HUMAN RESOURCES FOR HEALTH
in maternal, neonatal and reproductive health at community level

A profile of Timor-Leste

Angela Dawson, Tara Howes, Natalie Gray and Elissa Kennedy

www.hrhhub.unsw.edu.au

Timor-Leste
The Human Resources for Health Knowledge Hub

This technical report series has been produced by the Human Resources for Health Knowledge Hub of the School of Public Health and Community Medicine at the University of New South Wales.

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- maternal, neonatal and reproductive health workforce at the community level
- intranational and international mobility of health workers
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Suggested citation:
Dawson, A, Howes, T, Gray, N, Kennedy, E 2011, Human resources for health in maternal, neonatal and reproductive health at community level: A profile of Republic of Timor-Leste, Human Resources for Health Knowledge Hub and Burnet Institute, Sydney, Australia.

National Library of Australia Cataloguing-in-Publication entry
Dawson, Angela
Human resources for health in maternal, neonatal and reproductive health at community level: A profile of Timor-Leste / Angela Dawson ... [et al.]
9780733429811 (pbk.)
Maternal health services—Timor-Leste--Personnel management.
Community health services—Timor-Leste--Personnel management.
Howes, Tara.
University of New South Wales. Human Resources for Health.
Gray, Natalie.
Kennedy, Elissa.

Published by the Human Resources for Health Knowledge Hub of the School of Public Health and Community Medicine at the University of New South Wales.
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Design by Gigglemedia, Sydney, Australia.
CONTENTS

2 Acronyms
3 Executive summary
4 Timor-Leste: selected HRH and MNRH indicators
5 Key background information
6 Overview of maternal, neonatal and reproductive health
6 Cadres and roles
10 Coverage and distribution
11 Supervision and scope of practice
11 Teamwork
11 Education and training
11 HRH policy and plans
12 MNRH policy and plans
12 Remuneration and incentives
12 Key issues or barriers
13 Key initiatives
14 Critique
15 References
16 Appendix 1. Pre- and in-service education and training in Timor-Leste
17 Appendix 2. Country registration in Timor-Leste
18 Appendix 3. Country HRH and MNRH policies in Timor-Leste

LIST OF FIGURES
8 Figure 1. Health centres and workforce working at the community level in each district

LIST OF TABLES
5 Table 1. Key statistics
7 Table 2. Cadres involved in MNRH at community level in Timor-Leste
10 Table 3. Health worker distribution in Timor-Leste
ACRONYMS

AusAID       Australian Agency for International Development
ETPC         East Timor Planning Commission
GDP          gross domestic product
Govt.        government
HIV          human immunodeficiency virus
HRH          human resources for health
MDG          Millennium Development Goal
MNRH         maternal, neonatal and reproductive health
MoH          Ministry of Health
SISCa        Serviço Integrado de Saudé Comunitária (Integrated Community Health Service)
SPK          Sekolah Pendidikan Keperawatan (Health Nursing School)
TLNSD        Timor-Leste National Statistics Directorate
UNDESA       United Nations Department of Economic and Social Affairs
UNICEF       United Nations Children’s Fund
UNFPA        United Nations Population Fund
USAID        United States Agency for International Development
USD$         United States dollars
WHO          World Health Organization
WPRO         Western Pacific Regional Office of the World Health Organization

A note about the use of acronyms in this publication
Acronyms are used in both the singular and the plural, e.g. MDG (singular) and MDGs (plural). Acronyms are also used throughout the references and citations to shorten some organisations with long names.
EXECUTIVE SUMMARY

This profile provides baseline information that can inform policy and program planning by donors, multilateral agencies, non-government organisations and international health practitioners.

Accurate and accessible information about the providers of maternal, neonatal and reproductive health (MNRH) services at the community level (how they are performing, managed, trained and supported) is central to workforce planning, personnel administration, performance management and policy making.

Data on human resources for health (HRH) is also essential to ensure and monitor quality service delivery. Yet, despite the importance of such information, there is a scarcity of available knowledge for decision making. This highlights a particular challenge to determining the workforce required to deliver evidence-based interventions at community level to achieve Millennium Development Goal (MDG) 5 targets.

