Strengthening Health Systems to Improve Chronic Disease Prevention and Control

Singapore
5-7 November 2007

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Western Pacific Region
REPORT

STRENGTHENING HEALTH SYSTEMS TO IMPROVE CHRONIC DISEASE PREVENTION AND CONTROL MEETING

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NOTE

The views expressed in this report are those of the participants in the Strengthening Health Systems to Improve Chronic Disease Prevention and Control Meeting and do not necessarily reflect the policies of the Organization.

This report has been prepared by the World Health Organization Regional Office for the Western Pacific for governments of Member States in the Region and for those who participated in the Strengthening Health Systems to Improve Chronic Disease Prevention and Control Meeting which was held in Singapore from 5 to 7 November 2007.
SUMMARY

The increasing burden of chronic disease in the Western Pacific Region of WHO is a particular concern for low- and middle-income countries. The meeting on Strengthening Health Systems to Improve Chronic Disease Prevention and Control was held in Singapore from 5 to 7 November 2007, to assist countries respond to the challenge of strengthening health systems across the continuum of care. Participants were from seven selected low- and middle-income countries and three high-income countries. The organizing framework for the meeting was the WHO Health System Strengthening Strategy which is based on six building blocks: stewardship (leadership and governance); financing; health workforce; information; medicines and technologies; and service delivery. A people-centred approach was also viewed as a fundamental requirement for effective chronic disease management.

Background papers were presented and participants presented and discussed best practice country case studies covering: stewardship, financing, health workforce, systems of care, and patient centred care. Two site visits were organized.

Based on the presentations and discussions, a number of conclusions and recommendations for further action were proposed and agreed. For Member States the suggested actions – as appropriate to each country’s context and situation - were as follows:

- Implement national strategies to prevent and control risk factors for chronic disease, based on global and/or regional initiatives already agreed upon by Member States, including:
  - the Global Strategy on Diet, Physical Activity and Health;
  - the WHO Framework Convention on Tobacco Control; and
  - the Western Pacific Regional Strategy to Reduce Alcohol-Related Harm.
- Assess strengths, weaknesses and opportunities for strengthening health systems for chronic disease across the six health system building blocks (financing, workforce etc).
- Build or strengthen initiatives which support development of leadership capacity for chronic disease reforms at all levels of the health system.
- Review/update national strategies to develop health workforce capacity in chronic disease, including reviewing and updating existing training curricula for primary health care (PHC) workers with a special emphasis on needs of underserved areas and populations.
- Review fees and charges by hospitals and other health services (including drug pricing information) to ensure they do not act as financial barrier to care for chronic disease.
- Review and assess existing policies, education and training curricula and methods, services and interventions in light of the People-Centred Health Care policy framework, taking account of relevance and applicability, including cultural factors, in the local context.
• Establish and improve chronic disease surveillance and monitoring infrastructure/systems, building on existing surveys where possible.

• Consider development of a personal health record where these do not yet exist as part of strengthening clinical information systems.

Participants expressed a strong view that in order to assist countries to make further progress, there was a need for regional leadership and an important role for the World Health Organization (WHO). Member States look to WHO for guidance and support through:

• Development of a regional framework for health systems strengthening (HSS) and noncommunicable diseases (NCDs) suitable for adaptation by countries, building on the Chronic Care model and similar concepts; the WHO framework for action in health systems, Everybody's Business: Strengthening Health Outcomes to Achieve Better Health Outcomes; and the current strategies for, and approach to, health system development and NCD prevention and control in the Region.

• Facilitate sharing of information – global, regional and national - on all aspects of health systems strengthening and consider development of on-going mechanism for sharing evidence and best practice (possibly drawing on the experience of the European Observatory on Health Systems and Policies).

• Development of repository/dissemination mechanism for clinical guidelines, standards and protocols for chronic diseases to help all countries and areas avoid having to “reinvent the wheel” in this regard, as far as possible.

• Advice countries regarding methodologies (e.g. burden of disease studies) for establishing priorities for action (diseases, risk factors, population groups) and develop costed and evidence-based intervention packages for priority chronic conditions and their risk factors.

• Explore opportunities for creative engagement with the private sector consistent with the objectives of global and regional health strategies (with due regard to avoidance of conflict of interest) in order to facilitate collaborative activities at the country level.

• Support for the development of stronger and more accessible health economic analysis capacity (e.g. cost effectiveness studies, modeling of intervention costs and benefits) to assist in advocacy and decision making in the Western Pacific Region, including development and dissemination of standardized methods, possibly through a WHO Collaborating Centre.

• Support a systematic and strategic approach to development of behaviour change studies relevant to different cultures in the Region, and strengthen capacity for behaviour change communication (e.g. through short courses, distance learning programmes).

• Development of a Regional NCD and health systems change leadership programme, to support country level leadership development initiatives, building on examples such as ProLead and the breakthrough collaborative programme developed by the US Center for Health Improvement.
• Wide dissemination of the People-Centred Health Care policy framework and supporting materials.
# CONTENTS

### 1. Introduction

1.1 Objectives ....................................................................................................... 1  
1.2 Participants, observers and resource person ................................................... 2  
1.3 Opening ceremony .......................................................................................... 3  
1.4 Election of officers .......................................................................................... 3  

### 2. Proceedings

2.1 Presentation of key background papers ......................................................... 4  
2.2 Response to the chronic disease challenge .................................................... 4  
2.3 Country case studies ...................................................................................... 9  
2.4 Site visits ...................................................................................................... 17  

### 3. CONCLUSIONS................................................................................................... 19  

### ANNEXES:

ANNEX 1 - LIST OF TEMPORARY ADVISERS, OBSERVERS, AND SECRETARIAT  
ANNEX 2 - PROVISIONAL AGENDA  
ANNEX 3 - TIMETABLE  
ANNEX 4 - REPORT ON HEALTH SYSTEMS ACTIONS TO PREVENT CHRONIC DISEASE IN 10 WESTERN PACIFIC COUNTRIES  

Key words

| Chronic disease - prevention and control/ Health systems |
1. INTRODUCTION

The burden of chronic, noncommunicable disease (NCD)\(^1\) has increased rapidly in the Western Pacific Region, and is projected to increase further, placing enormous pressures on communities, households, health services and national health budgets. This is a particular concern for low- and middle-income countries. To respond to this challenge countries need to strengthen health systems across the continuum of care. Evidence-based strategies are required to ensure that systems of care are designed to meet the specific challenges of chronic diseases, with priority given to prevention, early detection and intervention, and effective disease control through primary health care and patient engagement. Many higher-income countries are now starting to implement financing and structural reforms to support these new patterns of care.

The 2005 Programmatic Review of the work of the WHO Regional Office for the Western Pacific in NCD prevention and control, recommended that WHO should consider organizing a regional meeting on systems of care for noncommunicable diseases, drawing on the growing evidence in this area, to assist countries in formulating effective policy and service responses to the economic, social, and health problems posed by the health transition and the growing chronic disease burden. In response, a Meeting on Strengthening Health Systems to Improve Chronic Disease Prevention and Control was held in Singapore from 5 to 7 November 2007.

While each country needs to find health system solutions appropriate to its local context and needs, countries can learn a lot from the experiences of others. The meeting provided an opportunity for participants from selected countries to review the evidence, pool knowledge and experiences, devise solutions suited to their own situations and priorities, consider the need for regional-level actions such as a regional framework for health systems and chronic disease, and an ongoing mechanism for disseminating evidence and sharing experiences in relevant health reforms.

1.1 Objectives

(1) To review how changing patterns of disease burden impact on health systems, households and communities in the Region and elsewhere, and consider projected trends and scenarios.

(2) To review evidence and best practices in health policies, financing measures, human resources, service design, community and patient engagement, and other strategies that can improve chronic disease outcomes, with a particular emphasis on low- and medium-resource settings;

(3) To identify major barriers and critical success factors in the implementation of successful health policies and interventions, and reviewed tools and

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\(^1\) The terms chronic disease and noncommunicable disease are used interchangeably in this report.
methods to assess and enhance health system performance to address chronic disease across the continuum of care;

(4) To consider and agree to relevant priorities and the next steps needed at country and regional levels to strengthen the health system response to chronic disease.

1.2 Participants, observers and resource persons

Thirty-three participants (Annex 1) from seven selected low- and middle-income countries in the Western Pacific Region (China, Fiji, Malaysia, Mongolia, Philippines, Samoa, Viet Nam) attended the meeting. Each country sent a team composed of:

(1) a senior ministry executive (e.g. deputy director general or secretary) with responsibility for overall health system planning, financing and governance;

(2) a senior health manager responsible for national NCD prevention and control activities;

(3) a senior policy officer with responsibilities in health services management, health financing or health insurance; and/or

(4) a senior clinician responsible for clinical governance of a major health service or facility.

In addition, invitations were extended to two or three participants from three higher-income countries (Japan, New Zealand and Singapore), including:

(1) a senior ministry official or executive with responsibility for overall health system planning, financing and governance; and

(2) a senior health manager or clinician responsible for NCD prevention and control.

Observers were present from the Australian Agency for International Development (AusAID), World Diabetes Foundation, Monash University, and Singapore. Four resource people participated in the preparation and conduct of the meeting.

1.3 Opening ceremony

Mr Heng Chee How, Minister of State for Health, Singapore, opened the meeting. He spoke of the challenge of chronic diseases and of Singapore’s response to the rising burden of chronic disease. He highlighted the Chronic Disease Management Programme (CDMP), which was launched in January 2007 and covers four key diseases/risk factors that contribute significantly to the disease burden: diabetes, hypertension, high lipids and stroke. The CDMP leverages on Medisave, which is a compulsory savings scheme that
was first set up to be used for outpatients but has been expanded for inpatient care. The CDMP is focused on primary care, patient empowerment and patient centred care.

Dr Shigeru Omi, WHO Regional Director for the Western Pacific, gave a keynote address on responding to the challenge of chronic diseases. He spoke of the global burden of chronic diseases and the importance of working together “to get the job done”. He emphasized that chronic diseases are essentially preventable and that achievement of the global goal for chronic disease would bring great benefits to the Region. Preventive programmes – population-wide and for high risk people – are one critical component of the response and WHO and Member States are implementing the Global Strategy on Diet, Physical Activity, and Health and the WHO Framework Convention on Tobacco Control. The Western Pacific Region is the only region where all eligible Member States have become contracting Parties to the Convention.

The second critical element is for the rational and cost-effective long-term management of people at high risk and people with established chronic disease. The challenges facing health systems in all countries of the Region are great and hence the importance of this meeting. To further WHO’s work in this area, the WHO Health System Strengthening Strategy was developed based on six building blocks: stewardship (leadership and governance); financing; health workforce; information; medicines and technologies; and service delivery. In addition, a reorientation of health systems towards a people-centred approach is a fundamental requirement for effective chronic disease management. The Western Pacific Region has made a strong commitment to the promotion of people-centred care.

1.4 Election of officers

Dr Karuppiah Vijayalakshmi of Singapore was elected Chairperson; Professor Gu Dongfeng from China as Vice-Chairperson, and Dr Lilibeth David of the Philippines as Rapporteur.

