



NPHI CASE STUDY

Profile of Creation and Growth

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South Africa National Institute for Communicable Diseases (NICD)

Respondent of the interview is Professor Barry Schoub, MB BCH, MMed (Micro), MD, DSc, FRCPath, FCPATH (SA), FRSSAf
Executive Director, NICD, since 2002

Role in creation of the NPHI Dr. Schoub was instrumental in the creation of the NPHI and was Director of one of the precursor organizations.

CREATION OF THE NPHI **Date of creation** 2002

Precursor organizations NICD was created from two precursor organizations: the National Institute for Virology (NIV) and the South African Institute for Medical Research (SAIMR). NIV traces its roots to the Poliomyelitis Research Foundation (PRF), established in 1948. In 1976, the PRF laboratories were sold to the State Department of Health and became the National Institute for Virology. The NIV provided the physical setting for and virology laboratories of NICD.

The second precursor organization was the central microbiology laboratories of SAIMR. SAIMR was founded in the early 1900s, as a partnership between the government and the mining industry, to provide laboratory support for efforts to reduce deaths and improve health in the mining industry—a very large industry in South Africa. It included about 200–300 laboratories around the country. In the late 1990s, the government bought out the mining companies' share of SAIMR, so that SAIMR became fully owned by the government.

The National Health Laboratory Service (NHLS) Act, passed in 2000, provided for the establishment of the NHLS from SAIMR and other state laboratories. NICD was created during the formation of NHLS. Central bacteriology, entomology, mycology, and parasitology laboratories from SAIMR became part of NICD, while the SAIMR labs around the country formed the major portion of NHLS.

NICD is a Branch of NHLS and also has close ties to the Department of Health (DOH) of South Africa.

“Do not reinvent the wheel.

Learn from other NPHIs.”

DR. BARRY SCHOUB

Impetus for change The original idea of forming an organization like NICD developed during informal discussions between Dr. Schoub and the Director-General of the Ministry of Health. Dr. Schoub, who was the director of NIV at the time, recognized the need for an agency that would have strong laboratory components but could also address communicable disease surveillance and epidemiology. Given that the government laboratory structure was being reorganized, developing a plan to accomplish this and convincing leadership of its importance was not difficult.

A reorganization of national laboratories provided an opportunity to develop an NPHI.

Factors leading to success in creating the NPHI

- Leadership was able to communicate the importance of having a public sector organization that could focus on infectious disease surveillance and laboratory support and the benefits of such an organization to the country.
- Creation occurred in the context of a larger reorganization of public sector laboratory services.
- Emerging infectious diseases—such as HIV infection, tuberculosis, and hemorrhagic fevers—highlighted the need for an agency such as what was being proposed.
- Precursor institutions had significant assets, such as scientific and technical expertise, facilities, and equipment.

Processes used to plan and set priorities when the NPHI was created The structure, mission, and vision for NICD were largely developed by Dr. Schoub with a variety of input. Visits to other NPHIs, including the Swedish Institute for Infectious Disease Control, UK Health Protection Agency, and US Centers for Disease Control and Prevention, were invaluable. Staff of these organizations were candid about what was good about their organizations as well as mistakes they had made and aspects they would change. A sample topic discussed during visits was: should laboratory and epidemiologic staff be in separate organizational units, or should they be integrated? As a result of the input received, NICD has integrated epidemiologic and laboratory efforts. Organizationally, the Swedish Institute for Infectious Disease Control is the most similar model to what was established at NICD. *Accountability for budget, policy, etc.* Although many of the staff and much of the organizational framework of PHAC derived from a branch in Health Canada, the branch did not have the same level of responsibility and accountability for budget, policy-making, and other processes that PHAC does. PHAC had to develop systems and structures and hire new staff to address these issues.

In retrospect, aspects of the creation of the NPHI that could have been improved

NICD receives approximately 1/5 of its budget from the DOH and 1/3 from NHLS. The rest comes from research grants and contracts. NHLS provides the administrative support for NICD, including rules and oversight for such processes as hiring. Because NHLS has a big administrative function, it has a large bureaucracy. In retrospect, it would have been preferable to establish more administrative autonomy, to allow NICD to operate with more flexibility and less bureaucracy.