This profile summarises the available information on the cadres working at community level in Timor-Leste: their diversity, distribution, supervisory structures, education and training, as well as the policy and regulations that govern their practice.

The profile provides baseline information that can inform policy and program planning by donors, multilateral agencies, non-government organisations and international health practitioners. Ministry of Health staff may also find the information from other countries useful in planning their own HRH initiatives.

The information was collected through a desk review and strengthened by input from key experts and practitioners in the country. Selected findings are summarised in the diagram on page 4. There are gaps in the collated information which may point to the need for consensus regarding what HRH indicators should be routinely collected and how such collection should take place at community level.
TIMOR-LESTE: SELECTED HRH AND MNRH INDICATORS

Maternal mortality ratio in 2008

370 deaths per 100,000 live births

Skilled birth attendance:

18% of births attended by a skilled birth attendant (2005–2009)

Human resources for health policy reference to community level HRH in MNRH

YES

22 nurses and midwives per 10,000 people

84.6% Government spending on health as a percentage of total expenditure on health (2007)

1 doctor per 10,000 people

Key to acronyms

HRH human resources for health
MNRH maternal, neonatal and reproductive health

(Adapted from UNICEF 2010, WHO 2010b)
KEY BACKGROUND INFORMATION

TABLE 1. KEY STATISTICS
(Adapted from Hogan et al. 2010, UNDESA 2005, UNICEF 2010, WHO 2010b)

<table>
<thead>
<tr>
<th>POPULATION</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total thousands (2008)</td>
<td>1,098</td>
</tr>
<tr>
<td>Annual growth rate (1998–2008)</td>
<td>2.9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HEALTH EXPENDITURE (2007)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total expenditure on health as a percentage of GDP</td>
<td>13.6%</td>
</tr>
<tr>
<td>General government expenditure on health as a percentage of total expenditure on health</td>
<td>84.6%</td>
</tr>
<tr>
<td>Private expenditure on health as a percentage of total expenditure on health</td>
<td>15.4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MDG 5 STATUS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Possible to achieve</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MORTALITY RATIO</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of maternal deaths for every 100,000 live births:</td>
<td></td>
</tr>
<tr>
<td>UNICEF 2010</td>
<td>370</td>
</tr>
<tr>
<td>Hogan et al.</td>
<td>929 (374–2,077)</td>
</tr>
<tr>
<td>Number of neonatal deaths for every 1,000 live births (in the first 28 days of life; 2009)</td>
<td>27</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SKILLED BIRTH ATTENDANCE (2005–2009)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of births covered by a skilled birth attendant</td>
<td>18%</td>
</tr>
</tbody>
</table>

A note on health expenditure
Apart from periods of instability, government expenditure on health as a percentage of gross domestic product (GDP) rose steadily from 7.7% in 1998 to 16.4% in 2006 which is one of the highest in the world. Much of these funds have been dedicated to repairing damaged infrastructure.

Key to acronyms
GDP    gross domestic product
MDG    Millennium Development Goal
OVERVIEW OF MATERNAL, NEONATAL AND REPRODUCTIVE HEALTH

Timor-Leste has a high maternal mortality ratio; some estimates are as high as 880 per 100,000 live births (MoH Timor-Leste 2007a), but an estimate for the year 2008 from UNICEF (2010) gives a ratio of 370 per 100,000 live births.

Approximately 80% of women receive some form of antenatal care. Ninety per cent of women give birth at home (MoH Timor-Leste 2007a), with approximately 43% of births assisted by a relative or friend, 35% assisted by a trained birth attendant, 32% by a nurse or midwife and 15% of births unattended (TLNSD 2007).

There is a high total fertility rate of 7.8% and low contraceptive prevalence rate of 7%. Outside Dili, 33% of the population live more than two hours’ walking distance from health facilities (MoH Timor-Leste 2007a).

The following services are available at district and village level. Note, the symbol # in the descriptions below refers to the number of cadres (e.g., numer of health teams, centres, etc.).

