care and to meet the evolving healthcare needs of the society, HA made great efforts to modernise the roles of its staff and enhance their competency in delivering quality patient services in public hospitals. Overseas experience revealed that given proper training, clear protocols, multi-disciplinary collaboration, adequate system support and management countenance, experienced nurses could coordinate call teams well, provide satisfactory out-of-hour support for doctors in managing patients with deteriorating conditions and gain the trust of patients. Team work could also be improved, thereby reducing duplication of work, improving continuity of patient care, reducing staff stress and optimising the number of on-site on-call doctors at night.

606 To dovetail with the pilot work reform strategies for relieving the heavy workload and improving the working conditions of frontline doctors, HA embarked on a supportive work reform programme of enhancing the senior nurse coverage during out-of-hours in an acute secondary hospital. For this purpose, HA sent a delegate of four, comprising a doctor and three nurses, to study the Clinical Site Manager model and examine the enhanced nursing roles in the United Kingdom[22] in January 2008. Three commissioned clinical skill enhancement programmes were conducted[23] in 2008/09 for 287 local experienced nurses from all the hospital clusters, covering scopes of clinical leadership, change management, clinical decision making, health assessment and clinical skill enhancement. Local training resource was also developed through a bespoke train-the-trainer workshop in order to facilitate both clinical course design and delivery in the local setting.

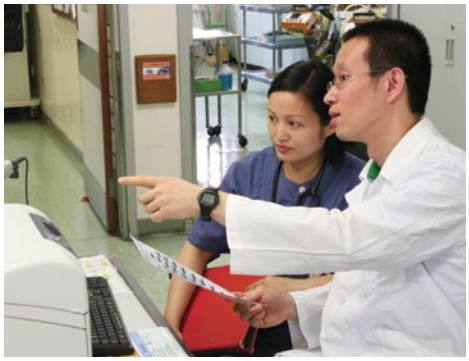
---

[22] Four hospitals in the United Kingdom were visited, including the Homerton University Hospital, Guys & St. Thomas Hospital, Royal Liverpool & Boardgreen University Hospital as well as the Faculty of Health, Edge Hill University.

[23] Three batches of clinical skill enhancement programmes and a train-the-trainer workshop were conducted by the Edge Hill University Hospital, United Kingdom, from June 2008 to February 2009.

607 In March 2009, the Clinical Management Unit ("CMU"), led by a clinician and comprising 8 well-trained Advanced Practice Nurse ("APN"), was formed in Yan Chai Hospital to pilot run the localised model of enhanced senior nurse coverage during out-of-hours. Evolving through various familiarization and pilot phases, the designated team of APN(CMU) took on the enhanced roles of providing advanced clinical nursing support and advice to clinical areas, undertaking advanced patient assessment and clinical interventions, participating in multi-professional handover and coordinating emergency response to manage clinical emergencies from 16:00 hrs to 08:00 hrs the following day. All inpatient wards[24] were covered and 34 clinical management protocols had been developed to guide the daily operation. Commencing late June 2009, ward nurses could call the on-site APN(CMU) direct for necessary support under specific circumstances, instead of sending parallel calls to the on-site on-call doctors as well so as to avoid duplication of work. Monthly clinical audits were also conducted to ensure that proper care was delivered and the operation was fine-tuned in a multi-disciplinary setting.

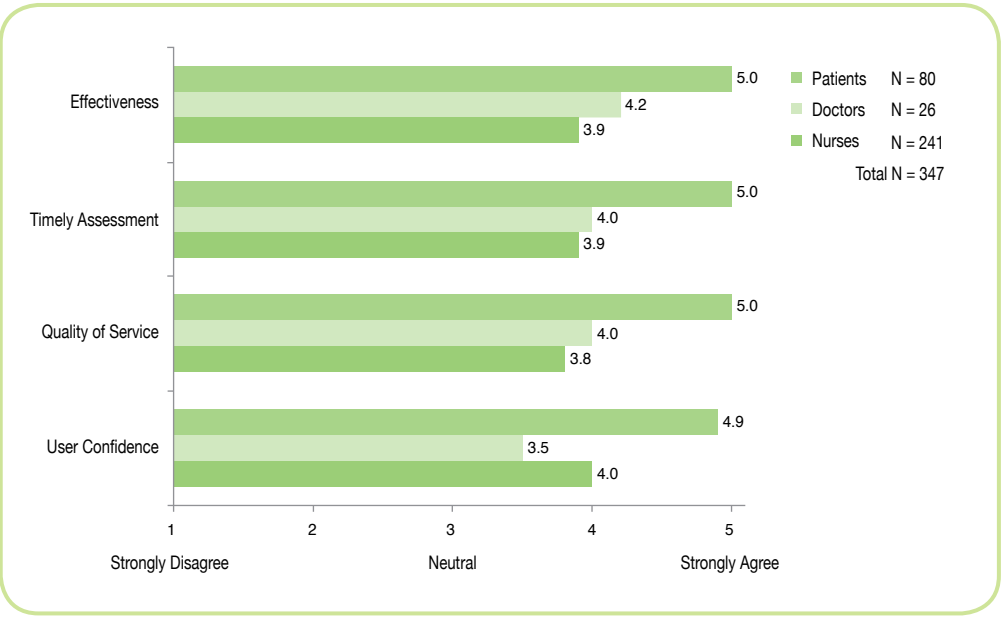
608 Eight months after full launch of the pilot programme, the Steering Committee was pleased to note that patient safety was maintained without any critical incidents; and most clinical and clinical support departments in the pilot hospital were supportive to the enhanced roles taken up by the trained experienced nurses. There were instances where deteriorating patients received prompt and proper management by APN(CMU) according to pre-set protocols; and timely specialist interventions were triggered for enhanced patient safety. The Steering Committee considered that treating patients according to agreed clinical protocols would guide clinicians' decisions and ensure that the right treatment would be provided, hence optimising patient care. The pilot programme of enhancing senior nurse coverage had facilitated patient prioritisation, lessened the workload of on-site on-call doctors and reduced the clinical risks associated with slimmer medical workforce and staff fatigue during out-of-hours. Besides, multi-disciplinary teamwork was improved and response to clinical emergencies, hence patient safety, was bettered under the protocol-based care model. The career progression of trained experienced nurses was also improved through creation of senior nursing positions.



[24] With the exception of newly admitted patients in acute wards and those in Accident & Emergency Department, Intensive Care Unit and Paediatric wards of the pilot hospital.

609 In a user survey conducted in the pilot hospital in August 2009[25] (Figure 6.1 below), the majority of doctors, nurses and patients had shown confidence and were satisfied with the overall effectiveness, timeliness of patient assessment as well as quality of APN(CMU)'s service. A snapshot of CMU's activities in October 2009 showed that APN(CMU) had shared over 1,000 doctors' clinical tasks in the month, including 70% of tasks related to management of abnormal investigation results (e.g. hypokalameia, hypoglycaemia), resuscitation, major patient complaints (e.g. chest pain, shortness of breath), vital parameter changes (e.g. hypotension, desaturation) and minor patient complaints, which were handled in accordance with CMU's clinical management protocols. The remaining 30% of clinical tasks were non-protocol based and related to patient review, nursing advice, drug prescriptions and interviews with patients' relatives. On the whole, CMU had provided important support for the frontline colleagues in the pilot hospital by handling some minor clinical problems and improving the on-call quality of frontline doctors at night[26]. These had rightly hit the programme targets to ease on-call doctors' workload, improve the quality of care and patient safety, support junior on-site on-call doctors and ward nurses, and equip experienced nurses with enhanced clinical skills and professional competency in clinical management and supervision.

Fig. 6.1 – User Survey on Enhanced Roles Senior Nurses



[25] The interim user survey had a sample size of 347 healthcare professionals, including 80 patients, 26 doctors and 241 nurses working in the pilot hospital.

[26] Extracted from the Annual Report of Yan Chai Hospital Doctor's Association, 2008/09.

Issues of Concern

A. Accountability and Responsibility for Enhanced Nursing Roles

610 A number of issues were encountered in the course of piloting the enhanced roles of nurses and strengthening the senior nurse coverage in the pilot hospital during out-of-hours. In the first place, despite the nursing management's strong support for Doctor Work Reform and its commitment to modernise the roles of nurses under a stringent workforce[27], certain frontline staff, including both doctors and nurses, was concerned about the nurses' accountability and responsibility for taking up the enhanced roles in caring for acute inpatients. Their concern stemmed from the deep-seated perception that doctors, instead of nurses, should take the leadership role in clinical practice. More importantly, the enhanced roles were considered to have outrun the core competency of nurses and their professional boundary of nursing care. In particular, ordering urgent blood tests and plain x-rays as well as prescribing simple drugs on behalf of clinicians, albeit protocol-based, were duties that should not be delegated or performed in the absence of direct supervision or referral by a registered medical practitioner under the prevailing professional regulations and legislations.

611 The Steering Committee recognised the concerns of the frontline staff and considered that the crux of matter lay in whether the power to refer for the said services was personal to the registered medical practitioners or could be delegated to the trained non-medical professionals acting on pre-defined clinical management protocols. There were varied legal views among the local and overseas healthcare sectors about the delegation authorities for different care procedures. However, in certain National Health Service Trusts in the United Kingdom, referral protocols were already in place to allow nurse practitioners, for instance, to order x-ray examinations within their extended scope of practice[28]; and Clinical Site Managers at the studied sites were actually performing the extended roles of ordering blood tests and x-ray examinations as well as prescribing drugs according to pre-set clinical management protocols with few safety issues. Non-medical allied health professionals, like pharmacists and other therapists, were also taking on a wider spectrum of care duties. Such delegation was founded on adequate training,

---

[27] The nursing management, in the corporate-wide consultation in May 2007, expressed strong commitment in support of Doctor Work Reform and articulated the need for enhancing the roles of nursing practitioners. Stringency of the nursing workforce should not be seen as a blockage to this development.

[28] Examples of x-ray referral protocols in NHS trusts giving guidance to non-medical practitioners to order x-ray within their expanded scope of practice could be found in http://www.nursepractitioner.org.uk/Documents/XRay%20Documents/MBHT%20xray%20ptocol.doc and http://www.mrccs.nhs.uk/upload_documents/docs/200892415445_c20_xray_referral_policy.pdf.

proper clinical supervision, protocol-based operation and ordinance support; and enhancing the roles of non-medical staff could alleviate doctors' workload and free them up for pressurised clinical services. Staff morale could also be improved through higher professional recognition and more career opportunities[29].

612 This pilot initiative entailed a culture of both teamwork and shared responsibilities, where doctors, nurses and allied health professionals would accommodate modernised roles and new ways of operation. In view that enhancing the roles of non-medical health carers was a global trend and would modernise their professions in delivering quality healthcare services, the Steering Committee fully supported this direction of work reform on the basis of safe practice, wide professional founding and sound system support. In order to meet the evolving healthcare needs of the society, HA was recommended to review with relevant professional bodies the core competency of health carers and develop a framework to facilitate enhancing their scope of professional duties in care delivery. Moreover, advanced clinical skill enhancement training should be provided for experienced nurses to take up the enhanced roles, alongside development of clinical management protocols and regular safety audits, so that proper care could be delivered by competent personnel and patient safety be protected under this new work reform initiative. Meanwhile, multi-disciplinary collaboration and other supportive facilities, like integrated observation charting using MEWS[30], unified communication tools and a structured and comprehensive handover system built on an electronic platform, would definitely facilitate the caring process and help identify patients in unstable or critically ill conditions for timely intervention. Finally, continuous communication and stakeholder engagement were indispensable to resolve any knotty issues throughout the development and implementation stages of this work reform initiative.

[29] Views of both overseas experts of Steering Committee on Doctor Work Hours, Hospital Authority.

[30] MEWS : Modified Early Warning Score – a patient assessment scoring system adopted from the United Kingdom. Please refer to the section "Introducing Common Ward Language to All of HA's Hospital Clusters" for details.

B. Designated Team Vs Skill Enhancement for All Nurses

613 On the other hand, the hospital and nursing management held different views about the mode of enhancing senior nurse coverage during out-of-hours. Some favoured setting up designated clinical management teams of doctors and experienced nurses with advanced skills, delineated roles and competence in acute care management, like that in the pilot hospital, while others preferred uplifting the core competency of all experienced nurses to provide protocol-based care for acute inpatients during out-of-hours. Their arguments ran around the rising nursing shortage in recent years[31] and the need for modernising the nursing profession as to provide quality healthcare services in an evolving environment.

614 The Steering Committee found both options viable on grounds of better teamwork and quality patient care. HA might look to the manpower supply and the peculiar settings in different hospitals and apply appropriate models of enhanced senior nurse coverage during out-of-hours. In general, with the experience gathered from the pilot programme, acute secondary hospitals that managed a relatively stable level of night activities would benefit from a designated clinical management team, whereas in acute tertiary hospitals, the alternative mode of enhancing all experienced nurses' core competency could be more cost-effective in the light of their larger patient volume and more complex patient conditions. In any case, staff training, multi-disciplinary collaboration and management support were crucial to the success of the initiative. HA was recommended to make use of its available training resource to build the critical mass of experienced nurses with advanced clinical skills and professional competency; and foster teamwork and system support as aforementioned, so that patient care could be improved, doctors' workload relieved and the nursing profession brought to a new horizon that was in line with international good practice. Clinical units like the CMU in Yan Chai Hospital might serve as a good training ground; and rotation could be arranged for all experienced nurses to take up the enhanced roles in acute care management.

[31] The annual turnover rate of nurses in public hospitals (excluding trainees) rose from 3.24% (615 nos.) in 2006/07 to 4.66% (877 nos.) in 2008/09 whereas the annual appointment of nurses rose from 527 nos. to 874 nos. only within the same period.

C. Impacts on Doctors' Training

615 Certain clinicians were concerned about the deprived training opportunities for junior doctors if experienced nurses were to take up the care coordination role in managing unstable patients during out-of-hours. The Steering Committee would like to emphasise that the initiative was aimed to improve patient safety and foster teamwork through advanced patient assessment, protocol-based care and effective multi-disciplinary collaboration. Instead of taking away junior doctors' training opportunities in acute patient management, enhancing senior nurse coverage during out-of-hours would help identify and stabilise unstable and critical patients who required urgent intervention, and enable on-call doctors to prioritise their work and refocus on core clinical care and due specialist training. Clinical supervision during out-of-hours could also be improved with enhanced collaboration and care coordination in emergency situations.

B. Introducing Common Ward Language to All of HA's Hospital Clusters

616 A safe culture which did no harm to patients entailed design of a safe system and safe practice in care delivery. Overseas studies revealed that 54% of patients had sub-optimal care prior to admission to the Intensive Care Unit ("ICU") and 40% of admissions to the ICU might have been avoided if earlier intervention had occurred[32]. As patients emerged quicker and sicker, HA needed to respond faster and slicker. Tools that could reliably identify deteriorating patients and trigger timely intervention would thus improve patients' outcome and reduce their mortality and morbidity. To this end, HA had put safe care process as one of its top five risk management programmes in both 2008/09 and 2009/10 in order to ensure the quality of care and patient safety.

617 Implementation of common ward language was a key supportive strategy under HA's Doctor Work Reform for enhancing the quality of care and patient safety in all its hospital clusters. It comprised use of an integrated observation chart with Modified Early Warning Score ("MEWS") and adoption of a unified communication tool using SBAR (i.e. situation, background, assessment and recommendation) to facilitate effective patient assessment and trigger of timely specialist intervention for deteriorating or potentially critical conditions[33].

---

[32] McQuillan et al, 1998 [BMJ]4.

[33] Both MEWS and SBAR were adopted from the National Health Service Trust in the United Kingdom.

618 In brief, MEWS was a bedside clinical scoring system which monitored the vital signs of systolic blood pressure, pulse rate, respiratory rate, temperature and level of consciousness to identify patients at risk of deterioration. Abnormal physiological values over time indicated the need for timely response and specialist intervention according to pre-defined action pathways. MEWS was most applicable to monitor adult patients in general wards, and was first put into use in an integrated observation chart in the New Territories East Cluster in February 2008. The integrated observation chart with MEWS (Figure. 6.2) was subsequently refined, standardised and rolled out to the other hospital clusters by stages. On the other hand, SBAR provided a structured and uniform communication approach to facilitate handover of patients' conditions in a multi-disciplinary setting in a succinct and concise manner. It was initially taken by the New Territories West Cluster in 2007 and a Chinese version was launched in the Kowloon West Cluster in July 2008 as well (Figure. 6.3). Twelve sessions had been conducted in the past three years to promulgate wider use of the tools in patient assessment and multi-disciplinary communication; and the success of implementing the common ward language in enhancing patient safety was shared among 150 nurses in a forum conducted in September 2009. By the end of 2009/10, the common ward language had been rolled out to all of HA's hospital clusters as part of their risk management priorities to enhance patient safety.

Fig. 6.2 – Integrated Observation Chart with MEWS

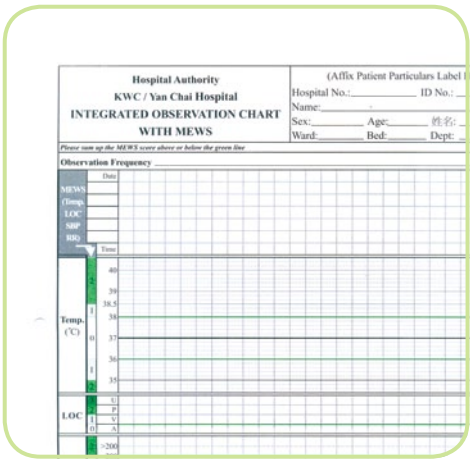


Fig. 6.3 – SBAR Communication Tool

619 On the whole, MEWS was an objective, measurable, easy to use and safe tool for use on different types of common diseases. Its beauty lies in the ease with which MEWS could logically be fitted into the patient assessment process where the observation chart would give a visual cue for MEWS calculation until the threshold point was reached to trigger graded response and timely intervention according to defined action pathways. Patient care could thus be prioritised with enhanced safety, alongside improvements in patient observation and documentation. In a local study involving 427 emergency patients, MEWS was found to be a useful screening tool to identify patients at risk of deterioration who required increased level of care as hospital inpatients or in the ICU. Moreover, where experienced staff was engaged in other clinical activities, the use of MEWS could aid close monitoring of patients and identification of high-risk patients in the Observation Ward of the Accident and Emergency Department[34]. The implementation of the integrated observation chart with MEWS, supplemented with the use of SBAR in multi-disciplinary communication, could therefore enhance teamwork and contribute to improving the quality of patient monitoring for safer and more effective management. Inexperienced doctors and nurses could also count on MEWS to prioritise care and attend to patients at risk of deterioration in an acute hospital setting.

Issues of Concern

620 While the common ward language could help improve patient monitoring and multi-disciplinary communication on patients' conditions, wider application of the tools, in particular the integrated observation chart with MEWS, in triggering specialist intervention for deteriorating patients had been limited so far. For one thing, certain clinicians considered it infeasible for MEWS to replace comprehensive clinical assessment and clinical judgment in patient monitoring; and MEWS was deemed not applicable to sub-specialty units like the coronary care and acute stroke units. Moreover, clinicians were unable to predict the overall outcome of critical illnesses through MEWS monitoring. Given few clinical data in literature to prove its effectiveness in support of the track-and-trigger system, clinical departments could but use MEWS as a supplementary tool for patient observation only.

[34] Hong Kong Journal of Emergency Medicine, 2006; 13:24-30 – The local study "Validation of MEWS in Emergency Department Observation Ward Patients" was conducted in the Hong Kong East Cluster in 2009.