The proposed agenda was adopted (Annex 2). The meeting was organized in plenary sessions and two local site visits were included (Annex 3). Extensive background material was made available both in hard copy and on a CD.
2. PROCEEDINGS

2.1 Presentation of key background papers

2.1.1 Chronic disease situation trends and implications

Dr Robert Beaglehole presented a paper that highlighted the global burden of chronic diseases and their particular burden – health and economic – on developing countries. The global goal for prevention and control of chronic disease was reviewed. New data to be released by The Lancet on 4 December 2007 for 23 developing countries was presented to show that a small package of population-wide and high risk interventions could readily achieve the global goal in these countries by 2015. The likely pattern of increasing burden of chronic disease in the Western Pacific Region, especially in China, was presented to illustrate the point that chronic diseases and their risk factors have the potential to rapidly overwhelm health systems.

2.1.2 Impact of changing patterns of disease on health systems, households and communities

Mr Colin Sindall noted that chronic disease incurs significant economic and social costs in addition to the direct health impacts. The economic costs are usually categorized as indirect costs (including lost productivity, foregone earnings, carer costs, welfare transfers, opportunity costs), or as direct health costs (medical, hospital, drugs, etc). In some cases, indirect costs are greater than direct costs. As one example, the WHO report Preventing Chronic Disease: A Vital Investment estimated the accumulated economic loss of forgone national income to China from 2005 to 2015, as a result of premature deaths caused by heart disease, stroke, and diabetes, at US$ 558 billion. The availability and use of good data on the economic impact of chronic disease will assist in advocacy for investment in chronic disease prevention and control.

Several examples of the microeconomic impact of chronic disease were provided. People with chronic illnesses on average earn less than those in better health and are less likely to work. In addition, productivity is reduced not only for those who have a disease but also for those who have risk factors. For example, in Australia, obesity was associated with over four million excess days lost from the workplace in 2001. The more risks people have, the lower their productivity. These are important arguments when NCD advocates seek to build support among businesses and government agencies for the introduction of healthy behaviours and disease prevention programmes in the workplace.

Individuals are affected by chronic disease in a variety of ways. They may have to deal with persistent symptoms that affect their quality of life. They have to learn new habits and behaviours, for example, continuous medication use and changes in diet. Having a long-term and incurable condition alters a person’s view of the future, and reduces their participation in social activities and employment, which can lead to frustration, anger, and depression. They have to find the time for many health visits and
deal with the anxiety of negotiating a complex, and often geographically distant, health system. They may also have concerns about the financial impact of their illness on their family and the burden placed on carers.

All of these issues are exacerbated for the poor, who may face catastrophic financial payments for health care and subsequent further impoverishment, or who may have very limited access to care. They may delay seeking care due to inability to afford treatment, or geographical barriers, and therefore be diagnosed only when disease is advanced.

Because chronic disease, by definition, requires care over time, the impact on the health care system is not only in terms of increased service utilization and the associated costs, but also in the nature of the demands placed on services to meet the needs of patients requiring long-term care. Health service design for this purpose is usually well short of optimal. As has been noted by the WHO study *Innovative Care for Chronic Conditions*, health systems around the world generally share common characteristics:

1. They are organized to provide acute illness care.
2. The patient's role in management is not emphasized.
3. Follow-up is sporadic.
4. Community services tend to be ignored.
5. Prevention is underutilized.

The core rational for the current meeting was to help health systems change accordingly.

2.1.3 Health systems development in response to chronic disease

Dr Dean Shuey gave a presentation on health systems development. Throughout much of the world there has been an increased interest in strengthening health systems. Over the past 5–10 years there has been a large increase in funding to the health sector, particularly international aid for health. Much of this funding has been disease specific, with the most interest in infectious diseases. It is increasingly recognized that weak health systems are an obstacle to the effective delivery of all disease-control activities. There is concern that the current methods of delivery of disease-specific health interventions are contributing to duplications, distortions, disruptions and distractions in the health system, to the detriment of achieving the maximum improvement in health outcomes possible with the resources available.

The WHO Secretariat in August 2007 issued a WHO framework for action in health systems entitled *Everybody's Business: Strengthening Health Outcomes to Achieve Better Health Outcomes*. The framework identifies four pillars for WHO action, including (1) a single health systems framework based on six clearly defined building blocks; (2) a focus on achieving health outcomes with systems and programmes; (3) a more effective role for WHO at country level; and (4) an enhanced role for WHO in the international health systems agenda. The six building blocks are critical for WHO programmes and national health authorities as they analyse their health systems. A key
Tenet is a holistic approach to health systems, recognizing that working on just one aspect of a system may not strengthen the system and in some cases may weaken it. Health system capacity must be built by truly increasing capacity, not by borrowing existing capacity to achieve short-term programme goals. It can be a delicate balance. The move towards a systems approach is not an argument about 'horizontal' or 'vertical' approaches, but about discovering the best way to deliver health outcomes, in an equitable, effective, and efficient manner.

NCD control requires an effective health systems approach that is long-term and sustainable. NCD control is not amenable to quick fixes and sudden flurries of activity that swiftly dissipate. In this respect, the attributes of good NCD control, which requires high quality interventions over the entire spectrum of health care and for a long period of time, does not so much identify differences with other disease control programmes, but commonalities with a host of programmes, including HIV/AIDS, tuberculosis (TB), maternal and child health (MCH), and immunization. All programmes can benefit from a systems approach.

2.1.4 Singapore’s response to chronic disease

Dr Derrick Heng noted that national strategic leadership is of key importance in Singapore's response to chronic disease. There is strong political commitment, and the goal of "Healthy Singaporeans" is enshrined in the mission statement of the Ministry of Health. There is dedicated funding for the Health Promotion Board and integration of primary care and hospital-based services for chronic diseases within public sector health care clusters. National plans for prevention and control of chronic diseases are operationalized through a whole-of-government approach involving multiple ministries, and other stakeholders such as nongovernmental organizations (NGOs), employers and unions.

There is a range of programmes and supportive policies, including use of legislation regulation and taxation, mass media campaigns, workplace health promotion, health education integrated into school curriculum, model school tuck shops and a holistic health framework for schools. Subsidized screening is available for chronic diseases. Monitoring and evaluation systems comprising death registration, disease registries, and regular national health surveys have been put in place. Indicators and long-term targets have been set and are regularly monitored and reviewed.

2.2 Response to the chronic disease challenge

A number of background papers were presented which focused specifically on responses to the challenge posed by chronic disease in the context of health systems. These are summarized below.
2.2.1 Comparative study on health systems and chronic diseases in developed countries: the European experience

In response to the emerging challenge of chronic diseases, many countries in Europe and elsewhere have experimented with new models of health care delivery that can achieve better coordination of services across the entire continuum of care. Dr Ellen Nolte provided an overview of models and strategies to chronic disease management that have been developed and/or implemented in six European countries (Denmark, England, France, Germany, the Netherlands and Sweden) as well as in Canada and Australia.

There is great diversity among European countries in their approaches to the rising burden of chronic disease, which vary both between and within countries, and which reflect the general approaches to health care financing and organization. In many countries where strong primary care teams exist, for example, in England, Sweden and the Netherlands, there has been a progressive shift in the management of chronic diseases to nurse-led clinics in primary care. The involvement of nurses in France or Germany is low, partly because of legal and professional restrictions that prohibit their deployment outside hospitals. Instead, Germany has introduced dedicated disease management programmes that patients and providers can join voluntarily, while France is providing incentives for the formation of provider networks so as to improve coordination and multidisciplinary working along the continuum of care. The role of patient self-management is acknowledged as a key component of effective chronic disease management in many countries; yet, systems that support self-management systematically remain relatively weak in many settings.

The sustainability of chronic care models faces considerable challenges in all health care settings, including: administrative and financial obstacles that impede the coordination and/or integration of health and social/community care services; lack of investment in suitable information systems; conflicting policies (activity-based funding versus shifting care into the community); a focus on cost reduction; and the potential impact of electoral cycles.

An effective response to the rising burden of chronic disease requires a health system environment that allows for the development and implementation of structured approaches to chronic disease management. Experience suggests that systems characterized by fragmentation of health services are facing considerable challenges in the successful implementation of system-wide strategies to provide care for patients with chronic illness.

2.2.2 Update on the health systems response to chronic diseases in selected countries in the Region

Dr Robert Beaglehole presented a summary of the information submitted by participating countries on the current state of their response to the health system challenges of chronic diseases (Annex 4). Information was provided on the six health
system building blocks and the core, expanded and optimal indicators for each of these building blocks. The responses indicated that considerable progress has been made in the strengthening of health systems in the countries. The success factors identified included: strong political support, strong ministry of health leadership, and supportive legislation; community awareness; local data, clear goals and priorities; strong organizations, including NGOs; support from health professionals and academics; affordable services including a supportive health insurance system; and donor support and external technical assistance.

The main challenges to strengthening the health systems in the Region include: ensuring strong and ongoing government support, policy implementation and enforcement; the increasing risks due to ageing populations and spread of risk factors; equity issues; shortages of staff, training, sustainable funding, equipment and drugs; improving coordination and harmonization; developing packages of suitable interventions for integrated delivery; securing an affordable supply of drugs; and improving professional attitudes to evidence and prevention.

In summary, although some progress is being made, health system strengthening for noncommunicable disease remains a major issue in the Western Pacific Region. Several key core actions are still required in several countries, for example, stronger government leadership, identified and sustained budgets, and greater attention to tobacco cessation interventions in clinical practice. There remains a need for strong leadership in this area from WHO.

2.2.3 People at the centre of care

Dr Don Matheson noted that most societies traditionally relied on healers. These forerunners of modern health professionals had limited technical resources, except for plants and potions that were immediately available. Most traditional healers focused on the strength of their relationship and understanding of the patient, both as an individual and as part of a family and the wider community. As modern health systems have developed, “healers” have been able to increase the physical potency of their tools. Local plants have been replaced with sophisticated drugs produced and marketed by global drug companies bigger than most nation states. Healers are organized into a profession and work in a health organization or a hospital. Their work is affected by local, district and regional interests, from insurance schemes through to global funding mechanisms. Specific diseases drive focused attention, e.g. a person becomes a diabetic, defined by their diagnosis rather than their humanity. These developments strongly affect the healer and determine what is done, how it is done, and with whom it is done.

The increase in sophistication, complexity and material potency that now empowers the modern health worker has taken attention away from the focused relationship with the person, their family and their community. This is creating a situation where people are experiencing an increase in alienation and disempowerment, expressed through decreasing satisfaction with health systems, and reduced levels of trust. This deterioration is of serious concern. The rise of chronic disease further exposes this
now fragile relationship, as successful interventions require strong partnerships between the health system, the patient, their family and the community. Successful management of these conditions requires the distinction between health system and patient to be blurred, as the patient needs to be empowered to take control of their condition and its management. “People at the centre of care” is a framework for re-building this relationship.

2.3 Country case studies

Country case studies were presented on the following health system building blocks and themes: stewardship, financing, health workforce, systems of care, and patient empowerment and people-centred care.

2.3.1 Stewardship (leadership and governance)

The following presentations were made:

(1) Japan – Health Japan 21: National health promotion in the 21st century
(2) Samoa – Development of the national NCD strategy
(3) Fiji – Fiji STEPS survey and the national NCD plan
(4) Mongolia – Integrated NCD prevention and control
(5) Philippines – Coalition building towards sustainable collaboration on prevention and control of noncommunicable diseases.