District level (#13)
- District health management team: district health officer, deputy health officer, district public health officer, environmental sanitation and nutrition officer and maternal and child health district program officer (Snell 2005a, p. 92).
- Level 4 community health centre: 10–20 beds; five centres located in the districts of Lautem, Viqueque, Manufahi, Ermera and Manatuto.
- Level 3 community health centre: fewer than 10 beds with 10–14 personnel; three centres located in the districts of Aileu, Liquica and Atauro Island.

Sub-district level (#65)
- Level 2 community health centre (#59, two per sub-district): five staff, provide external consults, simple laboratory, antenatal and postnatal care, immunisation and health promotion.
- Level 1 health posts (#177): staffed by nurses and midwives – ideally one nurse and one midwife per post. Many posts are currently vacant.

Village (suco) level (#442)
- Mobile clinics (114 total): supported by Level 1 health posts within 4–8 km and provide curative care, antenatal and postnatal care, immunisation, growth monitoring, health education and health promotion services (MoH Timor-Leste 2007a).

The cadres working in MNRH at the community level and the tasks they perform are outlined in Table 2.

Figure 1 provides another data set detailing the population in each district, health facilities and HRH numbers. There are differences between the personnel numbers presented here and other sources such as those from WHO.
### TABLE 2. CADRES INVOLVED IN MNRH AT THE COMMUNITY LEVEL IN TIMOR-LESTE

(adapted from Harrison and Mercer 2008; MoH Timor-Leste 2005, 2007a, 2007b; Vasconcelos 2009)

<table>
<thead>
<tr>
<th>BASE OR PLACE</th>
<th>STAFF INVOLVED (NAME OF CADRE)</th>
<th>POSSIBLE SERVICE IN THE COMMUNITY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Home-based</strong></td>
<td><em>Dukun</em> (Indonesian) or <em>Metan Dok</em> (Tetun)</td>
<td>Traditional healer, occasionally assists birth</td>
</tr>
<tr>
<td></td>
<td>Daia</td>
<td>Traditional birth assistance</td>
</tr>
<tr>
<td></td>
<td>Matan dok</td>
<td>Traditional healer</td>
</tr>
<tr>
<td><strong>Outreach centre</strong></td>
<td>Staff member from health centre working at SISCa*</td>
<td>Provision of antenatal care, postnatal care plan for delivery, referral of high-risk pregnancies, information on family planning, gynaecological consultation and child immunisation</td>
</tr>
<tr>
<td></td>
<td><em>Promotor Saude Familiar</em> (Family health promoter)</td>
<td>Community health volunteer – carries out home visits, assists with outreach services for local clinics, encourages women to go for antenatal care, postnatal care, develop a birth plan, use a skilled birth attendant, give colostrum after birth and space children</td>
</tr>
<tr>
<td></td>
<td>Midwife, nurse and doctor working in mobile clinics</td>
<td>Curative consultation, antenatal and postnatal care, immunisation, growth monitoring, health education and health promotion</td>
</tr>
<tr>
<td><strong>Aid post or basic clinic</strong></td>
<td>Community nurse and community midwife working at health posts</td>
<td>Family health promoter services, normal deliveries, referrals, basic resuscitation, antenatal and postnatal care, family planning</td>
</tr>
</tbody>
</table>