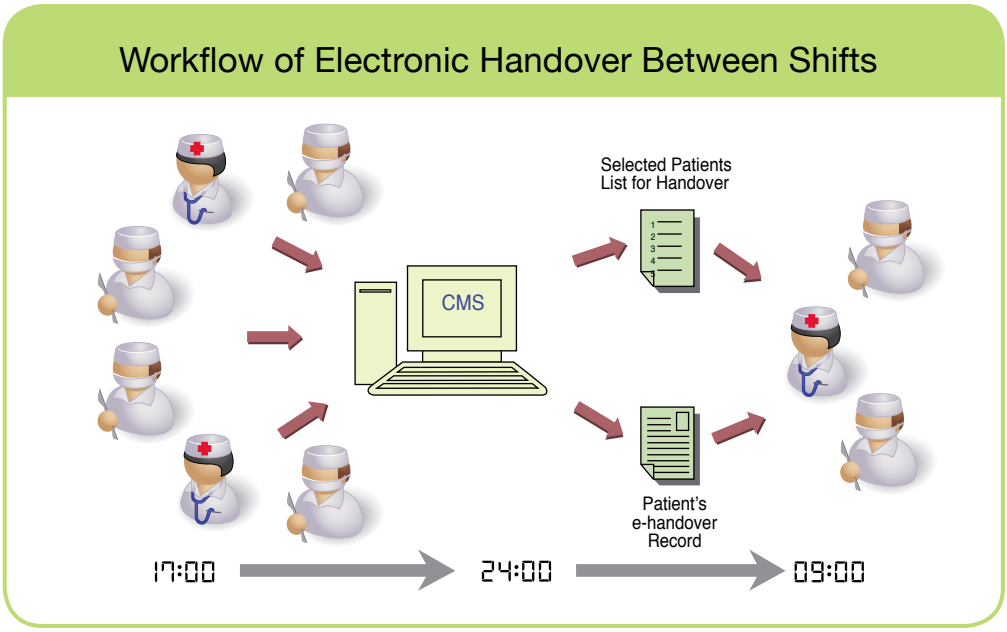
621 The Steering Committee recognised the clinicians' concern over patient safety in their limited application of MEWS to trigger further interventions for deteriorating patients. While MEWS was a supplementary rather than comprehensive tool for patient monitoring, its effectiveness could only be maximised with due application of the tool, availability of action pathways, support of complementary measures like SBAR and proper staff training. As discussed above, the integrated observation chart with MEWS furnished the physiological changes of patients over time in a variety of common diseases. It helped identify patients with deteriorating conditions for prioritised care and was not meant to impede the more frequent monitoring of high-risk patients who had reached the threshold point of triggering active assessment or specialist intervention. Besides, subsequent patient management should be protocol-based and detailed guidelines should be defined in advance in order to ensure that proper calls were made for on-site senior nurses or clinicians' advice and suitable interventions were provided for deteriorating patients. Adoption of a standardised communication approach, like SBAR, would definitely smooth out the communication process; and proper training was crucial to get all involved health carers familiar with the protocol-based workflow and care procedures. HA might consider gathering more local data and conducting regular compliance audits as well as user reviews in order to evaluate the effectiveness of the track-and-trigger system and ensure that both doctors and patients could benefit from the implementation of the common ward language in acute care management.

C. Piloting an Electronic Handover System in Selected Acute Hospitals

622 Effective handover of patients' information was a key element to ensure the continuity and safety of patient care delivered under a shift or on-call mode of operation. With the corporate initiative to bring in pragmatic work practice and reduce doctor work hours in the past years, there had been a rising need for a structured and comprehensive multi-disciplinary handover system among the health carers. Yet, literature showed that the quality of conventional handover among doctors via verbal or manual means could be poor, and certain clinicians had expressed that inadequate information about deteriorating patients who required urgent care was a major risk that should be tackled immediately. As clinical staff was often busy during out-of-hours, a multi-disciplinary handover system that could facilitate essential information transfer for critically ill and unstable patients was most crucial to ensure that the right care was delivered to the right patients at the right time.

623 HA took the preponderance of its modernised information technology and pioneered the development of an electronic handover function in its Clinical Management System (Version II) ("CMS II") for pilot in three acute hospitals, viz. Pok Oi Hospital, Tseung Kwan O Hospital[35] and Yan Chai Hospital, in early 2009. Major stakeholders' inputs were enlisted, including clinicians, nurses, health informaticians and information technology specialists, to define the user requirements and oversee the staged system development. It was the first of its kind in the healthcare sector around the world which allowed access to patients' demographic data, clinical information, laboratory and radiological results as well as drug prescriptions via a single system. Besides, multiple accesses were permitted at the same time and users could log on the system at any time through any networked station in the hospital, upload the latest patient data efficiently and retrieve them according to patients' needs and their own preferences (Figure 6.4). The electronic handover function also provided an additional platform to streamline multi-disciplinary handover on critically ill and unstable patients between shifts, help prioritise care for those requiring urgent review and attention, and improve clinical supervision during out-of-hours. It surpassed the conventional mode of handover in improved user-friendliness, minimal additional workload, better documentation and greater flexibility of access at different time and locations (Table 6.1).

Fig. 6.4 – Workflow of Electronic Handover Function



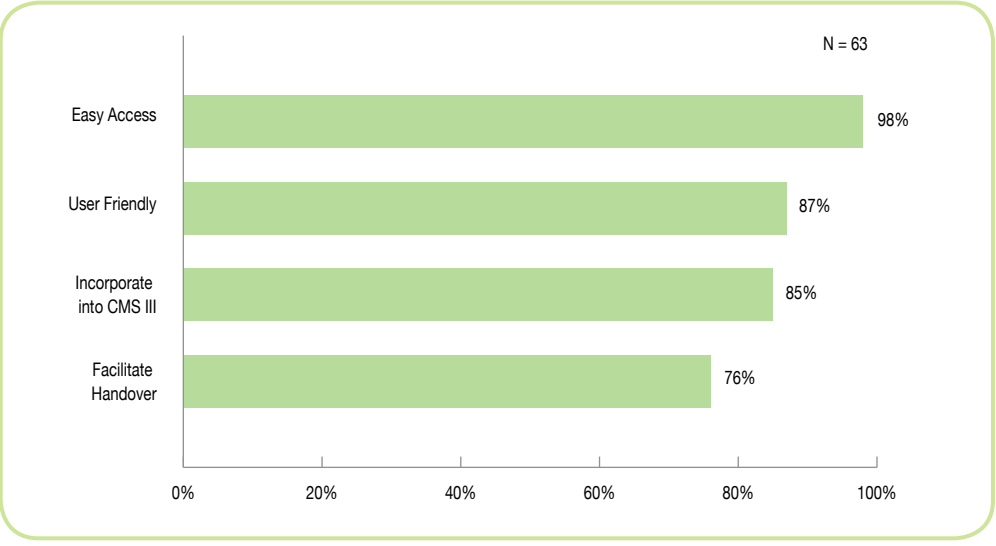
[35] The electronic handover function was piloted in the medical stream specialties of Tseung Kwan O Hospital only.

Table 6.1 – Comparison between Electronic and Conventional Handover Modes

	Electronic Handover	Conventional Handover
Extra resources required	Modification of CMS & hardware addition	Doctors and nurses hours
Multi-disciplinary handover	✓	✓
Effectiveness	✓	✓
Flexibility	✓	✗
Good Documentation	✓	✗
Room for clinical audits	✓	✗

624 In a retrospective case review and questionnaire survey conducted in the three acute pilot hospitals in April 2009[36], as shown in Figure 6.5, over 90% of the new electronic handover records and updates on existing records were found to be completed within 5 minutes and 1.5 minutes respectively. Besides, 98% of the respondents expressed that they could easily access the electronic handover function through CMS II while on duty and 87% found it user-friendly in terms of data input and information retrieval. Furthermore, 76% considered that the electronic mode could facilitate the multi-disciplinary handover for critically ill and unstable patients while 85% opted for building the electronic handover function in HA's CMS III in future for enhanced patient safety.

Fig. 6.5 – User Survey on Electronic Handover Function



[36] The retrospective case review of 92 electronic handover transactions was conducted in the three acute pilot hospitals in January to April 2009 whereas the questionnaire survey was conducted in April 2009.

625 On the whole, the electronic mode of handover was an area where Hong Kong took the idea from its overseas counterparts and developed it further and deeper[37]. It facilitated patient prioritisation which directed doctors' efforts to the most needy patients, thus ensuring their time was used most efficiently. It also provided a structured channel of information and accountability transfer among the healthcare professionals in different disciplines; and improved the continuity and safety of patient care as well as clinical supervision during out-of-hours. While system accessibility, reliability, ease of use, minimum workload and availability of essential data remained critical for user acceptance of the electronic means of handover, HA should go for its wider application in different clinical specialties and hospital clusters, in particular under the emerging modes of operation like full or partial shifts of work and increasing patient transfers between hospitals under the acute trauma diversion and treat-and-transfer arrangements for specialist care. HA was recommended to integrate the electronic handover function into its upcoming CMS III development and designate a team to coordinate the system development and rollout arrangement.

Issues of Concern

626 While technology had saved time and eased the shift transitions by facilitating multi-disciplinary handover on an electronic platform, the frontline clinicians were concerned about the transient information of patients being recorded in the system which might disrupt, instead of facilitating, the continuity of care for patients who truly required urgent assessment and clinical intervention at the juncture of shifts and during out-of-hours. Moreover, electronic handover was something novel to the medical profession and doctors took time to accommodate the new practice and build trust in the electronic platform in place of their conventional verbal and manual handover.

627 In this regard, the Steering Committee would like to clarify that the electronic platform was meant to expedite the multi-disciplinary handover process by providing a structured, efficient and flexible means of handover via an integrated clinical management system. It did not preempt the need for continuous assessment and periodic reference to patients' clinical notes for their latest conditions. Moreover, education and training, coupled with strong management drive, would help the healthcare professionals get with the new system gradually. HA was recommended to continue formulating and refining its clinical management

[37] Comments of Mr Andrew FOSTER, overseas expert of Steering Committee on Doctor Work Hour.

protocols and operational guidelines to manage clinical emergencies; and HA might consider conducting larger-scale studies to refine the electronic handover platform in order to meet the needs of different clinical specialties in ensuring the continuity and safety of patient care.

D. Strengthening the Core Competency of Health Carers

628 In order to ensure patient safety, strengthen the core competency of healthcare professionals in acute care management in a multi-disciplinary setting and relieve doctors from their heavy workload and mundane technical tasks in care delivery, HA had made great efforts to organise various training programmes for its health carers, including doctors, nurses and the care technicians, in the past years. Two clinical core competency courses were organised for 91 basic surgical trainees and 14 nurses in the surgical stream specialties while three batches of clinical skill enhancement programmes were conducted for 287 experienced nurses of different public hospitals. Besides, since the start of Doctor Work Reform, a total of 95 care technicians had been trained to provide round-the-clock blood-taking, electrocardiogram and intravenous cannulation services in various acute public hospitals.

A. Clinical Core Competency Courses for Doctors

629 The Hong Kong Academy of Medicine reiterated that limiting doctors' average weekly work hours to 65 should not have major impact on their postgraduate medical training but a further reduction in the work hour target would in principle have long-term impacts[38]. In the past two years, HA kept on strengthening the core competency skill set of junior and on-site on-call doctors in acute care management in order to reduce risks during out-of-hours and foster teamwork and collaboration among clinical specialties for enhanced patient safety. This was also in line with certain hospital management's view that service and training should complement each other such that junior doctors being trained for one specialty could manage basic patient problems under the care of doctors in the other specialties.

[38] HKAM's feedback on doctor work reform consultation documents in June 2007 and Dec 2009.

630 Two clinical core competency courses, covering management of acute surgical and orthopaedic conditions, peri-operative care as well as scenario-based communication skills, were conducted in the past years. The first course, delivered in November 2008, had equipped 24 basic surgical trainees and 14 nurses in the surgical stream specialties with the requisite skills in recognising, assessing and managing patients in critically ill and unstable conditions in both emerging and urgent situations. The hospital clusters, specialty colleges and the participants welcomed the course, which was now included as a mandatory module of the specialist training for all basic surgical trainees in HA hospitals. The second clinical core competency course, jointly organised by the Hong Kong College of Anaesthesiologists, the Hong Kong Intercollegiate Board of Surgical Colleges and HA, was delivered in November and December 2009 with refined contents for HA's 67 first-year basic surgical trainees. The majority of participants found the clinical core competency course stimulating and practical for use in the work place. HA was recommended to continue facilitating doctors' training, organising similar competency-based and refresher courses for its frontline doctors and introducing various modes of training in order to improve teamwork in a multi-disciplinary setting and enhance patient safety, especially during out-of-hours.

631 The Steering Committee noted that the HKAM would take a more comprehensive approach to enhance the quality of postgraduate medical education, modernise the Fellowship training system as to produce Fellows meeting societal needs in a sustainable manner, and monitor the process such that the quality of doctors' training would not be affected. It had commissioned an internal working group to study the correlation between work hours and specialist training, and define the core competencies of trainee doctors before conducting a cohort study to assess the long-term impacts of work reform on doctors' training. Consultations and surveys with fellows, trainees and trainers would also be conducted. Simulation would play a more important role in future training, as it provided safe and effective opportunities for learners at all levels to acquire practical skills required for quality and safe patient care. A combination of competency and time-based training using simulation technology would thus be provided to ensure the quality of postgraduate

medical education under HA's new work hour arrangements. HA was recommended to work closely with the HKAM in ensuring the quality of doctors' postgraduate medical education and evaluating the work reform impacts on doctors' training in different specialties.

B. Clinical Skill Enhancement Programmes for Nurses

632 Recognising that nurses were an integral part of the multi-professional team in delivering quality healthcare services, HA was mindful to enhance their professional training and competency in acute care management in the past years. In a staff opinion survey with 264 healthcare professionals conducted in May 2008, training was a major concern among the nurses in enhancing their professional roles and strengthening the senior nurse coverage during out-of-hours[39].

633 In this connection, HA conducted three batches of commissioned clinical skill enhancement programmes for 287 local experienced nurses in 2008/09 with a view to gearing them up in advanced patient assessment and stabilization, clinical decision making, supervision and intervention as well as response coordination in managing clinical emergencies. Local training resource was also developed through a bespoke train-the-trainer workshop in order to facilitate both clinical course design and delivery in the local setting. The training programmes were well received by the frontline nurses and hospital clusters; and positive changes were observed in the participants' views towards the enhanced nursing role in the care team after the training. HA was recommended to keep on organising similar clinical skill enhancement programmes for all nurses in order to improve their professional and core competency, support and relieve doctors' work in patient management and enhance the quality of care and patient safety in public hospitals.

[39] The staff opinion survey was conducted during the HA Convention 2008 with a random sample size of 264 respondents, with 12 doctors, 242 nurses and 10 other healthcare professionals. The nurses were most concerned about training, management support and manpower availability in taking up the enhanced roles during out-of-hours.

C. Care Technician Training Course

634 As discussed in previous chapters, developing the expertise of non-professional staff was a key and effective strategy for relieving the frontline doctors and nurses from mundane and repetitive tasks. So far, more than 400 care technicians had been trained to provide round-the-clock blood-taking, electrocardiogram and intravenous cannulation services in different acute public hospitals. Their scope of functions could be expanded to meet the evolving patient needs in the society; and HA was recommended to develop suitable training courses and draw in external expertise wherever possible, coupled with various quality assurance programmes and regular safety checks, so that patients could continue enjoying timely and quality services while the healthcare professionals could be relieved from their busy work and refocus on core clinical duties.

Issues of Concern

635 Certain frontline clinicians were worried about the impacts of Doctor Work Reform on the quality of doctors' training and the outcome of patient care. In particular, junior doctors' training opportunities would be deprived under the new work hour arrangement, enhanced senior nurse coverage during out-of-hours and engaging trained non-medical staff in care delivery. The Steering Committee considered that quality training did not rely solely on the volume and range of case exposure but could be achieved through a structured approach imbued in doctors' normal work pattern. With the introduction of various pilot work reform strategies, such as delegating trained non-medical staff to perform technical tasks, implementing new operational modes with augmented operating theatre capacity in the extended day and launching pragmatic work arrangements like partial shifts and short-call systems, many of the negative health impacts on doctors' work and learning effectiveness due to prolonged night work and deprived sleep hours had been reduced[40]; and doctors could now have more quality hours for service and training.

[40] Sleep deprivation impairs both performance and skill retention and is risky to patient care – Designing safe rotas for junior doctors in 48-hour week, Royal College of Physicians (Sep 2006).

636 On the other hand, enhancing senior nurse coverage during out-of-hours was meant to improve the care process and teamwork by performing advanced patient assessment, delivering protocol-based care and participating in multi-disciplinary handover. The initiative was considered effective to improve patient care, and was particularly beneficial to both junior doctors and nurses with only a few years of experience. Besides, trainee doctors should have mastered the basic skills of blood-taking, electrocardiogram and intravenous cannulation in their early years of professional training. Their expertise and time should be focused on clinical care for patients instead of these low-complexity technical tasks in wards, which were now increasingly delegated to the trained non-medical health carers.

637 Finally, HA had developed an electronic platform to facilitate multi-disciplinary handover and organised structured core competency training for basic surgical trainees. Doctors should now have more opportunities to engage in better clinical supervision and quality professional training for enhanced patient safety. The Steering Committee fully supported the HKAM's initiative to evaluate the work reform impacts on doctors' training. HA was recommended to continue collaborating closely with the HKAM and contemporaneously exploring the training needs of different specialty colleges in order to develop suitable training programmes for frontline doctors in order to meet the evolving healthcare needs of the society.

THE STEERING COMMITTEE'S RECOMMENDATIONS

638 The Steering Committee put forward the following recommendations in order to improve the quality of care and patient safety in HA hospitals:

a) HA was recommended to enhance the professional and core competency of all nurses in acute care coordination, patient assessment, responsiveness and emergency stabilization through development of clinical protocols and regular training. The roles of other allied health professionals, where appropriate, could also be extended in order to relieve the workload of doctors and improve the healthcare services in public hospitals.

638 b) HA was recommended to enhance the senior nurse coverage, supplemented by regular safety audits, so as to provide advanced, protocol-driven and competency-based nursing support for clinical departments in all acute hospitals at night. HA might look to the manpower supply and the peculiar situations in different hospitals and set up teams of senior nurses or gear up all night nurses to perform the enhanced functions. Both approaches could improve the continuity of care and patient safety while lessening frontline doctors' workload and ultimately their on-site on-call frequency and work hours.

c) HA was recommended to extend the common ward language to all public hospitals as appropriate and establish a uniform approach of multi-disciplinary communication in the care process. A sound track-and-trigger system, supported by clear protocols and detailed guidelines, should be set up to ensure that deteriorating and potentially critical patient conditions could receive timely specialist intervention. Besides, regular compliance audits and user reviews should be conducted in order to build evidence of system effectiveness and ensure that both doctors and patients could benefit from the work reform strategy for reduced workload and safer service.

d) HA was recommended to continue formulating, updating and promulgating both intra and inter-departmental clinical management protocols and electronic patient pathways which involved multi-disciplinary healthcare professionals, coupled with regular clinical audits and performance management, in order to optimise and improve care through teamwork.

e) HA was recommended to clear with relevant professional bodies on the core competency of health carers in different disciplines and develop a framework to facilitate enhancing their scope of professional duties in delivering quality healthcare services. Continuous stakeholder communication and engagement would definitely smooth out the knotty issues.

f) HA was recommended to integrate the electronic handover platform into the upcoming Clinical Management System (Version III) and extend its application to all clinical specialties and hospital clusters in order to facilitate structured and comprehensive handover of critically ill and unstable patients between shifts, ensure continuity and safety of patient care and strengthen clinical supervision during out-of-hours. A designated team should be identified to coordinate the system development and rollout arrangement.