Summary of discussion

Several success factors became apparent: government leadership, legislative support, coordination; local data; committed people and realistic ambitions; allocated budget and innovative funding mechanisms; WHO support; cross-sectoral engagement and partnerships; and creative marketing, monitoring and evaluation systems.

The major stewardship challenges raised included: the need for ongoing support from all stakeholders, internal and external, and especially government; the need to prioritize actions and balance interventions; the difficulties of translating plans into action; the need for sustainable funding; the critical roles of research, data, monitoring and evaluation; the importance of multisectoral actions; the importance of cultural factors and local context; and the critical role of primary health care.

Several practical next steps on stewardship emerged from the discussions. Countries require assistance for the development of: (1) bilateral and trilateral collaboration, including data and policy and programme comparisons; (2) advocacy programmes to gain high-level support; (3) external funding programmes; (4) information sharing on best practices; (5) priorities for action (diseases, risk factors, population groups) and packages of interventions, including their implementation and monitoring; and (6) identification of best approaches to engaging with the private sector.
2.3.2 Financing

The following presentations were made:

(1) Philippines – National health insurance initiatives to address NCD
(2) Fiji – Exploring health financing options for NCD prevention and control.

Summary of discussions

The following definition for the objectives of a health care financing system applies equally as well to the financing of NCD control as part of a health system:

"A good health financing system raises adequate funds for health, in ways that ensure people can use needed services, and are protected from financial catastrophes or impoverishment associated with having to pay for them. It provides incentives for providers and user to be efficient."

Financing must provide reliable sources of funds for both private and public goods in health. Increased funding, while important, is not the entire picture; funds must also be used effectively and efficiently.

The participants emphasized the need for NCD prevention and control to be part of a national health plan, including a national health care financing plan. It was agreed that the core principles of prepayment, risk pooling, and fairness in financing remain paramount. There was considerable discussion about the merits of social health insurance, and financing based on general taxation or earmarked taxes. It was recognized that all financing systems have strong points and weak points, creating both good and bad incentives. Perverse incentives, such as the over-prescribing of more expensive drugs if the income of prescribers depends on the sale of drugs, cannot always be eliminated, but plans to mitigate perverse incentives are always needed. The risks of financing NCD control through user fees were well recognized. In many settings, user fees are seen as a needed source of income for the health sector; however, shifting from user-fee systems to risk-pooled and pre-paid financing systems, with special consideration for the poor and underserved, was generally recognized as a high priority.

Alternative sources of funds for NCD control, such as earmarked taxes and health promotion foundations, engendered a lot of interest, but each nation will have to decide whether these solutions are applicable to their situation. The key point is that there must be reliable funding – which doesn’t disadvantage the poor – no matter the source. Participants expressed the view that a variety of funding sources for health was desirable, rather than depending on one source.

Collecting and analysing information on health care financing is crucial. This activity covers national health accounting and cost-effectiveness analysis for decision-making. WHO is deeply involved in building national capacity in both of these areas.
2.3.3 Health workforce

The following presentations were made:

(1) Mongolia – Health workforce: local fellowship training
(2) Malaysia – Developing and strengthening of primary care workforce for NCD prevention and control
(3) Philippines – Health leadership programme.

Summary of discussion

A skilled workforce is central to the effective health system response to the growing burden of chronic disease in the Region. An effective response:

(1) encourages the delivery of preventive care and evidenced-based treatment through appropriate payment mechanisms;
(2) equips the workforce with necessary qualifications, skills and competencies through training and development;
(3) ensures availability and accessibility of trained staff through appropriate infrastructure policies and management structures.

Many countries in the Region are finding it difficult to ensure the deployment of a workforce that is competent and skilled in the early detection and management of chronic disease and related risk factors, and that is accessible to all segments of the population, particularly in underserved areas. Because of the relatively low remuneration of health care workers in the public sector, key workers are being lured to the private sector, both within and outside the country, by more attractive career and payment opportunities.

Case studies from three countries presented innovative ways to address some of these challenges. For example, in order to enhance the availability of medical doctors in deprived areas, the Philippines Department of Health developed a ‘Leaders for Health’ programme aimed at building a corps of competent, professional and committed leaders who will provide strategic and effective leadership of the Philippine health sector at various levels. The programme takes an explicit systems perspective by actively involving local authorities and community leaders and providing technical assistance for support structures. The initiative has led to substantial improvements in the quality of services provided in the majority of sites prioritized under the scheme, with improvements in rational procurement and utilization of drugs, referral systems and disease surveillance.

In Mongolia, a local fellowship training programme was introduced to enhance the knowledge and skills of primary health care workers in rural areas in the early detection and management of noncommunicable diseases and related risk factors. This programme enhanced the availability of skilled health care workers in underserved areas.
and also led to the development of several new community-based health programmes initiated by fellows of the programme.

Investment in capacity-building also formed a key component of Malaysia’s strategy to address the rising NCD burden in the country. The strategy called for a multidisciplinary team approach as well as a structured training programme to enhance knowledge and skills of primary health care workers in the early detection and treatment of diabetes in the first instance.

While diverse in content and scope, the three programmes shared several common factors that were identified as keys for success: (1) commitment of key stakeholders at all levels of government (national, regional and local); (2) strategic partnerships with academic centres, regional and local leaders, professional organizations, industry and/or international funders, where appropriate; and (3) importantly, explicit mechanisms of recognizing health care workers’ contributions to success through, for example, awards and incentives.

Based on these and other experiences, participants proposed several next steps to advance the workforce in the area of noncommunicable disease:

(1) Invest in capacity-building through:

   (a) developing NCD training for health care workers that incorporate leadership training;
   (b) strengthening partnerships with academic institutions for the development and/or advancement of curricula;
   (c) reviewing or updating training curricula and/or manuals towards improving practicality at local level; and
   (d) integrating workforce development as a key component of a national NCD strategy.

(2) Enhance the availability of and access to quality care through:

   (a) teaming up primary health care physicians and nurse educators to better integrate health promotion and treatment;
   (b) developing multidisciplinary teams and evaluating new forms of workforce arrangements;
   (c) coordinating key stakeholders at the local and regional level; and
   (d) integrating private providers through accreditation mechanisms.

(3) Promote the quality of care through:

   (a) developing or adapting (existing) clinical guidelines and referral systems for noncommunicable disease; and
   (b) enhancing uptake or adoption of national standards by health care workers.
2.3.4 Systems of care

The following presentations were made:

1. China – Health for hypertensives
2. Fiji – Risk factor prevention strategies
3. Japan – Assessment of risk factors for diabetes and preventive interventions
4. Malaysia – Integrated management of CVD and diabetes (early detection and risk factor intervention)
5. New Zealand – Primary health care and noncommunicable diseases
6. Philippines – Botica ng Barangay (community-based drug outlets)
7. Singapore – Chronic disease management programme (also considered under patient-centred care below)
8. Viet Nam – Integrated, comprehensive and community-based model for noncommunicable diseases

Summary of discussion

To effectively prevent and manage long-term conditions, it is widely recognized that the design of health services and systems of care needs to be based on a different set of characteristics than those used for reactive, episodic and acute care. Most health care systems, whether in developed or developing countries, are not designed in this way.

Chronic disease control requires a systematic approach over time across the continuum of care, in which providers proactively manage risk as well as established disease, monitor results, and adjust treatment and advice accordingly, often in consultation with other health professionals. Long-term adherence to treatment and monitoring of various clinical parameters is critical, requiring active follow-up based on register, recall and reminder systems. Patients with chronic disease must themselves develop new skills, and learn to interact with health care organizations to successfully manage their conditions. There is strong evidence that where patients and their families are actively engaged in care, outcomes are significantly improved, and unnecessary health care utilization is reduced.

For all these elements to come into effect at the point of service delivery, many inputs across the various key building blocks of health systems must be aligned. For example:

1. Provider incentives must encourage the delivery of preventive care and evidence-based treatment (with implications for provider payment mechanisms).
2. Providers must have the necessary qualifications, skills and competencies in patient-centred care (with implications for workforce development and quality assurance).
(3) Providers must be supported with appropriate decision support tools such as clinical guidelines (with implications for evidence translation, dissemination, training, clinical governance, information systems).

(4) Patients should not face financial or other barriers when seeking preventive care or adhering to medication regimes (with implications for health insurance benefit coverage).

(5) The necessary drugs must be available, affordable and of acceptable quality (with implications for pharmaceutical policy, supply systems and regulation).

(6) Health services must be accessible, adequately staffed and managed to support quality care and patient-centred practice, with effective information, registration and recall systems (with implications for infrastructure and management development).

Many of these characteristics are described in the Innovative Care for Chronic Conditions Framework developed under the WHO Health Care for Chronic Conditions project (2002), and illustrated in the Chronic Care model (Figure 1).

**Figure 1 Chronic Care model**
In many cases, countries are starting to reorient their health services to incorporate aspects of the Chronic Care model. Examples provided included:

1. innovative financing mechanisms;
2. creation of multidisciplinary teams;
3. use of decision support tools;
4. quality improvement initiatives;
5. improving information systems and data quality;
6. promoting self-care; and
7. building links and networks across different levels of health system to improve integration.

To a certain extent, the stage of development of chronic care services reflected the level of economic development in the respective countries.

A number of countries demonstrated how they were using a focus on a single disease (for example, diabetes) or risk factor (for example, hypertension) to demonstrate the effectiveness of new systems of care, and as a starting point for more comprehensive, integrated approaches aimed at improving chronic disease prevention and management.
Participants noted that achieving more effective care and improving chronic disease outcomes required alignment among health system factors: for example, reducing financial barriers to care; funding models that support long-term patient–provider relationships; provider training and support; availability of affordable, safe drugs; and effective clinical information systems.

Several countries provided examples of models and initiatives aimed at supporting clinical preventive services and disease management with health promotion activities for patients and the wider community. Prevention and healthy lifestyles were seen as important across the continuum of care. Participants emphasized the need to foster support for healthy lifestyles and behaviours (e.g. in workplaces, neighbourhoods and food outlets; mass media), alongside improvements in clinical practice.

Countries reported many key success factors in their efforts to date. Some of these factors included:

(1) political commitment;
(2) leadership by the ministry of health;
(3) adequate resources;
(4) taking a system-wide approach, not creating a new chronic disease ‘silo’
(5) the importance of documentation and evidence of programmes and interventions;
(6) the use of good data and measurable indicators;
(7) appropriate health financing;
(8) reaching poor and underserved communities;
(9) building effective collaboration with key partners, e.g. universities, institutes and private sector, with clearly defined roles and responsibilities; and
(10) in several instances, WHO support.

Countries also reported on a variety of lessons learnt, including:

(1) Changing systems takes perseverance and time.
(2) It is important to have a long-term view and balance.
(3) Couple long-range goals such as sustainable, system improvement with short-term projects that demonstrate “quick wins”. For several countries, this meant rolling out initiatives in phases, but in the context of an overall strategy.
(4) Professional “buy in” for change can be difficult to achieve.
(5) Community and stakeholder involvement is important throughout the process of change.
(6) Informal networks can reduce the potential for new initiatives to be compromised or delayed through bureaucratic inertia
(7) Strengthening the primary health care system (including suitably trained staff, adequate resources, and availability of manuals, guidelines and standard operating procedures) is essential for effective chronic disease interventions.
and continuing care; but at the same time, measures aimed at improving chronic care can contribute to system strengthening.

