Health situation in Haiti before the 2010 earthquake

prepared by PAHO, January 19/2010
Population’s health:
Available data indicates that:

• Death registry highly incomplete (death certificates account for only 10%)
• The highest general mortality in the Americas (12.1 per 1,000 population)
• The highest maternal mortality in the Americas (pregnancy and labor related deaths)
• Shortest life expectancy in the Americas (61.5 years)
Demographics

• First black nation in the Americas, located in the Caribbean with 27,700 Kms\(^2\)
• Current population of 10 million
  – Close to one million in Port-au-Prince (Capital City)
• 60% of the population is under 25 years of age
• 11% of children had lost either parent (half a million kids)
• Population growth of 1.6% a year
  – 274,000 newborn every year
• Life expectancy at birth: Male: 59.7 and Female: 63.2
• Country’s official languages are Creole and French, but only 10% of population speaks French.
Socio-economics

• Poorest country in the Americas
  – 55% of population lives in households below the extreme poverty line of US$ 1.00 per person per day
  – 71% (over 6 million people) lives below poverty line of US$ 2.00 per person per day
• Unequal income distribution (4% population own 66% of nation’s wealth)
• 61% of population over 10 years old are illiterate
• Less than 40% of population has access to basic health care and 50% lacks access to basic prescribed drugs
• Annual GDP negative with -1.1% per year (2000-2004)
  – GDP improved to 1.1 recently (2005 – 2006)
• 33% of economically active population is unemployed
Governance and security

- Half of economically actively workers have government funded jobs
- Political instability has slowed investment
- Transitional governments since the 2000 have contributed to recurrent political unrest
- The average inflation rate has been 17% per year
- Floods in 2004, along with insecurity and political instability caused a 5.5% drop in the country’s GDP
Environmental health

• Deficient farming practices on steep terrain have accelerated soil erosion and loss of agriculturally productive land deriving in:
  – Land erosion that contributes to drainage obstruction, worsening the situation during flooding season
  – Inaccessibility to nutritional food due to a decline in agricultural production
  – Deterioration of children’s nutritional status
  – 40% of households experience food insecurity and
  – 12% of women are below the critical threshold for chronic energy deficiency

• Surface water is usually polluted by inefficient excreta and household waste management
  – Population with access to safe drinking water: 58%
  – Population with access to adequate sanitation: 19%
Children under 5 years old

- 1 in 12 Haitian children die before their fifth birthday
- According to the Morbidity, Mortality and Service Utilization Survey:
  - Leading causes of death are
    - Acute respiratory infections
    - Acute diarrheal diseases
- Most common problems
  - 65% pre-scholars had anemia
  - 40% Acute respiratory infections symptoms
  - 28% had one or more episodes of diarrhea
    - Only 57% had been treated with oral rehydration therapy
  - 23 % had suffered chronic malnutrition
  - 20% have been taken for a consultation or to get help
Children 5-9 years old

Overview:
• They account for 13% of the population
• 17% do not attend school
• 12.5% have never been enrolled
• 1/3 of the children had parasites.
• 27% of deaths were infectious and parasitic diseases

The five leading causes of death:
• Tuberculosis
• Diarrheal diseases
• Malnutrition
• HIV/AIDS
• Malaria
Adolescents: 10-14 and 15-19 years old

Overview:
- Services for adolescents are mainly provided by nonprofit organizations
- Fertility rate among 15-19:
  - Urban: 69/1,000
  - Rural: 86/1,000
- One for every 5 women aged 15-19 years old has access to modern contraceptives
- Condom use was low is 7% in 2005-2006

The six leading causes of death:
- AIDS
- Physical assaults
- Accidents
- Tuberculosis
- Typhoid
- Maternal causes
Adults 20-59 years old

Overview:
- This age group represents 40% of the total population.
- Includes women of childbearing age and most persons in the workforce
- 99% of women has received information on at least one modern family-planning method.

Leading causes of death in 2003
- 15% AIDS (leading cause for age group 20-49)
- 10% Cardiovascular diseases
- 5% Assaults
- 4.4% Maternal causes
- 4% Accidents
- 4% Tuberculosis
Older adults 65 years

Overview

• This age group represent 5.1% of the total population
• 78% is illiterate
• Some 72% of this group lives in rural areas
• There is no health care program for the elderly
• 7.7 indicated that they had at least one disability

Leading causes of death:

• Cardiovascular disease
• Stroke
• Neoplasm
• Lung disease
• Diarrheal disease
• Diabetes mellitus
Ten leading causes of death by sex and percentage of total diseases in Haiti, 2003