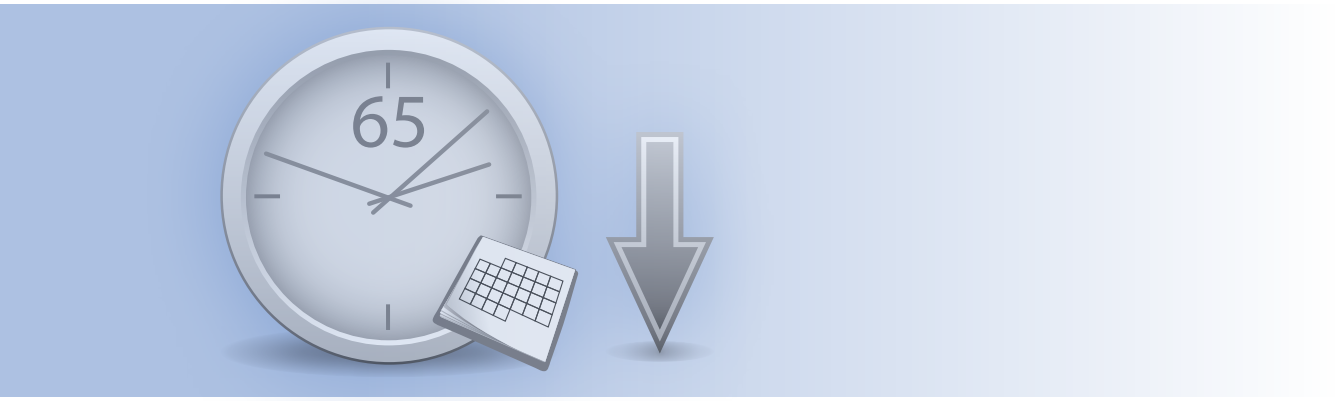
638 g) HA was recommended to continue facilitating doctors' training, organising refresher courses in collaboration with different clusters and specialty colleges, and introducing various supportive modes of training in order to strengthen the core competency skill set of frontline doctors in acute care management under a multi-disciplinary setting. HA was also recommended to work closely with the HKAM in evaluating the work reform impacts on doctors' training in different specialties.

Blank Page

7

Key Success Factors to Improve Work Hours

Determined leadership Work reform
Buy-in for modernised operations for quality services and training



EXECUTIVE BRIEF

701 HA was committed to rationalising frontline doctors' work hour and had set its targets to reduce all doctors' average weekly work hours to not exceeding 65 by the end of 2009 and their continuous work hours to a reasonable level in the long run. Following the recommendations of the Steering Committee, HA set in a corporate mechanism to monitor doctor work hour in a structured, broad-brush and prospective approach in 2009. Doctors' rostered hours of on-site work were monitored over a 26-week reporting cycle while off-site calls and called-back duties were also recognised as work in monitoring doctor work hour. Moreover, flexibility was allowed for clinical departments to adjust the duration of their daytime duty hours in the monthly call roster so as to reflect doctors' work patterns in the departments. The doctor work hour monitoring exercise was completed in 2009 with the support of a centrally-designed Doctor Work Hour Calculator; and a corporate Central Doctor Work Hour Monitoring System was developed to facilitate data submission and management reporting on doctor work hour.

702 Thanks to the effective work reform strategies, determined clinical leadership and the frontline staff's acceptance of pragmatic modes of operation and service delivery, HA had made great strides in improving its doctors' working conditions in the past years. Not only had the proportion of outliers working for more than 65 hours per week on average in HA fallen from around 18% in September 2006 (involving around 900 doctors in 12 clinical specialties) to 4.8% by the end of December 2009 (involving 252 doctors in 10 clinical specialties), the proportion of overnight on-site on-call doctors having immediate post-call time-off also rose from 65% in 2006 to 85.2% and 82.4% on the snapshot holiday and weekday respectively in 2009. In other

words, the number of overnight on-site on-call doctors without immediate post-call time-off had dropped from around 120 in 2006 to only 36 and 39 on the snapshot holiday and weekday in 2009. Frontline doctors were thus able to deliver quality care and acquire professional training in higher vigilance.

703 *The Steering Committee was not entirely contented with the outcomes and recognised that the data, while not representing doctors' actual work hours which also included overrun work beyond rostered hours and unreported called-back hours, furnished an index of their average working conditions in public hospitals. Given the limited scale of pilot work reform implementation and the various confounding factors that presented increasing workload and rising challenges to HA in the past years, like outbreak of human swine influenza and financial tsunami, continued wastage of doctors in pressurised specialties as well as the corporate initiative to reduce untaken annual leave of all staff hence accrued liability towards the end of the year, the current outlying situation could be the best attainable outcome in the meantime. On the other hand, it was noted that the majority of overnight on-site on-call doctors who did not have immediate post-call time-off involved senior calls or less intense on-site workload at night. These on-call doctors should have more uninterrupted rest time during their on-site call and were more able to take longer hours of post-call work.*

704 *It was anticipated that, when the work reform strategies were rolled out to all hospital clusters, coupled with an increase in workforce for certain pressurised specialties, and pragmatic work arrangements were introduced to revamp doctors' on-call systems, the number of outliers should be further reduced in different clinical specialties and the entire organization should be able to fully attain the corporate work hour targets with corresponding improvements in both doctors' work-life balance and professional training. The quality of care and patient safety would also be enhanced in public hospitals. On the other hand, the Steering Committee was cognizant of the extra work and call duties performed by certain frontline doctors, especially those in the middle call layer in busy specialties, in order to attain the work hour targets. Their exemplary performance, professionalism and dedication were highly appreciated.*

705 Despite certain frontline doctors' concern over the computation of average weekly work hours and request for capturing off-site tele-radiology service as on-site work, the Steering Committee kept the stance of taking a broad-brush and prospective approach to doctor work hour monitoring. Besides, HA was recommended to take into account doctors' work hour reported for different specialties in its workforce planning. A long-term doctor work hour monitoring mechanism should be set up, along with a designated office to coordinate the work hour monitoring exercise after completion of the corporate project; and a closer review should be conducted for outlier departments that were yet to fully attain the 65-hour cap for all its doctors in 2009 and those that reported prolonged continuous doctor work hours in the second reporting cycle in 2009. Compensation with time-off for outliers working in excess of 65 hours per week on average was not recommended. Instead, HA was recommended to work out pragmatic solutions for different clinical specialties in order to gradually attain the long-term targets of reducing doctors' continuous work hours to 16 on weekdays and 24 at weekends and holidays. In the interim, HA might consider granting post-call half-day time-off to doctors on overnight on-site call and arrange mutual-cover sleep time for 4 consecutive hours for those who were on overnight on-site on-call duty exceeding 24 hours, subject to adequate manpower, operational practicability and service sustainability.

706 On the other hand, the Court of Final Appeal's judgment on doctors' claims was handed down on 20 October 2009. Doctors were not entitled to extra payment or time-off for overtime; but they were entitled to a holiday on rest days and statutory / public holidays, including being on call off-site. This would have impacts on the implementation of off-site call systems in public hospitals on the said days. The Steering Committee noted that HA had reactivated its Task Force to Study the On-call System to explore different options of revamping doctors' on-call system in a bottom-up approach. The Steering Committee might look into the matter should there be any further issues related to the reform.

BACKGROUND

707 Overseas studies had shown that night work and sleep deprivation were associated with poor health, bad learning and medical errors; and exhaustion would impair doctors' performance and ability in making correct clinical judgments[1]. HA was mindful to improve the work-life balance of its staff and made great efforts to reduce the work hours of doctors without compromising the quality and safety of patient services. Following a doctor work hour survey conducted in September 2006, it was estimated that about 18% of public hospital doctors (i.e. about 900 doctors) worked for more than 65 hours per week on average while only 35% of overnight on-site on-call doctors (i.e. about 120) did not have immediate post-call time-off. Against this background, HA established the Steering Committee in October 2006 with a view to formulating various Doctor Work Reform strategies and overseeing the implementation of pilot work reform programmes in different hospital clusters. It was HA's targets to reduce the average weekly work hours of doctors to not exceeding 65 by the end of 2009 and their continuous work hours to a reasonable level of 16 on weekdays and 24 at the weekend and public holidays in the long run.

708 HA adopted the frontline views gathered from various corporate-wide consultations and the Steering Committee's recommendations[2] in developing its doctor work hour monitoring mechanism, which was promulgated to all hospital clusters in December 2008. In essence, HA took on a structured, broad-brush and prospective approach which entailed simple, easily comprehensible and flexible calculations and had balanced individual fairness, operational practicability and sustainability of the entire organization in the long run. Meticulous counting of actual work hours and retrospective self-reporting, as adopted in the work hour survey conducted in September 2006, were forsaken. Instead, doctors' rostered work hours were captured and flexibility was allowed to suit the varied duty patterns of different clinical specialties. Besides, off-site call duties and travel time for call-backs during an off-site call were counted in a broad-brush approach while unrostered work performed out of clinical emergencies and endorsed by the department head would be captured. Two reporting cycles were defined in 2009, each lasting for six months; and a doctor work hour calculator and the Central Doctor Work Hour Monitoring System were developed to facilitate data submission and management reporting on

---

[1] Section 1.1, Finds and Recommendations from the Hospital at Night Project, Modernization Agency, NHS (April 2004).

[2] The Steering Committee first submitted its Doctor Work Reform Recommendation Report to the HA Board in November 2009. The document contained, among others, the Steering Committee's recommended principles and approaches to doctor work hour monitoring in HA hospitals.

doctor work hour. Moreover, since February 2008, HA had extended the employee compensation coverage for all its employees travelling for ad hoc called-back duties beyond their daytime duty hours. This would give extra protection for staff performing emergency duties during out-of-hours and improve their morale.

OUTCOME OF DOCTOR WORK HOUR MONITORING

709 Thanks to the dedication and collaboration of over 220 clinical departments in HA hospitals, the two doctor work hour reporting cycles were smoothly completed in December 2009. Remarkable improvements were observed in HA doctors' working conditions after two years of work reform implementation and revamp of doctors' on-call systems plus granting of protected rest time during doctors' on-site on-call duties in various clinical departments. Doctors were thus able to deliver better patient care and acquire quality training in higher vigilance.

710 The major improvements in doctor work hour in the second reporting cycle covering July to December 2009 were summarised below with more details available in Appendix IX of this Final Report:

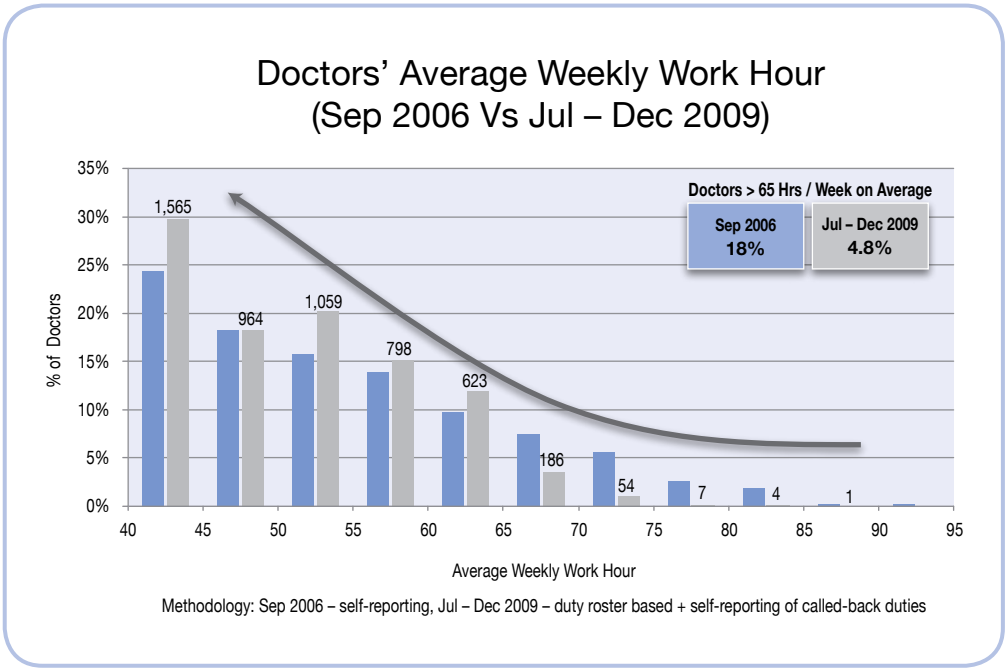
a) Average Weekly Work Hours

i) The proportion of doctors working for more than 65 hours per week on average dropped from around 18% in September 2006 (involving around 900 doctors in 12 clinical specialties) to 4.8% by the end of December 2009 (involving 252 doctors in 10 clinical specialties). The proportion of doctors working for more than 70 hours per week on average also dropped from 10% to 1% in the same period.

ii) The proportion of outliers (i.e. doctors working for more than 65 hours per week on average) in the rank of Medical Officer / Resident dropped from 24% to 7% whereas that of outlying senior doctors dropped from 3.6% to 0.6%.

iii) The drop in the proportion of outliers was most significant in Neurosurgery (from 73% to 13%), Paediatrics (from 40% to 7%), Surgery (from 45% to 19%), Oncology (from 26% to 0%), Obstetrics & Gynaecology (from 40% to 18%) and Medicine (from 21% to 2%).

Fig. 7.1 – Comparative Data of Doctors' Average Weekly Work Hours



710 **b) Continuous Work Hours**

i) The number of doctors undertaking on-site on-call duties for more than 24 hours at one go dropped from 340 in September 2006 to 244 and 221 on the snapshot holiday (July 1) and weekday (July 8) respectively in 2009.

ii) The proportion of overnight on-site on-call doctors having immediate post-call time-off rose from 65% in 2006 to 85.2% and 82.4% on the snapshot holiday and weekday respectively in 2009.

iii) The number of overnight on-site on-call doctors who did not have post-call time-off dropped from 120 in September 2006 to 36 and 39 on the snapshot holiday and weekday respectively in 2009.

Fig. 7.2 – Comparative Data of Doctors' Continuous Work Hours (Holiday)

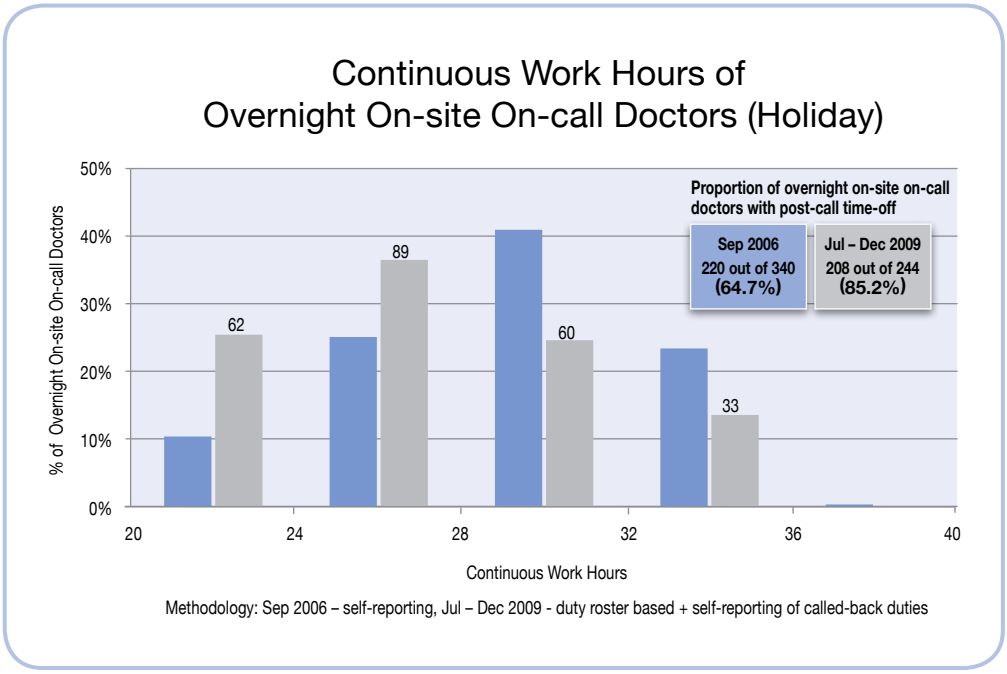
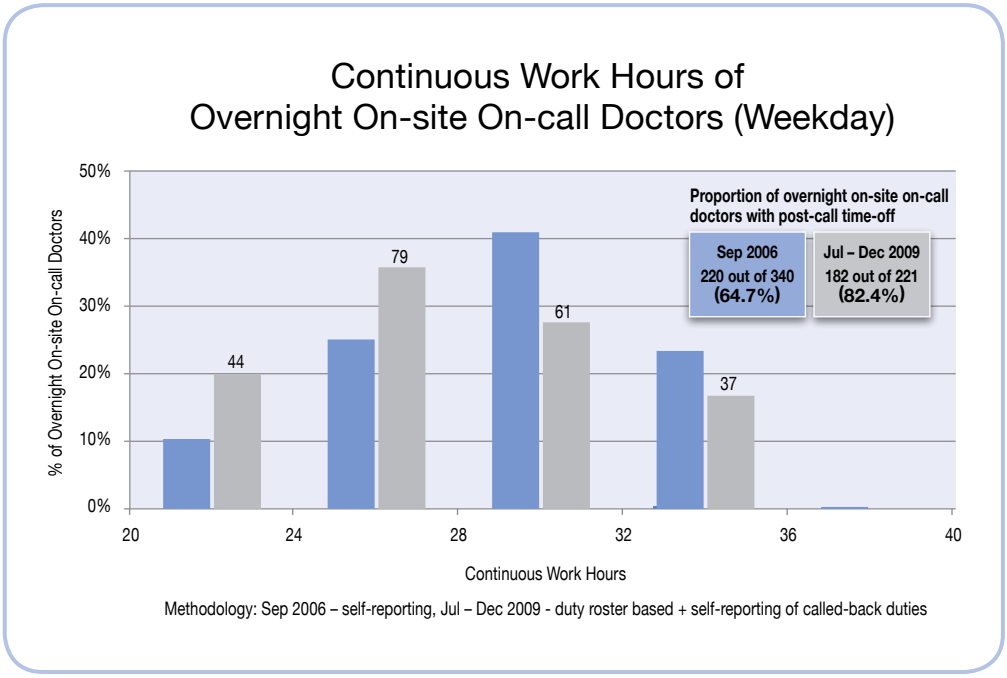


Fig. 7.3 – Comparative Data of Doctors' Continuous Work Hours (Weekday)



711 The Steering Committee recognised the huge strides that HA had made in the work hour improvements but was not entirely contented with the outcomes. The data, while not fully representing doctors' actual work hours including overtime beyond rostered hours and called-back hours unreported by the frontline doctors, furnished an index of their average working conditions in public hospitals. Given the limited scale of pilot work reform implementation and the various confounding factors that presented increasing workload and rising challenges to HA in the past years, the current outlying situation could be the best attainable outcome in the meantime. In particular, the downturn of the global economy had brought forth greater reliance and more utilization of public hospital services, whereas the outbreak of Human Swine Influenza (H1N1) in the local society had pushed up the emergency admissions to different specialties, especially the medical wards, since May 2009. Besides, staff wastage of healthcare professionals had been kept at a high level in recent years and difficulties were encountered in employing part-time private practitioners to support hospital operations in pressurised specialties. Coupled with the corporate initiative to reduce untaken annual leave of all staff hence accrued liability towards the end of the year, these factors had much increased the workload of clinical specialties and outplayed the positive impacts of work reform at the pilot reform sites.