(8) Low cost branded medicines *can* be made accessible and affordable.

Participants identified the following next steps and priorities:

(1) further investment in ensuring continuity of care along the care pathway, including introducing standards at each level of care;

(2) strengthening communication among providers, and between patients and providers through the use of e-mail, information technology and information management systems, where appropriate;

(3) introducing routine risk factor assessment and early detection of complications for patients in primary health care; use of “green” (or lifestyle) prescriptions to encourage behaviour change in those at risk;

(4) strengthening capacity at the primary care and district health centre level (includes improving facilities and equipment and enhancing skills of existing allied health personnel and generalist medical practitioners);

(5) establishing remuneration and incentive systems to reward providers who promote preventive models of care and long-term patient management;

(6) evaluation and monitoring of the impact of intensive versus standard interventions;

(7) enhancing data quality (e.g. cause of death registration) and health centre-based monitoring and documentation; and

(8) establishing national surveillance systems, including disease registries.

Key recommendations arising out of this session included the need for an ongoing mechanism for sharing evidence and best practice among countries, developing a regional repository for existing guidelines and protocols for chronic disease management; and supporting the development of approaches to assess overall risk in primary care as a basis for treatment options.

2.3.5 People-centred care

Presentations were made by New Zealand and Singapore.

Summary of discussion

Seven principles underpin the “people at the centre of care” approach: equity, engaging all stakeholders, promotion of empowerment, being evidence based including effectiveness, empathic, efficient and ethical.

Singapore has recently committed to ensuring that every citizen has a family physician and has developed a number of health system quality improvement mechanisms. New Zealand presented examples of institutional support for these principles, such as the establishment of a Health and Disability Commissioner, with powers to advocate for patients rights and quality improvement.
The discussion highlighted the communication failures that occur in many health systems, as well as the potential valuable resource that exists in individuals and families in managing their own health conditions. It was felt that some of the institutional response may be beyond the capacity of some countries; however, in all environments it was felt that there was the need to re-enforce a fundamental commitment to respecting people’s dignity and their human rights.

2.4 Site visits

2.4.1 Health Promotion Board Health Zone

This one-stop healthy lifestyles exhibition centre comprises a permanent exhibition and four multimedia classrooms known as health features. It also hosts a mini-theatre and a campaign centre. Through visual displays and life-sized models, it educates visitors of all ages in the importance of good health, with an emphasis on nutrition, exercise, stress management and smoking cessation. It is an impressive educational initiative, but its applicability to resource-constrained settings may be limited. More information is available at http://www.hpb.gov.sg/hpb/default/.

2.4.2 St. Luke’s Hospital

St. Luke's Hospital is a private, not-for-profit community hospital that serves a target population of people over the age of 40 years. Its focus is on noncommunicable disease, particularly rehabilitation. It has considerable rehabilitation capacity for conditions relevant to the elderly, e.g. leg ulcers, post-stroke, depression, diabetes, and dementia. St. Luke’s was founded 11 years ago and has a Christian affiliation. It is registered in Singapore as a voluntary welfare organization. The 185-bed hospital has an occupancy rate of around 85%. It accepts patients who are referred from tertiary or higher-level facilities and also refers patients to such facilities.

The facility was well designed with an open ward concept. Fees charged to patients were based on the size of the ward. Those who could not pay were referred for possible charity payment. The funding for the facility was a mixed source of user fees, charitable donations, and support through insurance, both private and government. The system is complex but seems to be manageable in the Singapore context.

2.4.3 Bukit Batok Polyclinic

Bukit Batok Polyclinic is one of 16 large polyclinics that are part of the public health care system in Singapore. Polyclinics are managed by two primary health organizations, the National Health Care Group Polyclinics and SingHealth Polyclinics. Two organizations are used to create healthy competition and to create a provider–payer split to enhance efficiency. Polyclinics employ about 12% of the primary health care providers in Singapore and care for about 22% of the primary care visits, with the remainder being provided mainly through private practitioners. Services provided by
Polyclinics are not free but are highly subsidized. A full range of outpatient services, including laboratory services, is available. The breakdown for subsidy is 75% for children and the elderly, 50% for adult citizens, 25% for permanent residents, and 0% for foreigners. Means testing is not done.

A typical polyclinic has about 10–15 doctors and 25–30 nurses who see about 600–700 patients a day, resulting in a rapid throughput of one patient every 6–10 minutes. The principles of patient-centred care are set as goals, but there is a balance with what is affordable, cost-effective, and necessary to meet the workload. There is the beginning of a computerized records system with laboratory and radiology information, and an innovative introduction of tele-radiology, which has decreased response time greatly. Polyclinics are stressed by the increase in noncommunicable diseases. In many ways, polyclinics provide the floor of a universal health care system for those who cannot afford private care. Polyclinics are able to provide good services to all by setting limits for the fees that private practitioners can charge. Again, this is a system that seems unique to Singapore.

3. CONCLUSIONS

The main conclusions of the workshop were as follows:

3.1 General

3.1.1 There was broad agreement among participants that the meeting objectives outlined in the introduction (Section 1.1) had been met.

3.1.2 The Rapporteur’s summary of the meeting noted that the presentations and discussions underpinned the importance of developing an effective health system response to chronic disease. The presentations showed that improving chronic disease prevention and control would substantially help achieve health system goals, especially for the poor. It was concluded that action on chronic disease would:

(1) greatly improve overall health status:
   (a) deaths from chronic diseases will increase by 20% in the next 10 years; infectious disease deaths will increase by only 1%;
   (b) chronic disease causes 60% of all deaths worldwide;
   (c) chronic disease affects the poor: 80% of all chronic disease related deaths occur in low- and middle-income countries;

(2) increase fair financing and financial risk protection:
   (a) interventions must reduce the cost of drugs, which is the major cost in chronic diseases (multidrug regimens and continued use);
(b) chronic disease impacts on costs to individual (out of pocket), to the health service (focus on acute care), or to society (productivity);
(c) chronic disease increases financial risk for the poor;

(3) enhance responsiveness:
   (a) patient-centred care, patients' rights and patient empowerment become more relevant with chronic diseases that require extensive self-management, team approach, and extended management and interaction with the health system;

(4) improve efficiency:
   (a) chronic disease causes significant economic costs, both direct (health care) and indirect (lost productivity); and
   (b) increased investment on interventions on prevention, primary care, and integrated team care will reduce current costs focused on acute care.

3.1.3 An important conclusion of the meeting was the realization of the critical role of a people-centred approach by the health system to deliver effective chronic disease prevention and control. The WHO Regional Office for the Western Pacific will officially launch a policy and ‘popular’ version of this approach in late November in Japan, supporting the policy framework that was endorsed by the Regional Committee (WR/RC58.R4) at its fifty-eighth session in the Republic of Korea in September 2008.

3.2 Key strategies

Presentations and discussions highlighted some of the key strategies needed across the six “building blocks” of the WHO Health System Strengthening Strategy to improve chronic disease prevention and control, as outlined below.

3.2.1 Stewardship

(1) A regional strategy on improving health system outcomes, particularly for the poor, is needed to help align country plans and donor assistance to chronic disease prevention and control.

(2) Private providers and industries must be linked to broader population health service developments through accreditation, certification, quality assurance, and other mechanisms.

(3) Chronic disease control strategies and goals, service design, packages of care and practice guidelines can function as standards and targets for providers in the public and private sector.

(4) Interventions must consider political and social processes and cultural norms in order to become sustainable.
3.2.2  Financing

(1) Appropriate financing mechanisms are needed for chronic disease management to reduce financial burden on individuals and to health systems.

(2) Payment mechanism or results-based financing can influence provider behaviour and change local health system quality; it can incentivize preventive and continuing care for chronic diseases.

(3) National plans can help manage fragmentation and other complexities of current aid, national funding, global partnerships and private donors, and the need for long-term relationships with funding agents for chronic diseases.

3.2.3  Health workforce

(1) Training for chronic disease management can be facilitated with systematic and structured curricula using a team approach to training, integration with other training, and outsourcing to academia or training institutions.

(2) Incentives should link work to results desired (i.e. there could be some elements of “pay for performance”, e.g. blood pressure targets for nurses).

(3) Skill mix must focus on increasing the number and skills of generalists, and better referral systems. Roles of allied health professionals, nurse practitioners and volunteers must be defined as they play a critical part in chronic disease management.

3.2.4  Service delivery

(1) An integrated and comprehensive approach requires good information systems, ideally electronic and based on common IT platforms.

(2) A focus on both primary care and primary prevention is necessary, including a consistent approach to risk factor targets and interventions; tobacco cessation in clinical practice is a priority.

(3) Support for self-management (e.g. incentives for healthy lifestyle; emphasizing health literacy and patient information) and the adoption of patient-centred care practices and attitudes are very important.

(4) Performance targets and measures of distribution or fairness of performance should be required.

3.2.5  Medicines
(1) Improvements should be made to the rational use of medicines, drug quality, assessment and drug financing.

(2) Drug costs could be lowered through the use of cheaper generic drugs, drug benefits, segmenting subsidies to drugs, and other mechanisms.

(3) Drug interaction studies and health technology assessments are needed.

3.2.6 Health information

(1) Links with private sector data and information sharing must be established.

(2) Information needs to be coherent and unified; surveillance and monitoring systems are required.

(3) An allied health workforce could enter information such as blood pressure, height and weight in a health service database.

3.2.7 The meeting indicated that participants have been or would be actively pursuing, to varying degrees, many aspects of the eight essential elements for action proposed by WHO under the Integrated Care for Chronic Conditions programme, which can be summarized as follows:

(1) Build support for new approach from acute to chronic care.
(2) Engage and work with the political environment.
(3) Build integrated health care.
(4) Align sectoral policies for health.
(5) Use health care personnel more effectively.
(6) Centre care on the patient and family.
(7) Support patients in their communities.
(8) Emphasize prevention.

3.2.8 In addition, it was proposed that consideration needed to be given to the physical structure of health services, and to the role of individual responsibility, in preventing and managing chronic disease.

3.3 Next steps

Based on the above and discussions on the final day, a number of conclusions and recommendations for further action were proposed and agreed.

3.3.1 For Member States the suggested actions – as appropriate to each country’s context and situation – were as follows:

(1) Implement national strategies to prevent and control risk factors for chronic disease, based on global and/or regional initiatives agreed by Member States, including the Global Strategy on Diet, Physical Activity and Health, the WHO
Framework Convention on Tobacco Control, and the Western Pacific Regional Strategy to Reduce Alcohol-Related Harm.

(2) Assess strengths, weaknesses and opportunities for strengthening health systems for chronic diseases across the six health system building blocks.

(3) Build or strengthen initiatives that support development of leadership capacity for chronic disease reforms at all levels of the health system.

(4) Review and/or update national strategies to develop health workforce capacity in chronic disease, including reviewing and updating existing training curricula for primary health care workers, with a special emphasis on needs of underserved areas and populations.

(5) Review fees and charges by hospitals and other health services (including drug pricing information) to ensure they do not act as financial barriers to care for chronic disease.

(6) Review and assess existing policies, education and training curricula and methods, services and interventions in light of People-Centred Health Care: A Policy Framework, taking account of relevance and applicability, including cultural factors, in the local context.

(7) Establish and improve chronic disease surveillance and monitoring infrastructure and/or systems, building on existing surveys where possible.