**Notes to Table 2**

* Serviço Integrado de Saudé Comunitária (Integrated Community Health Service)
FIGURE 1. HEALTH CENTRES AND WORKFORCE WORKING AT COMMUNITY LEVEL IN EACH DISTRICT
(Adapted from Govt. Timor-Leste 2002; MoH Timor-Leste 2008)
<table>
<thead>
<tr>
<th>District</th>
<th>Population</th>
<th>Hospitals</th>
<th>Community health centres</th>
<th>Health posts</th>
<th>Nurses</th>
<th>Senior nurses</th>
<th>Mobile clinics</th>
<th>Health centers</th>
<th>Midwives</th>
<th>Senior midwives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bobonaro</td>
<td>90,960</td>
<td>1 (24 beds)</td>
<td>19</td>
<td>n/a</td>
<td>5</td>
<td>n/a</td>
<td>n/a</td>
<td>19</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Liquica</td>
<td>62,990</td>
<td>n/a</td>
<td>12</td>
<td>n/a</td>
<td>3</td>
<td>n/a</td>
<td>n/a</td>
<td>21</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Ermera</td>
<td>113,870</td>
<td>n/a</td>
<td>21</td>
<td>n/a</td>
<td>6</td>
<td>n/a</td>
<td>n/a</td>
<td>11</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Ainaro</td>
<td>58,620</td>
<td>1 (24 beds)</td>
<td>14</td>
<td>n/a</td>
<td>9</td>
<td>n/a</td>
<td>12</td>
<td>9</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Cova Lima</td>
<td>58,900</td>
<td>1 (24 beds)</td>
<td>18</td>
<td>n/a</td>
<td>5</td>
<td>n/a</td>
<td>8</td>
<td>18</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Oecusse</td>
<td>63,730</td>
<td>1 (24 beds)</td>
<td>6</td>
<td>11</td>
<td>3</td>
<td>n/a</td>
<td>12</td>
<td>6</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>
Table 3 outlines the distribution of this workforce according to age, gender and employment in the public and private sectors where available.

There is a discrepancy in the numbers of health personnel recorded by different sources. Numbers of nurses have been reported as 1,795 (WHO 2010b) and similarly 1,800 (Snell 2005a, 2005b).

However, the Nursing Curriculum of the Nursing Association of Timor-Leste (2007) states that there are currently 1,080 nurses: 965 educated through the SPK\(^1\) system, 103 with a Diploma III in Nursing, and 9 with a Bachelor Degree (Nursing Association of Timor-Leste 2007). In seven districts of the country, the ratio of nurses to population is 1:2,102. This meets the target for Timor-Leste basic services package. However, the Standards for the International Council of Nurses states that the ratio should be 1:250 (Nursing Association of Timor-Leste 2007).

There are approximately 530 midwives working in Timor-Leste (Snell 2005b) with approximately 274 in the public sector (MoH Timor-Leste 2005). According to WHO (2010b), there are 74 doctors in the country. The Timor-Leste Workforce Training Plan states that 40 of these doctors are working in the public sector. There are a large number of unfilled public posts. Personnel working in the private sector are largely unrecorded (MoH Timor-Leste 2005).

\(^1\) Sekolah Pendidikan Keperawatan (Health Nursing School)

### TABLE 3. HEALTH WORKER DISTRIBUTION IN TIMOR-LESTE

(Adapted from MoH Timor-Leste 2005; Moh Timor-Leste 2008; Nursing Association of Timor-Leste 2007; Snell 2005b; MoH Timor-Leste 2008; WHO 2010a, WHO 2010b)

<table>
<thead>
<tr>
<th>CADRE</th>
<th>NUMBER</th>
<th>PUBLIC</th>
<th>PRIVATE</th>
<th>RURAL</th>
<th>URBAN</th>
<th>MEAN AGE</th>
<th>GENDER</th>
<th>RATIO TO 1,000 PEOPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse Total</td>
<td>1,795</td>
<td>820</td>
<td>975</td>
<td>4</td>
<td>1.61</td>
<td></td>
<td>Male</td>
<td></td>
</tr>
<tr>
<td>Bachelor Degree</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Female</td>
<td></td>
</tr>
<tr>
<td>Diploma III</td>
<td>103</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPK(^1) educated (Health Nursing School)</td>
<td>965</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working at community level</td>
<td>43</td>
<td>306</td>
<td>125</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Midwife</td>
<td>530(^*)</td>
<td>274</td>
<td>256</td>
<td>35</td>
<td>0.48</td>
<td></td>
<td>Male</td>
<td></td>
</tr>
<tr>
<td>Working at community level</td>
<td>184</td>
<td>7</td>
<td>177</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctor</td>
<td>79</td>
<td>40</td>
<td>39</td>
<td>10</td>
<td>69</td>
<td>0.07</td>
<td>Male</td>
<td></td>
</tr>
</tbody>
</table>

Notes to Table 3

\(^*\) Reviewer comment: many midwives perform an administrative or supervisory role at the district level or in Dili and are not in clinical positions.