712 The Steering Committee firmly believed that the 65-hour/week cap was a pragmatic target and improvements could be entrenched in different clinical specialties. It was anticipated that, when the work reform strategies were rolled out to all hospital clusters, coupled with a rational increase in workforce for certain pressurised specialties, and pragmatic work arrangements were introduced to revamp doctors' on-call systems, the number of outliers should be further reduced in different clinical specialties and the entire organization should be able to fully attain the corporate work hour targets with corresponding improvements in both doctors' work-life balance and professional training. The quality of care and patient safety would also be enhanced in public hospitals.

713 Upon review of the latest doctor work hour data, the Steering Committee came up with the following recommendations in order to improve the outlying situation of doctors working beyond the cap of 65 hours per week on average in a pragmatic manner:

a) For pressurised specialties with a relatively high level of staff wastage in recent years – the deficiency could be made up by robust staff retention strategies, revamping their on-call systems and prompt replacement of the vacancies.

b) For specialties where the work reform strategies might not fully address the prolonged work hour issues and the night-time activities could barely be reshuffled to the daytime (e.g. Paediatrics and Obstetrics & Gynaecology) – the deficiency could be made up by rationally deploying additional doctors and streamlining workflow and the care procedures so as to optimise workload.

c) For highly sub-specialised units that had grave patient safety concerns over reducing the number of on-site doctors at night (e.g. Cardiothoracic Surgery and Neurosurgery) – the deficiency could be made up by enhancing frontline doctors' core competency and launching crossover on-site on-call cover among specialties in the same service stream.

d) For other outlying specialties (e.g. Ear, Nose, Throat, Ophthalmology, Intensive Care Unit and Internal Medicine) – the deficiency could be made up by revamping doctors' on-call system and strengthening off-site specialist support for on-site on-call doctors.

KEY SUCCESS FACTORS TO IMPROVE WORK HOURS

714 Despite the varied outcomes of the same work reform strategy launched at different pilot sites, the Steering Committee had identified three key success factors to bring down the work hours of frontline doctors in different specialties, namely, determined clinical leadership in changing doctors' existing call systems, implementation of work reforms to optimise the overall workload and a cultural change among the frontline doctors to accommodate new modes of operation.

A. Determined Clinical Leadership in Changing Doctors' Existing Call Systems

715 The commitment of clinical leaders was most critical to bring about changes in doctors' existing work patterns and improve their working conditions. Recognising the negative impacts of prolonged work hours and the correlation between a fresh state of mind and due care delivery and proper clinical decision making, a number of clinical leaders had changed the frontline doctors' overnight on-site on-call systems and shortened their continuous work hours, hence average weekly work hours, in phases. This was most eminent at the pilot work reform sites but thriving examples were also found in other non-pilot reform clinical specialties. For example, in the Surgery Department of Queen Mary Hospital, the number of overnight on-site on-call doctors had been reduced with a corresponding drop in their continuous work hours, whereas its counterparts in Prince of Wales Hospital had combined the sub-specialty on-site on-call layers and capped the doctors' call frequency in a month, thereby keeping their average weekly work hours at a reasonable level.

B. Implementation of Work Reforms to Optimise Overall Workload

716 An impeccable work reform proposal would be futile if it did not get tested in reality. Since the fourth quarter of 2007, HA had implemented various work reform strategies in order to optimise the service volume and manage the risks of care in public hospitals. Deployment of doctors had alleviated the workload of frontline doctors in pressurised areas whereas other pilot work reform strategies, like reshuffling backlog operations at night to the extended day, reducing avoidable admissions to clinical specialties, sharing out doctors' basic care duties to the trained care technicians as well as enhancing the roles of experienced nurses in support of doctors' work during out-of-hours, had all created room for revamping the existing on-call systems of doctors in different clinical specialties. The work reform strategies were effective to reduce doctor work hours without compromising the quality and safety of patient care in public hospitals.

C. Cultural Change among Frontline Doctors to Accommodate New Modes of Operation

717 It was understandable that work reform would bring about uncertainty, anxiety and skepticism. But thanks to the open mind of the frontline doctors and their acceptance of new modes of operation, HA had attained much in improving doctors' working conditions. The Steering Committee was glad to observe a gradual change in the frontline doctors' attitude in the past years, from a sense of safety vested in the conventional mode of overnight on-site on-call system to the new belief that vigilant doctors could render better and safer care. This had given a great booster to implementing changes and enlisting buy-in of stakeholders for new models of service delivery. Moreover, collaborations within and among clinical specialties had increased at both pilot and non-pilot reform sites, thus facilitated the launching of pragmatic work arrangements, like stronger off-site specialist support for on-site on-call doctors and crossover on-site on-call cover between sub-specialties in the same service stream. The frequency of overnight on-site calls and the work hours of doctors could therefore be reduced; and the quality and safety of patient care were ensured with nil critical incidents reported under the corporate initiative of rationalising doctor work hour. On the other hand, the Steering Committee was cognizant of the extra work and call duties performed by certain frontline doctors, especially those in the middle call layer in busy specialties, in order to attain the corporate work hour targets. Their exemplary performance, professionalism and dedication were highly appreciated.

718 Table 7.1 below highlighted some examples of work hour improvements attained by different pilot and non-pilot reform sites through implementing pilot work reform strategies and revamping doctors' existing work patterns in the past years.

Table 7.1 – Work Hour Improvements in Different Clinical Specialties

Hospital	Specialty	On-site On-call Doctors > Midnight	Doctors' Continuous Work Hours	Supportive Strategies
QMH	Surgery *	4 → 3	28 → 16	Change in on-site on-call system
NDH	Surgery	3 → 2	No change	Combined layers of call + Capped monthly on-site
	Orthopaedics	2 or 3 → 2	29 → 16	Extra EOT sessions
UCH	Orthopaedics	3 → 2	28 → 16	Extra EOT sessions
	Medicine	7 → 5	28 → 16	24-hr TSA(CA)
PYNEH	Medicine	5 → 4	28 → 24	EMW + 24-hr TSA(CA) + Enhanced pharmacist service
PMH	Medicine	5 → 4	28 → 16	EMW + 24-hr TSA(CA)
AHNH	Medicine	3 → 2	28 → 10-16	24-hr TSA(CA) + MEWS
YCH	Medicine	3 → 3	28 → 16	24-hr TSA (CA) + APN(CMU)
	Anaesthesia	1 → 0	17 → 8	One Anaesthetist to cover night calls in YCH / CMC simultaneously if mature

* *Non-pilot reform specialties.*

^ *Surgical trainees on 1st call layer could attain the 65-hr/week cap but the middle ranking doctors (Higher trainees or Associate Consultant) couldn't due to a shrunk workforce under the private market boom.*

ISSUES OF CONCERN

719 A number of issues were gathered from the clinical specialties and frontline doctors in the two completed cycles of doctor work hour reporting in 2009, viz. monitoring of actual versus rostered doctor work hours, handling of statutory / public holidays and off-site tele-radiology service in work hour computation, frequency of upcoming doctor work hour monitoring, staged implementation of continuous work hour targets as well as workforce planning mechanism for medical staff in different clinical specialties. These issues were worth more in-depth discussion in order to come up with an agreeable, practicable yet sustainable yardstick for monitoring the work hour improvements for doctors in the entire organization.

A. Monitoring of Actual Versus Rostered Doctor Work Hours

720 An ever scrutinised issue of the corporate doctor work hour monitoring exercise lay in the measure of actual versus rostered doctor work hours in different clinical specialties. The doctors union representatives, in particular, called for a reversal of the prospective approach which was based on doctors' monthly call rosters, and proposed to capture doctors' actual work hours in a retrospective and self-reporting manner. Certain frontline doctor representatives also opined that the reported work hours could be misleading as clinical heads might manipulate the data, and there had been few improvements to their working conditions nor any significant reduction in their work hours since commencement of the pilot work reform programmes. The on-call duty rosters were still badly arranged in certain clinical departments. On the other hand, the possible impacts of the Minimum Wage Bill on capturing staff work hours in different disciplines were noted. The Steering Committee had a detailed discussion of this issue and made reference to the experience in the United Kingdom, where the Government was denounced by the doctor trade unions in 1995 for falsifying its claim for reducing doctor work hours, and independent inspection bodies were subsequently set up to compare what the employers claimed with what doctors reported as facts of their work hours in each hospital.

721 The local mechanism differed from its overseas counterpart on various aspects. In the first place, by monitoring doctor work hours, the Steering Committee agreed that HA sketched an index of doctor's average working conditions for workforce planning rather than any compensatory purpose. Besides, the entire mechanism, including both the scope of monitoring and the formula for calculating doctors' average weekly work hours[3], was founded on HA-wide consultations with the frontline and the clinical specialties. Clinical departments were all given the flexibility to define their daytime duty hours according to their operational needs. This would avoid the potential disputes over individual fairness due to performance of unrostered work or voluntary stay-behind of doctors beyond their rostered duty hours. Besides, the prospective approach of monitoring would not only save the meticulous work of hour-to-hour reporting, but also balance operational practicability and sustainability of the organization in the long run. The Steering Committee, while appreciating the dedication and professionalism of frontline doctors to deliver quality patient care, was reluctant to learn that doctors would reduce themselves to be technical workers who clocked their work hours in a meticulous manner. The original stance of prospective counting in a broad-brush approach was therefore supported and kept. Moreover, the impacts of the Doctor Work Reform might not be prominent in certain clinical departments, due much to the limited scale of implementation in its pilot phase; and the reduction in doctor work hours at non-pilot sites was mainly a result of determined clinical leadership and frontline doctors' accommodation of new operational modes and revamped on-call duty rosters without compromising the quality of care and patient safety. These were highly commendable for genuine improvements in doctors' working conditions in public hospitals.

B. Handling of Statutory / Public Holidays and Off-site Tele-radiology Service in Work Hour Computation

722 Another hot issue rested with the handling of statutory / public holidays as well as off-site tele-radiology service in work hour computation. Under the current monitoring mechanism, the former was not discounted from the work hour formula whereas the latter would not be captured as on-site work for work hour monitoring purpose. Certain doctors disagreed to this approach as it would reduce the average weekly work hours of doctors if statutory / public holidays were not deducted from the denominator, and disincentivise doctors to deliver professional tele-radiology service using high-end technology away from the hospital.

---

[3] For details, please refer to Chapter 5 and Appendix XVIII of the Doctor Work Reform Recommendation Report issued in November 2007.

723 The Steering Committee understood the concerns of frontline doctors but was also cognizant that whichever way of handling statutory / public holidays would not do perfect justice to all parties. As doctors performed on-call duty on statutory / public holidays, be it on-site or off-site, their work hours would be captured, net of the ensuing alternative holiday for estimation of their average weekly work hours. Simple discount of the said holidays from the work hour formula would disproportionately augment their average weekly work hours. The current work hour formula had balanced staff equity, operational arrangement and service sustainability of the organization. The Steering Committee would thus keep its initial recommendation for not discounting statutory / public holidays from the work hour formula. On the other hand, the Steering Committee definitely supported the use of advanced technology to expedite the care process and improve patient outcomes. However, in view of the insignificant volume of tele-radiology service and the meticulous work involved in capturing the work hour data, it was not suggested to capture off-site tele-radiology service as on-site work at this stage. That said, the Steering Committee opined that the methodology for work hour monitoring could evolve over time and be in line with technological advances in delivering healthcare services.

C. Frequency of Upcoming Doctor Work Hour Monitoring

724 The unprecedented corporate-wide doctor work hour monitoring exercise had induced loads of administrative duties on the part of frontline doctors and department secretaries in reporting and compiling the work hour data. Despite the prospective approach of capturing rostered work and the availability of such enabling tools as the Doctor Work Hour Calculator and the Central Doctor Work Hour Monitoring System, the clinical departments saw the exercise as an immense burden to their busy daily schedule. They opted for a less frequent reporting cycle which could justify the extra tasks but yet produce useful data to the corporate management at the same time.

725 In this regard, the Steering Committee would like to warmly thank all who had contributed to the success of the corporate doctor work hour monitoring exercise. After the two reporting cycles in 2009, HA had grasped the average working conditions of doctors in different ranks and specialties in public hospitals. While doctor work hours should be regularly monitored as an on-going initiative and booster to improve doctors' work-life balance, it was agreed that the frequency of monitoring could be relaxed, say, at an interval of 3 years, for clinical specialties that had attained the work hour cap of not exceeding 65 per average week and where there were few issues of prolonged continuous work hours for on-call doctors. Otherwise, a closer review and more frequent reporting requirement in every half year would be recommended until the concerned departments had attained the work hour targets and resolved the prolonged work hour issues. This would tie in with the corporate timeline of deploying Resident Trainees and House Officers in January and July each year to relieve the workload of pressurised specialties. HA was recommended to set up and promulgate a long-term doctor work hour monitoring mechanism to all hospital clusters and identify a designated team to coordinate the work hour monitoring exercise. Moreover, HA was recommended to keep on improving doctors' working conditions and reviewing clinical departments' manpower arrangement, instead of recompensing the outliers with time-off for work done in excess of 65 hours per week on average.

D. Staged Implementation of Continuous Work Hour Targets

726 Despite the encouraging attainments of the average weekly work hour targets by the end of 2009, HA was faced with daunting challenges in resolving the prolonged continuous work hours of on-site on-call doctors in public hospitals. The Steering Committee well appreciated the varied work practices and operational requirements of different clinical specialties; and had therefore recommended to HA, in November 2007, phased introduction of a hybrid model of doctors' continuous work up to 16 hours on weekdays and 24 hours at weekends and on holidays in the long run. In order to ensure that both doctors and patients would truly benefit from a more vigilant and team-based workforce, HA should work out pragmatic solutions for different clinical specialties so that both their call frequency and continuous work hours could be kept at a reasonable level without compromising their training opportunities and the quality and safety of patient care. In the interim, HA was recommended to grant post-call half-day time-off to doctors on overnight on-site call and arrange mutual-cover sleep time for 4 consecutive hours for those who

were on overnight on-site on-call duty exceeding 24 hours, subject to adequate manpower, operational practicability and service sustainability. Yet, both determined clinical leadership and a change in the mindset of frontline doctors were crucial to attaining greater success in any doctor work hour initiative.

E. Workforce Planning Mechanism for Medical Staff in Different Clinical Specialties

727 To ensure a sufficient workforce of suitably qualified healthcare staff to meet the evolving needs of society in the medium to long run, HA used to take on a structured and systematic approach of workforce planning in the past years. In general, additional manpower requirements were assessed to meet the projected growth of service demand and workload; and the past workforce trend and age profile of health carers were analyzed to project the anticipated turnover beyond the forecast level. As elucidated in previous sections, doctors in certain clinical specialties were obsessed with prolonged work hours while the recommended work reform strategies might not be applicable to resolve the work hour issues in some other specialties. With the introduction of doctor work hour monitoring exercise, an index of doctor's average working conditions in different ranks and clinical specialties was available. HA could thus make better use of the index data in its workforce planning so that a more balanced workload could be attained among the frontline doctors for receiving professional training and delivering quality patient care.

PRAGMATIC MODELS OF OPERATION

728 The Steering Committee would like to briefly share a number of exemplary and pragmatic models of operation which might provide reference for clinical specialties to revamp their doctors' work arrangements. They were all wisdom of the frontline doctors aiming to improve their work-life balance and ultimately the quality and safety of patient care.

A. Fewer on-site on-call doctors for an optimised workload

729 This was made possible by implementing various pilot work reform strategies which had trimmed avoidable activities and optimised the workload of on-site on-call doctors during out-of-hours. Examples were found in a number of Orthopaedics Departments that had piloted the EOT programme with backlog operations cleared in the extended day; as well as the Medicine Departments supported by the EMWs and 24-hour care technician services which gave greater room for revamping doctors' on-call systems.

B. Partial Shift and Short-call System

730 It entailed a change in the conventional overnight on-site on-call pattern into a partial shift (i.e. a mixture of day-time duty and work on night shifts) or short-call system (i.e. on-site on-call service ending before midnight) in order to cope with the optimised night activities and reduce doctors' on-site work hours. Patient safety was of paramount concern and stronger specialist support in an off-site mode might be required. The partial shift system was run at a pilot reform site for some time, though later transformed into a post-call time-off arrangement for all overnight on-site on-call doctors due to the increased call frequencies for doctors and sustainability concerns of the concerned clinical specialty. Yet, it provided a good example of determined clinical leadership and demonstrated the importance of transparent communication in revamping the on-call systems for frontline doctors. On the other hand, doctors' continuous work hours had also been successfully reduced upon launch of the short-call system in two other medical specialties, as shown in Table 7.2 below.

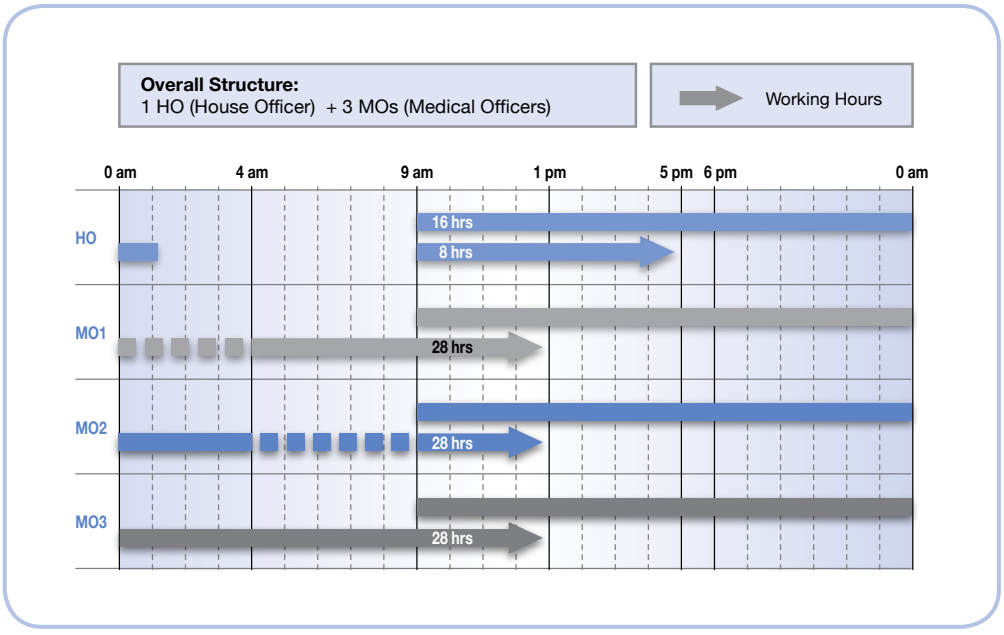
Table 7.2 – Work Hour Improvements under the Short-call System

		Doctors from 5 pm to Midnight	Doctors from Midnight to 9 am	Change in On-site Doctors' Continuous Work Hours
Hospital X (1 on-site doctor)	Pre-pilot	5	5	32 → 14
	Post-pilot	5	4	
Hospital Y (2 on-site doctors)	Pre-pilot	4	3	28 → 18
	Post-pilot	5	3	

C. Mutual Coverage among On-site On-call Doctors

731 Under this system, on-site doctors in the same service stream would cross cover each other for any on-call duties and take turn for a 4-hour sleep during their on-call period. This would reduce the continuous work hours of on-site on-call doctors and render safer patient care by more vigilant doctors. It was especially suitable for specialties which had stable but limited night activities; yet the core competency of the frontline doctors in acute care management had to be strengthened in order to safeguard patient safety. Moreover, where there was a genuine need or sudden patient surge at night, doctors on protected sleep should be called up to assist. This pragmatic practice was not new to clinical operation and was proven effective well before launching the pilot work reform strategies without negative clinical outcomes. Figure 7.3 illustrated how the mutual coverage system worked.