(8) Consider developing a personal health record, if one does not exist, as part of strengthening clinical information systems.

3.3.2 It was also proposed that bilateral and trilateral partnerships between countries with common interests should be formed to share information on experiences and best practices. Areas suggested for consideration included:

(1) social health insurance and how best to include the poor (possible partners: Philippines and Viet Nam);

(2) drugs: how to decrease costs for low-income groups (possible partners: China and the Philippines);

(3) establishment, operations and potential benefits (and risks) of health promotion foundations and earmarked funds for NCD prevention (possible partners: Singapore, Fiji and Samoa).

3.3.3 Participants expressed a strong view that regional leadership was needed to assist countries to make further progress. Since Member States look to WHO for guidance and support, participants urged WHO to consider the following assistance:
(1) Develop a regional framework for health systems strengthening and noncommunicable diseases suitable for adaptation by countries, building on the Chronic Care model and similar concepts; the WHO framework for action in health systems, *Everybody's Business: Strengthening Health Outcomes to Achieve Better Health Outcomes*; and the current strategies for, and approach to, health system development and NCD prevention and control in the Region.

(2) Facilitate sharing of information – global, regional and national – on all aspects of health systems strengthening and consider development of on-going mechanism for sharing evidence and best practice (possibly drawing on the experience of the European Observatory on Health Systems and Policies).

(3) Develop a repository and dissemination mechanism for clinical guidelines, standards and protocols for chronic diseases to help all countries and areas avoid having to “reinvent the wheel” in this regard, as far as possible.

(4) Provide advice to countries regarding methodologies (e.g. burden of disease studies) for establishing priorities for action (diseases, risk factors, population groups) and develop costed and evidence-based intervention packages for priority chronic conditions and their risk factors.

(5) Explore opportunities for creative engagement with the private sector, consistent with the objectives of global and regional health strategies (with due regard to avoidance of conflict of interest), in order to facilitate collaborative activities at the country level.

(6) Support the development of stronger and more accessible health economic analysis capacity (e.g. cost-effectiveness studies, modelling of intervention costs and benefits) to assist in advocacy and decision-making in the Western Pacific Region, including development and dissemination of standardized methods, possibly through a WHO collaborating centre.

(7) Support a systematic and strategic approach to development of behaviour change studies relevant to different cultures in the Region, and strengthen capacity for behaviour change communication (e.g. through short courses, distance learning programmes).

(8) Develop a regional NCD and health systems change leadership programme, to support country-level leadership development initiatives, building on examples such as ProLead and the breakthrough collaborative programme developed by the United States Center for Health Improvement.

(9) Widely disseminate *People-Centred Health Care: A Policy Framework* and supporting materials.
ANNEX 1

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ANNEX 2

PROVISIONAL AGENDA

1. Opening
2. Introduction of participants
3. Election of officers
4. Adoption of the agenda
5. Introduction to the meeting
6. Setting the scene
   6.1 Impact of changing patterns of disease on health systems
   6.2 Chronic disease situation, trends and implications
   6.3 Health systems development in response to chronic diseases
7. Response to the chronic disease challenge
   7.1 Comparative study on health systems and chronic disease in developed countries: the European experience
   7.2 Update on the health systems response to chronic diseases in selected countries in the Region
8. Country case studies
   8.1 Stewardship (leadership and governance)
   8.2 Financing
   8.3 Health workforce
   8.4 Systems of care: organization and delivery of a continuum of care for chronic disease (including health promotion and disease prevention)
   8.5 Patient empowerment and people-centred care
9. Identification of critical elements for improved chronic disease prevention and control
10. Priorities for action and next steps
11. Conclusions and recommendations
12. Closing
## TENTATIVE TIMETABLE

<table>
<thead>
<tr>
<th>Time</th>
<th>Sunday, 4 November</th>
<th>Monday, 5 November</th>
<th>Tuesday, 6 November</th>
<th>Wednesday, 7 November</th>
</tr>
</thead>
</table>
| 08:30 to 10:15        | Registration (08:00) | 1. Opening (08:30 - 9:30)  
Opening address - Minister of State for Health  
Keynote speech by Regional Director, WHO  
Performance and relaxation workout  
Group photo | Continuation of discussion and review of day 1  
8.3 Health workforce  
Malaysia, Philippines | Field visit |
| 10:15 to 10:30        | Coffee Break       | 2. Introduction of participants (10:00)  
3. Election of officers  
4. Adoption of agenda  
5. Introduction to the meeting  
6. Setting the scene - presentations  
6.1 Impact of changing patterns of disease on health systems (Colin Sindall)  
6.2 Chronic disease situation, trends and implications (Robert Beaglehole)  
6.3 Health systems development in response to chronic diseases (Dean Shuey) | 8.4 Systems of care: organization and delivery of a continuum of care for chronic disease (including health promotion and disease prevention)  
Malaysia, New Zealand, China, Fiji, Japan, Philippines, Viet Nam | Field visit |
| 10:30 to 12:30        | Lunch Break        | 7. Response to the chronic disease challenge  
7.1 Comparative study on health systems and chronic disease in developed countries (Ellen Nolte)  
7.2 Update on the health systems response to chronic diseases in selected countries in the Region (Robert Beaglehole) | 8.5 Patient empowerment and people-centred care  
Singapore, New Zealand | 10. Priorities for action and next steps  
Group session: Observations on the field and review of meeting  
Finalization of key elements of success and priorities for action  
Response from Partners: World Diabetes Foundation |
| 12:30 to 13:30        | Lunch Break        | 8. Country case studies  
8.1 Stewardship (leadership and governance)  
Japan, Samoa, Fiji, Mongolia, Philippines | Group session: discussion and review and Identification of critical elements in systems of care  
8.2 Financing  
Philippines, Fiji | 11. Conclusions and recommendations  
12. Closing |
| 13:30 to 15:30        | Coffee Break       | 8.1 Stewardship (continuation)  
8.2 Financing  
Philippines, Fiji | Group Session: discussion and review and Identification of critical elements in patient empowerment  
9. Summary of identified critical health systems elements for improved chronic disease prevention and control  
Group Session: discussion and review of day 2  
Introduction to field visit (Singapore National Healthcare Group) | |
| 15:30 to 15:45        | Pre-registration (3:00 – 6:00 pm) | 8.1 Stewardship (continuation)  
8.2 Financing  
Philippines, Fiji | Group Session: discussion and review and Identification of critical elements in patient empowerment  
9. Summary of identified critical health systems elements for improved chronic disease prevention and control  
Group Session: discussion and review of day 2  
Introduction to field visit (Singapore National Healthcare Group) | 11. Conclusions and recommendations  
12. Closing |
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>18:30 onwards</td>
<td>Welcome Dinner /Cocktails</td>
<td>The Jewel Box, 109 Mount Faber Road</td>
</tr>
<tr>
<td></td>
<td>Visit to Health Promotion Board Health Zone</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DINNER</td>
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</tbody>
</table>
Health systems actions to prevent chronic disease in 10 Western Pacific countries

Overview

Introduction

This brief report summarizes the background, methods and key findings of an assessment made in October 2007 of the state of health systems as they relate to chronic diseases in ten selected countries.

Contents

This publication contains the following topics:

<table>
<thead>
<tr>
<th>Topic</th>
<th>See Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction, preparation and aims</td>
<td>35</td>
</tr>
<tr>
<td>Methods</td>
<td>36</td>
</tr>
<tr>
<td>Findings</td>
<td>37</td>
</tr>
<tr>
<td>Success factors, barriers and challenges</td>
<td>39</td>
</tr>
<tr>
<td>Conclusions</td>
<td>39</td>
</tr>
<tr>
<td>Tables 1-2</td>
<td>41</td>
</tr>
<tr>
<td>Tables 3-4</td>
<td>42</td>
</tr>
<tr>
<td>Tables 5-6</td>
<td>43</td>
</tr>
<tr>
<td>Tables 7-8</td>
<td>44</td>
</tr>
<tr>
<td>Tables 9-10</td>
<td>45</td>
</tr>
</tbody>
</table>
Introduction

Background

The background and justification for this study include the following:

- The burden of chronic (noncommunicable disease) has increased rapidly in the Western Pacific, and is projected to increase further, placing enormous pressures on communities, households, health services and national health budgets;

- There is only limited information available on steps taken by countries, especially low- and middle-countries, to integrate their response to the chronic disease epidemics more fully into their health systems.

Preparation for Singapore meeting

A meeting on *Strengthening health systems to improve chronic disease prevention and control*, was held in Singapore, November 3-7, 2007.

Preparation for the meeting included the following:

- Development and testing of a structured questionnaire;
- Collection of information from 10 participating countries on the current status of their health system efforts to respond to the challenges of chronic disease

Aims

The study which forms the basis of this report had two main aims:

- to review the current status, evidence and regional best practices in health systems building blocks that are being used to improve chronic disease outcomes; and

- to identify major barriers and critical success factors in the implementation of successful health policies and interventions to address chronic disease across the continuum of care

Sources of Information

The sources for the study were based on the following WHO documents:

- *Strengthening health systems to improve health outcomes. WHO’s framework for action. (July, 2007)* and
- A modified set of indicators relating to chronic disease prevention and control progress based on Annex 7 of the draft discussion paper *Making Health Systems Work for Chronic Disease, WHO, WPRO, (December, 2006)*
Methods

Methods Building Blocks

The study focused on the following six health systems building blocks:

• Stewardship (leadership and governance),
• financing,
• health workforce,
• information and evidence,
• medicines, and
• systems of care.

Different levels of action

The indicators were classified into three different levels of complexity:

• core,
• expanded,
• optimal.

For the purposes of the meeting and this report, the focus was on the core and expanded indicators.

Participating countries

The participating countries were as follows:

<table>
<thead>
<tr>
<th>Country</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>Mongolia</td>
</tr>
<tr>
<td>Japan</td>
<td>Philippines</td>
</tr>
<tr>
<td>Fiji</td>
<td>Samoa</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Singapore</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Vietnam</td>
</tr>
</tbody>
</table>

Process for gathering information

The process for obtaining information on current approaches to chronic disease prevention and control and its degree of integration into existing health systems was assessed in the following way:

• Current activities were mapped against a template to gather data in a comprehensive and stepwise manner.
• A questionnaire was developed, tested in one country, and then provided in a user-friendly electronic format to meeting participants to complete.
• One participant from each country was identified as the “key informant” for the purposes of coordinating the country information.
• All participants were contacted through the WHO Country Representative – where applicable.
• Information provided from the countries was reviewed for completeness and consistency and summary tables produced.
• Further information was collected directly from participants at the meeting.
Findings

**Highlights**

Highlights of the results are shown according to each of the 6 building blocks assessed.

**Stewardship**

- A published government mandate for chronic disease prevention was available in 7 countries;
- The process of preparing this mandate was underway in the other three (Table 1).
- All ten countries have ratified the WHO Framework Convention on Tobacco Control
- Seven countries have enacted national legislation consistent with the FCTC.
- Over half the countries have developed a national coordinating mechanism for the implementation of diet and physical activity programmes consistent with the WHO Global Strategy on Diet, Physical Activity, and Health.

**Expanded indicators**

Progress towards the expanded indicators is shown in (Tables 2 and 3). In brief, progress was mixed:

- Some progress was reported on diet and physical activity guidelines,
- Little has been done in the region to restrict the exposure of children to advertising and marketing of products high in fat, salt and sugar, and
- Physical activity programmes are often limited to children.