\(^\text{1}\) Sekolah Pendidikan Keperawatan (Health Nursing School): 3 years, post-junior high school.
Each district is overseen by a district health management team. Primary health care facilities are usually staffed by a community nurse, a community midwife and, increasingly, by medical doctors. When nurses are not available for these positions, assistant nurses are contracted (Govt. Timor-Leste and UN 2009).

Nursing activities are overseen by the nursing director who is appointed by the Ministry of Health. This person is responsible for standards and quality assessment, recruitment and mobility of nurses, and assessing practice and training. They are supported in this role by the nursing committee.

The private health service makes up 51% of health care provision. Private health units are required to obtain a licence from the Permanent Secretary and are monitored by the Office of Health Inspection, the National Directorate of Health Policy and Planning and other institutions of the Ministry of Health. All private maternal and child health clinics must be overseen by a nurse midwife and must have staff present at all times. Anecdotal evidence suggests that many private health providers are not closely monitored.

There are three different levels of nursing credentials:
- Bachelor Degree
- Diploma III
- Educated through SPK (the health nursing school).

The Diploma III in Nursing recommenced in October 2008. It is a three-year program run through the Institute for Health Sciences (Instituto de Ciencias de Saúde). The entry requirements are either the completion of secondary high school with a focus on maths and natural sciences, or a SPK graduate with work experience.

Nursing curriculum
The School of Nursing and Midwifery was established at the Institute for Health Sciences in 2008. The Diploma III Nursing curriculum is now being carried out through the school system. The aim of this curriculum is to train nurses with critical thought, management and leadership skills so they are able to work in health service structures. It includes subjects in family and community nursing as well as maternity and newborn nursing.

For more information on education and training, please refer to Appendix 1.

For more information, please refer to Appendix 3.
MNRH POLICY AND PLANS

Strategies for reproductive health in the country are outlined in the National Reproductive Health Strategy (MoH Timor-Leste 2004). The objectives of this strategy are to increase knowledge about rural health, promote family planning and access to rural health services, reduce maternal and perinatal mortality and morbidity, reduce sexually transmitted infections and HIV\(^6\) and encourage a comprehensive approach to reproductive health.

With regard to HRH, the strategy aims to improve in-service competency training and pre-service midwifery education, create mechanisms for collaboration between skilled birth attendants and traditional birth attendants and create good ties between public and private health providers. The Maternal and Child Health Unit will work with the National Institute of Health Sciences to coordinate training materials and sessions for pre-service and in-service training. The need for training in middle- and high-level management is also highlighted, as well as in supervisory and clinical skills.

MNRH is also included in the National Development Plan (ETPC 2002), the Basic Services Package (MoH Timor-Leste 2007a) and the National Family Planning Policy (MoH Timor-Leste and UNFPA 2004).

For more information, please refer to Appendix 3.

KEY ISSUES OR BARRIERS

Inability to encourage health staff to work in health posts and community health centres due to the challenging working conditions in these areas.

- Heavy reliance on foreign personnel to fill doctor posts. These doctors are often unable to speak Tetun (National East Timorese Women’s Conference 2008).
- Limited number of midwives and nurses in districts. Most midwives are concentrated in urban areas (MoH Timor-Leste 2008).
- Poor distribution of nurses and midwives working in the different districts (MoH Timor-Leste 2005).
- Inability to encourage health staff to work in health posts and community health centres due to the challenging working conditions in these areas. There are also challenges involved in supervising these remote posts (Snell 2005b).
- There are challenges filling roles at central and district levels due to low numbers of senior health practitioners (MoH Timor-Leste 2005).
- There is inconsistency in the way health posts are graded and therefore the way pay scales are determined (MoH Timor-Leste 2005).
- Often there is a poor alignment between public and private health facilities (Timor-Leste Ministry of Health 2005).
- There is a greater need for counsellors to carry out family planning (Govt. Timor-Leste and UN 2009).

REMUNERATION AND INCENTIVES

Proposed incentives under the Basic Services Package (MoH Timor-Leste 2007a) to encourage staff to work in rural and remote posts include rural allowances, cash incentives, quality housing, opportunities for training to be upgraded to community midwives and nurses, preference for attending workshops, conferences and training and promotion prospects (Govt. Timor-Leste and UN 2009).