Fig. 7.3 – Mutual Coverage among On-site On-call Doctors



D. Combined Call Layers with Strong Off-site Specialist Support

732 Combining the on-site on-call layers could also reduce the work hours of frontline doctors without affecting the quality of care and patient safety. This measure was particularly useful to tackle the increasing staff wastage under a booming private market. Yet, strong off-site specialist support was recommended, coupled with regular safety audits and supportive programmes like enhanced senior nurse coverage and an electronic handover platform, in order to ensure that patients would receive timely and proper care during out-of-hours. The corresponding drop in training opportunities for junior doctors could be addressed by structured and scenario-based training, whereas senior doctors' concern over heavier workload would be managed through implementing various work reform strategies.

E. Other Pragmatic Measures to Reduce Doctor Work Hours

733 Other pragmatic measures were also available to attain the same ends without compromising patient care, like granting of post-call half-day time-off to overnight on-site on-call doctors, providing 4 consecutive hours of mutual-cover sleep time, capping the overnight on-site on-call frequency for junior doctors, gradually launching a hybrid shift system (i.e. 16 hours on weekdays and 24 hours at weekends and holidays), arranging continuous night shifts for doctors, extending HA's Special Honorarium Scheme to buy service from serving doctors, as well as recruiting more part-time private practitioners and retired senior doctors to take care of specialist outpatient consultations. Implementation and success of these measures would depend highly on adequate workforce, operational practicability, service sustainability and, above all, determined clinical leadership in instituting changes and a cultural change among the frontline doctors to accommodate new ways of work that might rock the conventional mode of overnight on-site on-call systems in various clinical specialties.

COURT OF FINAL APPEAL'S JUDGMENT ON DOCTORS' CLAIMS

734 The doctors' claims that lasted for seven years were heard in the Court of Final Appeal in September 2009, with the judgment handed down on 20 October 2009. In essence, doctors were not entitled to extra payment or time-off for overtime; but they were entitled to a holiday on rest days and statutory / public holidays, including being off-site on call. If this entitlement could not be given for operational reasons, the doctors had to be compensated either with a full day-off or a day's pay, regardless of whether they performed any work while on call off-site. The judgment would have impacts on the implementation of off-site call systems in public hospitals on rest days and statutory / public holidays. The Steering Committee was given to understand that HA had reactivated its Task Force to Study the On-call System to explore different options of revamping doctors' on-call system in a bottom-up approach.

THE STEERING COMMITTEE'S RECOMMENDATIONS

735 The Steering Committee put forward the following recommendations in order to attain quality doctor hours for service and training in HA hospitals:

a) HA was recommended to continue monitoring doctors' working conditions in a structured, broad-brush and prospective approach and incorporate doctor work hour reported for different specialties as a key consideration in its workforce planning. A long-term doctor work hour monitoring mechanism was recommended to be set up with the following arrangements, and a designated team should be set up to coordinate the work hour monitoring exercise:

   i) For departments that were yet to fully attain the 65-hour cap for all its doctors in 2009 and those having reported prolonged continuous work hours in the second reporting cycle in 2009, HA was recommended to review their work hour data every half year until the work hour targets were attained.

   ii) For other clinical departments, HA was recommended to review their work hour data at an interval of 3 years.

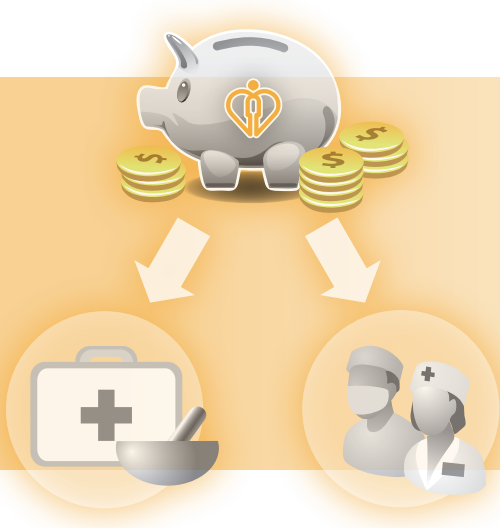
b) HA was recommended to apply appropriate means of operation and viable work patterns to various clinical specialties and hospital clusters in order to enhance the frontline doctors' work-life balance without compromising their training opportunities and the quality and safety of patient care. Pragmatic solutions should also be worked out for different clinical specialties in order to gradually attain the long-term targets of reducing doctors' continuous work hours to 16 on weekdays and 24 at weekends and holidays. In the interim, HA was recommended to grant post-call half-day time-off to doctors on overnight on-site on-call and arrange mutual-cover sleep time for 4 consecutive hours for those who were on overnight on-site on-call duty exceeding 24 hours, subject to adequate manpower, operational practicability and service sustainability.

c) HA was recommended to continue its efforts to reduce doctor work hour to a reasonable level and review clinical departments' manpower arrangements, instead of recompensing the outliers with time-off for work done in excess of 65 hours per week on average. HA was recommended to continue engaging different stakeholders in formulating viable solutions, balancing the need for granting day-offs for on-call duties against the need for up-keeping patient safety in public hospitals, and ensure that public money was properly used at all times.

Blank Page

8 Targeted Deployment of Resources

Strategic and prudent deployment of resources
for better care and greater work recognition



EXECUTIVE BRIEF

801 *Following the recommendations of the Steering Committee in November 2007, HA had embarked on a series of pilot Doctor Work Reform programmes since the end of 2007 in order to verify their effectiveness in attaining the reform objectives of quality care through teamwork, risk management for enhanced patient safety as well as quality doctor hours for service and training. Seed money at the sum of $182 million[45] had been injected in the pilot programmes, supporting 348 new posts of doctors, nurses, allied health professionals and other supporting grades of staff in different hospital clusters. Moreover, an additional pool of 70 Resident Trainees were allocated to various pressurised clinical specialties in 2008/09 and 2009/10 in order to specifically address the workload issues of doctors; and the total headcount of HA doctors had actually risen by 471, from 4,617 in March 2007 to 5,088 in July 2009. It was HA's target to reduce all doctors' average weekly work hours to not exceeding 65 while ensuring the quality of care and patient safety in public hospitals, and the target was largely attained as to render a more vigilant and competent workforce for delivering quality and safe care under the ever rising service demand, global economic downturn as well as outbreak of epidemics in recent years.*

[45] Seed money in the sum of $31 Mn, $77 Mn and $74 Mn was injected in 2007/08 (half-year), 2008/09 and 2009/10 respectively to launch various pilot work reform programmes.

802 *As the experience of the pilot work reform was consolidated, HA was recommended to roll out various pilot work reform strategies in other public hospitals where appropriate, and strategically and prudently deploy its resources so as to maximise the outcome of work reform in improving both doctors' work-life balance and the service outcome. While HA was recommended to continually explore different ways to reconfigure its hospital services and rationalise its service provision; resource utilization should be prioritised for those programmes that had a greater potential for increasing the system efficiency, optimising workload, enhancing the quality of care and patient safety as well as improving staff morale. In this connection, HA was recommended to formulate an enhanced honorarium system which could duly recognise doctors' excess work in a broad-brush and nominal approach, taking into consideration the organization's affordability and sustainability in the long run; and to supplement the enhanced honorarium system with the established special honorarium scheme in order to recognise frontline doctors' contribution to ad hoc clinical activities.*

PRINCIPLES OF RESOURCE DEPLOYMENT

803 The Steering Committee had envisaged the adverse impacts brought by the recent financial tsunami, and forecasted a downward spiral that would affect the local healthcare market. Further constrained by the decreasing supply of medical graduates in the near future, HA would be confronted by a more stringent financial situation and slimmer workforce while the demand for public hospital services would grow progressively, hence greater workload and stress on the frontline health carers. In order to maximise the service outcome and maintain the work-life balance and morale of a highly dedicated team of health carers, HA should strategically and prudently deploy its healthcare resources to pressurised areas with the gravest issues of prolonged work hours, having regard to the right incentive, equity and sustainability of different work reform initiatives. Considerations should be given to the varied experience and work reform outcomes in the pilot hospitals, such that resources could be deployed in priority to programmes which had greater potential for improving the system efficiency, enhancing the quality of patient care and safety, and optimising the workload of the healthcare workforce in public hospitals. On the other hand, HA was recommended to continue reconfiguring its hospital services, enhancing the service quality and improving the morale of its staff, so that the entire organization might tide over the crisis smoothly with the concerted efforts of all parties. Pragmatic modes of clinical operation should be encouraged while greater support should be given to boost multi-disciplinary collaboration, enhance

the roles of health carers in patient care and strengthen the system support to expedite patient management. All these would render a more cost-efficient and effective public healthcare system that would benefit patients, staff and the entire organization.

ENHANCED HONORARIUM SYSTEM

804 In November 2007, the Steering Committee recommended HA to explore a sound and appropriate honorarium system with a view to duly recognising doctors' excess work in providing dedicated healthcare services for patients in public hospitals, and to revamping the prevailing fixed-rate honorarium system which had been in force for over 20 years. The enhanced honorarium system should not only resemble the conventional fixed-rate two-tier honorarium system by taking a broad-brush approach to recognise doctors' excess work hours nominally, but also allow more flexibility to better address the variations of doctor work patterns in different call tiers, specialties and hospitals. HA foresaw the enhanced honorarium system as a tool to improve quality doctor hours for both service and training, and recommended the following principles in formulating its enhanced honorarium system:

a) The honorarium should serve as a token of recognition instead of an incentive for over-rostering or self-generating overwork for higher pay.

b) Doctors' excess work hours should be recognised financially but nominally.

c) Doctors should not be worse off under the enhanced honorarium system.

d) Sustainability and affordability should be considered.

805 Two options under the broad-brush nominal recognition system had been proposed, the first basing on doctors' average weekly work hours while the other on their frequency of standardised calls or shift per month, as illustrated below.

Fig. 8.1 – Enhanced honorarium based on doctors' average weekly work hours

Option 1 – Honorarium Based on Average Weekly Work Hours

Specialty	Call Nature in General	On-site	On-site	On-site/ Off-site	Off-site	Off-site
	Rank	Basic Trainee/ Non-follow/ Non-trainee	Higher Trainee	Specialist (Resident/MO)	SMO/AC	CON
A						
B						
C						
D						

Average Weekly Work Hours	45-49.9	50-54.9	55-59.9	60-65
Monthly Honorarium	$X	$2X	$3X	$4X

Fig. 8.2 – Enhanced honorarium based on doctors' standardised call / shift per month

Option 2 – Honorarium Based on Frequency of Standardised Call/Shift Per Month

Specialty	Call Nature in General	On-site	On-site	On-site/ Off-site	Off-site	Off-site
	Rank	Basic Trainee/ Non-follow/ Non-trainee	Higher Trainee	Specialist (Resident/MO)	SMO/AC	CON
1						
2						
3						
4						

No. of Standardised Calls/Shifts*	1–2	3–4	5–6	7–8
Monthly Honorarium	$Y	$2Y	$3Y	$4Y

* No. of calls/shifts needs to be standardised due to heterogeneity of calls (short vs long, on-site vs off-site, etc.)

806 Both options carried the features of prospective expectation of work hours or call frequencies / shifts rather than retrospective compensation for their actual hours worked. The tiers of honorarium were expanded so as to better differentiate the varying workload of doctors subject to the cap of 65 hours per week on average. It was expected that doctors possessing comparable levels of competence and working in similar call tiers, clinical specialties and hospital settings would share similar work patterns and draw a similar rate of monthly honorarium. This was in line with the "more pay for more work" principle and might address the inadequacy of the current 2-tier fixed-rate honorarium system in recognising doctors' excess work hours.

807 The Steering Committee was more in favour of the first option that was based on doctors' average weekly work hours for reason of simplicity and fairness. For an enhanced honorarium system based on doctors' standardised call frequency, HA needed to tackle the heterogeneity and complexity of their call systems in different clinical specialties and hospitals. Irregular hours of long and short calls were entailed and diverse nature of on-site and off-site calls were involved. This required immense work in aligning the call systems at different sites. Besides, there could be disputes over the calculation of the call / shift systems between the management and the frontline.

808 In the past two years of work reform implementation, there had not been any pronounced views and suggestions from the frontline as to how the enhanced honorarium system should be formulated. HA was therefore recommended to explore the matter further in order to address the disparity of pay in recognition of doctors' excess work. Moreover, for whichever option to adopt, HA was recommended to review doctors' work hour or call / shift frequency every three years so that flexibility would be maintained and the enhanced honorarium system would evolve with the changing mode of operation in different clinical specialties brought about by the work reform implementation.

809 On the other hand, HA might consider using the established Special Honorarium Scheme to recompense medical staff for their voluntary work in handling the anticipated surge in workload. Although its nature was different from the enhanced honorarium system that was targeted to nominally recognise doctors' excess hours of rostered duties, this Special honorarium should be welcomed by the frontline doctors in recognition of their contribution to ad hoc clinical activities.

THE STEERING COMMITTEE'S RECOMMENDATIONS

810 The Steering Committee recommended the following measures in relation to the targeted deployment of resources:

a) HA was recommended to prudently deploy its limited resources to pressurised areas, with due regard to equity, right incentive and sustainability of the work reform initiatives. Given a healthcare budget, coupled with the engulfing financial tsunami and the epidemic outbreak in the community, the demand for public healthcare services, hence service volume and workload, would definitely rise in the coming years. Resource utilization should therefore be prioritised for those programmes that had a greater potential for increasing the system efficiency, optimising workload, enhancing the quality of care and patient safety as well as improving staff morale. Meanwhile, HA was recommended to continually explore different ways to reconfigure its hospital services and rationalise its service provision for the ultimate benefits of patients and the society.

b) HA was recommended to develop a sound and appropriate honorarium system, with due regard to affordability and sustainability concerns, in order to financially recognise doctors' excess work hours in a broad-brush and nominal approach. In this connection, an enhanced honorarium system using doctors' average weekly work hours to differentiate bandings of doctors in different call tiers, specialties and hospital settings should serve the purpose while not incentivising them to over-roster or self-generate overwork for more pay. On the other hand, HA might consider supplementing the enhanced honorarium system with the established special honorarium scheme in order to recognise frontline doctors' contribution to ad hoc clinical activities.

Blank Page

9 The Way Forward

Keep momentum of reform
Modernise workforce and care delivery
Continuous improvement

901 Two years into launching Doctor Work Reform, the Steering Committee was glad to learn that HA had made great strides in improving its doctors' working conditions and ensuring the quality and safety of patient care in public hospitals. Greater workforce flexibility had been developed in various disciplines, while the roles of health carers were modernised with improved operational efficiency and patient safety. Despite the limited scale of implementation and the daunting challenges encountered in the pilot phase, the work reform strategies were proven effective and had laid a solid foundation for delivering better and more efficient healthcare services in public hospitals. These strategies should be implemented, irrespective of any work hour targets in the organization; and HA should capitalise on the success attained in various work reform programmes in order to further optimise the total workload, improve the work-life balance of its healthcare staff and provide better and safer health services for the community.

902 As there would be rising demand for workforce reform in the healthcare sector, HA should keep the momentum of launching effective work reform strategies, coupled with regular performance management, and continue its workforce reform by extending non-medical carers' roles to substitute doctors' technical tasks in care delivery. Community-based and ambulatory care, along with enhanced public-private partnership, should also be developed in order to manage the rising workloads in public hospitals. Yet, to attain greater success, it required not only leadership at the top, but also the concerted efforts at the frontline and the continued support of all stakeholders.

903 The Court of Final Appeal's judgment on doctors' claims surely had bearings on the off-site call systems for specialists on rest days and statutory / public holidays. It provided the corporate management with a golden opportunity to recognise the dedicated work of frontline doctors in delivering quality patient services. Yet, revamping doctors' on-call systems, while complying with the court requirement for giving genuine day-offs for on-call duties without restrictions, should take into account patient safety and good use of public money. HA should keep in close liaison and communication with doctors at all levels in order to arrive at practicable solutions without compromising the quality and safety of patient care in public hospitals.

THE STEERING COMMITTEE'S RECOMMENDATIONS

904 The Steering Committee put forward the following recommendations in relation to the way forward of Doctor Work Reform in HA:

a) HA was recommended to keep the momentum of reform, roll out effective work reform strategies to other public hospitals in phases and continue its various service rationalization initiatives in order to improve doctors' work-life balance and ensure the quality of patient care, taking into account the "People First" culture, patient safety, prudent use of public money, rationality, operational practicability and service sustainability.

b) HA was recommended to continue developing a flexible workforce with extended roles to meet the evolving healthcare needs of the society, reinforcing risk management through protocol-based care and technology-based pathways, as well as fostering teamwork among the healthcare professionals in order to deliver quality and safe care in public hospitals.

c) HA was recommended to extend its scope of community and ambulatory services with improved system support and expand its public-private partnership programmes in order to reduce avoidable admissions and workload in public hospitals and manage patients in a safer, more convenient and cost effective manner.

d) HA was recommended to keep track of doctors' working conditions and introduce pragmatic work arrangements in the light of different clinical specialties' readiness and operational practicability in order to gradually attain the continuous work hour targets of 16 hours on weekdays and 24 hours at weekends and holidays in the long run.

904 e) HA was recommended to keep in close liaison and communication with stakeholders at all levels in revamping its on-call systems while not compromising the quality and safety of patient care in public hospitals. Collaboration with the HKAM should also be continued in monitoring the effects of reduced work hours on doctors' specialist training.

