

BUILDING INTEGRATED EPIDEMIOLOGY AND NATIONAL MICROBIOLOGY REFERENCE LABORATORY (NRL) SYSTEM FOR INFECTIOUS DISEASE CONTROL IN FINLAND OVER 40 YEARS

Petri Ruutu

National Institute for Health and Welfare Finland (THL), Helsinki, Finland

DOI: 10.5937/BatutPHCO24010R

Introduction: According to scientific literature, infectious disease (ID) surveillance by passive, physician notification-based surveillance has low sensitivity. Direct data inputs are required from clinical and reference microbiology to meet the needs of ID public health control programs.

Description of developments: The National Public Health Institute (acronym KTL/THL) provided until the 1980s a wide range of clinical microbiology diagnostic services in its regional branches and the central institute. Competition with developing publicly funded hospital clinical microbiology laboratories, together with a strategic decision to change the national institute into a scientific and expert institution led to stopping the clinical microbiology services at KTL/THL.

In the early 1990s KTL/THL established infectious disease epidemiology, previously non-existent in the institute, and introduced a digital national surveillance system, based primarily on notifications from clinical microbiology laboratories. Initially vaccination program oriented, the epidemiology service was expanded by early 2000s to cover all ID control programs.

By early 2000s, it was obvious that the KTL/THL laboratory units were not coordinated for effective NRL support of ID control programs. The institute's epidemiologists and NRL microbiologists intensified their collaboration to focus on optimizing the key NRL objectives, technical processes, resources and their priorities. At the same time the fragmented laboratory organization of KTL/THL was simplified through mergers, ending up in 2010s as only one NRL unit (Expert NRL Microbiology) in the same department with the ID epidemiology functions, moving at the same time a number of microbiology and immunology research functions to the universities. This has led to more effective and ID control program-oriented use of technical capacities and human resources across different areas of NRL microbiology in the institute. The latest organizational changes (in 2024) seek further technical and resource synergy for both ID and non-ID epidemiology.

Conclusions: Over 40 years KTL/THL strategically developed, through organizational changes, training and recruitment, the NRL microbiology and ID epidemiology functions in an integrated manner to focus on producing data for surveillance, outbreak control and other key ID public health areas. This could serve as a model for developing these functions in Serbia for effective ID public health.