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Committee on Statistics

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**Towards improving vital statistics: new regional initiative funded by
the Australian Agency for International Development (AusAID)**

Corrigendum

The dates of the session *should read* as above.

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ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC

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First session
15-17 December 2008
Bangkok

**Towards improving vital statistics: new regional initiative funded by
the Australian Agency for International Development (AusAID)¹**

Introduction

1. The purpose of this paper is to inform the Committee of Statistics about an important new Australian initiative to strengthen health information systems in the Asia-Pacific region which can assist countries to improve their vital statistics and cause of death statistics as needed.
2. The health information system (HIS) is part of the national statistical system and plays an important role in ensuring that reliable and timely health statistics are available for operational and strategic decision-making and for guiding the distribution of resources for the improvement of population health. Despite the importance for evidence-based decision-making, the HIS in many developing countries is weak, fragmented and often focused on disease-specific programmes driven by donor requirements and well-intentioned international initiatives.
3. In terms of demand, a HIS should be able to produce data on key inputs to the health system, including government expenditure, health infrastructure, facilities and services, as well as data on performance or outputs of the health system, health outcomes (mortality, morbidity, disability), disease outbreaks and provide information on health inequities, coverage and use of services. This starkly contrasts with the current very limited supply of health information in many developing countries, where even the most basic function such as the ability to count reliably the number of births and deaths, by age and sex, continues to be a problem.

¹ This document was contributed by Professor Alan D. Lopez and Ms Vicki Bennett, School of Population Health, University of Queensland, Brisbane. It has been reproduced without formal editing. The views expressed are those of the author and do not necessarily reflect the views of the United Nations.

4. There is broad consensus in the global health community that health information underpins the health system and that the strengthening of national HIS in income-poor countries is necessary to improve further health outcomes and make health programmes and health initiatives more effective. Without the ability to measure and benchmark achievements and the efficiency of resource use, debates and priorities for health and what does or does not work tend to be based more on ideology than on hard evidence.

Assistance in health information strengthening

5. The Millennium Development Goals, as well as some of the global health partnerships such as the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) and the Global Alliance for Vaccines and Immunization (GAVI), have helped to focus attention on the poor state of health information in most developing countries. In 2005, a new global initiative to assist low-income countries was launched, namely the Health Metrics Network (HMN), with the specific aim to reform and strengthen health statistical systems in countries with the poorest health. The HMN Framework and Standards for Country Health Information Systems was developed with the active participation of a network of partner organizations, and countries and its standards and guiding principles were approved by the World Health Assembly in 2007. More than 60 countries have become part of the HMN network, many of these in the Asia-Pacific region, and have undertaken an assessment of the state of their health information systems, with the active participation of national statistical offices and other important stakeholders. The objectives of the assessment, other than revealing strengths and weaknesses of the system, is to serve as a baseline for measuring progress, to build consensus around priority needs for the HIS and to mobilize joint technical and financial support for the implementation of development plans.

6. Improving health in the Asia-Pacific region has always been a key objective of Australia's bilateral development assistance. The health policy outlined in the 2006 White Paper on the Australian Government's overseas aid programme has a clear focus on strengthening health system fundamentals and specifically mentions as one of the pillars, the strengthening of health information systems, without which the effectiveness of interventions cannot be ascertained. As the wider development community has aligned behind the challenges of fulfilling the MDGs, more resources have been committed to support the health sector in developing countries and external financing for health has substantially increased from both official partners and private sources. Despite this scaling up of resources for health, the rate of progress towards attaining the health MDGs has not significantly changed, and may in fact have slowed in some of the more critical regions². Increasing the money alone therefore is proving not always to be sufficient to achieve better health gains.

² Adam Wagstaff, Mariam Claeson, Robert M. Hecht, Pablo Gottret, and Qiu Fang, "Millennium Development Goals for Health: What Will It Take to Accelerate Progress?." 2006. *Disease Control Priorities in Developing Countries (2nd Edition)*, ed. , 181-194. New York: Oxford University Press. DOI: 10.1596/978-0-821-36179-5/Chpt-9.