Appendices

Membership
Task Force on Doctors' Work Hours
Hospital Authority

Chairman:	Mr WU Ting-yuk, GBS, JP	Chairman Hospital Authority
Members:	Mr Peter LO	HA Board Member
	Mrs Yvonne LAW	HA Board Member
	Dr Donald LI, JP	HA Board Member
Secretary:	Ms Karen CHOY	Manager (Boards & Support) Hospital Authority

Membership
Steering Committee on Doctor Work Hour
Hospital Authority

Chairman:	Dr C H LEONG, GBS, JP	Former Chairman Hospital Authority
Members:	Dr Sherene DEVANESEN	Chief Executive Peninsula Health in Victoria, Australia
	Mr Andrew FOSTER, CBE	Chief Executive Wrightington, Wigan and Leigh NHS Trust, The United Kingdom
	Prof T F FOK, SBS, JP	Dean, Faculty of Medicine The Chinese University of Hong Kong
	Prof K N LAI, JP	Chair Professor, Department of Medicine The University of Hong Kong
	Dr C T HUNG	Vice President (Education & Exams) Hong Kong Academy of Medicine
	Dr Lawrence LAI, JP	Chairman Cluster Administration and Specialty Advisory Committee on Doctor Work Hour, Hospital Authority
	Dr W L CHEUNG, JP	Director (Cluster Services) & HA Representative Doctors Staff Group Consultative Committee, Hospital Authority
	Dr Nancy TUNG	Cluster Chief Executive Kowloon West Cluster
Secretary:	Mr Linus FU	Manager (Doctor Work Reform) Hospital Authority

Membership
Cluster Administration and Specialty Advisory Committee on Doctor Work Hour, Hospital Authority

Chairman:	Dr Lawrence LAI, JP	Cluster Chief Executive Hong Kong West Cluster (up to 31.12.2009)
Members:	Dr W L CHEUNG, JP	Director (Cluster Services) Hospital Authority
	Dr Nancy TUNG	Cluster Chief Executive Kowloon West Cluster
	Dr T W LEE	Hospital Chief Executive Pok Oi Hospital
	Dr Susanna LO	Hospital Chief Executive Shatin Hospital & Bradbury Hospice
	Dr K T TOM	Hospital Chief Executive Tseung Kwan O Hospital
	Ms CHAN Yuet-kwai	Cluster General Manager (Nursing) Kowloon East Cluster
	Ms Eva LIU	Cluster General Manager (Nursing) Kowloon Central Cluster
	Central Committees for Clinical & Professional Services Co-Chairs / Representatives:	
	Dr C B CHOW	Hon. Consultant (Paediatrics and Adolescent Medicine) Caritas Medical Centre and Princess Margaret Hospital

Membership
Cluster Administration and Specialty Advisory Committee on Doctor Work Hour, Hospital Authority

---

	Dr C H CHUNG	Chief of Service (Accident & Emergency) North District Hospital
	Dr Dawson FONG	Chief of Service (Neurosurgery) New Territories West Cluster
	Dr H S LAM	Cluster Chief of Service (Radiology) Kowloon West Cluster
	Dr S K LI	Chief of Service (Medicine) Pamela Youde Nethersole Eastern Hospital
	Dr Joseph LUI	Consultant (Anaesthesia) Princess Margaret Hospital
	Dr Francis MOK	Chief of Service (Surgery) Caritas Medical Centre
	Dr H K WONG	Cluster Chief of Service (Obstetrics & Gynaecology) Kowloon Central Cluster
	Dr S H YEUNG	Consultant (Orthopaedics & Traumatology) Pamela Youde Nethersole Eastern Hospital
Secretary:	Mr Linus FU	Manager (Doctor Work Reform) Hospital Authority

Membership
Doctors Staff Group Consultative Committee
Hospital Authority

Chairman:	Mr Shane SOLOMON	Chief Executive Hospital Authority
	Dr LAU Ka-hin	Associate Consultant (Psychiatry) Queen Mary Hospital
HA Representative:	Dr W L CHEUNG, JP	Director (Cluster Services) Hospital Authority
Members:	**Hong Kong Public Doctors' Association**	
	Dr CHAN Chi-wing, Timmy	Associate Consultant (Anaesthesiology) Queen Mary Hospital
	Dr TAM Kin-ming	Senior Medical Officer (Medicine) Yan Chai Hospital
	Public Consultant Doctor's Group	
	Dr Vincent YEUNG	Chief of Service (Medicine & Geriatrics) Our Lady of Maryknoll Hospital
	Directly Elected Representatives	
	Dr AU YEUNG Kwok-leung	Medical Officer (Team B1) Castle Peak Hospital
	Dr CHAN Tin-sang, Augustine	Associate Consultant (Radiology) Pamela Youde Nethersole Eastern Hospital
	Dr CHAN Wai-lam	Associate Consultant (Orthopaedics & Traumatology) Kwong Wah Hospital

Membership
Doctors Staff Group Consultative Committee
Hospital Authority

	Dr CHOO Kah-lin	Senior Medical Officer (Medicine) North District Hospital
	Dr HO Hung-Kwan, Michael	Medical Officer (GOPC) Queen Elizabeth Hospital
	Dr HO Sheng-sheng	Senior Medical Officer (Medicine) Alice Ho Miu Ling Nethersole Hospital
	Dr IU Ying-fung, Felix	Resident (Obstetrics & Gynaecology) Tuen Mun Hospital
	Dr LO Chi-fung, Ernie	Resident (Eye) Tseung Kwan O Hospital
	Dr NG Yin-ming	Consultant (Paediatrics) Queen Elizabeth Hospital
	Dr TSE Yiu-cheong	Resident (Oncology) Princess Margaret Hospital
	Dr WONG Cheung	Resident (Accident & Emergency) United Christian Hospital
	Dr WONG Mong-sze, Marcus	Associate Consultant (GOPC) Violet Peel GOPC, Pamela Youde Nethersole Eastern Hospital
Secretary:	Mrs Jessie SZE	Manager (Staff Consultation) Hospital Authority

Membership
Emergency Operating Theatre Task Group
Hospital Authority

Convenor:	Dr Anne KWAN	Chief of Service (Anaesthesiology and Pain Medicine) United Christian Hospital
Members:	Dr P P CHEN	Chief of Service (Anaesthesia) Alice Ho Miu Ling Nethersole Hospital and North District Hospital
	Dr C K KONG	Consultant (Surgery) Yan Chai Hospital
	Dr P Y LAU	Chief of Service (Orthopaedics & Traumatology) United Christian Hospital
	Dr H T LEONG	Chief of Service (Surgery) Alice Ho Miu Ling Nethersole Hospital and North District Hospital
	Dr Joseph LUI	Consultant (Anaesthesia) Princess Margaret Hospital
Secretary:	Ms Elissa TAM	Executive Assistant (Doctor Work Reform) Hospital Authority

Membership
Emergency Medicine Ward Task Group
Hospital Authority

Convenor:	Dr C C LAU	Clinical Service Coordinator (Accident & Emergency) Hong Kong East Cluster
Members:	Dr Jimmy CHAN	Cluster Service Coordinator (Accident & Emergency) New Territories East Cluster
	Dr N K CHEUNG	Consultant (Accident & Emergency) Prince of Wales Hospital
	Dr H T FUNG	Consultant (Accident & Emergency) Tuen Mun Hospital
	Dr H F HO	Cluster Chief of Service (Accident & Emergency) Kowloon Central Cluster
	Dr S K LI	Cluster Service Coordinator (Medicine) Hong Kong East Cluster
	Dr Albert LIT	Chief of Service (Accident & Emergency) Princess Margaret Hospital and Yan Chai Hospital
	Dr F NG	Chief of Service (Accident & Emergency) Caritas Medical Centre
	Dr K L ONG	Consultant (Accident & Emergency) Pok Oi Hospital and Tuen Mun Hospital
	Prof T H RAINER	Hon Chief of Service (Accident & Emergency) Prince of Wales Hospital
Secretary:	Ms Elissa TAM	Executive Assistant (Doctor Work Reform) Hospital Authority

Membership
Technical Services Assistant (Clinical Assistant) Task Group
Hospital Authority

Convenor:	Dr K H CHAN	Associate Consultant (Medicine) Yan Chai Hospital
Members:	Ms K L CHIU	Department Operations Manager (Specialist Out-patient Clinic) Alice Ho Miu Ling Nethersole Hospital
	Mr Alex LEUNG	Senior Manager (Staffing and Non-clinical Grade Management) Hospital Authority
	Ms S H LI	Senior Nursing Officer (Central Nursing Division) Yan Chai Hospital
	Ms May WONG	Department Operations Manager (Specialist Out-patient Clinic) Princess Margaret Hospital
	Ms S H YEUNG	Department Operations Manager (Medicine) Pamela Youde Nethersole Eastern Hospital
	Ms Rhoda CHAN	Ward Manager (Orthopaedics & Traumatology) Caritas Medical Centre
	Ms May Nar TAM	Advanced Practice Nurse (Nursing Services Division) United Christian Hospital
Secretary:	Ms Elissa TAM	Executive Assistant (Doctor Work Reform) Hospital Authority

Key Milestones of Doctor Work Reform
Hospital Authority

Date	Events
2006	
3rd quarter	HA-wide survey on doctors' work hours and doctors' on-call structure
4th quarter	• Set-up of Steering Committee on Doctor Work Hour (04.10.2006) • Set-up of 2 Advisory Committees (04.10.2006): – Cluster Administration and Specialty Advisory Committee on Doctor Work Hour – Doctors Staff Group Consultative Committee • Progress update in: – Cluster Administration and Specialty Advisory Committee (1st – 2nd time) – Doctors Staff Group Consultative Committee (1st – 2nd time) • 1st Meeting of Steering Committee on Doctor Work Hour (13.10.2006) • 2nd Meeting of Steering Committee on Doctor Work Hour (06.12.2006) • 1st round of hospital road show for all clusters
Dec 06 – May 07	1st round of road show to Specialty Coordinating Committee (COC, 16 Specialties)
2007	
1st quarter	• 1st briefing in Hong Kong Academy of Medicine (Education & Exams Committee) • UK visits to 2 champion hospitals (1 Teaching and 1 DGH), deaneries and Royal Colleges (29.01.2007–02.02.2007) • Doctors' on-call activities survey in 3 HA hospitals • Doctor Work Reform Strategic Planning Workshop (23.03.2007) • Progress update in: – Doctors Staff Group Consultative Committee (3rd time) – Nursing Forums (Management and staff representatives) – 3rd Meeting of Steering Committee on Doctor Work Hour (23.03.2007) • 2nd round of hospital road show for all clusters

Date	Events
2nd quarter	• 1st meeting of Task Force on Doctors' Work Hours • 1st meeting of Hong Kong Academy of Medicine • 2nd–4th briefing in Hong Kong Academy of Medicine (Education & Exams Committee) • Consultation with all HA doctors and Hong Kong Academy of Medicine on Doctor • Progress update in: – Doctors Staff Group Consultative Committee (4th time) – Nursing Forums (Management and staff representatives) • 4th Meeting of Steering Committee on Doctor Work Hour (29.06.2007)
May – Oct 07	2nd round of road show to Specialty Coordinating Committee (COC, 16 Specialties)
3rd quarter	• Progress update in: – Cluster Administration and Specialty Advisory Committee (3rd time) – Doctors Staff Group Consultative Committee (5th time) • Consultation with 2 advisory committees, all cluster/ hospital chiefs and HAHO senior executives of HAHO on Doctor Work Reform (03.09.2007 –23.09.2007)
4th quarter	• Progress update in: – Doctors Staff Group Consultative Committee (6th time) – Nursing Forums (Management and staff representatives) – Medical Services Development Committee (1st time) – Task Force on Doctors' Work Hours (2nd time) – Progress update in Regional Advisory Committee (Hong Kong, Kowloon and New Territories) – 5th Meeting of Steering Committee on Doctor Work Hour (22.10.2007) • Consultation on Doctor Work Reform Recommendation Report with 2 advisory committee members, HKAM, cluster / hospital chiefs and HAHO senior executives • Submission of Doctor Work Reform Recommendation Report to Administrative and Operational Meeting, Hospital Authority (29.11.2007) • 3rd round of hospital road show for all clusters
Oct 07–Apr 08	3rd round of Specialty Coordinating Communication (COC) (16 Specialties)

Date	Events
2008	
1st quarter	• Progress update in: – Cluster Administration and Specialty Advisory Committee (4th time) – Doctors Staff Group Consultative Committee (7th time) – Nursing Forums (Management and staff representatives) – Alliance for Patients' Mutual Help Organizations (1st–2nd time) – Hong Kong Academy of Medicine (2nd time) – 6th Meeting of Steering Committee on Doctor Work Hour (23.01.2008) – Panel on Health Services Meeting, Legislative Council (10.03.2008) • HA's delegate visit to UK hospitals in London and Liverpool on Hospital at Night • Overseas expert visit to HA (Dr Patrick CHU) – Sharing forum on pilot reform programmes and discussion forums in pilot clusters (25.02.2008–27.02.2008)
2nd quarter	• Special Plenary Session on Impact of Work Reform, Hospital Authority Convention 2008 (05.05.2008 – 06.05.2008) • Nursing seminar on enhanced nursing roles by UK experts (Dr Patrick CHU & Mr Gerry Bolger) (07.05.2008) • Progress update in: – Patient groups – Nursing Forums (Management and staff representatives) – Hong Kong Academy of Medicine (3rd time) – 7th Meeting of Steering Committee on Doctor Work Hour (19.06.2008) • Introduction of common ward language in Quality Forums of Kowloon West Cluster (27.05.2008 – 20.06.2008)
Apr – Sep 08	4th round of road show to Specialty Coordinating Committees (16 specialties)
3rd quarter	• Progress update in: – Cluster Administration and Specialty Advisory Committee (5th time) – Doctors Staff Group Consultative Committee (8th time) – Nursing Forums (Management and staff representatives) – Hong Kong Academy of Medicine (4th time) • 4th round of hospital road show for all clusters
4th quarter	• Progress update in: – Doctors Staff Group Consultative Committee (9th time) – Nursing Forums (Management and staff representatives) – 8th Meeting of Steering Committee on Doctor Work Hour (17.11.2008) • Issuance of "Guideline on Doctor Work Hour Monitoring" to all Cluster Chief Executives, Hospital Authority (10.12.2008)
Oct 08 – Apr 09	5th round of road show to Specialty Coordinating Committees (16 specialties)

Date	Events
2009	
1st quarter	• Progress update in: – Doctors Staff Group Consultative Committee (10th time) – Nursing Forums (Management and staff representatives) – Medical Services Development Committee (2nd times) – Task Force on Doctors' Work Hours (3rd time) – Progress update in Regional Advisory Committees (Hong Kong, Kowloon, New Territories) • Consultation on draft Interim Pilot Review Report on Doctor Work Reform with 2 advisory committee members, HKAM, Hospital Chiefs and HAHO senior executives • Submission of Interim Pilot Review Report on Doctor Work Reform to HA Administrative and Operational Meeting (26.02.2009) • 5th round of hospital road show for all clusters
2nd quarter	• Progress update in: – Patient Groups – Nursing Forums (Management and staff representatives) – Panel on Health Services Meeting, Legislative council (11.05.2009) • Sharing Session, Hospital Authority Convention 2009 (05.05.2009)
May – Oct 09	6th round of road show to Specialty Coordinating Committees (16 specialties)
3rd quarter	• Progress update in: – 9th Meeting of Steering Committee on Doctor Work Hour (15.10.2009)
4th quarter	• Progress update in: – Doctors Staff Group Consultative Committee (11th time) • Consultation on draft Final Report on Doctor Work Reform with 2 advisory committee members, HKAM, cluster / hospital chiefs and HAHO senior executives
2010	
1st quarter	Submission of Final Report on Doctor Work Reform to Administrative and Operational Meeting, Hospital Authority (25.2.2010)

Summary of Doctor Work Hour Monitoring Surveys
Hospital Authority

I. Methodology

DWH Survey (September 2006)

- Basis : Self-reporting by doctors
- Sample Size : 536 doctors (weekly work hours) and 747 doctors (continuous work hours)
- Features : Retrospective self-reporting

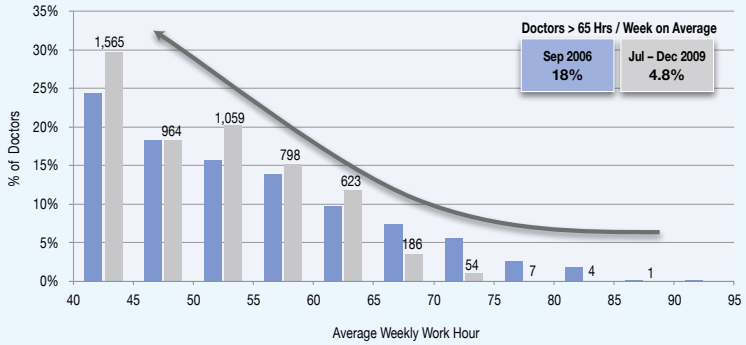
DWH Monitoring (July – December 2009)

- Basis :
  - HA-wide consultation and Steering Committee's recommended work hour formula
  - Doctor Work Hour Calculator developed for all clinical departments
- Sample Size : 5,261 doctors of 222 clinical departments in all HA hospitals
- Features :
  - Prospective counting based on clinical departments' monthly call roster
  - Broad-brush approach
  - Flexibility allowed for new duty pattern
  - Recognition of off-site call duty, travel time for called-back and endorsed unrostered work due to clinical emergency

II. Key Results

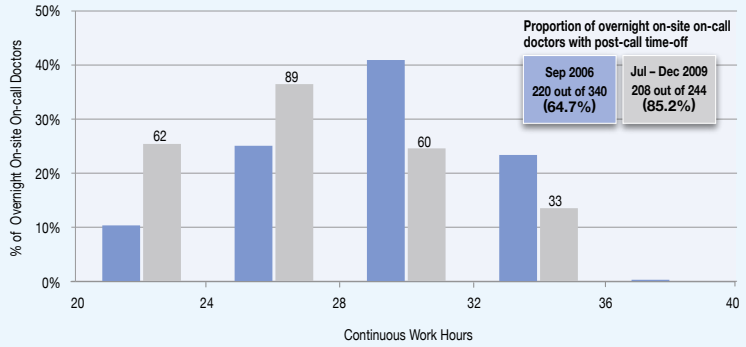
	September 2006	July – December 2009
Doctors working for > 65 hrs / wk on average	18%	4.8%
Overnight on-site on-call doctors with post-call time-off	65%	85.2% (Holiday) 82.4% (Weekday)

Doctors' Average Weekly Work Hour (Sep 2006 Vs Jul – Dec 2009)



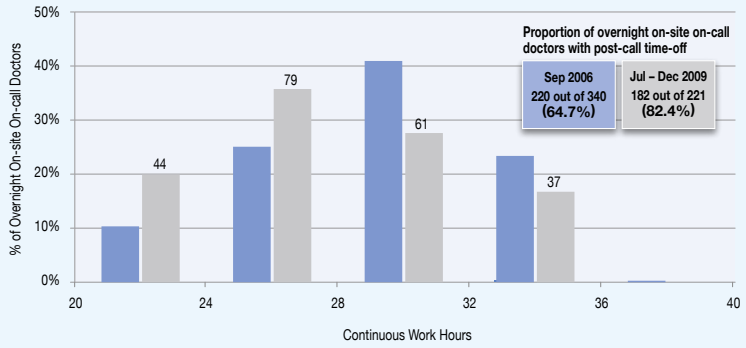
Methodology: Sep 2006 – self-reporting, Jul – Dec 2009 – duty roster based + self-reporting of called-back duties

Continuous Work Hours of Overnight On-site On-call Doctors (Holiday)



Methodology: Sep 2006 – self-reporting, Jul – Dec 2009 - duty roster based + self-reporting of called-back duties

Continuous Work Hours of Overnight On-site On-call Doctors (Weekday)



Methodology: Sep 2006 – self-reporting, Jul – Dec 2009 - duty roster based + self-reporting of called-back duties

1. Average Weekly Work Hours (T) > 65

Specialty	September 2006		July – December 2009				
	Mean T	All T > 65	Mean T	All T > 65	CON T > 65	SMO/AC T > 65	MO/RES T > 65
HA Overall	**55.0**	**900 (Around 18%)**	**51.9**	**4.8% (252/5,261)**	**0.2% (1/583)**	**0.7% (9/1,229)**	**7.0% (242/3,449)**
Neurosurgery	71.4	73%	57.9	12.5% (12/96)	0%	12% (3/25)	15.3% (9/59)
Surgery	63.5	45%	58.4	18.6% (90/483)	0%	1.8% (2/113)	28.8% (88/306)
Obstetrics & Gynaecology	63.9	40%	59.8	17.9% (39/218)	2.8% (1/36)	7.8% (4/51)	26.0% (34/131)
Paediatrics	60.9	40%	56.3	7.0% (23/329)	0%	0%	11.0% (23/209)
Orthopaedics & Traumatology	60.1	29%	57.9	(15.6%) (51/327)	0%	0%	23.7% (51/215)
Oncology	59.7	26%	52.9	0%	0%	0%	0%
Cardiothoracic Surgery	58.3	22%	54.6	5.6% (2/36)	0%	0%	10.0% (2/20)
Internal Medicine	58.0	21%	53.4	1.5% (19/1,241)	0%	0%	2.2% (19/883)
Ear, Nose, Throat	50.7	16%	50.8	4.9% (4/82)	0%	0%	7.7% (4/52)
Ophthalmology	52.8	13%	50.5	6.7% (10/149)	0%	0%	10.2% (10/98)
Psychiatry	53.2	12%	47.6	0%	0%	0%	0%
Intensive Care Unit	53.2	4%	53.3	1.5% (2/131)	0%	0%	2.4% (2/84)
Anaesthesiology	52.2	0%	51.1	0%	0%	0%	0%
Radiology	46.8	0%	47.2	0%	0%	0%	0%
Accident & Emergency	46.3	0%	43.7	0%	0%	0%	0%
Pathology	46.2	0%	46.9	0%	0%	0%	0%
Family Medicine	45.2	0%	44.4	0%	0%	0%	0%
Community Medicine	–	–	47.5	0%	–	0%	0%