<table>
<thead>
<tr>
<th>Disease</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease of circulatory system</td>
<td>829</td>
<td>561</td>
<td>1,380</td>
<td>24.4</td>
</tr>
<tr>
<td>AIDS</td>
<td>219</td>
<td>271</td>
<td>490</td>
<td>8.6</td>
</tr>
<tr>
<td>Infectious intestinal diseases</td>
<td>219</td>
<td>268</td>
<td>487</td>
<td>8.6</td>
</tr>
<tr>
<td>Pneumonia and influenza</td>
<td>160</td>
<td>169</td>
<td>329</td>
<td>5.8</td>
</tr>
<tr>
<td>Malignant neoplasm</td>
<td>157</td>
<td>135</td>
<td>292</td>
<td>5.1</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>118</td>
<td>148</td>
<td>266</td>
<td>4.7</td>
</tr>
<tr>
<td>Malnutrition</td>
<td>117</td>
<td>132</td>
<td>249</td>
<td>4.4</td>
</tr>
<tr>
<td>Infection specific to perinatal period</td>
<td>128</td>
<td>117</td>
<td>245</td>
<td>4.3</td>
</tr>
<tr>
<td>Accidents</td>
<td>77</td>
<td>142</td>
<td>219</td>
<td>3.8</td>
</tr>
<tr>
<td>Assault</td>
<td>28</td>
<td>145</td>
<td>173</td>
<td>3.0</td>
</tr>
<tr>
<td>Total deaths with other defined causes</td>
<td>781</td>
<td>775</td>
<td>1,556</td>
<td>27.3</td>
</tr>
<tr>
<td>Total deaths from defined causes</td>
<td>2,833</td>
<td>2,863</td>
<td>5,696</td>
<td>100</td>
</tr>
<tr>
<td>Ill-defined causes</td>
<td>1,043</td>
<td>1,272</td>
<td>2,315</td>
<td></td>
</tr>
</tbody>
</table>

Source: PAHO. Health in the Americas, 2007. Volume II-Countries; page 416
Five leading cause of infant mortality by rates by the first four Mortality, Morbidity and Service Utilization (EMUS I-IV), Haiti, 1987-2006

<table>
<thead>
<tr>
<th></th>
<th>EMUS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I 1987</td>
</tr>
<tr>
<td>Infant mortality (0-1 years old)</td>
<td>99</td>
</tr>
<tr>
<td>Neonatal mortality (0-28 days old)</td>
<td>40</td>
</tr>
<tr>
<td>Postnatal mortality (1-11) months old)</td>
<td>59</td>
</tr>
<tr>
<td>Young child mortality (1-4 years old)</td>
<td>66</td>
</tr>
<tr>
<td>Infant and young child mortality (0-4 years old)</td>
<td>158</td>
</tr>
</tbody>
</table>

Source: PAHO. Health in the Americas, 2007. Volume II-Countries; page 416
* These are preliminary results
Health Problems
Communicable diseases

Vector-borne diseases

Malaria:

- Rainy season: March-May and October-November
- Over 106,152 cases in 2005
- There were 50 sentinel (surveillance) sites throughout the country
- The Global Fund had provided financial resources to reduce malaria morbidity by 10% and eliminate mortality by 2010
Vector-borne diseases
Cont...

Dengue
• All serotypes (I-IV) circulate in the country.
• No structured program in place
• Problem is mainly located in urban areas, where the presence of larval breeding sites facilitates its propagation

Lymphatic filariasis
• Found in both urban and rural areas, mainly in the Nord department (Gulf of Gondave)
• The entire country is at risk of transmission through biting by *Culex quinquefasciatus*. 
Vaccine-preventable Diseases

- Immunization program covers the following diseases:
  - Tuberculosis (Highest incidence in the Americas)
  - Poliomyelitis (no single case found since 2000)
  - Diphtheria (DPT coverage of 53% in 2008)
  - Tetanus
  - Whooping cough (major outbreak in 2004)
  - Measles is a major concern due to its extremely low coverage (54% vaccination coverage)
  - Neonatal tetanus remains a major public health problem
    - In 2005 119 cases of tetanus were reported, of which 71 were neonatal.
Intestinal Infectious Diseases

Overview

- 24% of children under 5 years old had had one or more episodes of diarrheal disease in the previous two week of a national survey.
- Of these children 40% were treated with oral rehydration therapy (ORT).
- ORT is more prevalent in the cities (72% in the metropolitan area and 52% in the countryside).
- Children aged 6-11 are the most affected (41%)
- Infants 12-13 months olds (38%)
- These pathology ranked third behind AIDS, on the list of leading causes of death in 2003.