**Financing**

Key findings in the area of financing included the following:

- Five countries have funding for chronic disease prevention as a line item in national budgets; however, an equal number do not have such dedicated funds (Table 4).
- Regular, increases in tobacco taxes, the most powerful tobacco control measure, are still under utilised in the countries and
- Only two have any earmarking of these funds for prevention programmes.
- Out of pocket funding for primary health care for chronic disease prevention activities remains an important issue in three countries.
## Findings

### Workforce training

Overall finding with regard to health workforce training:

- The health workforce receives at least some basic training in chronic disease prevention
- In most countries primary health care workers generally receive some training from specialists (Table 5).

### Information and evidence

Information and evidence for measuring chronic diseases has had some successes in the region:

- The implementation of risk factor surveys, especially for tobacco consumption, and often based on the STEPS surveillance system (Table 6), was a feature in most countries
- However, risk factor surveillance systems are still required in most countries and the translation of data into policy remains a challenge (Table 7).

### Medicines

Key finding for the medicines indicators included the following:

- First and second line drugs for chronic disease are not affordable for the majority of the population in four countries (Table 8).
- The modern management of high risk patients based on assessment of overall risk status, as opposed to arbitrary risk factor cut points, is not yet the norm in these countries.

### Systems of care

Systems of care were variable:

- Tobacco cessation in the context of routine clinical encounters is still not fully utilised in the majority of countries (Table 9).
- At least basic information on risk factors is provided to patients in almost all countries and
- Progress is being made on the development of integrated teams at the primary health care level.
- Staff training for secondary prevention still requires further emphasis and the provision of general information for patients is still uneven in most countries (Table 10).
Successes, barriers and challenges

Success factors

The major success factors in strengthening health systems for chronic diseases were identified as follows:

- Political support, MOH leadership, legislation
- Community awareness
- Local data, clear goals and priorities
- Strong organizations, including NGOs
- Support from health professionals, academic links
- Free services, supportive health insurance systems
- Donor support, technical assistance

Barriers and challenges

Major barriers existed and represented the challenges to be overcome:

- Lack of government engagement
- Low government health care spending, high out of pocket expenses
- High cost of drugs, lack of generics
- Professional attitudes, high workloads, distribution, lack of CE
- Vertical programs
- Lack of data
- Private sector engagement (e.g. in tobacco)

CONCLUSIONS

Conclusions

Wide ranging discussion indicated that health system strengthening for chronic diseases remains a major issue in WPR countries. Although considerable progress has been made, the following were highlighted:

- Some core actions are still required e.g. Government leadership, tobacco cessation programmes
- Many best practices examples exist
- Major barriers and challenges remain
- A strong ongoing WHO leadership role is required.
### Tables

#### Table 1
**Stewardship: Core indicators**

<table>
<thead>
<tr>
<th>Country</th>
<th>Government mandate</th>
<th>Tobacco control legislation</th>
<th>National dietary and PA coordination</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>In process</td>
<td>Enacted</td>
<td>In process</td>
</tr>
<tr>
<td>Fiji</td>
<td>Pub’d with goals</td>
<td>FCTC implement’n</td>
<td>Comprehensive policy</td>
</tr>
<tr>
<td>Japan</td>
<td>Pub’d with goals</td>
<td>Enacted</td>
<td>Comprehensive, policy</td>
</tr>
<tr>
<td>Malaysia</td>
<td>In process</td>
<td>FCTC implement’n</td>
<td>In process</td>
</tr>
<tr>
<td>Mongolia</td>
<td>Pub’d with goals</td>
<td>FCTC implement’n</td>
<td>In process</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Pub’d with goals</td>
<td>FCTC implement’n</td>
<td>Comprehensive, policy</td>
</tr>
<tr>
<td>Philippines</td>
<td>Pub’d with goals</td>
<td>FCTC implement’n</td>
<td>Comprehensive, policy</td>
</tr>
<tr>
<td>Samoa</td>
<td>In process</td>
<td>Not yet adopted</td>
<td>In process</td>
</tr>
<tr>
<td>Singapore</td>
<td>Pub’d with goals</td>
<td>FCTC implement’n</td>
<td>Comprehensive, policy</td>
</tr>
<tr>
<td>Vietnam</td>
<td>Pub’d with goals</td>
<td>FCTC implement’n</td>
<td>In process</td>
</tr>
</tbody>
</table>

#### Table 2
**Stewardship: Expanded indicators**

<table>
<thead>
<tr>
<th>Country</th>
<th>Diet Guidelines</th>
<th>Physical Activity (PA) Guidelines</th>
<th>Advertising /PA restrictions; PA Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>Implemented</td>
<td>Implemented</td>
<td>None Implemented</td>
</tr>
<tr>
<td>Fiji</td>
<td>Established</td>
<td>Established</td>
<td>None Limited to children</td>
</tr>
<tr>
<td>Japan</td>
<td>Implemented</td>
<td>Implemented</td>
<td>None Implemented</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Implemented</td>
<td>Established</td>
<td>Some limits Limited to children</td>
</tr>
<tr>
<td>Mongolia</td>
<td>Implemented</td>
<td>In process</td>
<td>None Limited to children</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Implemented</td>
<td>Established</td>
<td>Self-regulatory Implemented</td>
</tr>
<tr>
<td>Philippines</td>
<td>Implemented</td>
<td>Implemented</td>
<td>Some limits Implemented</td>
</tr>
<tr>
<td>Samoa</td>
<td>In process</td>
<td>In process</td>
<td>None Implemented</td>
</tr>
<tr>
<td>Singapore</td>
<td>In process</td>
<td>Established</td>
<td>? None Implemented</td>
</tr>
<tr>
<td>Vietnam</td>
<td>In process</td>
<td>No plan</td>
<td>None</td>
</tr>
</tbody>
</table>
### Table 3
#### Stewardship: Expanded indicators cont’d

<table>
<thead>
<tr>
<th>Country</th>
<th>Coordination</th>
<th>Advocacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>Some progress</td>
<td>Advanced</td>
</tr>
<tr>
<td>Fiji</td>
<td>Operational</td>
<td>Advanced</td>
</tr>
<tr>
<td>Japan</td>
<td>Operational</td>
<td>Advanced</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Operational</td>
<td>Advanced</td>
</tr>
<tr>
<td>Mongolia</td>
<td>Operational</td>
<td>In process</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Operational</td>
<td>Well advanced</td>
</tr>
<tr>
<td>Philippines</td>
<td>Operational</td>
<td>In process</td>
</tr>
<tr>
<td>Samoa</td>
<td>Some progress</td>
<td>None</td>
</tr>
<tr>
<td>Singapore</td>
<td>Some progress</td>
<td>Advanced</td>
</tr>
<tr>
<td>Vietnam</td>
<td>Some progress</td>
<td>In process</td>
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</table>

### Table 4
#### Financing: Core and Expanded indicators

<table>
<thead>
<tr>
<th>Country</th>
<th>CORE NCD Budget</th>
<th>CORE Tobacco Taxes</th>
<th>EXPANDED Health Financing PHC</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>Line item</td>
<td>?</td>
<td>Govt pay some 28-60%</td>
</tr>
<tr>
<td>Fiji</td>
<td>Some funds</td>
<td>Regular increases</td>
<td>?PHC out of pocket</td>
</tr>
<tr>
<td>Japan</td>
<td>Line item</td>
<td>?</td>
<td>Govt &amp; Insur. pay PHC</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Some funds</td>
<td>Regular increases</td>
<td>Govt &amp; Insur. pay PHC</td>
</tr>
<tr>
<td>Mongolia</td>
<td>Line item for 5 years</td>
<td>Regular increases, earmarking</td>
<td>Govt pays for PHC</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Substantial funds</td>
<td>Annual increase CPI</td>
<td>Govt pays bulk</td>
</tr>
<tr>
<td>Philippines</td>
<td>Line item 2008</td>
<td>Reg. increases; some earmarking</td>
<td>Out of Pocket 44%; govt 34%; Insur. 10%</td>
</tr>
<tr>
<td>Samoa</td>
<td>Some funds</td>
<td>Irregular increases</td>
<td>Govt &amp; Insur. pay PHC</td>
</tr>
<tr>
<td>Singapore</td>
<td>Line item</td>
<td>Regular increases</td>
<td>Govt &amp; Insur. pay PHC</td>
</tr>
<tr>
<td>Vietnam</td>
<td>Insignificant funds</td>
<td>No $ tobacco co. programmes</td>
<td>Govt/Ins pay some PHC</td>
</tr>
</tbody>
</table>
### Table 5
#### Workforce: Core and expanded indicators

<table>
<thead>
<tr>
<th>Country</th>
<th>CORE Training in prevention &amp; control</th>
<th>EXPANDED PHC workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>Some provided</td>
<td>Some basic tr’g by specialists</td>
</tr>
<tr>
<td>Fiji</td>
<td>Major part of basic education</td>
<td>Some basic tr’g by specialists</td>
</tr>
<tr>
<td>Japan</td>
<td>Some provided</td>
<td>Some basic tr’g by specialists</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Major part of basic education</td>
<td>$ for capacity bldg for 5 years</td>
</tr>
<tr>
<td>Mongolia</td>
<td>Major part of basic education</td>
<td>Some training by specialists</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Some provided</td>
<td>Some training by specialists</td>
</tr>
<tr>
<td>Philippines</td>
<td>Major part of basic education</td>
<td>Some basic tr’g by specialists</td>
</tr>
<tr>
<td>Samoa</td>
<td>Major part of basic education</td>
<td>Some training by specialists</td>
</tr>
<tr>
<td>Singapore</td>
<td>Major part of basic education</td>
<td>CME for GPs, clinic staff</td>
</tr>
<tr>
<td>Vietnam</td>
<td>Limited</td>
<td>Some basic tr’g by specialists</td>
</tr>
</tbody>
</table>

### Table 6
#### Information and Evidence: Core indicators

<table>
<thead>
<tr>
<th>Country</th>
<th>National RF data</th>
<th>Patient registers</th>
<th>Share information</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>Regular surveys</td>
<td>Some computerised</td>
<td>Occasional</td>
</tr>
<tr>
<td>Fiji</td>
<td>One survey</td>
<td>Paper records</td>
<td>Routine</td>
</tr>
<tr>
<td>Japan</td>
<td>Regular surveys</td>
<td>Some computerised</td>
<td>Occasional (privacy)</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Regular surveys</td>
<td>Paper records</td>
<td>Routine</td>
</tr>
<tr>
<td>Mongolia</td>
<td>One survey</td>
<td>Paper records</td>
<td>Routine</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Regular surveys</td>
<td>Computerised</td>
<td>Occasional</td>
</tr>
<tr>
<td>Philippines</td>
<td>Regular surveys</td>
<td>Paper records</td>
<td>Occasional</td>
</tr>
<tr>
<td>Samoa</td>
<td>STEPS 1st round</td>
<td>Paper records</td>
<td>Routine</td>
</tr>
<tr>
<td>Singapore</td>
<td>Regular surveys</td>
<td>Computerised</td>
<td>Routine</td>
</tr>
<tr>
<td>Vietnam</td>
<td>One survey</td>
<td>Paper records</td>
<td>None</td>
</tr>
</tbody>
</table>
### Table 7