* *Methodology: 2006 – retrospective self-reporting*
2009 – prospective & duty-roster based + self-reporting of called-back duties

2. Continuous Work Hours

Proportion of Overnight On-site On-call Doctors with Immediate Post-call Time-off

Specialty	September 2006	July – December 2009 (Holiday)	July – December 2009 (Weekday)
HA Overall	**64.7%**	**85.2% (208/244)**	**82.4% (182/221)**
Cardiothoracic Surgery	0%	33.3% (1/3)	33.3% (1/3)
Ophthalmology	0%	80% (4/5)	80% (4/5)
Radiology	0%	50% (1/2)	100% (2/2)
Surgery	29%	67.7% (21/31)	56.3% (18/32)
Psychiatry	42%	63.6% (7/11)	66.7% (6/9)
Orthopaedics & Traumatology	45%	70.8% (17/24)	76.9% (20/26)
Ear, Nose, Throat	50%	66.7% (2/3)	50% (1/2)
Obstetrics & Gynaecology	67%	81.5% (22/27)	78.6% (22/28)
Internal Medicine	76%	97.6% (41/42)	95.7% (45/47)
Paediatrics	80%	94.3% (33/35)	94.1% (32/34)
Oncology	83%	100% (5/5)	100% (4/4)
Neurosurgery	86%	71.4% (5/7)	71.4% (5/7)
Anaesthesiology	88%	100% (28 / 28)	100% (3 / 3)
Accident & Emergency	100%	100% (1 / 1)	100% (1 / 1)
Family Medicine	100%	100% (4 / 4)	100% (4 / 4)
Intensive Care Unit	100%	100% (16 / 16)	100% (14 / 14)
Community Medicine	–	0%	0%

** Methodology: 2006 – retrospective self-reporting; 2009 – prospective & duty-roster based*

Consolidated Feedback on Doctor Work Reform
Hospital Authority (2007/08 – 2009/10)

Doctors' Work Hours

A. Weekly Work Hours

- Some doctors are concerned that unless extra resources are given, long working hour will remain persistent; some believe that in order to develop a successful programme, more detailed reporting and calculation instructions are needed to replace the ambiguous mechanism such that the submitted data only reflect actual working hours. Some suggest that there should be a full count of travel time and structured training, but partial count of off-site hours and non-structured training. Whereas self-arranged overseas conferences and study courses should not be counted.
- There have been arguments that the reform model is tremendous but may be too modest and lack long-term targets, while capping average weekly work hours (AWWH) at 65 is too much, unfair, destructive to doctors' life and family, and unethical. The lack of written protocols, in addition to conflicts between Steering Committee's beliefs and the corporate policies in the Human Resources Policies Manual also cast uncertainty over the execution.
- The reform, according to some doctors, is only applicable to some hospitals, and should never make doctors working < 65 hours / week worse off.

B. Continuous Work Hours

- The current on-call system, 28 CWH plus a short 4-hour break, dehumanises, robs enthusiasm at work, affects service quality and may result in callosity in patient treatment; a longer sleep time is welcomed.
- Some prefer capping continuous work at in-patient setting (e.g. 12–16 hours) and specialist outpatient setting (e.g. 8 hours), while some believe that the time-honoured on-call system should be maintained and kept at 24 continuous work hours.

Managing Workload at Macro Level

C. Reducing Avoidable Admissions

- Some criticise HA management's unfamiliarity with front line operations for overlooking the importance of GOPC, who can be the first gatekeepers; however, some are skeptical of the gatekeeper role of Accident & Emergency Department (A&E) in reducing avoidable admissions.
- Some have suggested a few ideas for improvement, such as setting up short stay trolleys and beds, as well as units like VTE, to allow better initial diagnosis and to relieve pressure off A&E cubicles. In a similar token, setting up specialist geriatric assessment units run by senior, specialist geriatricians supported by good community care can often avoid admissions altogether.
- Assigning a single Telephone Nursing Consultation Service centre to concentrate experience and expertise in operating telephone consultations for all patients may help reduce avoidable admissions, but more scientific evidences supporting the theory are required.

D. Emergency Medicine / Admission Wards

- In general, frontline doctors are concerned about the outcomes of diverting emergency cases to a certain hospitals and the impact on their work, because only a few selected patient groups may benefit. Cautious monitoring and further pilot work are needed to analyze EMW progress. Some even suggest that establishing night admission wards is a more effective solution.
- Given the shortage of doctor / nursing manpower to run EMW, there is anticipated resistance from staff against further manpower savings. Frontline staff of admission wards may have difficulty in caring for patients of other specialties.

E. Enhancing Public-private Interface

- Staff generally agrees to public-private interface, but believes a more flexible employment scheme towards private practitioners and a greater facilitation of patient referral service to the private sector, such as the Electronic Patient Record System, are needed for greater continuity of care. Similarly, hiring early-retired senior specialists (until they are 65) is also plausible.
- Some are less optimistic about the effectiveness of bringing in private practitioners because of their already heavy workload. Moreover, HA's compensation scheme is not generous enough. HA should instead take in more FM trainees and provide better incentive for them to stay.

<u>Optimising Night Activities in All Hospitals</u>

F. Extended Day Model

- Results in extended day service are positive, but additional resources to hire locums for evening and weekend services are still needed.
- Manpower shortage puts more pressure on middle-ranking clinicians, and makes it even more difficult to handle extended day duties. Some suggest capping day-time activities and strengthening non-medical staff's support.

G. Restricting Emergency Operating Theatre (EOT) Sessions after 22:00 Hours

- The re-engineering of EOT may indirectly shift workload to tertiary acute hospitals, when operations such as acute trauma and obstetric services at these hospitals are unavoidable and mostly accounted for OT sessions at night; more resources are hence needed.
- HA should expand the restricted list of emergency operations at night to include open wounds management and operation on threatened neurological functions of limbs. And since EOT can also reduce cost and length of stay by cutting complication, re-admission and infection rates, it should be further extended to other hospitals for evaluation for workload redistribution effects.
- Some are worried that restricting EOT sessions may lengthen patient waiting time, hence putting patients lives at risk.

H. Extended Roles of Non-medical Staff

- Generally, doctors do agree that additional CTS staff running on 24 hours can free doctors up from doing tedious tasks at night time; some also believe that enhanced pharmacy support for A&E, and extra manpower to community and/ or rehabilitation hospitals will be helpful, but these non-medical staff may not be well-equipped to take up more responsibilities.
- Given the current fragmented nursing skills, some doctors agree that it would be very helpful for nurses to have clinical skill enhancement, but their enhanced roles should never replace a doctor's position.
- Some remain skeptical of CTS' level of contribution, and believe that shorter on-call time should be adopted to relieve the work of frontline doctors. Some argue that CTS's extended role would deprive doctors' training opportunities.

I. Reinforcing Support System and Efficiency

- System protocols must be meticulous but kept flexible in patient management; some agree to protocol-driven 24-hr computer tomography (CT) and magnetic resonance imaging (MRI) service so long as they are supervised by clinicians.
- Some sub-specialty services are technology dependent and need enhancing disease coding system as well as patient and blood identification.

<u>Change in Existing Doctors' Work Pattern</u>

J. Core-competency Call Team

- Elective rotation opportunities are sometimes insufficient and unfair.
- While some smaller hospitals may have difficulty adopting the new concept and should merge with other call teams to ensure unnecessary complication when transferring patients, the modified on-call system also raises concerns over the level of expertise, experience, extra workload and accountability; senior physicians are suggested to provide back-up support.
- Some believe that call team is more appropriate for surgical staff than for medical and should avoid including specialists, unless necessary.

K. Shift System Replacing On-call Duties

- In general, shift system raises concerns over the continuity of care, deterioration of patient conditions, manpower implication and impact on doctors' professional training exposure.
- Some believe that calls on holidays can be demoralising and argue that shift duty is more feasible. However, some residing in remote islands prefer longer work hours. Another suggestion is to make use of SHS to create flexibility in on-call duties.
- Other suggestions:
  - Fewer calls but longer continuous work hours with short breaks in between and a full-day rest after a long working day (e.g. 24 hours).
  - A structured and consistent call pattern (e.g. 6 night shifts in 4 weeks, subject to 65 hours per week and 24 hours of continuous shift) in same specialties across hospitals that is backed by regular rotations.

L. Handover System

- HA must tackle the inadequacy in the current system and develop a standardised toolkit and procedure for more effective handovers. Although a handover system is more applicable to hyper-acute and emergency situations, surgeons' tight schedule will make a good system useless.

Training

M. Training

- Many physicians would like to receive protected training time while some believe there's a need to reinforce clinical supervision of enhanced training. However, the proposed shift system and prolong core competency training have also raised some concerns in providing trainees hands-on experience.
- HA should continue to evaluate nursing leadership training and create a more economical and efficient solution to send nurses for overseas training.

Targeted Deployment of Resources

N. Targeted Deployment of Resources

- Deployment of resources will affect the manpower of a certain pressurised areas, and it should not compromise the training and first hand experience of trainees. HA should look beyond hours of work, collaborate with Academy of Medicine, better define pressurised areas and combine surgical trainees in different specialties to help relieve frontline doctors' workload. Appropriate protocols and guidelines must also be included.
- A few issues – the small amount of budget planned for deployment of resources, financial recognition in lieu of work more than 44 hours, effect of new employment of doctors – need to be addressed in later stages.
- The small increase in number of doctors coupled with an uneven distribution of interns is braved by increases in workload, expectation and turnover rate.

Revamped Honorarium System

O. Remuneration

- Doctors' main concern is fairness: some support more pay for more work, and argue that an across-the-board honorarium system is unfair and open to abuse while their counterparts believe the former policy will polarise payrolls, and have voted for a department-unified compensation scheme.
- FM trainees believe HA should impose a mixed system for promotion to allow more transparency in the selection process.
- A few who commented on the low remuneration rate said honorarium should be equitable to sound attractive to doctors; some wish that excessive long working hours and work at unsocial hours can be addressed more justifiably.

Others

P. Workload Issues

- HA should look into operational needs, work intensity and quality expectation of different specialties, clinical admission and call-patterns.

Q. Monitoring Mechanisms

- Instead of monitoring work hour in compliance with sophisticated formulas, HA should look at patient safety / condition, training opportunity, resident fatigue and team morale. These are all intertwined with doctors' workload.

R. Reform Model and Measures

- Many doctors agree with the reform's initiatives but question about long-run feasibility and improvement targets; they argue that the reform lack a concrete game plan and assertive measures.
- HA should consider enhancing the flexibility of the reform due to the lack of a controlled model, some programmes may not be as effective as previously had predicted. Programme like common ward language is proven unpopular among medical staff. Moreover, some have pointed out that percentage should be used in statistics to allow readers to understand the improvements.

S. Staff Morale Issues

- Some doctors believe cultural change is important among seniors; their occasional on-call duties can help establish leadership and trust between management and frontline staff.
- Low morale of lower / middle tier doctors has been persistent and is partly due to the lack of promotional prospect as well as unequal pay scale. Better employment and remuneration packages should be imposed, while more promotional opportunities should be created based heavily on clinical competency.

Summary of Consultation Feedback on Draft Final Report on Doctor Work Reform (23 Nov – 19 Dec 2009)

From:	Prof Raymond LIANG President of the Hong Kong Academy of Medicine	#1

Thank you for your letter inviting the Academy to comment on the Final Report on DWR.

The Academy understands that the decrease in doctors work hour, being a world trend, is difficult to resist. As mentioned in our responses to you in 2007, limiting the weekly working hours to 65 hours should not have any major impact on training for the time being. The Academy has tried but found it difficult to have quantitative measurement on the impact of DWR on training, given that there are various limitations and confounding factors. However, the Academy accepts in principle that there are long-term impacts of DWR, especially if further reduction of working hours beyond 65 hours per week is required.

To move forward, the Academy would focus far more attention on training than in the past, and take a more comprehensive approach to enhance the quality of postgraduate medical education. The long-term strategy for the Academy with regards to the issue of DWR is to modernise postgraduate medical education and closely monitor the process such that the quality of training would not be affected. While the Academy would try to enlist long-term commitment from Colleges to ensure that quality of training will not be affected by the work hour limitation, we would need support from HA.

Following a workshop conducted in June, a position paper has been drafted, which is being discussed by Education Committee and Colleges of the Academy. The paper serves to highlight the proposed key reforms to postgraduate medical education that are required to modernise the Fellowship training system such that the Academy will produce Fellows meeting the needs of the society in a sustainable manner, under limited time and resources available. In the paper, there is a recommendation that “Colleges should be encouraged to build more skill/simulation laboratories and develop simulator based training. Doctors-in-training should have adequate exposure to simulators. In the longer term, some parts of simulator training should be mandatory and be made widely available so that it can precede practicing on the patient. Simulators should be developed for assessment purposes.”

Simulations would play a more important role in future training, as it provides safe and effective opportunities for learners at all levels to acquire practical skills that are required for quality and safe patient care. We have not yet come up with details about using simulators for training, but expect that it would require resources/support from, and collaboration with, HA.

The Academy will keep HA informed of the development.

From:	Doctors Staff Group Consultative Committee, Hospital Authority (Extract of Minutes of 61st DSGCC Meeting held on 14 Dec 2009)	#2

1. SM(DWR) informed members that the Steering Committee on Doctor Work Hour had compiled the draft Final Report on Doctor Work Reform, a copy of which was sent to members for comments. The draft report was under consultation with major stakeholders until 19.12.09. The draft report would then be submitted to the HA Board in 1Q10.

2. SM(DWR) gave a presentation covering the comparison of the Steering Committee's recommendations between the interim pilot review report and the draft final report; the pilot work reform programmes and outcomes; the issues of concerns and the Steering Committee's proposed recommendations for rollout of the reform strategies in other public hospitals.

3. Responding to a member's enquiries on the mixed outcomes on admission reduction of Emergency Medicine (EM) wards among the 3 pilot hospitals, SM(DWR) explained that CMC was a secondary acute hospital with admission of relatively less critical patients. Hence, admission reduction was more obvious. In PMH and PYNEH, admission reduction was less obvious because PMH was situated at the hilltop and it admitted many categories 1 and 2 patients via ambulances. As for PYNEH, the Observation wards were already in operation before the pilot scheme. Extra beds were added and the wards were renamed for running of the pilot scheme.

4. A member said the doctor work reform had commenced for 2 years but frontline doctors could not feel any reduction in work hours or improvement in working conditions. There were also allegations that data on work hours of doctors could be manipulated by COS and administrative staff. He suggested conducting a survey among doctors on whether they felt any improvement since the doctor work reform. A member commented that the number of work hours could be misleading and the on-call rosters were still poorly arranged. A member suggested that the survey should include all doctors covering all aspects affecting their morale.

5. CE said in light of the skepticism expressed on the number of work hours reported, the Doctor Work Reform team would consider the best way to obtain direct feedback from frontline doctors supposedly to have been benefited.

6. A member suggested HA to include blood culture and cross matching in the scope of round-the-clock Care Technicians' service with a view to reducing the workload of junior doctors. SM(DWR) responded that the 3 pilot hospitals had already piloted Care Technicians to do blood culture with positive preliminary results. For cross matching, further consideration and discussion among doctors and nurses would be needed on this mode of operation. There were also some issues and concerns on responsibility and liability. D(CS) said the suggestion could be further explored in the relevant Work Group under HR.

   [Post-meeting note from HRM(T&D): The next central workgroup meeting of Corporate TSA(Clinical Assistant) Training will be held on 4 February 2010.]

From: A Hospital Chief Executive #3

I write to convey my comments to the captioned draft.
I appreciate the background, share the development direction, support the strategies and pilot programmes, and understand the implementation difficulties detailed in the document.

Rollout of Reform Programmes
Para 023

Training versus service for medical doctors

A. Deployment of Doctors to Pressurised Areas

a) Hospitals
With regard to deploying additional doctors to the pressurised specialties, I would like to highlight the existing unsatisfactory situation. HA, as an organization, is responsible for service provision (employing medical doctors) as well as facilitation of post-graduate clinical specialist training. Many a time, these two objectives do not complement each other.

For example, during night time, although medically trained residents (under the Dept of Medicine) could manage patient problems under the care of other surgical Departments, surgically trained residents under the Orthopaedic & Traumatology Department might not be “able” to look after patients with medical problems (under the care of other non-surgical Departments within the same Hospital).

Medical Officers (service) / Basic trainees (training) should be generic for the first three years of their basic specialist training. However, their respective specialty Colleges might not agree to this proposal.

Work over-lap between GOPC and SOPC

b) GOPC
GOPCs have to serve different purposes at different times. During “peace” time, GOPC colleagues are looking after patients with chronic illnesses. Some of these could have been seen by private doctors. Some of these might have also been followed up by Specialist OPD at the same time.

During “war” time, the limited workforce had to be deployed for other purposes (eg melamine-tainted milk, swine flu).

Family Medicine Physician training is geared towards quality patient care which needs more time. The training is conducted in GOPCs which are set up to meet service demand. Another example of conflict between service and training.

From: A Hospital Chief Executive (Continued)	#3

Enhancement of ambulatory care

c) Many clinical problems do not have to be sorted out in the Hospital. Likewise, many old cases of SOPC do not have to be followed up [that frequently / and be seen by doctors each time / at all].

Para 024

B. Re-engineering of Emergency Operating Theatre ("EOT") Services

Semi-emergency or elective operations can be scheduled in other Cluster Hospitals without Accident & Emergency Department.

Para 025

C. Establishment of Emergency Medicine Wards ("EMWs")

Worthwhile and effective practices by EMWs should be benchmarked and promulgated across HA Hospitals.