Monthly salaries for C-grade physicians range from USD$298 to USD$374 depending on years of service, with personnel progressing on the pay scale every three years (MoH Timor-Leste 2008).

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\(^6\) human immunodeficiency virus.
KEY INITIATIVES

SISCa outreach service
This is a primary health care clinic that is set up in a community for a day and provides a range of health services. SISCa was launched on 21 December 2007 and was established throughout the country by the end of 2008. It draws on strong participation by the community. Within the clinic there are six stations catering to different health needs. One station is for antenatal care, immunisations, vitamin and nutrient supplements, detection and referral of high-risk pregnant mothers, family planning, delivery plans for pregnant mothers and gynaecological consultations (Martins 2009). Health care staff, usually from local health clinics, are mobilised to work at each of the health care stations.

Cuban Medical Brigade
Through this program the Cuban government has provided a number of experienced physicians to be placed in a number of clinics throughout the country. Cuba has also paid for Timorese students to undertake medical training to receive a Bachelor of Medicine (MoH Timor-Leste 2005).

UNFPA
Under ‘train the trainers’ programs, 13 midwives and general practitioners received training to become national master trainers for family counselling (Snell 2005a).

Marie Stopes International
Midwives have been provided with motor bikes to enable them to access remote communities and internally displaced-persons camps to teach people about reproductive health and family planning (Ferraro 2009).

Training health volunteers
UNICEF has been training volunteers through the Family Health Promoter Program to give information to women in remote areas about skilled birth attendants (UNICEF 2007). This program runs through the Ministry of Health with assistance from Health Alliance International. In this program volunteers are trained to educate women in villages about available health care facilities and help them develop a birth plan.

Clinica Cafe Timor
Cooperativa Cafe Timor has opened 11 fixed clinics and 28 mobile clinics to provide basic health services to people living in coffee-growing areas. Cooperativa Cafe Timor started in 2000 as farmers united to sell their coffee on the international market. The cooperative then branched out to provide affordable health services to members and later to the general population. It is the largest private health provider and receives support from the government. One specific focus is on maternal and child health.

Mobile clinics consist of a midwife, nurse, administrator, driver and a four-wheel drive vehicle. Each team conducts weekly visits to four remote locations. The community is actively involved in choosing locations and constructing a building for the clinic. As part of this initiative they have also trained groups of midwives (Cooperative Coffees 2009; MoH Timor-Leste 2007a; USAID 2009).

Midwives have been provided with motor bikes to enable them to access remote communities and internally displaced-persons camps to teach people about reproductive health and family planning.
CRITIQUE

There is wide variation between sources, with official government estimates lower than external sources.

Documentation
There was some difficulty in finding a sufficient number of sources for the map in this report, with information often having to be provided by contacts who have worked in the country. Government reports and a small number of peer-reviewed journal articles were used to build this profile. Information was also drawn from grey literature.

News articles from the websites of agencies and non-government organisations were used to provide information on MNRH initiatives. It was also difficult to find information on the Ministry of Health’s recently implemented SISCa program. Information had to be provided by contacts.

There have been conflicting figures for health personnel across different sources: an article by Snell (2005b) titled Strengthening Health Systems in Timor-Leste; the National Workforce Plan 2005–2015 (MoH Timor-Leste 2005); the Nursing Curriculum (Nursing Association of Timor-Leste 2007); and the WHO Statistical Information System (WHO 2010b).

The numbers provided for doctors were 40 (MoH Timor-Leste 2005), 52 (Snell 2005a, 2005b) and 79 (WHO 2010b). The combined numbers provided for midwives and nurses were 1,080 (Nursing Association of Timor-Leste 2007), 1,094 (MoH Timor-Leste 2005), 1,795 (WHO 2010b) and 2,330 (Snell 2005a, 2005b).

There is wide variation between sources, with official government estimates lower than external sources. The National Health Workforce Plan sources its figures from payroll numbers from the Ministry of Finance, Administration and Logistical Services, and from figures kept in the Ministry of Health.

