

# Improving indigenous maternal and child health

Viviana Crivelli, Juan Hautecouer, Coll  
Hutchison, Ana Llamas, Carolyn Stephens

In the public hospital in Otavalo in Ecuador, indigenous women have seen a major change in their maternal and child health services and this has increased their trust in the system. In the past, discrimination was a major problem, and women were not allowed to use their traditional birth practices or bring their traditional birth attendants (TBAs) with them. They were not able to explain all the factors that they felt important for their children's health. Now since the introduction of a national Vertical Birth Policy – many indigenous women traditionally give birth standing up – a Universal Health Care Policy, and the introduction of TBAs into the hospital system, indigenous women feel less discriminated against (see Box 1).

Discrimination towards indigenous peoples and minorities is a global problem, and indigenous populations internationally experience extreme marginalization and poor health. Indigenous women are particularly disadvantaged during pregnancy and children during infancy. But before we look in detail at health in indigenous women and children it is important to describe briefly the historical and cultural context of indigenous health worldwide.

### **The context for indigenous maternal and child health**

The current marginalization of indigenous peoples has a long history. Five hundred years ago in Latin America, millions of people were displaced, killed or lost their lives to introduced diseases in the course of the Spanish and Portuguese invasions. In Asia, Africa and the Middle East the situation of minorities and indigenous peoples is linked to their historical relationship with majority ethnic or religious groups. For example, in India indigenous groups, known as tribal peoples, are often seen by scientists and policy-makers from the majority culture as backward and their health problems are blamed on their culture and bad habits.

To an extent, the policy support and attention indigenous peoples receive in their countries relates to the size of their populations. In some countries, for example Bolivia, indigenous peoples are the majority population, and there is an indigenous president. However, in most countries indigenous peoples are a minority of

the population, and often culturally diverse in terms of both the majority population and other minorities, with very different ways of looking at health and their own health systems. For example, according to the 2000 Census, China has 55 different indigenous populations, totalling 104.49 million people, but comprising only 8.1 per cent of the country's total population. Each of these groups has their own language and culture, highly different from each other and from the majority culture.

#### **Box 1**

## One indigenous woman's perspective on discrimination in the health system

*When I started to work in this organization we used to attend talks about our rights, about pregnant women's rights, about the rights that the state guarantees and the right to health, that nobody can tell us off or discriminate against us ... Before, I didn't know we had rights, you even felt bad for being indigenous because there was discrimination everywhere, in education, in health ... in the street they used to call us 'indians, longas' [pejorative terms used to insult indigenous people]. We used to say nothing but after those talks [in the organization] and the self-identification as indigenous you start seeing things more clearly and you can defend yourself. If anyone tells me off without justification I can answer back. So I wanted to deliver in hospital because we needed it for my husband's [paternity leave] and because I wanted to help others, because there is so much injustice.*

Indigenous woman, aged 30, Otavalo Public Hospital, Ecuador, 2012<sup>1</sup> ■

It is important to realize that for many indigenous communities 'health' is a concept linked to the community, not the individual; it has an important spiritual element and relates strongly to the well-being of the ecosystem and planet. This has important implications for how we measure and treat health in indigenous peoples. Allopathic medical models, often termed 'western' medicine, tend to treat symptoms of individuals, and measure 'health' with statistics regarding individual illness and mortality. This chapter uses some of these statistics but also reports from indigenous community members about their own perspectives on health.

If we look at what we know globally from scientific studies and government reports, indigenous health data is better documented in Australia, North America and New Zealand, where approximately 1.1 per cent of the world's indigenous populations live. The health of indigenous peoples in lower-income regions – including Latin America, South Asia and Africa – has received significantly less scientific and policy attention. A *Lancet* series<sup>2</sup> on global indigenous health identified several key themes:

- Lack of data: indigenous identity is not recognized by some national governments, and where indigenous peoples are recognized, data are rarely routinely collected or disaggregated.
- Where data exist, evidence suggests that, in all settings, indigenous peoples suffer extreme ill-health and many population groups are at risk of demographic extinction.
- Indigenous peoples' concepts of health differ from western biomedical models. Rarely focusing on individual well-being, indigenous people see their personal health as intimately linked to that of the wider community and ecosystem in which they live.
- Socio-political factors linked to marginalization and colonialism, and relationships with the land and environment, are seen as fundamental determinants of indigenous health.