GROWTH OF THE NPHI

Processes by which the NPHI has grown Growth has been very satisfactory, mainly through increases in budget from NHLS (about 100% over 5 years) and from grants and contracts (also about 100% over 5 years). Growth from DOH has been much slower. Overall, FTEs at NICD have grown by about 50% since 2002. NICD has not gained additional units from other organizations since its beginning, but it did create the Epidemiology and Surveillance Division.

Factors responsible for growth

Need is clear It has been easy to communicate the need and the benefits from additional resources provided to NICD.

Success leads to more success As NICD has been productive and applied for more grants, it has achieved more visibility and acquired more support. Having good staff who have produced results and published helps in getting more grants. (NICD staff contribute 70–80 journal publications and a larger number of scientific presentations annually.)

Location near leadership Co-location with the leadership of NHLS has been useful because it is easy to visit with NHLS leaders and explain proposals and priorities. NHLS has increased funding to NICD by about 100% since NICD was created.

Specialized foundations Foundations, in particular the PRF, have also contributed to growth. Since the government purchased the PRF laboratories in 1976, interest on the proceeds has allowed the PRF to support research aimed at furthering the development of medical virology in South Africa. NICD has been a recipient of significant funds from this organization.

Advocacy by outside organizations has not played a role in growth.

Addition of specific capacities

Laboratory Since its inception, NICD has had infectious disease laboratory capacity, including entomology, microbiology, parasitology, and virology, and the only comprehensive BSL-4 laboratory in Africa. These were consolidated at a single location in 2005.

Epidemiology Although infectious disease surveillance had been conducted since the creation of NICD, the need for enhanced efforts led NICD to create a unit focused on epidemiology and surveillance in 2004.

Training NICD staff lecture at universities and have graduate students from universities. NICD also conducts informal training, often hosting workers from Africa and, to a lesser extent, some Asian countries. In addition to serving as a venue for short courses, such as World Health Organization courses in polio and measles diagnosis, in 2006 NICD launched a Field Epidemiology and Laboratory Training Program (FELTP). This program is designed to train field epidemiology and public health laboratory fellows for leadership positions in the South African national and provincial public health systems.

SELECTED CORE ATTRIBUTES

National scope NICD serves as a national coordinating body for major infectious disease public health issues. However, South Africa is a geographically large country, with a population of >45 million. Given that NICD has fewer than 500 staff, it cannot possibly meet all of the country's needs. Nevertheless, it provides assistance to organizations throughout South Africa. Public health schools and eight South African medical schools, DOH, and nine provincial health departments provide additional laboratory and epidemiologic capacity.

National recognition NICD is nationally recognized. When outbreaks or other situations occur, there are sometimes differences of opinion between the national and sub-national levels about the role of NICD in responding.

Focus on major health problems in the country NICD's mandate is to work on communicable diseases. Other organizations in government address non-communicable conditions, such as chronic diseases. NICD works collaboratively with these organizations when appropriate. For example, NICD collaborates with the National Institute of Occupational Health, which is part of NHLS, on infectious disease issues among workers.

SELECTED CORE FUNCTIONS

With regard to communicable diseases, NICD has important roles related to most of the Core Functions (CF). This includes monitoring and evaluation (CF 1); surveillance, epidemiologic investigations, and laboratory services (CF 2); human resource development (CF 8); research (CF 10); and emergencies and disasters (CF 11). Through such activities as assisting laboratories outside of NICD and evaluating rapid diagnostic kits, NICD contributes to other Core Functions as well.

The emphasis for future growth will be to add capacity to do more of the kinds of things that NICD is currently doing rather than add entirely new units or address conditions that have not been the purview of NICD in the past. Expanding epidemiologic capacity is a high priority, as currently there are only eight or nine persons in this division.

RECOMMENDATIONS FOR OTHERS WHO ARE CREATING NPHIS

Visiting other NPHIs was critical
to the process of establishing NICD.
Learn from other NPHIs.

- Do not reinvent the wheel. Learn from other NPHIs.
- Establish the need. Collect data from government documents, publications, and other sources. Be able to explain why an NPHI is needed in terms of threats to the public's health.
- Demonstrate how an NPHI will make a difference. Use local data to develop support for public health research and programs. These data could come from a variety of sources, including journals and various repositories.
- Develop partnerships with countries that have an interest in low-resource countries or particular ties to your country. If you can show that the government is interested in supporting public health, that you have trained people who can do good work, and that you have leadership, then you will be more likely to get such donor resources.