7. Australia's health aid has been growing rapidly from under \$200 million in 2000 to over \$340 million in 2007 and is almost entirely focused on the Asia-Pacific region where Australia has extensive development experience and close socio-economic ties. Like other donors, increasing the effectiveness of development assistance has been a major goal for AusAID. The White Paper signals a significant change in the way aid is delivered, with more emphasis on measureable outputs and a more diversified research programme to provide sound guidance for aid initiatives. It also recognizes the need to strike a balance between addressing major immediate health concerns and managing the longer-term task of strengthening underlying health systems by building capacity for these both in countries and among those in Australia who deliver technical assistance.

Strategic partnerships for health

8. Within this new commitment to expanding its aid programme in the health sector, the Australian Government has given priority to improving the quality and effectiveness of aid through providing AU\$24 million over four years to establish four health development knowledge hubs in Australian universities. The establishment of the hubs will provide improved health knowledge and expertise to inform policy dialogue at national, regional and international levels and will provide expert guidance to AusAID on how to ensure better health outcomes from its bi-lateral aid programmes.

9. The four recently-established "Knowledge Hubs" in Australia are as follows:

- Health policy and health financing (Nossal Institute for Global Health, Melbourne);
- Human resources for health (University of New South Wales, Sydney);
- Health information systems (University of Queensland School of Population Health, Brisbane);
- Women's and children's health (Burnet Institute, Melbourne; the Centre for International Child Health, University of Melbourne; and the Menzies School of Health Research, Darwin).

10. Each Hub will be expected to establish networks of experts and to work with other development partners active in the region with a strong commitment to supporting the achievement of the Millennium Development Goals. ESCAP therefore will be a key partner in this initiative. The Hubs are a critical component of AusAID's Global Health Enabling Strategy and have, as their broad objective, to inform health policy dialogue across the Asia-Pacific region, and to ensure that the Australian aid programme is evidence-based. The collaboration with regional partners and the products and research output from the Hubs will help to influence the thinking of national

governments and a broad range of development partners by identifying cost-effective mechanisms to improve priority aspects of health information systems.³

11. This paper brings to the attention of participants the existence of the Hubs, and in particular lays out the aims and objectives of the Health Information Systems Hub at the University of Queensland. The HMN HIS assessments clearly show that many countries in this region are struggling to build better statistical and health information systems and that there is a strong demand for expert advice. The newly-formed Hub will be a key partner in the region to assist countries to develop their health information systems and to provide training in priority aspects of health statistical development. A key focus of the work of the Health Information Systems Hub will be to expand the knowledge base, and to develop tools and expertise that can assist countries to strengthen their vital statistics systems, cause of death data and population statistics.

Defining Health Information Systems

12. A HIS should be an integrated effort to collect, process, report and use health information and knowledge to influence policy and decision-making, programme action and research. Sound decision-making at all levels of a health system requires reliable health statistics that are disaggregated by sex, age and socio-economic characteristics. At the policy level, decisions informed by evidence contribute to more efficient resource allocations and, at the delivery level, information about the quality and effectiveness of services can contribute to better outcomes.

13. As part of the national statistical system, a HIS is heavily biased towards quantitative data – counting births and deaths, description of health status based on statistics on fertility and mortality of populations over time, quantification of associations between health outcomes and risk or protective factors, and assessment of the effectiveness of public health interventions.

14. Information systems, particularly at the lower levels of the health system, need to be simple and sustainable and not overburden health delivery staff or be too costly to run. Peripheral staff need feedback on how the routine data they collect can be used, and understand the importance of good quality data for improving health. Capacity building is also required to ensure policymakers at all levels have the ability to use health data, whether it originates from routine systems, health surveys or special operational research.⁴ It is also important that staff working at the periphery of the health system understand the significance of local data for local programme management, and that their needs for strengthened capacity for health statistics analysis are met. Local use of data collected at lower levels of the health system is a critical step in improving overall data quality.