Typhoid fever responsible for the following percentages of death:

- 2.8% in children 5-9
- 8.9% in age group 10-14
- 3.2% in age group 15-19
- 1.5% in age group 20-49
Chronic Communicable Diseases

- Tuberculosis
  - Seventh leading cause of death in the country
  - The most affected age group is 15-44
  - Estimated incidence of TB in 2005 was 12,632 cases
    - Detection rate of 49% in 2006
    - Cure rate 70% (Treatment provided free of charge)
  - TB/HIV co-infection rate is 29%
  - HIV has exacerbated TB situation making it the leading infectious disease in people living with HIV.
Chronic Communicable Diseases cont…

• Leprosy
  – Between 1998-2002 there were 1,718 cases were detected (only 75% were treated)
Acute Respiratory Infections

- Mortality attributable to ARI in children ranks just behind the number of deaths from malnutrition and diarrhea (According to the mortality, morbidity and service utilization survey (2005-2006)
- No less than 40% of children under 5 years old had had fever or symptoms compatible with ARI in the two week preceding the survey.
  - Only 20% of them had been formally examined to obtain treatment
HIV/AIDS

- HIV prevalence is 2.2% (220,000 cases)
  - 2.3% among women aged 15-49
  - 2.0% among men aged 15-59%
  - In selected women groups is 3.3% and 91% of the women tested returned for their results
  - Male: Female ratio is 1:1.9

- An estimated 40,000 HIV-positive persons needed antiretroviral therapy in 2005

- Number of people receiving treatment increased from 5,500 in January 2006 to 9,412 in September 2006

- 10% of seropositive women and their babies received antiretroviral therapy to prevent mother-to-child transmission

- Condom use limited (11% of women and 23% of men who had had sexual relation in the 12 months prior to the survey reported its use.

- People with HIV/AIDS continue to be stigmatized and discriminated.
Non-communicable Diseases

• Anemia:
  – 65% in children under 5 years of age
  – 54% among women in general
  – 63% in pregnant women
  – 1/3 of children 6-59 months suffer from vitamin A deficiency
  – Children 24-35 months old had some form of mild iodine deficiency

• Sickle cell disease
  – 706 individuals were identified with sickle cell disease in 679 families of which 27 had two or three children with the malady.
Non-communicable Diseases cont...

- It is estimated that heart diseases, diabetes and hypertensive disorders are important public health problems, but the extent of them is known.

**Diabetes**
- Eleventh cause of death in the country
- The age-adjusted prevalence of diabetes is:
  - 4.8% in men and 8.9% in women, with 71% of cases already known.

**Hypertension**
- Found in 48.7% of men and 46.5% women. The rate in the group older than 40 was 69.1% in men and 67.2% in women.
Non-communicable Diseases cont...

• Cardiovascular disease
  – Cerebrovascular diseases accounted for one third of all deaths in 2003

• Malignant Neoplasm
  – Ranks fifth as the specific cause of death
  – 5.1% of all recorded deaths were related to cancer
## Zoonoses

### Rabies
- In 2006, Haiti was the country with the highest number of human cases (10 cases) in the Americas, and reported an average of 4 cases a year, mostly in metropolitan areas.
- Because of this, the country had undertaken massive dog vaccinations to reduce human rabies.
- Brazil has provided important vaccine donations.
- Prophylaxis remains a problem in the country.

### Anthrax
- Endemic in the Department of the Nord, Sud-Est, Nippes and Artibonite
- These four departments are active foci.
## Health Infrastructure Distribution by Department, Haiti 2003

<table>
<thead>
<tr>
<th>Department</th>
<th>Hospitals</th>
<th>Health Centers</th>
<th>Dispensary</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artibonite</td>
<td>6</td>
<td>12</td>
<td>7</td>
<td>88</td>
</tr>
<tr>
<td>Centre</td>
<td>4</td>
<td>1</td>
<td>33</td>
<td>38</td>
</tr>
<tr>
<td>Grand’Anse</td>
<td>2</td>
<td>16</td>
<td>35</td>
<td>53</td>
</tr>
<tr>
<td>Nord</td>
<td>5</td>
<td>3</td>
<td>40</td>
<td>48</td>
</tr>
<tr>
<td>Nord-Est</td>
<td>1</td>
<td>6</td>
<td>15</td>
<td>22</td>
</tr>
<tr>
<td>Nord-Ouest</td>
<td>3</td>
<td>10</td>
<td>58</td>
<td>71</td>
</tr>
<tr>
<td>Ouest</td>
<td>31</td>
<td>13</td>
<td>169</td>
<td>213</td>
</tr>
<tr>
<td>Sud</td>
<td>6</td>
<td>17</td>
<td>41</td>
<td>64</td>
</tr>
<tr>
<td>Sud-Est</td>
<td>1</td>
<td>4</td>
<td>26</td>
<td>31</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>59</strong></td>
<td><strong>82</strong></td>
<td><strong>487</strong></td>
<td><strong>628</strong></td>
</tr>
</tbody>
</table>

Source: Ministere de la Santé Publique et de la Population. Analyse du Secteur de la Sante pour la Réforme, 2004