This document states that details for private practice are largely unknown (MoH Timor-Leste 2005). The Nursing Curriculum obtains its personnel figures from the Nursing Association of Timor-Leste, with nursing staff data available for only seven districts (Nursing Association of Timor-Leste 2007).

A small number of relevant journal articles are available (Snell 2005b; Wild 2009). Other sources used were reports from Health Alliance International, a conference paper and an article from the Guardian (Ferraro 2009; Harrison and Mercer 2008; Vasconcelos 2009).

The information from Health Alliance International is based on a questionnaire administered to women aged between 15 and 49 years who have a child under 24 months of age. The topics covered include antenatal care, birth practice, skilled birth attendance, postnatal care and family planning (Harrison and Mercer 2008).

Reviewers
Three reviewers gave an in-depth critique of the map. The first is a former highly experienced member of the Ministry of Health who provided information in the form of articles and reports that are not easily accessible in the public domain. This reviewer also provided details of progress made and the areas requiring more attention.

The second reviewer is from the Ministry of Health and clarified numbers of personnel and provided information on current initiatives in MNRH. The third reviewer is a PhD student who has been carrying out primary research in the country. This reviewer provided articles and reports and gave feedback on various aspects of the map.
REFERENCES


MoH Timor-Leste 2007a, *Basic Services Package for Primary Health Care and Hospitals: achieving the MDGs by improved service delivery*, Timor-Leste Ministry of Health, Dili.


## APPENDIX 1

### PRE- AND IN-SERVICE EDUCATION AND TRAINING IN TIMOR-LESTE

<table>
<thead>
<tr>
<th>CADRE</th>
<th>INSTITUTION/ORGANISATION</th>
<th>QUALIFICATION</th>
<th>LENGTH OF STUDY</th>
<th>GRADUATES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRE-SERVICE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nurse</td>
<td>Institute of Health Sciences</td>
<td>Diploma III in Nursing</td>
<td>3 years</td>
<td></td>
</tr>
<tr>
<td>Midwife</td>
<td>Institute of Health Sciences</td>
<td>Midwifery training</td>
<td>1 year</td>
<td></td>
</tr>
<tr>
<td>Family health promoter</td>
<td>Health Alliance International</td>
<td>Basic training</td>
<td></td>
<td>174 across 6 districts</td>
</tr>
<tr>
<td><strong>IN-SERVICE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UNICEF and UNFPA Safe and Clean Delivery for Midwives (Ministry of Health workforce)</td>
<td></td>
<td></td>
<td>147 (participants between 1999–2004)</td>
<td></td>
</tr>
<tr>
<td>Midwifery Practitioner Course August 2004</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Midwife</td>
<td>Health Alliance International</td>
<td>On-the-job training, mentoring and monitoring midwives on counselling and communication skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Alliance International</td>
<td>Family Planning Clinical Skills and Counselling</td>
<td></td>
<td>26 in 2008</td>
<td></td>
</tr>
<tr>
<td>Health Alliance International</td>
<td>Refresher training on safe motherhood</td>
<td></td>
<td>92 in 2008</td>
<td></td>
</tr>
</tbody>
</table>
## APPENDIX 2

### COUNTRY REGISTRATION IN TIMOR-LESTE

<table>
<thead>
<tr>
<th>CADRE</th>
<th>LEGISLATION</th>
<th>RESPONSIBILITY FOR REGISTRATION</th>
<th>ELIGIBILITY REQUIREMENTS FOR REGISTRATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse</td>
<td>Decree-Law No. 14/2004, Practice of Health Professions, 1 September 2004</td>
<td>Ministry of Health</td>
<td>Certificate, Bachelor Degree, Undergraduate Degree or Technical – Professional Diploma Issued by a nursing school. Completion of an appropriate internship in a specialised area.</td>
</tr>
</tbody>
</table>
### APPENDIX 3