Information and Evidence: Expanded indicators

<table>
<thead>
<tr>
<th>Country</th>
<th>Data used for policy</th>
<th>Tobacco data</th>
<th>Clinical Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>Development</td>
<td>Surveys, GYTS</td>
<td>Some prepared</td>
</tr>
<tr>
<td>Fiji</td>
<td>Development</td>
<td>STEPS, GYTS</td>
<td>Some prepared</td>
</tr>
<tr>
<td>Japan</td>
<td>Monitoring</td>
<td>Research data</td>
<td>Integrated</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Development</td>
<td>STEPS, GYTS</td>
<td>Integrated</td>
</tr>
<tr>
<td>Mongolia</td>
<td>Development</td>
<td>STEPS, GYTS</td>
<td>Some prepared</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Monitoring</td>
<td>Adult and youth</td>
<td>Integrated, diab/CVD</td>
</tr>
<tr>
<td>Philippines</td>
<td>Devel’t/monitoring</td>
<td>STEPS etc, GYTS</td>
<td>Some prepared</td>
</tr>
<tr>
<td>Samoa</td>
<td>Development</td>
<td>STEPS, GYTS</td>
<td>Few prepared</td>
</tr>
<tr>
<td>Singapore</td>
<td>Monitoring</td>
<td>GYTS etc</td>
<td>Integrated</td>
</tr>
<tr>
<td>Vietnam</td>
<td>Available</td>
<td>STEPS, GYTS</td>
<td>Some prepared</td>
</tr>
</tbody>
</table>

### Table 8

Medicines: Core and Expanded indicators

<table>
<thead>
<tr>
<th>Country</th>
<th>CORE First line drugs</th>
<th>EXPANDED Second line drugs</th>
<th>EXPANDED Management RF+NCD</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>Affordable (urban)</td>
<td>Affordable (urban)</td>
<td>Arbitrary cutpoints</td>
</tr>
<tr>
<td>Fiji</td>
<td>Affordable</td>
<td>Affordable</td>
<td>Overall risk</td>
</tr>
<tr>
<td>Japan</td>
<td>Affordable</td>
<td>Affordable</td>
<td>Arbitrary cutpoints</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Affordable</td>
<td>Affordable</td>
<td>Overall risk</td>
</tr>
<tr>
<td>Mongolia</td>
<td>Not affordable</td>
<td>Not affordable</td>
<td>Arbitrary cutpoints</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Affordable</td>
<td>Affordable</td>
<td>Overall risk</td>
</tr>
<tr>
<td>Philippines</td>
<td>Not affordable</td>
<td>Not affordable</td>
<td>Arbitrary cutpoints</td>
</tr>
<tr>
<td>Samoa</td>
<td>Affordable</td>
<td>Affordable</td>
<td>Diabetes/hypertension</td>
</tr>
<tr>
<td>Singapore</td>
<td>Affordable</td>
<td>Affordable</td>
<td>Overall risk</td>
</tr>
<tr>
<td>Vietnam</td>
<td>Not affordable</td>
<td>Not affordable</td>
<td>Arbitrary cutpoints</td>
</tr>
</tbody>
</table>
Table 9
Systems of Care: Core Indicators

<table>
<thead>
<tr>
<th>Country</th>
<th>Primary prevention, tobacco control</th>
<th>Risk factor control</th>
<th>Organization of PHC</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>Assessment</td>
<td>Basic info-RF</td>
<td>Some integrated teams</td>
</tr>
<tr>
<td>Fiji</td>
<td>No emphasis</td>
<td>Basic info-RF</td>
<td>Teams, but not active</td>
</tr>
<tr>
<td>Japan</td>
<td>Tobacco cessation</td>
<td>Comprehensive</td>
<td>Some integrated teams</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Tobacco cessation</td>
<td>Comprehensive</td>
<td>Some integrated teams</td>
</tr>
<tr>
<td>Mongolia</td>
<td>No emphasis</td>
<td>Info on RF</td>
<td>Some integrated teams</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Tobacco cessation</td>
<td>Info on RF</td>
<td>Some integrated teams</td>
</tr>
<tr>
<td>Philippines</td>
<td>Assessment, counselling</td>
<td>Info on RF,CD</td>
<td>Some integrated teams</td>
</tr>
<tr>
<td>Samoa</td>
<td>No emphasis</td>
<td>Not routine</td>
<td>Some integrated teams</td>
</tr>
<tr>
<td>Singapore</td>
<td>Tobacco cessation</td>
<td>Comprehensive</td>
<td>Teams established</td>
</tr>
<tr>
<td>Vietnam</td>
<td>No emphasis</td>
<td>Basic info-RF</td>
<td>No teams</td>
</tr>
</tbody>
</table>

Table 10
Systems of care: Expanded Indicators

<table>
<thead>
<tr>
<th>Country</th>
<th>Secondary prevent, staff training</th>
<th>Information for patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>Some</td>
<td>Some comprehensive program</td>
</tr>
<tr>
<td>Fiji</td>
<td>Some</td>
<td>Patient info</td>
</tr>
<tr>
<td>Japan</td>
<td>Routine</td>
<td>Patient info, skills workshops</td>
</tr>
<tr>
<td>Malaysia</td>
<td></td>
<td>Patient info, skills workshops</td>
</tr>
<tr>
<td>Mongolia</td>
<td>Some</td>
<td>Patient info</td>
</tr>
<tr>
<td>New Zealand</td>
<td>Some</td>
<td>Patient info</td>
</tr>
<tr>
<td>Philippines</td>
<td>Some</td>
<td>Patient info</td>
</tr>
<tr>
<td>Samoa</td>
<td>Some</td>
<td>Verbal info</td>
</tr>
<tr>
<td>Singapore</td>
<td>Routine</td>
<td>Patient info, skills workshops</td>
</tr>
<tr>
<td>Vietnam</td>
<td>Demonstration sites</td>
<td>Occasional</td>
</tr>
</tbody>
</table>
Strengthening health systems for the prevention and control of chronic noncommunicable diseases

(Figure from Making Health Systems Work for Chronic Disease, WHO WPRO, December, 2006)
Background information and instructions for completing questionnaires

Background source material
The background, purpose, aims and methods of the case studies to map current health system activities in the area of chronic NCDs, are described in the attached paper *Strengthening health systems to improve chronic disease prevention and control: WHO Western Pacific Region case studies.*

Layout of this document
There are three sections in this document as follows:

- Information about case studies and instructions for completion (pp2-4)
- Questionnaire 1: mapping the 6 Health Systems Building Blocks against their chronic disease/NCD indicators (pp5-13)
- Questionnaire 2: Best Practice template (pp 14-15)

Aims of the country case studies
The aim of the case studies are to:

- Review current status, evidence and regional best practices in health system Building Blocks (stewardship, financing, health workforce, information and evidence, medicines, and systems of care) and other strategies that are being used to improve chronic disease outcomes (see figure);

- Identify major barriers and critical success factors in the implementation of successful health policies and interventions,

- Review tools and methods to assess and enhance health system performance to address chronic disease across the continuum of care.

Data collection process
The data collection process involves two questionnaires for the following purposes:

- An assessment of the current status of health systems activities for the prevention and control of chronic diseases; and

- A description of examples of Best Practice in countries within the WHO Western Pacific Region.
To map the current status of health system activities, a number of indicators have been developed. Please note the following concerning the indicators:

- They have been classified somewhat arbitrarily
- The classification is open to further discussion
- They are measures of process and outputs, and
- In due course indicators of outcome will be required.

The first questionnaire maps the six health system building blocks against indicators of action classified into:

- Core indicators
- Expanded indicators, and
- Optimal indicators.

At this stage first stage of data collection, we ask you to focus only on the core and expanded indicators; optimal indicators are optional.

Note:
a full set of indicators for assessing implementation of the WHO Global Strategy on Diet, Physical Activity and Health is available at [http://www.who.int/dietphysicalactivity/Indicators%20English.pdf](http://www.who.int/dietphysicalactivity/Indicators%20English.pdf)

Participants are asked to assess the current state of health system activities in their country, ideally electronically, for each Building Block in the following manner:

- Place an X in the appropriate circle;

- Provide details as requested in the space indicated by the brackets [ ] by placing the cursor in the centre of the brackets and typing; this information is not mandatory, but offers an opportunity for further expansion or explanation;

- Use as many lines as necessary within the [ ] to succinctly describe progress; don’t be concerned with formatting issues;

- Include references to appropriate published documents if possible;

- Where appropriate, list barriers and constraints to implementation including:
  - Factors that have contributed to the success of the intervention;
  - Problems that had to be overcome; and
  - Challenges still to be overcome.
Process for completing questionnaires

The process used for mapping current status (Questionnaire 1) is as follows:

- Participants will work in country teams;
- One person will be identified as the “key informant” to coordinate the response to the questionnaires and to act as the focal point for further follow up in preparation for the country presentations at the Singapore meeting.

Instructions for identifying examples of Best Practices

Participants are asked to identify one or more best practices in relation to the health system building blocks and the prevention and control of chronic diseases and to complete Questionnaire 2 for your chosen best practice examples.

The structure of this questionnaire will be used to organise the power point presentation which will be shared with other participants at the Singapore meeting. In due course, a powerpoint template will be provided for presentation purposes.

Process for providing examples of Best Practice (Questionnaire 2)

The process for completing the examples of Best Practice (Questionnaire 2) is the same as for Questionnaire 1.

A Best Practice could be any approach to health systems strengthening for chronic disease prevention and control which appears to have either special merit or important lessons for wider discussion at the meeting.

Examples of Best Practices include the following:
- experience with innovative funding mechanism e.g., health promotion foundations;
- the use of STEPS surveillance data to inform and monitor policy;
- innovative approaches to financing long term care;
- successful tobacco control progress, especially with regard to disadvantaged populations;
- use of an overall risk approach to managing patients in primary health care;
- available and affordable first line or combination drugs for high risk patients;
- attempts to ensure an equitable delivery of prevention programmes or services to at risk or disadvantaged populations;
- provision of pain relief and hospice care for end of life care;
- use of the Chronic Disease Care Model;
- health financing innovations to improve efficiency/equity;
- studies of the economics of chronic NCDs;
- integrated health care records;
- implementation of a basic health care package;
- Successful alliances with Non Governmental Organisations (NGOs);
- health promotion activities across the spectrum of care.
# Questionnaire 1: Mapping current status

## Building Block 1: Stewardship (Leadership and Governance)

### Core indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Government mandate for NCD policy</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>o Not started yet</td>
</tr>
<tr>
<td></td>
<td>o In process [ ]</td>
</tr>
<tr>
<td></td>
<td>o Published but does not include quantified or timed risk factor or chronic disease goals [ ]</td>
</tr>
<tr>
<td></td>
<td>o Published and includes quantified and times risk factor or chronic disease goals [ ]</td>
</tr>
<tr>
<td><strong>Tobacco control legislation</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>o Not adopted yet</td>
</tr>
<tr>
<td></td>
<td>o Enacted in line with FCTC – equivalent [ ]</td>
</tr>
<tr>
<td></td>
<td>o Implementation underway at national level:</td>
</tr>
<tr>
<td></td>
<td>o Ban on smoking in health care facilities [ ]</td>
</tr>
<tr>
<td></td>
<td>o Ban on direct and indirect advertising in national media [ ]</td>
</tr>
<tr>
<td></td>
<td>o Health warnings on tobacco products consistent with FCTC [ ]</td>
</tr>
<tr>
<td><strong>National diet and physical activity coordinating mechanism</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>o No plan established yet</td>
</tr>
<tr>
<td></td>
<td>o Plan in process [ ]</td>
</tr>
<tr>
<td></td>
<td>o Policy developed and implemented consistent with WHO Global Strategy on Diet and Physical Activity [ ]</td>
</tr>
<tr>
<td></td>
<td>o Policy includes foods high in salt, fat and sugar [ ]</td>
</tr>
</tbody>
</table>