Concluding the series, *The Lancet* editor Richard Horton commented: 'perhaps the most urgent call of all is to remove the cloak of invisibility from the shoulders of indigenous peoples'.<sup>3</sup> The problem is that in many countries, indigenous peoples are not *visible* within census or routine

statistics. This is important for understanding indigenous health problems. There is no universally accepted definition of 'indigenous' and countries may use very different ways of identifying the indigenous population and of registering this status in health data. For example, census and population surveys often base their statistics on indigenous populations on surveys that use a measure of self-identification as indigenous by respondents. Problems emerge where indigenous peoples experience discrimination, and they often do not want to self-identify as indigenous as it is stigmatizing. As policies change and discrimination decreases, the indigenous population may seem to increase, but this is simply because more indigenous people are willing to self-identify as indigenous.

In some regions, it is the government that does not wish to recognize the concept of 'indigenous'. This is most pronounced in Africa, where there are an estimated 14.2 million self-identifying indigenous people, including hunter-gatherers, such as Batwa in central Africa and San in Botswana; and pastoralists such as Maasai in Kenya and Tanzania, and Tuaregs in west and northern Africa. Almost all these communities face discrimination, displacement and conflict with national governments and majority populations.

Health data may be even more problematic than population data – people's ethnic status is rarely measured in health statistics and data are rarely disaggregated. If you add these statistical problems together with the demographic reality that indigenous peoples may be a small proportion of national population in most countries, indigenous peoples can be rendered invisible. Women and children can be particularly voiceless, and their needs overlooked.

Keeping this background context in mind, we can start to look at the evidence of the health situation faced by indigenous women and children. Gender inequities exist in almost all settings – girl children are disadvantaged in infancy, women are disadvantaged in health terms, access to education, employment and social services. In almost every country, indigenous and minority women and children have worse health indicators than non-indigenous and non-minority women and children.<sup>4</sup>

The context of indigenous poverty and

inequity underlies the health profile of indigenous women and children. But this is not the only problem: indigenous peoples often live in remote inaccessible areas, which are often home to natural resources that are important to majority populations in their countries.

Many communities may not have access to basic services such as clean water, sanitation, education and health, but as importantly, they are often displaced from their homes through deforestation, resource extraction and conflict. In urban areas, indigenous peoples often end up in low-income settlements in the worst environmental and social conditions. And even when services are available to indigenous communities they are often not adapted to the needs of culturally distinct indigenous peoples.

### Indigenous child health

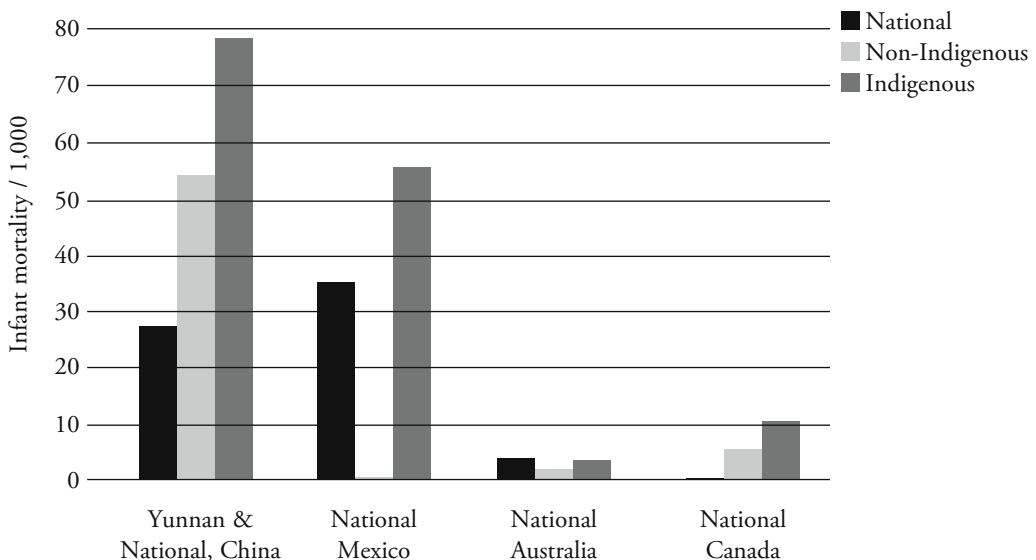
International studies show that indigenous children have worse health indicators than non-indigenous children in almost every context.<sup>5</sup> They have higher rates of infant mortality, and higher rates of illness, including respiratory and diarrhoeal disease. In the Republic of Congo, mortality from measles has been estimated to be five times higher in Ba'Aka children than neighbouring Bantu communities.<sup>6</sup>

