## Lessons from a Special Service for Public Health, Brazil

**To the Editor**: Many thanks for your interesting and informative special section on infectious diseases in the Amazon Region (*1*). Your readers should also be interested in a little known, but extremely successful, sustainable health program that had its start in the Amazon.

In 1942, the governments of Brazil and the United States agreed to establish a special service for public health (called the Serviço Especial de Saúde Pública). The purpose of this program was to improve health conditions in key areas in the Amazon, expedite the collection and export of native rubber, and counteract the growing influence of Nazi Germany in Latin America (*2*). The program spread to the Vale do Rio Doce, where there were resources of iron ore, mica, and optical quartz, which were important for the war effort. Although the program eventually moved to all states of Brazil, the Amazon program remained an important activity for ≈50 years before it was integrated into the Brazilian Ministry of Health (*3*).

The program in the Amazon focused primarily on infectious disease. It comprised programs of immunization, provision of small sustainable water systems, development of privy programs (sewer systems in the larger centers of population), malaria control, improvement of residences and living conditions for Chagas disease control, epidemiologic intelligence, and extensive training for auxiliary and professional personnel.

The effects of this program are shown by the increase in life expectancy for all age groups, with an increase of >10 years for those childhood age groups for whom infectious disease control would have the greatest effect from 1939–1941 to 1950–1951 (*4*). This program contains many lessons for the planners of health and disease control projects in tropical, low-income countries.

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## Ceftazidime-Resistant *Salmonella enterica*, Morocco

**To the Editor:** Nontyphoidal salmonellosis (NTS) is a major foodborne illness worldwide. Extended-spectrum cephalosporins (ESCs) are currently preferred drugs for treatment of children with NTS. However, resistance to ESCs has emerged worldwide and has become a serious public health problem. This resistance is caused by production of various class A extended-spectrum β-lactamases (ESBLs) and class C cephalosporinases in *Salmonella enterica* (*1*).

National surveillance systems, ideally based on integration of data for animals, food, and humans, are needed to develop strategies for containing antimicrobial drug resistance. Such systems are primarily based on a network of public or private clinical laboratories that refer *Salmonella* isolates to public health laboratories for identification. However, this laboratory-based surveillance system in developing countries is hampered by cost constraints and poor access to quality health facilities, resulting in a low rate of isolation of bacterial pathogens from patients having mild infections. These constraints account for the lack of data and underestimation of the number of NTS cases in many countries, including Morocco.

According to the World Health Organization Global Salm Surv database (www.who.int/salmsurv/activities/en), the Moroccan National Institute of Hygiene reported only 210 human non-Typhi isolates and 999 animal non-Gallinarum isolates during 1999–2003. Antimicrobial drug resistance data are extremely rare. We report the presence of nontyphoidal *Salmonella* isolates resistant to ESCs during an outbreak of food poisoning and in food products in Morocco.

In March 2008, an *S. enterica* serotype Typhimurium strain was isolated from stool samples of 45 persons who had attended a wedding ceremony in Errachidia. Clinical symptoms were diarrhea, vomiting, and stomach cramps, beginning 24–72 hours after these persons had eaten a tagine prepared with poorly cooked broiler chickens. Five patients were hospitalized for 3 days, but no deaths were recorded. *S. enterica* serotype Typhimurium was isolated from leftovers of a broiler carcass stored in a refrigerator.

PulseNet (http://pulsenetinternational.org/pulsenet/pulsenet.asp)