

Annex A

HSR CRG STRATEGIC AREAS AND YEARLY THEMES

Strategic Areas	Yearly Themes (FY09 Priority areas)
<p><u>Chronic Disease Management (Annex A1)</u></p> <p>High quality chronic disease management requires a holistic and integrated approach, adequate to provide the most appropriate care to different patient groups.</p>	<ul style="list-style-type: none">▪ Improving care integration for coronary heart diseases/ diabetes mellitus/ stroke/ COPD/ ESRD (End Stage Renal Disease)
<p><u>Care Transition (Annex A2)</u></p> <p>Excellent patient-centric care requires well coordinated transitions between healthcare providers.</p>	<ul style="list-style-type: none">▪ ED services (including pre-hospital emergency care)▪ ILTC Services▪ Palliative care (residential / home)▪ Dementia care
<p><u>Patient Safety (Annex A3)</u></p> <p>Enhancing patient safety requires systemic improvements to ensure that prevention of medical errors and promotion of care safety are sustained.</p>	<ul style="list-style-type: none">▪ Medication safety▪ Safe surgery▪ Healthcare associated infection
<p><u>Public health (Annex A4)</u></p> <p>Public health measures are important parts of the healthcare system, and comprise population level interventions to prevent or treat disease and improve health.</p>	<ul style="list-style-type: none">▪ Infectious Diseases▪ Prevention/ Early detection of diabetes mellitus and cardiovascular diseases▪ Strategies in preventing/ management of Obesity

Chronic Disease Management

1. Coronary Heart Disease

Coronary heart disease (CHD) is currently the second most common cause of death in Singapore, and a major cause of disease burden. With an aging population, a rise in the prevalence of CHD and its complications is anticipated.

HSR CRG projects on chronic disease management of CHD should translate into improvements in quality of care and health outcomes of CHD patients.

Goals of CHD projects could include:

- Improve symptom to treatment time for patients with acute myocardial infarction.
- Improve management of chest pain and suspected CHD.
- Improve management of chronic stable CHD.
- Improve heart failure management.
- Enhance cardiac rehabilitation.
- Improve monitoring of CHD care delivery and performance.

2. Diabetes Mellitus

The National Health Survey (NHS) 2004 showed that one in 12 Singaporeans (8.2%) aged 18 – 69 had diabetes mellitus (DM) in 2004. In addition, the NHS 2004 also showed that the prevalence of impaired glucose tolerance in Singapore is one in 8 persons (12.0%). The prevalence of diabetes in the Singapore is projected to rise with population ageing.

There is therefore an urgent need to study strategies to optimally manage diabetes.

HSR CRG projects on DM should translate into improvements in quality of care and health outcomes of diabetic patients.

Goals of DM projects could include:

- Promote holistic treatment and management of DM.
- Improve prevention of complications of diabetes.
- Improve early detection of complications of diabetes.

3. Stroke

Stroke is the fourth most common cause of death and a major cause of disability in Singapore¹. In 2007, there were over 5,000 cases of strokes in Singapore². However, it is also one of the most preventable life-threatening health conditions.

HSR CRG projects on stroke should translate into improvements in quality of care and health outcomes of stroke patients.

Goals of stroke projects could include:

- Develop ways to encourage stroke patients to seek treatment early.
- Evaluate outcomes of different models of acute care for stroke patients, and improve understanding of modifiable factors that affect acute stroke care outcomes.
- Enhance follow-up, rehabilitation and support of stroke patients.

¹ <http://www.moh.gov.sg/mohcorp/statistics.aspx?id=5526>

² Stroke Registry

Care Transition

1. Emergency Department (ED) Services

Emergency medical services are a critical part of our healthcare system, and have come under increasing strain in recent years. Rising demand and operating constraints have led to spikes in waiting times for admission, and rising waiting times for consultation at EDs.

From 2004 to 2007, the volume of ED attendances has risen at a compounded annual growth rate of 6.7%³, and the trend looks set to continue. As difficulties with emergency medical services are reflective of issues along the entire healthcare continuum, improvements in this sector will require a holistic approach that integrates activities across the entire healthcare continuum.

Goals of ED projects could include:

- Improve the understanding of the drivers of demand for ED services.
- Develop ways to better match supply and demand for emergency care.
- Develop innovative ways to improve effective ED capacity.
- Improve acute bed availability.
- Improve pre-hospitalization services, standards and delivery, as well as ensure its seamless integration into ED care (Focus areas: AMI, stroke, trauma).
- Improve the interface between acute and step down care.

2. Intermediate and Long-Term Care (ILTC)

The Intermediate and Long-Term Care (ILTC) sector forms an important part of the overall healthcare sector. It complements the role of acute care (e.g. hospitals) by providing mid to long-term care for the community. As part of the wide spectrum of strategies needed to meet our challenges associated with an ageing population, we have to develop a strong network of community-based services, and ensure long-term sustainability in the provision of such services, so that those in need of care can have access to an adequate range of effective and efficient services such as eldercare, rehabilitation, dialysis, etc.

Goals of ILTC projects could include:

- Evaluate integrated clinical pathways and new community care services.
- Evaluate appropriateness and cost-effectiveness of treatment in different care settings.
- Pilot and validate patient assessment instruments.