While health problems are common across the world, the scale of the health problems, and of inequities between indigenous and non-indigenous groups, varies widely between countries. For example a study in China found that infant mortality rates (IMR) for indigenous groups in Yunnan Province were 77.75 per 1,000, compared to a national IMR of 26.9 per 1,000, and an IMR of 53.64 per 1,000 for non-indigenous populations of Yunnan.<sup>7</sup> In Mexico, municipalities with a high proportion of indigenous peoples in their population had an IMR of 55.1 compared to a national IMR of 34.8 per 1,000. This study also showed that there are important inequalities between indigenous groups – the highest IMRs were in the indigenous regions with the worst socio-economic conditions.<sup>8</sup>

Figure 1 shows the IMRs in Yunnan compared with the national data in China, as well as in three other countries.<sup>9</sup> It is based on different studies from different periods but it does allow us to see the striking differentials in between indigenous and non-indigenous populations and countries with different regions and socio-economic conditions. It also highlights the differences between countries.

Indigenous child health indicators can be equally poor. Indigenous children often suffer

**Figure 1** Infant mortality for indigenous and non-indigenous children in four countries



malnutrition and childhood diseases at rates higher than non-indigenous children. Indigenous children also often have poorer nutrition indicators, with both under-nutrition and malnutrition, and have higher intestinal parasite loads, than non-indigenous children in their settings. In Misiones in Argentina, there are a remaining 78 Mbyá Guaraní communities with 4,083 members. Studies indicate that 57 per cent of Guaraní children under five years were undernourished and 43 per cent suffered chronic under-nutrition.<sup>10</sup>

As they grow into adolescence, particularly if they are exposed to so-called western lifestyles, they are vulnerable to drug and alcohol addictions, with young girls also vulnerable to sexual abuse and prostitution. Young girls are particularly vulnerable when major infrastructure projects move into their remote regions, bringing outside workers who look to the young girls for sex work.<sup>11</sup>

Mental health problems and suicide rates among indigenous young people can also be higher than those in the non-indigenous population. This is often linked to ‘acculturation’, particularly if the indigenous community has been forced into urban settings, where urban indigenous children and their families often experience the worst situations of urban marginalization, discrimination and poverty.

Some evidence suggests that maternal health plays an important role in protecting young indigenous people from mental health problems, even in extreme circumstances of displacement.<sup>12</sup>

### Indigenous maternal health

Indigenous women are most often the key carers of children in their communities. TBAs are a very important health resource in the community, and many traditional healers are women. In many indigenous cultures in Latin America, an elderly indigenous woman in the community is chosen each year to become the Pachamama (or Earth Mother), advising the whole community and guiding them towards a caring relationship with the environment.

