

Training in Reproductive Health Research WHO - Geneva 2006

Viral Hepatitis in Reproductive Health

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Hepatitis B - Honduras Research

Challenges for Northern NGOs Working in Developing Countries

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Part 1

Prevalence of the Hepatitis B chronic carrier state among pregnant women in Honduras, and prevention of vertical transmission





Honduras – Physical Geography

- Area: 112,090 sq km
- Terrain: Mostly mountainous, with narrow coastal plains
- Climate: Subtropical in lowlands and temperate in the mountains

Honduras – Demographics

- Population: 6,823,568
- Median age: 19 years (Italy: 41.4)
- Population growth rate: 2.24%
- Birth rate: 31.04 / 1000
- Death rate: 6.64 / 1000
- Total fertility rate: 3.97 children / fertile aged woman

Honduras – Economy

- GDP per capita: \$2,600 (only Nicaragua, Cuba and Haiti have a lower GDP in the Western Hemisphere)
- Population below poverty line: 53%
- Unemployment rate: 27.5%

Honduras – Health Indicators

- Life expectancy at birth: 66.15 years
- Infant mortality rate: 42 / 1000 live births (USA: 7.1)
- Maternal mortality rate: 108 / 100,000 live births (USA: 9.9)

Hepatitis B in Honduras

- WHO classifies Honduras as a moderately endemic country (2% to 7% prevalence)
- It is unclear, however, how these estimates were made (local health authorities lack reliable data)
- Only epidemiological survey to date suggests ~ 3% of pregnant women are chronic carriers

Eradication Efforts

- Hepatitis B vaccine (Engerix) has been made part of the Expanded Program for Immunizations (EPI) in Honduras
- First dose given at 6 to 8 weeks of age

Vertical Transmission

- Transmission from mother to child (almost always at the time of birth)
- Risk of the child becoming chronic carrier depends on mother's serology:
If mother is HBsAg+ only: 10-30%
If mother is also HBeAg+: 70-90%
- To protect the child, the first dose of the vaccine must be given as close as possible to the time of birth

Aims

- To determine the prevalence of chronic hepatitis b infection, as indicated by the presence of HBsAg, among pregnant women
- To assess the risk level of vertical transmission, given the HBeAg status of women found to be HBsAg carriers
- To assess the efficacy in Honduras of Engerix, a recombinant hepatitis b vaccine, to prevent vertical transmission

What are we going to accomplish?

- Reliable data, to help formulate health policy
- Prevention of vertical transmission
- Referral of HBsAg+ mothers to the Ministry of Health for epidemiological follow-up

Our local partner

- The Instituto Hondureño del Seguro Social
 - Autonomous institution, providing pensions and healthcare
 - Covers close to a million hondurans (400,000+ workers and 500,000+ dependents)
 - Has hospitals in the two largest urban centers (Tegucigalpa and San Pedro Sula)

Data collection and management

- 4000 pregnant women followed at the Hospital de Especialidades and the Hospital Regional del Norte
- Basic demographic information, blood for HBsAg and HBeAg determinations
- Establishment of a serum bank
- Design and development of a research database

Main intervention

Preventing vertical transmission

- First dose of vaccine to be administered within 24 hours of birth
- Long-term follow up of vaccinated babies

Our contribution – Analytical

- Study design
- Project Implementation
- Database design
- Statistical and cost-effectiveness analysis

Our contribution – Material

- Equipment:
 - Freezer (serum bank)
 - Computers
- Cost of serological testing:
 - HBsAg; HBeAg
- Vaccine
- Personnel:
 - Research assistant, full time
 - Research assistant, part time
 - Data entry clerk, part time
- Analytical software

Part 2

Challenges for Northern NGOs Working in Developing Countries

The Challenges

- Assessment of the real needs
- Identification and consultation of local partners:
 - Decide objectives together
 - Build up mutual trust
 - Share information
 - Share responsibilities (asses capacities of partners)
 - Create transparency
- Analysis of the cultural, economical, ecological and social implication of the initiative
- Adoption of an holistic approach
- Coordination with local authorities and other actors working in the same territory/sector

The Challenges

- Attention to collusion and corruption
- Involvement and agreement of local communities (do not create high expectations)
- Clarity about project goals (while the implementation has to remain flexible to respond to undefined variables and changing circumstances)
- Clarity about organisational structure and schedule
- Attention to sustainability
- Estimation of the costs
- Development of local expertise
- Monitoring and evaluation

We choose to go to the moon.

We choose to go to the moon in this decade and do the other things, not because they are easy, but because they are hard, because that goal will serve to organize and measure the best of our energies and skills, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one which we intend to win...

John Fitzgerald Kennedy
September 12, 1962

Engage!