



National Centre for
Infectious Diseases



H1N1

ZIKA

MERS

EBOLA

H7N9

SARS

N1

MERS

N9

National Centre for Infectious Diseases

Protecting the people of Singapore
from infectious diseases

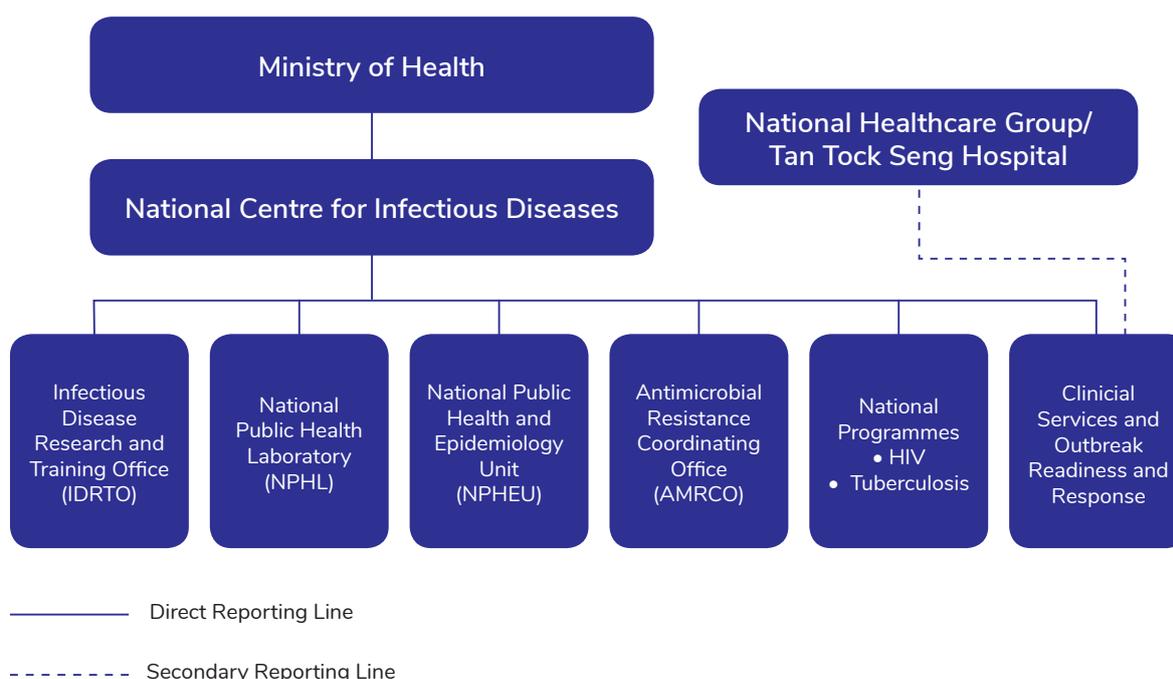
About NCID

In the last 20 years, the world has seen outbreaks from Nipah and SARS to Ebola and Zika. The threat of emerging infectious disease outbreaks is real. To combat infectious diseases at a national level, the National Centre for Infectious Diseases (NCID) was conceived. NCID is the result of years of hard work to build our capabilities to provide the best patient care and safeguard Singapore in an event of an outbreak.

A national asset, the mission of NCID is to protect the people of Singapore from infectious diseases and to respond effectively to an outbreak.

The 330-bed purpose-built facility is designed to strengthen Singapore's capabilities in infectious disease management and prevention. NCID houses clinical services, public health, research, training and education, and community engagement functions within one overarching structure. In addition to the clinical treatment of infectious diseases and outbreak management, the expanded roles and functional units of NCID include the National Public Health and Epidemiology Unit, the National Public Health Laboratory, the Infectious Disease Research and Training Office, the Antimicrobial Resistance Coordinating Office, and the National Public Health programmes for HIV and Tuberculosis.

With its state-of-the-art facilities and comprehensive clinical and public health capabilities in infectious disease prevention, control, and management, NCID looks forward to playing a leading regional and global role in protecting the health of Singaporeans and global citizens.



Our Mission, Vision and Core Values

MISSION

Protecting the people of Singapore from infectious diseases

VISION

Strong, trusted and united in keeping Singapore safe from infectious diseases

CORE VALUES

Nurturing

We foster growth within a safe and supportive environment

Compassion & Collaboration

We care for everyone and work with all

Integrity & Innovation

We do the right things and embrace creativity

Dedication

We are ready to respond anytime



**NATIONAL CENTRE
FOR INFECTIOUS DISEASES**

NCID Facilities and Services

The NCID building is specially designed to ensure the safety of patients, staff and the community and to shoulder the infectious disease outbreak response for Singapore.