In interviews with Doña Celia Andrade, Pachamama of the Calchaqui Valleys of Tucumán in northern Argentina, she told us:

#### Box 2

## Indigenous maternal health – a perspective from Ecuador

*‘With my first child, the doctors told me that I would deliver around 3 p.m. and that if I needed anything before that I should ring the bell. I was left alone [in the labour ward]; I rang the bell many times because I needed to go to the toilet. I rang the bell for half an hour and nobody came. Then, a doctor in a suit who was not on duty turned up by chance. I told him I wanted to go the toilet, I had been calling for help and nobody was coming. ‘Are you in labour?’ the doctor asked. ‘Yes, and I can’t cope any more!’ I said. He checked me with one of those machines you put in the tummy and he said ‘This baby is about to die!’ And the doctor gave a cut to deliver. It turns out that the doctor who was on duty had gone to the park with a friend and didn’t come back on time; so the doctor in the suit delivered me. My daughter was born very, very blue and with a very big head. That’s why I didn’t want to go back to hospital because [health care workers] say it’s not time [for delivery] yet and they leave.’*  
‘Graci’ – a pseudonym

After this first experience Graci wanted a homebirth for her second child. However, she delivered her second child in hospital too because, as she explained, her feet swelled up and she felt a strong burning sensation all over her body. Her husband and her sister said this was not normal and, although she did not want to go to the hospital, eventually her husband and sister persuaded her. According to Graci, her second experience was very different. Research data showed that at that time, the hospital had implemented the

Vertical Birth and the Universal Health Care Policy.

*'I think the second time care was good because the doctor and the indigenous TBA were [on the labour ward]. The TBA is employed there and they are with the patient. The same for doctors and nurses, they are there with the patient; now they don't leave you alone ... What is also very good is that now a relative can stay with the patient ... My sister was with me [during labour] and she told me I could [deliver], because I thought I couldn't cope. When I was about to deliver my sister told me I had to push and that I could do it and then the baby came out. My sister told me "It's a boy!" and the doctors also*

*said "It's a boy!"*' Graci'

Graci's sister, Marta, who also happened to be pregnant, was due to deliver a few months after Graci. As Marta stated, initially she wanted a homebirth but she delivered in hospital because she felt strong cramps during labour and felt she would not be able to deliver at home. She was encouraged by her sister Graci to go to the hospital because 'care in the hospital is good now'.<sup>13</sup> ■

**Below: An indigenous woman feeds one of her children in a river, Ecuador. James Morgan/Panos.**





*'When I was young and a mother, I cured my children with our medicines, with herbs, with good food. Now that I am Pachamama I see young mothers who do not have such good food for their children, who do not have time to cook for their children. These children are our future and we have to care for them with good food and health, and with our knowledge of our medicines and our love for our planet.'*

Despite their cultural importance and knowledge, indigenous women are often highly marginalized in their national and local contexts. They are generally the key holders of traditional food and medical practice, but may speak only their native languages, and are often unused to communicating with people outside of their community. As a result indigenous women often experience extreme prejudice in their contact with the outside world, particularly in health and social services.

Pregnancy can be a particularly difficult time: the official health system of most countries is not based on cultural sensitivity towards indigenous women, and they are often treated with disrespect and prohibited from following their traditional birth practices. As a consequence, indigenous women in many settings do not access the formal health system, or access it only in emergencies, often too late.

Box 2 (on p. 28) shows the experience of one indigenous woman and her sister during two pregnancies in Otavalo Hospital in Ecuador talking about their feelings about care during pregnancy and delivery.

The experience of indigenous women in Ecuador is very similar to that of indigenous women across the world. Indigenous women rarely receive culturally appropriate care within a western health care system and this is particularly problematic during pregnancy. Risks to maternal health are often the same as for any pregnant woman, and include complications during pregnancy and in delivery. Data can be incomplete as indigenous women often distrust the health systems and do not access services, but studies show that indigenous women have higher rates of maternal mortality than non-indigenous women.<sup>14</sup>

From a health service perspective, indigenous

.....  
**Box 3**  
.....

## The MDGs

.....