³ AusAID, Canberra, May 2008, *AusAID Update on Global Health Enabling Programs*.

⁴ AusAID, Canberra, 2006, *Helping health systems deliver – A policy for Australian development assistance in health*.

15. The HMN in its Framework and Standards for Country Health Information Systems⁵ has defined the health information system as consisting of six components, which can be grouped into “inputs”, “processes” and “outputs”. Inputs refer to all resources for the HIS, while processes cover how indicators are selected and data collected and managed, while outputs deal with the production, dissemination and use of information. Accordingly, the six components are:

1. **Health information system resources** – these include the legislative, regulatory and planning frameworks required for a fully functioning health information system, and the resources that are required for such a system to be functional. Such resources involve personnel, financing, logistics support, information and communications technology (ICT), and coordinating mechanisms within and between the six components.

2. **Indicators** – a core set of indicators and related targets is the basis for a health information system plan and strategy. Indicators need to encompass determinants of health; health system inputs, outputs and outcomes; and health status.

3. **Data sources** – these can be divided into two main categories: (1) population-based approaches (censuses, civil registration and population surveys); (2) institution-based data (individual records, service records and resource records). A number of data-collection approaches and sources do not fit neatly into either of the above main categories but can provide important information that may not be available elsewhere. These include occasional health surveys, research and information produced by community-based organizations.

4. **Data management** – this covers all aspects of data handling from collection, storage, quality-assurance and flow, to processing, compilation and analysis.

5. **Information products** – data must be transformed into information that will become the basis for evidence and knowledge to shape health action.

6. **Dissemination and use** – the value of health information is enhanced by making it readily accessible by decision-makers and by providing incentives for information use.

The activities and research at the HIS Hub will be closely aligned with the standards and guidelines of the HMN Framework. New research and evidence from the Hub will be fed back into the Framework and shared with countries and development partners. Taking a dynamic approach will ensure that the Framework can remain an instrument of consensus as intended, and that the vision, standards and processes required for health information systems to function adequately will evolve as systems mature.

⁵ World Health Organization 2008, Framework and standards for country health information systems / Health Metrics Network, Second Edition.

Health Information Systems Knowledge Hub

16. The School of Population Health (SPH) at the University of Queensland has been funded by AusAID to establish a Health Information Systems (HIS) Knowledge Hub (in April 2008) and is currently developing a programme of work to deliver on the objectives outlined below, and to help build HIS capacity and knowledge in the Asia-Pacific region. The overall aim of the Hub is to guide the establishment and/or strengthening of priority elements of national HIS in countries in the Asia-Pacific region, in order to generate comprehensive, relevant and reliable evidence for national and regional health policy development, service delivery and programme evaluation.

17. This broad aim will be accomplished through the following key strategic objectives:

1. Identify and map the critical elements for health information systems development in the region; work with countries to identify gaps and priorities; and help countries to determine national health information systems development plans for the next five to ten years.
2. Provide technical direction for health information systems strengthening within the Australian aid programme, through regional and global knowledge partnerships.
3. Build the capacity of the Australian health development community and partner countries through fellowship programs, networking and short courses on key areas related to health information systems, including:
 - Population statistics and fertility and mortality measures;
 - Vital registration and causes of death;
 - Hospital information systems;
 - Surveys to measure health status;
 - Risk factor exposure, health service utilization, and health expenditure;
 - Burden of disease assessment;
 - Health financing and cost-effectiveness analyses; Health services management.
4. Facilitate country participation in research and training activities to build local capacity to strengthen the above areas of national health information systems.

18. The establishment of a HIS Knowledge Hub reflects AusAID's and Australia's growing recognition of the need for strengthening health information systems in developing countries so that they can deliver the information needed to guide country health reforms, support policy development and measure progress.