The 330-bed facility has expansion capacity to accommodate close to 500 beds during an outbreak. It contains a large screening centre, isolation, cohort and negative pressure wards, as well as a High Level Isolation Unit to safely contain and manage high consequence pathogens. As a self-contained facility, NCID is able to confine the treatment of infected patients to a single place and the entire building can be locked down during larger outbreaks for the safe management of highly infectious agents.

Besides clinical facilities, NCID also houses Public Health units namely, the National Public Health and Epidemiology Unit, the National Public Health Laboratory, the Antimicrobial Resistance Coordinating Office and the Infectious Disease Research and Training Office.

Situated at the heart of Health City Novena, NCID is well-connected to Tan Tock Seng Hospital, the Lee Kong Chian School of Medicine and the Ng Teng Fong Centre for Healthcare Innovation for better collaboration and more coordinated operations.

Inpatient Facilities

17 Wards with 330 beds including:

- 1 High Level Isolation Ward with 4 High Level Isolation Units and 8 Negative Pressure beds
- 5 Negative Pressure Wards with 100 beds
- 5 Isolation Wards with 100 beds
- 4 Cohort Wards with 80 beds, including 16 Negative Pressure beds
- 2 ICU Wards with 38 beds

Other Clinical Facilities and Services

- Outpatient Clinic
- Screening Centre
- 2 Operating Theatres
- Satellite Diagnostic Laboratory
- Pharmacy

Public Health Facilities

- Biosafety Levels 2 and 3 Reference Laboratories
- Research Laboratory
- Research Ward
- Research Clinic
- Tuberculosis Secure Facility
- NCID Cares



Clinical Services

In line with NCID's national role, a multi-disciplinary team of physicians, nurses and allied health professionals work together to support national outbreak response plans by maintaining outbreak readiness and providing centralised clinical management during outbreaks.

On a day-to-day basis, the clinical team also provides professional and compassionate clinical care to patients who suffer from infectious diseases, whether these are acquired locally from the community or healthcare settings, during travel or through occupational and recreational exposure.

On site at NCID, the clinical team provides a number of specialised outpatient and inpatient infectious disease services, for example, HIV disease management, management of patients infected by "high level isolation pathogens" such as Ebola, outpatient/ home antibiotic therapy, antimicrobial stewardship and the management of ICU infections.

In addition, the clinical team collaborates with healthcare professionals in Singapore and internationally to exchange best practices and continually improve the prevention and management of infectious diseases, training future generations of healthcare professionals in the delivery of such care.

National Public Health and Epidemiology Unit (NPHEU)

NPHEU supports the Ministry of Health (MOH) in infectious disease prevention, surveillance, response, and preparedness by:

- (i) Providing evidence base for the National HIV, Tuberculosis, and Sexually Transmitted Infections Programmes and national strategies for the prevention and control of communicable diseases
- (ii) Providing long-term horizon scanning and risk assessment on infectious disease threats for clinical and public health practice guidance
- (iii) Conducting national surveillance and audits on healthcare-associated infections, antimicrobial stewardship, and infection prevention and control
- (iv) Strengthening the linkage between expertise in public health and epidemiology and policy development

NPHEU works closely with members of the public, patients, healthcare professionals and institutions, researchers and scientists, MOH and other government agencies, to protect Singaporeans against communicable diseases and antimicrobial resistance.



National Public Health Laboratory (NPHL)

NPHL was set up in 2007 as part of the Communicable Disease Division at MOH. It provides specialised laboratory tests to track changes in existing organisms, detect new and re-emerging pathogens and respond to outbreaks. NPHL has been involved in outbreak investigations, including the Chikungunya outbreak in 2008, the H1N1 pandemic in 2009 and the Zika outbreak in 2016.

Currently as a unit under NCID, NPHL is actively involved in the laboratory surveillance and preparedness for highly infectious pathogens, such as MERS-CoV, H7N9 and Ebola. Its facilities include a biosafety-level 3 containment facility which is dedicated to the surveillance of infections of public health importance as well as the detection and identification of novel pathogens.

NPHL uses the best science for the laboratory surveillance of infectious diseases and the investigation of outbreaks. It works closely with partners in government agencies, medical laboratories and research institutions to enable a coordinated and broad-based response to infectious threats.



Antimicrobial Resistance Coordinating Office (AMRCO)

Antimicrobial resistance (AMR) is an increasingly serious threat to global public health. To combat AMR, MOH called for the development of the National Strategic Action Plan (NSAP) on AMR. Launched in November 2017, the NSAP on AMR sets the framework for a national response to AMR by formalising and unifying the existing responses mounted across sectors, and providing a roadmap on existing gaps and priorities for future intervention. The plan consists of five core strategies — education and training, surveillance and risk assessment, research, prevention and control of infection, and optimisation of antimicrobial use.