- Goal 1 Eradicate extreme poverty and hunger
- Goal 2 Achieve universal primary education
- Goal 3 Promote gender equality and empower women
- Goal 4 Reduce child mortality
- Goal 5 Improve maternal health
- Goal 6 Combat HIV/AIDS, malaria and other diseases
- Goal 7 Ensure environmental sustainability
- Goal 8 Develop a global partnership for development

women may also have health behaviours that put them at risk, such as smoking during pregnancy, and they may delay attending health services until the last stages of an emergency, giving health staff very little time to help them.

Gender inequities within the household also play a significant role in indigenous maternal health: one study in Mexico among indigenous women in Chiapas found that decision-making was dominated by husbands and their families, and that 98 per cent of indigenous women only spoke their own indigenous language and did not access outside services. Western maternal health services were not used at all: 49 per cent of all obstetric cases were assisted by TBAs, 45 per cent by relatives and 6 per cent by their partner.<sup>15</sup>

### **The Millennium Development Goals and indigenous maternal and child health**

Box 3 shows the Millennium Development Goals (MDGs), adopted initially in 2001. Since their introduction, indigenous peoples' organizations, international non-governmental organizations (NGOs) and UN bodies have expressed concerns about the MDGs process, particularly in relation to measurements of indigenous well-being.



**Above:** Aboriginal children at a health clinic in Ramangining, Australia. Penny Tweedie/Panos.

Concerns relate principally to the issues of measurement of indigenous population, along with economic, social and health statistics mentioned earlier in this chapter. For example, Jane Freemantle, writing for the *UN Chronicle*, reports that, even in Australia, it is estimated that only 59 per cent of Aboriginal and Torres Strait Islander children (under 15 years) are included in national infant and childhood mortality statistics due to incomplete and inaccurate identification in some states and territories. Freemantle comments:

*'Without accurate identification of indigenous persons in health datasets, we cannot accurately describe and monitor indigenous births, deaths,*

*and child health outcomes. We cannot answer the questions: Who are our indigenous peoples? What is their current standard of health and how does it compare to other members of the population? Why is their health so poor and how can opportunities for better health care and health outcomes be supported and increased?'*<sup>36</sup>

The key solution to the problems of the MDGs and indigenous well-being is in the development of *disaggregated* MDG indicators for indigenous peoples within countries. For example, Goal 4 is to reduce child mortality. The specific target of MDG 4 is to reduce the under-five mortality rate by two-thirds, between 1990 and 2015. The indicators for MDG 4 are under-five and IMRs, and the proportion of one-year-old children immunized against measles. These indicators could be disaggregated in order to measure rates



within indigenous populations – this would allow us to know if indigenous peoples were being left behind in the overall MDG race. This is a key civil society policy recommendation for any post-MDG framework.

### **Policy responses**

Despite the continued problems of indigenous maternal and child health, significant progress has been made at both the international level and within countries. In terms of data collection and documentation of indigenous health issues, UN agencies, NGOs and indigenous organizations have been pushing for disaggregated data for indigenous peoples for some years.

Some countries, such as Argentina, Bolivia, Brazil and Ecuador, now include census questions that allow the population to self-identify as indigenous if they wish. This helps to identify the size of the indigenous population but needs to be combined with indicators of indigeneity within data collected by health, education and other government agencies.

In 2007 the UN Declaration on Rights of Indigenous Peoples was ratified. It emphasizes indigenous peoples' rights to health and to their own definitions of health and well-being. The declaration also emphasizes indigenous rights to the conservation of medicinal plants, animals and minerals – an important element linked to the natural resources that indigenous peoples rely on.

At national level, indigenous peoples have been supported by a number of governments. Health services have been adapted and training of medical professionals has been made more culturally sensitive. In several states, governments have trained indigenous peoples to become health workers and developed inter-cultural health services.

Some of the most interesting examples of initiatives are found at the local level. For example, the implementation of the Vertical Birth Policy in Ecuador was principally driven by indigenous groups both within and outside the Ecuadorian government. This has not been easy but has gradually changed the face of the health system for indigenous women and their families.