19. The HIS Knowledge Hub will work in partnership with regional organizations such as WHO-WPRO, ESCAP, SPC and ADB towards facilitating the development and integration of health information systems and local capacity to ensure that cost-effective, reliable and relevant information is available, and used, to better inform health development policies across the region. In building up the health statistical capacity in the region, the Hub expects to collaborate with the Statistical Institute for Asia and the Pacific (SIAP) in the development of a mutually supportive training curriculum. An overall focus of the training should be to develop country-level analytical skills that are more directly relevant to assessing health system performance in countries than what is currently taught in schools of public health.

20. The School which hosts the HIS Hub has over 100 academic staff. It has an established international reputation in the evaluation and development of vital statistics systems and their precursors, including sample registration systems. The School has extensive experience working with partners in countries in the Asia-Pacific region and Western Asia. The Hub will also draw more broadly on the extensive technical expertise available through SPH's strong and extensive linkages worldwide, and particularly with many academic and development agencies in the Asia-Pacific region.

Priority Work Areas

21. Across the six domains of the HIS described earlier, the Hub will prioritize a series of specific activities to enhance the knowledge and evidence-base and to ensure that the most appropriate technical advice and assistance is provided to countries. Selected activities will be undertaken across all six domains initially. Rather, the focus will be on those activities within each domain that are the most urgent to advance knowledge.

22. The activities proposed for the HIS Hub fall under the broad areas outlined below:

Build knowledge/evidence: A number of strategies will be explored to build the knowledge and evidence base in HIS. One will be to undertake country-based operational research, in specific areas of HIS where additional knowledge and evidence is needed. A priority will be to include local investigators in these research activities to build local health research capacity. Another strategy will be to systematically review existing and previous activities in HIS within partner countries to learn from past experiences about what strategies are most effective and sustainable. It will be important to understand what strategies and approaches have not worked well, and to learn from these experiences about the limitations of the methods employed. Engagement with a range of Australian and country-based experts who have worked in HIS in the region, as well as a review of existing documentation created through various country-based programmes, will be vital to understand the extent to which current HIS strategies employed have delivered improved health information, availability and use.

Develop networks and partnership: A priority for the HIS Knowledge Hub is to establish a network of Australian and international experts in health information systems. The Hub intends to create and strengthen links with identified technical experts and institutions that will have demonstrable expertise in specific areas of health information development. This network will provide advice on key technical themes identified by the Hub, and on emerging and current themes in health information systems development as it relates to health systems strengthening, health systems research or health policy reform in the Asia-Pacific region.

Develop tools and products: A number of tools and products are expected as outputs from the work of the Hub. These will enable countries and donors to apply consistent good-practice methods for evaluating, planning and improving HIS within countries. These may take the form of guidelines or evaluation tools, position papers, briefing notes and publications that draw together knowledge or frameworks that are designed to ensure national and international consistency for collecting, storing and using health information to improve health outcomes. It is likely that several of these products will be developed in collaboration with WHO, WB, HMN, ADB or other agencies working on similar topics. The Hub is already closely collaborating with the Health Metrics Network and WHO in developing an assessment tool for countries to help them to evaluate the functioning of their vital statistics system and the quality of the data produced (see E/ESCAP/CST/6) including pilot testing of the tool in selected countries.

Build human capacity: Building the capacity of partner countries through fellowship programme and short courses on key elements related to HIS is a priority of the Hub. Training and capacity-building activities to enable the conduct of research and development projects by country partners, and to build capacity for critical analyses of health data have also been identified as a key requirement. Investigation of the most appropriate modes of training delivery will be explored to ensure the greatest benefit is delivered to a wide range of partners. Collaboration with regional and national training partners, particularly SIAP, medical associations and universities, will be a priority. To assist AusAID in delivering a scaled-up Australian aid programme in health, the HIS Hub will also work towards identifying and training the next generation of Australians to work in technical assistance in health information systems. Given the shortage of people in Australia with knowledge in HIS, this will be an important contribution that will benefit the technical advisory programme and make it more efficient in the future. For the countries receiving assistance, this should mean that the quality of the assistance they receive will be more effective, closely aligned with good international practice and delivered by experts who have been specifically trained for development assistance.