### Expanded indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coordination with relevant stakeholders</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>o No mechanisms established yet</td>
</tr>
<tr>
<td></td>
<td>o Some progress being made [ ]</td>
</tr>
<tr>
<td></td>
<td>o National coordination mechanism in operation [ ]</td>
</tr>
<tr>
<td><strong>Advocacy on main NCD risk factors</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>o No communication plan established yet</td>
</tr>
<tr>
<td></td>
<td>o Communication plan in process [ ]</td>
</tr>
<tr>
<td></td>
<td>o Communication and advocacy well advanced [ ]</td>
</tr>
</tbody>
</table>
| National diet guidelines | o No plan established yet  
| | o Plan in process [ ]  
| | o Plan established [ ]  
| | o Plan implemented nationally [ ]  
| National physical activity guidelines | o No plan established yet  
| | o Plan in process [ ]  
| | o Plan established [ ]  
| | o Plan implemented nationally [ ]  
| Advertising, and marketing to children | o No limits set (fat, salt and/or sugar) of foods and drinks  
| | o Some limitations set for items high in fats, salt and sugar [ ]  
| | o Strong limitations in place [ ]  
| Physical activity programmes | o No specific programmes  
| | o Some limited programmes for children [ ]  
| | o National implementation in line with WHO Global Strategy on Diet, Physical Activity and Health [ ]  
| Optimal indicators | Food labelling systems | o No mechanisms established yet  
| | o Discussions in process for promoting healthy products [ ]  
| | o System developed and implemented [ ]  
| Protection of rights | o No legislation to protect rights of people with disability  
| | o Legislation planned [ ]  
| | o Legislation has been passed [ ]  
| Successes, barriers and challenges | Barriers and constraints | o Factors that have contributed to the success of the intervention [ ]  
| | o Problems that had to be overcome[ ]  
| | o Challenges still to be overcome [ ]  
| Best Practice | Example e in Stewardship and governance | o No good example  
| | o Good examples of best practice exist  
| | o An example is attached *(Please complete Questionnaire 2)*
Building Block 2: Financing

Core indicators

Budget for NCD prevention and control
- Insignificant budget for NCD
- Some funds available for current year (*specify amount and source*)
- Line item in annual budget for next (x) years (*specify amount for current year*)

Tobacco control program
- No nationally funded tobacco control programme
- Tobacco taxes are being regularly increased
- Tobacco revenue is earmarked for tobacco control programmes and/or health promotion activities

Expanded indicators

Health financing system
- Patients pay bulk of primary health care services out of pocket
- Government or health insurance scheme pays some primary health care services
- Government or health insurance scheme pays for bulk of primary care

Optimal indicators

Health benefit package
- No health benefit package available for chronic disease patients
- Acute and emergency care only
- Preventive treatments covered
- Long term care covered

Successes, barriers and challenges

Barriers and constraints
- Factors that have contributed to the success of the intervention
- Problems that had to be overcome
- Challenges still to be overcome

Best Practice
Example e in Financing

- No good example
- Good examples of best practice exist
- An example is attached (*Please complete Questionnaire 2*)

---

**Building Block 3: Health Workforce**

### Core indicators

**Training in chronic disease prevention and control**

- Not part of primary education of health workforce
- Some information included in primary training of health workforce
- Information and skills a major part of basic education

### Expanded indicators

**Primary health care workers**

- Receive no training by specialists in chronic disease prevention and control
- Receive some basic training by specialists
- On the job educational opportunities are provided to all workforce

### Optimal indicators

**Continuing professional education**

- No continuing education is provided
- Some continuing education provided
- Continuing professional education is mandatory

### Successes, barriers and challenges

**Barriers and constraints**

- Factors that have contributed to the success of the intervention
- Problems that had to be overcome
- Challenges still to be overcome

### Best Practice

**Example e in Health Workforce**

- No good example
- Good examples of best practice exist
- An example is attached (*Please complete Questionnaire 2*)
## Building Block 4: Information and Evidence

### Core indicators

| Availability of nationwide risk factor data |  
|--------------------------------------------|---|
| Ad hoc surveys only, not suitable for measuring trends over time | [ ] |
| One survey established with planned repeats to measure trends | [ ] |
| Two or more surveys completed to measure trends in major risk factors | [ ] |

| Patient registries in primary care |  
|-----------------------------------|---|
| None available | [ ] |
| Basic paper records are kept | [ ] |
| Computerised records are kept | [ ] |

| Sharing of patient information |  
|--------------------------------|---|
| None / rarely | [ ] |
| Occasionally | [ ] |
| Routine sharing | [ ] |

### Expanded indicators

| Use of surveillance data to inform and monitor policy |  
|-----------------------------------------------------|---|
| None available | [ ] |
| Available to inform policy | [ ] |
| Has been used to develop policy | [ ] |
| Has been used to monitor policy implementation | [ ] |

| Tobacco and risk factor surveillance |  
|-------------------------------------|---|
| No surveillance established | [ ] |
| STEPS surveillance for risk factors in place | [ ] |
| Global Youth Tobacco Survey completed | [ ] |

| Clinical Management Guidelines |  
|--------------------------------|---|
| None / few developed | [ ] |
| Some guidelines prepared | [ ] |
| Integrated into everyday tools to help promote evidence-based care | [ ] |
## Optimal indicators

<table>
<thead>
<tr>
<th>Clinical information systems</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No common clinical information systems used in health care system</td>
<td></td>
</tr>
<tr>
<td>Common system used but not electronically linked</td>
<td></td>
</tr>
<tr>
<td>Routine electronically linked system with monitoring and feedback</td>
<td></td>
</tr>
</tbody>
</table>

## Successes, barriers and challenges

<table>
<thead>
<tr>
<th>Barriers and constraints</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Factors that have contributed to the success of the intervention</td>
<td></td>
</tr>
<tr>
<td>Problems that had to be overcome</td>
<td></td>
</tr>
<tr>
<td>Challenges still to be overcome</td>
<td></td>
</tr>
</tbody>
</table>

## Best Practice

<table>
<thead>
<tr>
<th>Example e in Information and Evidence</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No good example</td>
<td></td>
</tr>
<tr>
<td>Good examples of best practice exist</td>
<td></td>
</tr>
<tr>
<td>An example is attached <em>(Please complete Questionnaire 2)</em></td>
<td></td>
</tr>
</tbody>
</table>
Building Block 5: Medicines

Core indicators

Availability and affordability of first line drugs
- First line drugs (such as aspirin, beta blockers, insulin) are not routinely available [  ]
- First line drugs are available but not generally affordable [  ]
- All major first line drugs for chronic disease management are available and affordable/free [  ]

Expanded indicators

Availability and affordability of second line drugs
- Second line drugs (such as ace inhibitors) are not routinely available [  ]
- Second line drugs are available but not generally affordable [  ]
- All major drugs for chronic disease management are available and affordable/free [  ]

Management of major chronic risk factors and diseases
- No treatment guidelines for common drugs are available
- Treatment decisions based on level of risk factor / arbitrary cut point [  ]
- Treatment decisions based on locally tailored overall risk guidelines [  ]

Optimal indicators

Palliative care/treatment
- Pain medication difficult to get / not affordable [  ]
- Pain medication provided as needed as part of end of life care [  ]
- Pain medication provided as needed for chronic diseases/cancer [  ]

Successes, barriers and challenges

Barriers and constraints
- Factors that have contributed to the success of the intervention [  ]
- Problems that had to be overcome[  ]
- Challenges still to be overcome [  ]

Best Practice

Example e in Medicines
- No good example
- Good examples of best practice exist
- An example is attached (Please complete Questionnaire 2)
## Building Block 6: Systems of Care (Organisation & Delivery)

### Core indicators

#### Primary prevention: tobacco control
- No specific emphasis on tobacco control at primary care level
- Tobacco use is routinely assessed
- Tobacco cessation services are provided and are affordable

#### Primary health care: risk factor control
- No specific emphasis on risk factors for chronic disease
- Basic information on major risk factors is provided to patients
- Information on prevention of chronic disease is routinely provided
- Patients’ overall risk are assessed and monitored at health care visits

#### Organisation of primary health care teams
- No capacity for building health care teams
- Some effort at building integrated teams
- Multidisciplinary teams include a range of health care professionals and are widely operational

### Expanded indicators

#### Secondary prevention: staff training
- No formal training provided for chronic disease management
- Some training efforts at disease control and management are in place
- Staff routinely receive ongoing training in chronic disease management

#### Information for patients
- No services in place for routine provision of information to patients
- Patients are provided with information to maintain healthy behaviours
- Skill building workshops on self management are provided to patients
- Computerised patient self-assessment is used for individual plans

### Optimal indicators

#### Tertiary prevention
- No organised efforts for post health facility care in community
- Community based rehabilitation programmes are established
- Multidisciplinary teams are available
| Palliative services | o No specific services provided for terminally ill [ ]
| | o Some treatments available [ ]
| | o Palliative services are available to control of pain and permit death with dignity [ ]

### Successes, barriers and challenges

| Barriers and constraints | o Factors that have contributed to the success of the intervention [ ]
| | o Problems that had to be overcome [ ]
| | o Challenges still to be overcome [ ]

### Best Practice

| Example in Organisation and Delivery | o No good example
| | o Good examples of best practice exist
| | o An example is attached (*Please complete Questionnaire 2*)
The following guidelines may assist in completing this template:

- Where more than one example is given, copy Questionnaire Template for each example;
- Set each example in the context of the general state of policy and health system development for chronic NCDs;
- Some examples will involve overlapping Building Blocks. The following example illustrates this possibility:

The introduction of a financing arrangement which provides incentives for family physicians (workforce) to develop plans (linked to paper/electronic records for reminder/recall system) for patients with chronic disease and for nurses (workforce) to follow up patients’ use of (subsidised) medicines.

<table>
<thead>
<tr>
<th>Introduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>An example of best practice in health system strengthening for chronic diseases in [Building Block(s)] in [Country] is as follows:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title of project or programme</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ]</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Origin and background</th>
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</thead>
<tbody>
<tr>
<td>[ ]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aim and purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ]</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Scope: eg pilot or national</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Key players and partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Start date</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ]</td>
</tr>
<tr>
<td>Planned duration</td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>Source of funds</td>
</tr>
<tr>
<td>Funds allocated</td>
</tr>
<tr>
<td>Population covered</td>
</tr>
<tr>
<td>Main outcome and results</td>
</tr>
<tr>
<td>Monitoring and evaluation</td>
</tr>
<tr>
<td>Key factors in success</td>
</tr>
<tr>
<td>Key lessons learned</td>
</tr>
<tr>
<td>Policy implications</td>
</tr>
</tbody>
</table>

**Contact details**

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Mobile: +64 21 02498065