³ MOH

3. Palliative Care

Death is inevitable, but the sufferings that accompany terminal illness are amenable to intervention. The end-of-life journey can be stressful and frightening for the patient and their caregivers. To maximize the quality of life for patients during the last phase of their lives, it is essential to improve the provision of palliative care services, especially in the community.

Terminally ill patients often have certain perspectives and expectations on the quality of care they should receive. They are concerned with receiving adequate pain and symptom management, avoiding inappropriate prolongation of dying, achieving a sense of control, relieving burden on loved ones and strengthening relationships with loved ones. Several international studies have indicated that a significant proportion of patients would prefer to die at home in the company of their loved ones.

Goals of palliative care projects could include:

- Improve understanding of disease trajectory towards the end of life.
- Improve end of life care planning.
- Identify the barriers to end of life care planning and how these can be overcome.
- Improve the ability of health care professionals to manage end of life care issues.

4. Dementia Care

Singapore's population is rapidly aging. The number of persons aged over 65 will increase from 8.4% in 2005 to 18.7% in 2030, which translates to absolute numbers of 296,900 in 2005 to 873,300 of older persons in Singapore by 2030⁴. With this rapid ageing, the prevalence of neurodegenerative disorders such as dementia is projected to increase exponentially. Hence, dementia is clearly a national healthcare priority.

Goals of dementia projects could include:

- Understand epidemiology and causal factors for racial differences in prevalence.
- Improve clinical diagnosis of dementia.
- Address caregiver issues in dementia.
- Examine the effectiveness of support interventions for caregivers of dementia patients.
- Improve quality of life in dementia.
- Address end of life issues in dementia.

⁴ Committee on Ageing Issues: Report on the Ageing Population

Patient Safety

The Institute of Medicine Report 'To Err Is Human' found that 1 million injuries and nearly 100,000 deaths occur in the United States as a result of medical errors. Since the report was published, there has been a concerted effort by various agencies to increase patient safety and the quality of care. In response, healthcare organisations, physicians and hospitals have been searching for innovative ways to improve patient safety.

1. Medication Safety

Medication errors are preventable events in the medication use process - errors in the prescribing, dispensing, administration and use of medications. They are the leading causes of preventable adverse events.

HSR CRG projects on medication safety should translate into systems improvements to prevent medication errors.

Goals of Medication Safety projects could include:

- Development of metrics for medication safety.
- Evaluation of the effectiveness of interventions (including IT solutions) to enhance medication safety.

2. Safe Surgery

Surgical care has been an essential component of health care worldwide for over a century. As the incidences of traumatic injuries, cancers and cardiovascular disease continue to rise, the impact of surgical intervention on health systems will grow.

Goals of Safe Surgery projects could include:

- Development of metrics to assess appropriateness of surgical procedures (including endoscopies).
- Development of risk adjusted metrics to assess the outcomes of surgery.

3. Healthcare Associated Infection (HAI)

HAI, and associated antimicrobial resistance, has become increasingly prevalent worldwide, and is one of the biggest challenges facing medicine today. Reducing HAI rates is critical for safeguarding patients from complications, preventing prolonged hospital stay and reducing unnecessary medical expenditures. MOH places emphasis on finding new ways to reduce infections by scientific methods.

Goals of HAI projects could include:

- Improve understanding of factors contributing to HAI and evaluation of interventions to reduce HAI.

Public Health

1. Infectious Disease (ID)

Infectious disease (ID) outbreaks – both local and overseas – pose a serious health and security threat to Singapore. As the experience with H1N1/A influenza has shown, the inter-connected nature of our modern world allows novel diseases to spread rapidly. Bioterrorism also remains an ever-present threat. Finally, there is also a need to improve the management of infectious diseases of public health importance such as dengue, HIV, TB, sexually transmitted infections, and vaccine-preventable diseases.

Goals of ID projects could include:

- Improve the understanding of spread of infectious disease.
- Improve risk analysis capabilities.
- Improve management of infectious diseases of local and regional importance.

2. Obesity

In Singapore, the national health surveys have shown that the prevalence of obesity has increased steadily from 5.1% in 1992 to 6.9% in 2004⁵. Even though Singapore's current obesity prevalence is still relatively low, the concern is to act pre-emptively to prevent a rapid rise to epidemic levels as experienced in other developed countries⁶.

Obesity is a major risk factor for many chronic diseases of high burden such as type II diabetes, ischemic heart disease, hypertensive disease, ischaemic stroke, certain types of cancer and osteoarthritis. The health, economic and social costs of obesity to Singapore's economy will be huge if we do not address this increasing trend early.

HSR CRG projects on obesity should translate into strategies/ benefits in prevention/ management of obesity.

Goals of obesity projects could include:

- Improve the understanding of environmental, psychosocial and behavioural factors that drive increased energy intake and decreased energy output.
- Develop and evaluate ways to optimise nutrition and energy intake.
- Develop and evaluate ways to promote physical activity, including having a conducive environment.

⁵ National Health Survey 2004

⁶ It has been forecasted that by 2050, in the United Kingdom 60% of men, 50% of women and 25% of children would be obese.

- Develop and evaluate innovative approaches to management of obesity in the primary care or community setting.