Audit and monitoring should be carried out to align variations in EMWs practices (e.g. patients could have just been managed in the EMWs during night time and be admitted to the Hospital admission wards the following day after the cut off hour when total number of patient admissions for the preceding day would be captured)

Para 027

Role of nurses should be better delineated instead of being proliferated in all directions. (eg Nurse consultants vs nurse educators vs nurse specialists)

The Way Forward

Para 030

a) If HA continues to keep pace with forever increasing public demand, existing unstable workforce might not be sustainable. One fine day, the organization had to define certain limits to its scope and depth of services.

b) Some work done by medical doctors could be shared out by other healthcare professionals.

c) Community health care centres, able to mobilise resources from affiliated Hospitals, can divert patient flux away from hospitals. (eg ambulatory care centres)

d) Avoid overlap of work done by GOPC and SOPC

Comparison of Steering Committee's Recommendations in Interim Pilot Review Report (2008/09) and Final Report on Doctor Work Reform (2009/10), Hospital Authority

Recommendations in Interim Pilot Review Report (2008/09)	Recommendations in Final Report (2009/10)
I. Deployment of Doctors to Pressurised Areas	
1. HA to consider reviewing the effectiveness of deploying additional doctors in reducing doctor work hour at different pilot reform sites and pressurised clinical specialties. [Para 420 a]	1. Recommendation kept. Besides, HA was recommended to plan its workforce with reference to the competing service demands, supply of medical graduates, trainee admissions in different specialty colleges, manpower wastage, doctors' working conditions and service sustainability for the entire organization. [Para 217 a]
2. HA to consider continually exploring further means of collaboration with the private sector, like employment of part-time private practitioners through the Flexible Employment Strategy to help out the General Outpatient Departments, dovetailing with redeployment of newly employed doctors to pressurised clinical specialties via the established resource allocation mechanisms. [Para 420 b]	2. Recommendation kept. However, HA was also recommended to develop Family Medicine Specialist Clinics instead of employing private practitioners to help out General Outpatient Departments. [Para 217 b]
3. HA to consider continually reviewing its manpower level, work arrangements and call patterns. [Para 420 c]	3. Recommendation kept. Besides, HA was recommended to continue rationalising its hospital services, streamlining work procedures and fostering multi-disciplinary collaboration in care delivery. [Para 217 c]

Recommendations in Interim Pilot Review Report (2008/09)	Recommendations in Final Report (2009/10)
II. Re-engineering of Emergency Operating Theatre ("EOT") Services	
1. HA to consider re-engineering the EOT services in all acute hospitals with 24-hour emergency services. Different modes of operating theatre services could be introduced after 22:00 hrs to support the night emergency operations. Additional funding, if any, could first be allocated to acute secondary hospitals to expand their operating theatre capacity in the extended day. [Para 528 a]	1. Recommendation kept. [Para 319 a]
2. HA to consider addressing the issues of inadequate day-time operating theatre capacity. [Para 528 b]	2. Recommendation kept. [Para 319 b]
3. HA to consider reviewing the work practice and instilling a cultural change in the surgical stream specialties. [Para 528 c]	3. Recommendation kept. [Para 319 c]
4. HA to consider delineating the roles and service scopes of different hospitals, exploring further room for service re-arrangements, formulating acute trauma and neurosurgical diversion mechanisms and developing protocol-based escort medicine service in all hospital clusters. [Para 528 d]	4. Recommendation kept. [Para 319 d]
5. HA to consider continuing to collaborate with the Hong Kong Academy of Medicine and its Specialty Colleges in enhancing the core competency training of frontline doctors on emergency care. [Para 528 e]	5. Recommendation kept under doctors' training. [Para 638 g]

Recommendations in Interim Pilot Review Report (2008/09)	Recommendations in Final Report (2009/10)
6. HA to explore the feasibility of providing general resident call coverage for patients who were physiologically unstable in the surgical stream specialties with reference to the global trend and the practice in the private healthcare market. [Para 528 f]	6. Recommendation kept. [Para 319 e]
III. Establishment of Emergency Medicine Wards ("EMWs")	
1. HA to consider exploring different models of emergency care for acutely admitted patients and address various limiting factors, like availability of hospital beds, training for a competent workforce, system support and a gradual change for closer cross-specialty collaboration, which were vital to the success of the EMW initiative. [Para 635 a]	1. Recommendation kept. Besides, HA was recommended to (i) adopt appropriate modes of emergency care for acutely admitted patients in accordance with the local situations and the pre-existing set-ups of different Accident and Emergency Departments; and (ii) expand the scope of community care to further reduce avoidable admissions. [Para 422 a – c]
2. For those acute hospitals that had already set up an EMW, HA to consider continuing to refine the service model. [Para 635 b]	2. Recommendation kept. [Para 422 a]
3. In view of the evolving mode of EMW service and the lead time required for addressing the aforementioned limiting factors, HA to consider reviewing the pilot EMW initiative for a longer period and analyzing more performance and outcome data before determining the detailed rollout plan for EMW service. [Para 635 c]	3. Review completed.

Recommendations in Interim Pilot Review Report (2008/09)	Recommendations in Final Report (2009/10)
4. HA to consider enhancing the core competencies of doctors through structured training and staff rotations among hospital clusters and clinical specialties. [Para 634 d]	4. Recommendation kept under doctors' training. [Para 638 g]
IV. Introduction of Care Technician Service	
1. HA to consider extending round-the-clock care technician service to all acute hospitals. Regular review of care technicians' scope of service, coupled with periodic safety monitoring and competency-based refresher training, were also recommended. [Para 726]	1. Recommendation kept. [Para 513]
V. Enhancing Senior Nurse Coverage during Out-of-hours	
1. HA to consider piloting in phases and evaluating the effectiveness of enhancing the clinical, professional and leadership roles of experienced nurses in providing protocol-driven, competency-based and after-hour coverage across clinical specialties in selected acute hospitals. [Para 820 a]	1. Pilot completed. HA was recommended (i) to enhance the senior nurse coverage for clinical departments in all acute hospitals at night, (ii) to clear with relevant professional bodies on the core competency of healthcare workers in different disciplines and develop a framework to facilitate enhancing their scope of professional duties and (c) to extend the roles of other allied health professionals where appropriate to relieve the workload of doctors. [Para 638 a/b/e]
2. HA to consider continuing to organise commissioned clinical skills enhancement training for nurses in acute settings and develop the local training resource to improve the core competency of nurses in acute patient care. [Para 820 b]	2. Recommendation kept. HA was recommended to enhance the professional and core competency of all nurses in acute care coordination, patient assessment, responsiveness and emergency stabilization through development of clinical protocols and regular training. [Para 638 a]

Recommendations in Interim Pilot Review Report (2008/09)	Recommendations in Final Report (2009/10)
VI. Introducing Common Ward Language & Protocol-driven Patient Care	
1. HA to consider extending the common ward language to other public hospitals as appropriate and establishing a uniform approach in multi-disciplinary communication. [Para 905 a]	1. Recommendation kept. Besides, HA was recommended to set up a sound track-and-trigger system with regular compliance audits and user reviews to ensure that deteriorating and potentially critical patient conditions could receive timely specialist intervention. [Para 638 c]
2. HA to consider continuing to formulate, update and promulgate both intra- and inter-departmental clinical management protocols involving multi-disciplinary professionals. [Para 1004 a]	2. Recommendation kept. [Para 638 d]
VII. Piloting an Electronic Handover System	
1. HA to consider piloting and evaluating the effectiveness of the newly developed electronic handover system in order to facilitate structured and comprehensive handover between shifts for critically ill and unstable patients, ensure continuity and safety of patient care and enhance after-hour clinical supervision. [Para 1108 a]	1. Pilot completed. HA was recommended to integrate the electronic handover platform into the upcoming Clinical Management System (Version III) and extend its application to all clinical specialties and hospital clusters. A designated team should be identified to coordinate the system development and rollout arrangement after Doctor Work Reform came to a close in 2009/10. [Para 638 f]
VIII. Strengthening the Core Competency of Health Carers	
1. HA to consider continuing to encourage and facilitate doctors' training and set in different supportive measures and modes of training. [Para 1411 a]	1. Recommendation kept. [Para 638 g]

Recommendations in Interim Pilot Review Report (2008/09)	Recommendations in Final Report (2009/10)
2. HA to consider enhancing the core competency of junior doctors in acute clinical care management by organising refresher training courses in collaboration with different Specialty Colleges. [Para 1411 b]	2. The clinical core competency course was now a mandatory module of specialist training for all basic surgical trainees in HA hospitals. [Para 630]
3. HA to consider continuing to collaborate with the Hong Kong Academy of Medicine in evaluating the impacts of work reform on the standard of doctors' training in the post-pilot period. [Para 1411 c]	3. Recommendation kept. [Para 638 g]
IX. Attaining Quality Hours for Service and Training	
1. HA to consider monitoring the work hours of public hospital doctors in a broad-brush approach and on the principle of prospective counting of rostered work in all situations, except their called-back duties during an off-site call and endorsed unrostered work. [Para 1226 a]	1. Recommendation kept. [Para 735 a]
2. HA to consider putting in place a mechanism to recognise unrostered work beyond the rostered duty hours in unforeseen circumstances and justified by demonstrable clinical needs. [Para 1226 b]	2. Done in both cycles of doctor work hour reporting in 2009. [Para 708]

Recommendations in Interim Pilot Review Report (2008/09)	Recommendations in Final Report (2009/10)
3. HA to consider monitoring the work hours of frontline doctors at regular and appropriate time points – For clinical specialties that were unable to meet the corporate target of reducing doctors' average weekly work hours to not exceeding 65 by the end of 2009, HA to consider reviewing their manpower level, work arrangement and duty patterns at half-yearly intervals. [Para 1226 c]	3. HA was recommended (i) to develop a long-term doctor work hour monitoring mechanism, (ii) to incorporate the reported doctor work hour as a key consideration in its workforce planning, (iii) to review outlier departments' doctor work hour at half-year intervals and other departments at 3-year intervals, (iv) to review outlying departments' manpower arrangement instead of recompensing with time-off for work done in excess of 65 hours per week on average, and (v) to set up a designated team to coordinate the work hour monitoring exercise after Doctor Work Reform came to a close in 2009/10. [Para 735 a/c]
4. HA to consider continuing to explore new ways of operation and work out viable solutions to change doctors' existing work pattern with the ultimate aims of enhancing their work-life balance and morale without compromising the quality of care and patient safety. [Para 1317 a]	4. Recommendation kept. Besides, stakeholder engagement was recommended to formulate viable solutions, balancing the need for granting day-offs for on-call duties against the need for up-keeping patient safety in public hospitals, and ensuring that public money was properly used at all times. [Para 735 b/c]
5. HA to consider gradually implementing a modified on-call system in order to reduce their continuous work hours towards the long-term target of 16 on weekdays and 24 at weekends as well as public and statutory holidays. [Para 1317 b]	5. Recommendation kept. [Para 735 b]

Recommendations in Interim Pilot Review Report (2008/09)	Recommendations in Final Report (2009/10)
6. In the interim, HA to consider attaining 100% compliance with post-call half-day time-off granted to all doctors on overnight on-site call and arranging mutual-cover sleep time for 4 consecutive hours for those who were on overnight on-site duty exceeding 24 hours, subject to adequate workforce, operational practicability and service sustainability. [Para 1317 c]	6. Recommendation kept. [Para 735 b]
X. Targeted Deployment of Resources	
1. HA to consider prudently utilising the healthcare resources in reconfiguring its hospital services, enhancing the service quality and improving the morale of healthcare personnel, while taking into account equity, right incentives and service sustainability in the long term. [Para 1511 a]	1. Recommendation kept and HA was recommended to prudently deploy its limited resources to pressurised areas. [Para 810 a]
2. Realising the financial stringency under the current financial turmoil, HA to consider appropriate resource injection and manpower deployment in the light of the need and the scale of launching various work reform strategies in different public hospitals. [Para 1511 b]	2. HA was recommended to prioritise use of its healthcare budget for those programmes that had a greater potential for increasing the system efficiency, optimising workload, enhancing the quality of care and patient safety as well as improving staff morale. [Para 810 a]
3. HA to consider continuing to explore a sound and appropriate enhanced honorarium system in a broad-brush and nominal approach and deter over-rostering of doctors and self-generating overwork – This could be supplemented by the established special honorarium system to recognise frontline doctors' contribution to ad hoc clinical activities. [Para 1511 c]	3. Recommendation kept and HA was recommended to use doctors' average weekly work hours to differentiate bandings of doctors in different call tiers, specialties and hospital settings. [Para 810 b]

Doctors' Headcount in Various Specialties
Hospital Authority

Specialty	July 2007	July 2008	July 2009
Accident & Emergency	408	435	439
Anaesthesiology	336	349	353
Cardiothoracic Surgery	30	30	29
Clinical Oncology	117	121	130
Dental	0	0	0
Ear, Nose and Throat	74	79	82
Family Medicine, OPD & Staff Clinics	500	510	492
Intensive Care Unit	88	94	114
Medicine (inc HSP, Reh, Inf, CGAT)	1,100	1,121	1,125
Neurosurgery	77	88	90
Obstetrics & Gynaecology	203	207	217
Ophthalmology	138	139	150
Orthopaedics & Traumatology	290	295	303
Paediatrics (inc MH in CMC)	302	306	318
Pathology	176	180	185
Psychiatry (inc MH, except CMC)	280	295	314
Radiology	227	235	246
Surgery	441	454	482
Others	13	15	22
Total	**4,799**	**4,952**	**5,088**

All data on full time equivalent (FTE) basis, rounded to the nearest integers and excluding Interns / Externs / Dental Officers

Source: Workforce Planning Section, Strategy and Planning Division, Hospital Authority

Allocation of Resident Trainees for Doctor Work Reform Purposes

Specialty	2008/09	2009/10
Surgery	13	6
Accident & Emergency	10	4
Paediatrics & Adolescent Medicine	7	5
Obstetrics and Gynaecology	6	1
Anaesthesiology	5	1
Orthopaedics & Traumatology	3	1
Medicine	2	–
Intensive Care Unit	1	1
Neurosurgery	–	2
Ophthalmology	–	1
Radiology	–	1
Total	**47**	**23**

47 out of 350 (i.e. 13.4%) and 23 out of 386 (i.e. 6.0%) new Resident Trainee posts allocated for DWR purposes in 2008/09 and 2009/10 respectively

Source: Medical Grade Department, Cluster Services Division, Hospital Authority

Summary of Turnover Rate of Doctors in Different Clinical Specialties, Hospital Authority

Specialty	2007-2008	2008-2009	2009-2010 (Projected)
Accident & Emergency	5.0%	4.9%	4.0%
Anaesthesiology	7.6%	3.8%	4.8%
Cardiothoracic Surgery	0%	3.3%	6.2%
Clinical Oncology	2.6%	5.0%	2.5%
Ear, Nose and Throat	13.9%	3.9%	4.6%
Family Medicine OPD & Staff Clinics	10.4%	6.8%	7.5%
Intensive Care Unit	0%	4.3%	2.3%
Medicine (include HSP, Reh, Inf, CGAT)	3.7%	4.8%	3.9%
Neurosurgery	1.3%	3.5%	1.5%
Obstetrics & Gynaecology	8.7%	6.0%	6.6%
Ophthalmology	5.9%	6.5%	5.5%
Orthopaedics & Traumatology	2.4%	6.2%	4.2%
Paediatrics	5.8%	6.6%	5.8%
Pathology	5.2%	1.1%	3.1%
Psychiatry	4.7%	4.1%	2.9%
Radiology	6.3%	5.6%	4.0%
Surgery	8.4%	4.3%	7.1%
Total	**5.8%**	**5.0%**	**4.8%**

$$\text{Turnover rate} = \frac{\text{Total no. of staff leaving in respective staff group in financial year (excluding temporary staff)}}{\text{Average strength of respective staff group in the same period (excluding temporary staff)}}$$

Source: Workforce Planning Section, Strategy and Planning Division, Hospital Authority

Intake and Turnover Rate of Nurses
Hospital Authority

	Intake	Turnover ^	Turnover Rate ^
2007–08	671	844	4.5%
2008–09	874	877	4.7%
2009–10 (up to Jun 2009)	78*	110*	4.1%^^

Remark

^ Included HAHO, Gen and Psy streams, voluntary early retirement and retirement

* Apr–Jun 09 intake, turnover

^^ Rolling 12-month turnover rate

Source: Workforce Planning Section, Strategy and Planning Division, Hospital Authority

Acknowledgement

The Steering Committee would like to express its deepest appreciation and heartfelt gratitude to the following parties, who / which had contributed significantly to HA's Doctor Work Reform by providing valuable feedback and constructive opinions on formulating the reform strategies, implementing the pilot programmes, and refining the reform rollout strategies as contained in this Final Report on Doctor Work Reform.

Overseas Experts and Institutions in the United Kingdom

- Professor Dame Carol BLACK, Chairman, Academy of Medical Royal Colleges
- Dr Patrick CHU, Medical Director of Clinical Support Division, Royal Liverpool University Hospital
- Dr John COAKLEY, Medical Director, Homerton University Hospital
- Dr Simon ECCLES, Consultant (Emergency), Homerton University Hospital
- Faculty of Health, Edge Hill University
- Guys & St Thomas Hospital
- Homerton University Hospital
- London Deanery
- Royal Colleges of Nursing (London)
- Royal Colleges of Physicians (London)
- Royal Colleges of Surgeons (London)
- Royal Liverpool & Broadgreen University Hospitals

Local Organisations and Participating Units

- Cluster / Hospital Chiefs, General Managers, Clinical Heads and Frontline Doctors
- Cluster Human Resources Division and Information Technology Department
- Hong Kong Academy of Medicine and its Member Colleges
- Hong Kong Public Doctors' Association and other Doctor's Associations
- Hospital Authority Delegates in the Visit to the United Kingdom
- Hospital Authority Emergency Medicine Ward Task Group
- Hospital Authority Emergency Operating Theatre Task Group
- Hospital Authority Specialty Coordinating Committees
- Hospital Authority Task Force on Doctors' Work Hours
- Hospital Authority Technical Services Assistant (Clinical Assistant) Task Group
- Participants in HA's Doctor Work Reform Strategic Planning Workshop
- Respondents in the HA-wide consultation on Doctor Work Reform

Collaborative Departments in Hospital Authority Head Office

- Corporate Communication Department
- Enterprise Resource Planning Project Team
- Finance Division
- Human Resources Division
- Network Management Department
- Nursing Services Department
- Statistics, Workforce Planning and Knowledge Management Department

Glossary

Acronym	Full Description
AHNH	Alice Ho Miu Ling Nethersole Hospital
APN	Advanced Practice Nurse
CMC	Caritas Medical Centre
CMS	Clinical Management System
CMU	Clinical Management Unit
EMW	Emergency Medicine Ward
EOT	Emergency Operating Theatre
Final Report	Final Report on Doctor Work Reform
HA	Hospital Authority
HKAM	Hong Kong Academy of Medicine
ICU	Intensive Care Unit
LegCo	Legislative Council
MEWS	Modified Early Warning Score
NDH	North District Hospital
PMH	Princess Margaret Hospital
PYNEH	Pamela Youde Nethersole Eastern Hospital
QMH	Queen Mary Hospital
SBAR	Situation, Background, Assessment and Recommendation
SOPD	Specialist Outpatient Department
Steering Committee	Steering Committee on Doctor Work Hour
TSA(CA)	Technical Services Assistant (Care Assistant)
UCH	United Christian Hospital
YCH	Yan Chai Hospital

Steering Committee on Doctor Work Hour
Hospital Authority

Dr C H LEONG, GBS, JP *(Chairman)*
Former Chairman, Hospital Authority

Dr Sherene DEVANESEN *(Overseas Expert)*
Chief Executive
Peninsula Health in Victoria, Australia

Mr Andrew FOSTER, CBE *(Overseas Expert)*
Chief Executive
Wrightington, Wigan and Leigh NHS Trust
The United Kingdom

Prof T F FOK, SBS, JP
Dean, Faculty of Medicine
The Chinese University of Hong Kong

Prof K N LAI
Chair Professor, Department of Medicine
The University of Hong Kong

Dr C T HUNG
Vice President (Education & Exams)
Hong Kong Academy of Medicine

Dr Lawrence LAI, JP
Chairman, Cluster Administration and Specialty
Advisory Committee on Doctor Work Hour
Hospital Authority

Dr W L CHEUNG, JP
Director (Cluster Services)
Hospital Authority

Dr Nancy TUNG
Cluster Chief Executive, Kowloon West Cluster
Hospital Authority

Doctor Work Reform Team
Hospital Authority

Dr Deacons YEUNG
Chief Project Coordinator (Doctor Work Reform) /
Chief Manager (Cluster Performance)

Dr K H CHAN
Senior Manager (Doctor Work Reform)

Mr Linus FU
Manager (Doctor Work Reform)

Final Report Support Team
Cluster Services Division, Hospital Authority

Ms Elissa TAM
Executive Assistant

Mr K W CHEUNG
Project Assistant

Mr Tim CHEUNG
Project Assistant

Mr Vincent CHEUNG
Project Assistant

Ms Queenie LAI
Project Assistant

Ms Pecky LI
Project Assistant

This Final Report is accessible via HA's internet:
http://www.ha.org.hk/report/DWR