Influence thinking/policy/strategies: As a dedicated centre for HIS and vital statistics strengthening, the Hub will draw together knowledge and evidence about good-practice for HIS in developing countries. It is intended that all the publications and reports of the Hub will be widely disseminated to ensure that they form part of the knowledge base that will influence thinking by country governments and a broad range of development partners. The Hub will also work to ensure it is a key contributor

to relevant dialogue in the region and ready to provide assistance to those whose responsibility it is to ensure that policies and strategies for HIS are based on the best available evidence.

Support country HIS plan development and activities: To assist countries with understanding their current HIS status and development needs, a series of country visits is planned for the first half of 2009. The aim of these visits will be the following:

- Establishing key contacts and commencement of dialogue with country Ministry of Health officials responsible for HIS and other relevant government department staff. This will include dialogue with other donor agencies' country offices, as well as WHO and ADB;
- Assessment of current HIS capability using a tool aligned with the HMN assessment tool, and ensuring that all existing assessment documentation is taken into consideration;
- Assisting countries with the development of HIS development plans that draw on the evidence-base being built by the Hub. The long-term support and expertise available through the HIS Hub will provide guidance to ensure these plans are adequately reflected in the work programmes of countries and donors over time;
- building long-term partnerships between countries and the regional Knowledge HUB at the University of Queensland in Brisbane;
- Linking in country staff to major international networks and resources to facilitate sustainable health information systems development, focusing on vital statistics.

Initially, these visits will focus on priority countries for AusAID, including Fiji, Indonesia, Papua New Guinea, the Solomon Islands, Timor Leste and Vanuatu. Where possible, the visits will be arranged to include experts from other development partners with an interest in HIS strengthening.

Summary and conclusions

23. A primary goal of the HIS Knowledge Hub at the School will be to provide practical long-term support and advice to countries in the Asia-Pacific region to improve and develop health information systems. The Hub will be an on-going regional resource in this vital area of health systems development, providing substantial technical expertise and experience.

24. The School will build on its existing strong links with other regional and global partners including WHO, HMN, ESCAP, ADB, SPC and others to ensure coordination of advice and activities to deliver the best health information outcomes for countries. This will also strengthen the knowledge base for guiding vital statistics development by drawing on the expertise within these organizations, and building on their previous experience.

25. A key output of the Hub will be capacity development and the provision of training and training materials, guidelines and manuals to ensure good practice methods are recommended, that are appropriate for meeting the needs of countries. Delivery of training and mentoring by the Hub will

build capacity not only of country counterparts, but will also increase the ability of the Australian HIS workforce to provide more effective advice and assistance to developing countries in the region.

26. Specific focus will be given to the development of knowledge and regional expertise to improve key components of HIS within countries, including vital statistics, cause of death data, health records systems, risk factor and morbidity data, management information systems, and national health accounts to track resource flows.

27. The HIS Knowledge Hub is a long-term, sustainable regional resource for the use of countries and partners in the region to ensure that their health information systems, including their vital statistics system, are informed by good practice. By functioning as a “knowledge broker” between HIS technical advances, new standards and frameworks, and the needs of countries, the Hub will fulfil an important role for countries and the donor community in ensuring that their HIS development is based on appropriate technical advice. Much of the Hub’s activities will be externally focussed, with a strong emphasis on providing technical advice and knowledge to countries most in need.

28. The Hub is looking forward to collaborating with ESCAP and the national statistical offices in the region as important contributors of vital statistics and population data, and to assisting them in their efforts to generate more reliable data on population size and change.

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