In other contexts, indigenous women have been involved in the development of research into maternal mortality and maternal health

.....  
**Box 4**  
.....

## Health-related Articles of the UN Declaration on Rights of Indigenous Peoples, 2007

.....

### **Article 24**

1. Indigenous peoples have the right to their traditional medicines and to maintain their health practices, including the conservation of their vital medicinal plants, animals and minerals. Indigenous individuals also have the right to access, without any discrimination, to all social and health services.
2. Indigenous individuals have an equal right to the enjoyment of the highest attainable standard of physical and mental health. States shall take the necessary steps with a view to achieving progressively the full realization of this right.

### **Article 31**

1. Indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs, sports and traditional games and visual and performing arts. They also have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge and traditional cultural expressions.
2. In conjunction with indigenous peoples, States shall take effective measures to recognize and protect the exercise of these rights.



policies. For example, indigenous women in Australia were involved in the development of vaccine policy and antenatal care.<sup>17</sup> As a result, previously autonomous indigenous health providers were incorporated into a community-based, collaborative Mums and Babies programme for indigenous women in Townsville. A subsequent study found that the number of indigenous women who entered the programme and gave birth at Townsville Hospital trebled in three years to 61 per cent.

A major step forward for indigenous health generally has been the development of education programmes to incorporate indigenous young people into medical and nursing training, often with concurrent development of inter-cultural health education in medical schools. One particularly successful programme in Australia explored what indigenous communities in northern Queensland want from their medical doctors. This included culturally appropriate knowledge and communication. The programme

**Above:** Medical students from the high Andean valleys of Salta, Tucumán and Catamarca, Argentina. *Carolyn Stephens.*

also incorporated indigenous perspectives and indigenous practitioners into medical schools.

The photo above shows young medical students from the high Andean valleys of Salta, Tucumán and Catamarca celebrating the first programme of social inclusion in medical education initiated by the National University of Tucumán in Argentina. These students are the first group from their communities to be trained as doctors, with a concurrent programme of indigenous health training introduced into the medical faculty in 2013.

### **Conclusion**

There is a long way still to go to bring indigenous maternal and child health up to the standards of their right to 'the highest attainable standard of physical and mental health'. Making

visible the current situation is one important step forward. If governments internationally make a commitment to routinely disaggregate data on indigenous populations, their health and their social and economic situation, this would be another important step forward. The MDGs are an important initiative that governments internationally have signed up to, but they have not yet acknowledged formally the need to have indicators disaggregated for indigenous health.

Finally, we need to recognize that indigenous peoples are an important representation of human cultural and linguistic diversity. They are often the guardians of the most critical natural resources of the planet and have a unique understanding of these environments. They have a key contribution to make to medicine internationally and to the health of all peoples. The health of indigenous mothers and children is vital for the survival of indigenous populations internationally. And the survival of indigenous peoples is linked intimately to the survival of the planet and all of us. ■