#### COUNTRY HRH AND MNRH POLICIES IN TIMOR-LESTE

<table>
<thead>
<tr>
<th>NAME OF POLICY</th>
<th>RELEVANT INFORMATION FOR MNRH AT COMMUNITY LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>The National Development Plan 2002–2020</td>
<td>HRH are addressed under the health section of this plan which falls under capacity building. The plan aims to improve health training, regulate employment to ensure minimal standards and improve management structures. It is also focused on improving primary health care to target areas with poor access to health services and empower women with an aim of increasing the proportion of women working in the health sector. This plan includes measures to upgrade midwifery skills and train traditional birth attendants under specific Strategy A of the health plan. There is also a special focus on maternal and child health. (ETPC 2002)</td>
</tr>
<tr>
<td>Health Sector Strategic Plan 2008–2012</td>
<td>This health sector plan highlights the need to improve maternal and child health. HRH are listed as a priority area. The strategies to improve HRH are to redistribute staff according to needs in different areas, introduce a new incentives scheme, improve the service given by midwives through better pre-service training and improve supervision and control measures and to improve skills in community-based approaches. (MoH Timor-Leste 2007b)</td>
</tr>
<tr>
<td>National Health Workforce Plan 2005–2015</td>
<td>The plan focuses on improving training, recruitment, retention and deployment of staff, creating clear career paths and carrying out a gradual replacement of expatriate health staff with well-trained local staff. It also plans to cater to a growing population. Regarding maternal health, it highlights the need for better training of nurses and midwives and the current under-training in this sector. It also mentions plans to train traditional birth attendants in a short course on client referral to strengthen ties between attendants and the health system. (MoH Timor-Leste 2005)</td>
</tr>
<tr>
<td>National Workforce Training Plan</td>
<td>Document could not be accessed.</td>
</tr>
<tr>
<td>Document Title</td>
<td>Summary</td>
</tr>
<tr>
<td>----------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| National Reproductive Health Strategy 2004         | The objectives of this strategy are to increase knowledge about rural health, promote family planning and access to rural health services, reduce maternal and perinatal mortality and morbidity, reduce sexually transmitted infections and HIV and encourage a lifecycle approach to rural health.  
In regards to HRH, the strategy aims to improve in-service competency-based training and pre-service midwifery education, create mechanisms for collaboration between skilled birth attendants and traditional birth attendants and create good ties between public and private health providers.  
The Maternal and Child Health Unit will work with the National Institute of Health Sciences to coordinate training materials and sessions for pre-service and in-service training. The need for training in middle- and high-level management is also highlighted as well as supervisory and clinical skills. (MoH Timor-Leste 2007a) |
| Basic Services Package 2007                        | This report outlines the government’s endeavour to develop primary health care in the country and has a special focus on maternal and child health. It details the minimum level of services to be available at all levels of the health care system. Included is the proposal to develop safe delivery at every facility and to have at least one skilled birth attendant or a team of health personnel stationed at every health centre who are well skilled in the use of partograph and active management of the third stage of delivery. (MoH Timor-Leste 2007a) |
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Human Resource for Health Knowledge Hub,
University of New South Wales
Some of the key thematic areas for this Hub include governance, leadership and management; maternal, neonatal and reproductive health workforce; public health emergencies; and migration.
www.hrhhub.unsw.edu.au

Health Information Systems Knowledge Hub,
University of Queensland
Aims to facilitate the development and integration of health information systems in the broader health system strengthening agenda as well as increase local capacity to ensure that cost-effective, timely, reliable and relevant information is available, and used, to better inform health development policies.
www.uq.edu.au/hishub

Health Finance and Health Policy Knowledge Hub,
The Nossal Institute for Global Health (University of Melbourne)
Aims to support regional, national and international partners to develop effective evidence-informed national policy-making, particularly in the field of health finance and health systems. Key thematic areas for this Hub include comparative analysis of health finance interventions and health system outcomes; the role of non-state providers of health care; and health policy development in the Pacific.
www.ni.unimelb.edu.au

Compass: Women’s and Children’s Health Knowledge Hub,
Compass is a partnership between the Centre for International Child Health, University of Melbourne, Menzies School of Health Research and Burnet Institute’s Centre for International Health.
Aims to enhance the quality and effectiveness of WCH interventions and focuses on supporting the Millennium Development Goals 4 and 5 – improved maternal and child health and universal access to reproductive health. Key thematic areas for this Hub include regional strategies for child survival; strengthening health systems for maternal and newborn health; adolescent reproductive health; and nutrition.
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