AMRCO oversees the implementation, monitoring and evaluation of the NSAP on AMR with a focus on education and training, surveillance and risk assessment, and research.

AMRCO works closely with the One Health agencies — Singapore Food Agency, National Parks Board / Animal and Veterinary Service, National Environment Agency, Public Utilities Board and Health Promotion Board — to facilitate and coordinate AMR efforts across human, environmental, food and animal sectors. Additionally, AMRCO provides secretariat support to the National Antimicrobial Resistance Control Committee, National Antimicrobial Stewardship Expert Panel and One Health Antimicrobial Resistance Workgroup.

AMRCO aims to facilitate regional and international collaborations, develop regional capacity-building and share expertise with partners in this field.





**Infectious Disease
Research and Training
Office (IDRTO)**



Academic research, training and education form a vital part of national preparedness and defence against the threat of emerging infections. IDRTO is a core unit within NCID to help fulfil its unique role as a national asset with domain expertise in public health, academic achievement and clinical excellence, as well as outbreak preparedness for both healthcare workers and the general public.

IDRTO comprises four key components:

- National Infectious Disease Research Coordinating Office
 - NCID Research Office
 - Training and Education Office
 - Community Outreach
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National Infectious Disease Research Coordinating Office

The National Infectious Disease Research Coordinating Office encourages collaborative infectious disease (ID) research between healthcare and research institutions in Singapore and beyond. It assumes the responsibilities formerly under the Singapore Infectious Disease Initiative to develop human capital for ID research including seed funding and travel fellowships to nurture budding ID researchers. It reviews the strategy and general direction for future ID research in Singapore and will help coordinate pandemic preparedness and epidemic research nationally. The Singapore Infectious Disease Research Network (SCRN) which supports multicentre collaborative ID clinical research as well as outbreak research is also a part of this office.



NCID Research Office



The NCID Research Office oversees the in-house research at NCID and the maintenance of NCID research facilities, namely the ID Research Laboratory, the ID Research Clinic and the ID Research Ward.

Training and Education Office



The Training and Education Office caters to the ID training and professional development of healthcare workers in Singapore, including ID outbreak response training needs. These include developing the capabilities of individual healthcare workers, and building the professional capabilities of regional health systems and intermediate and long-term care providers.

Community Outreach



The Training and Education Office will work towards public education via community partnership and engagement to prevent the spread of infectious diseases and build community preparedness for outbreaks. Focus areas include awareness and knowledge about HIV to combat stigma and discrimination, vaccines to improve adoption of recommended adult vaccination, antibiotic resistance to reduce antibiotic overuse, and vector-borne infections such as dengue.



National HIV Programme

Human Immunodeficiency Virus (HIV) infection remains a public health priority in Singapore, and an effective national response to this ongoing epidemic requires a concerted effort involving clinicians and healthcare professionals, public health practitioners, academics and other stakeholders. The National HIV Programme was established under NCID to coordinate this national HIV response.

The programme aims to formulate a coherent national plan to achieve the UNAIDS 90-90-90 targets and beyond.

Guiding this work is the vision of providing quality and holistic patient-centred, cost-effective and evidence-based care for people living with HIV in Singapore consistent with standards and recommendations by a shared community of care providers comprising multi-disciplinary professionals and stakeholders. In addition, it will advocate for and formulate policies that reduce stigma and discrimination experienced by people living with HIV in Singapore.



National Tuberculosis Programme

The National Tuberculosis (TB) Programme, also known as the Singapore TB Elimination Programme (STEP), was launched by MOH in 1997 to strengthen the national TB control efforts in response to the then decade-long stagnation in the country's TB incidence rate.

The goals of STEP are to detect all infectious TB cases, to cure all TB cases, to detect and treat all infected contacts, and to prevent the emergence of multi-drug resistant TB.

The STEP Registry administers the National TB notification registry and the national Treatment Surveillance Module, which monitors the treatment progress and outcome of all TB cases in the country.

The TB Control Unit (TBCU) functions as the national referral centre for TB evaluation and treatment, for the tracing of treatment defaulters, and for the management of complicated or drug-resistant TB patients. It manages 80% of the country's TB cases; the vast majority of which are treated under Directly Observed Therapy (DOT). Another major function of the TBCU is the screening of close contacts in households, workplaces and congregate settings (such as schools and prisons) for active and latent TB, and provision of preventive therapy for contacts found to have latent TB infection.



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