## Endnotes

1. Llamas Montoya, A., 'Delivering maternal health in Ecuador: the right to health of indigenous women', unpublished PhD thesis data, London School of Hygiene and Tropical Medicine, 2013.
2. Stephens, C., Porter, J., Nettleton, C. and Willis, R., 'Disappearing, displaced, and undervalued: a call to action for Indigenous health worldwide', *The Lancet*, vol. 367, no. 9527, 2006, pp. 2019–28.
3. Horton, R., 'Indigenous peoples: time to act now for equity and health', *The Lancet*, vol. 367, no. 9524, 2006, pp. 1705–7.
4. Stephens, C., Nettleton, C., Porter, J., Willis, R. and Clark, S., 'Indigenous peoples' health – why are they behind everyone, everywhere?', *The Lancet* vol. 366, no. 9479, 2005, pp. 10–13.
5. Luo, Z.C., Wilkins, R., Heaman, M., Smylie, J., Martens, P.J., McHugh, N.G. et al., 'Birth outcomes and infant mortality among First Nations Inuit, and non-Indigenous women by northern versus southern residence, Quebec', *Journal of Epidemiology & Community Health* vol. 66, no. 4, 2012, pp. 328–33; UNICEF, *Ensuring the Rights of Indigenous Children*, Innocenti Digest 11, Florence, UNICEF Innocenti Research Centre, 2004.
6. Ohenjo, N., Willis, R., Jackson, D., Nettleton, C., Good, K. and Mugarura, B., 'Health of Indigenous people in Africa', *The Lancet*, vol. 367, no. 9526, 2006, pp. 1937–46.
7. Li, J., Luo, C. and de Klerk, N., 'Trends in infant/child mortality and life expectancy in Indigenous populations in Yunnan Province, China', *Australian and New Zealand Journal of Public Health*, vol. 32, no. 3, 2008, pp. 216–23.
8. Fernandez Ham, P., 'Infant mortality in the indigenous population: backwardness and contrasts' (in Spanish), *Demos*, vol. 6, 1993, pp. 12–13.
9. *Ibid.*; Alessandri, L.M., Chambers, H.M., Blair, E.M. and Read, A.W., 'Perinatal and postneonatal mortality among Indigenous and non-Indigenous infants born in Western Australia, 1980–1998', *Medical Journal of Australia*, vol. 175, no. 4, 2001, pp. 185–9; Smylie, J. and Adomako, P. (eds), *Indigenous Children's Health Report: Health Assessment in Action*, Toronto, Keenan Research Centre, University of Toronto, Centre for Research on Inner City Health, 2009, <http://www.crich.ca>. Variances depend on availability of data.
10. Agencia Dyn, 'Misiones: mas de la mitad de los niños indígenas estan desnutridos', *Diario la Voz del Interior*, Cordoba, Argentina, 2005, p. 17.
11. Napolitano, D. and Stephens, C., 'La salud de los pueblos indígenas y el Proyecto de Gas de Camisea Informe para la AIDSESP', London, London School of Hygiene & Tropical Medicine/Shinai Serjali, 2003.
12. Nettleton, C., Napolitano, D. and Stephens, C., *An Overview of Current Knowledge of the Social Determinants of Indigenous Health*, Geneva, World Health Organization (Commission on Social Determinants of Health, Working Paper), 2007.
13. Llamas Montoya, *op. cit.*
14. Barnett, S., Nair, N., Tripathy, P., Borghi, J., Rath, S. and Costello, A., 'A prospective key informant surveillance system to measure maternal mortality – findings from indigenous populations in Jharkhand and Orissa, India', *BMC Pregnancy Childbirth*, vol. 8, no. 6, 2008; Kildea, S.,

'Maternal deaths high for Indigenous women', *Women Birth*, vol. 21, no. 4, 2008, pp. 175–6.

15. Herrera Torres Mdel, C., Cruz Burguete, J.L., Robledo Hernandez, G.P. and Montoya Gomez, G., 'The household economy: a determinant of maternal death among indigenous women in Chiapas, Mexico' (in Spanish), *Revista Panamericana de Salud Publica*, vol. 19, no. 2, 2006, pp. 69–78.
16. Freemantle, J., 'Indigenous children – their human rights, mortality, and the Millennium Development Goals', *UN Chronicle*, 2010, retrieved June 2013, [http://www.un.org:80/wcm/content/site/chronicle/home/archive/issues2010/achieving\\_global\\_health/indigenuschildre\\_nhumanrights](http://www.un.org:80/wcm/content/site/chronicle/home/archive/issues2010/achieving_global_health/indigenuschildre_nhumanrights)
17. Panaretto, K.S., Lee, H.M., Mitchell, M.R., Larkins, S.L., Manassis, V., Buettner, P.G. et al., 'Impact of a collaborative shared antenatal care program for urban Indigenous women: a prospective cohort study', *Medical Journal of Australia*, vol. 182, no. 10, 2005, pp. 514–19.