



Harnessing technology for innovative and efficient integrated disease surveillance and control

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**NATIONAL INSTITUTE FOR
COMMUNICABLE DISEASES**

Division of the National Health Laboratory Service



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National Institute for Communicable Diseases (NICD) supports the DoH with diagnostic, public health surveillance and outbreak response expertise and information required to guide prevention and control of infectious diseases

IHR and GHSA

OBJECTIVES

Prevent

- 1-National Legislation, policy & Financing
- 2-IHR Coordination, Communication & Advocacy
- 3-Antimicrobial Resistance
- 4-Zoonotic Diseases
- 5 Food Safety
- 6-Biosafety/ Biosecurity
- 7-Immunization

Detect

- **8-National Laboratory System**
- **9-Real Time Surveillance**
- **10-Reporting**
- **11-Workforce Development**

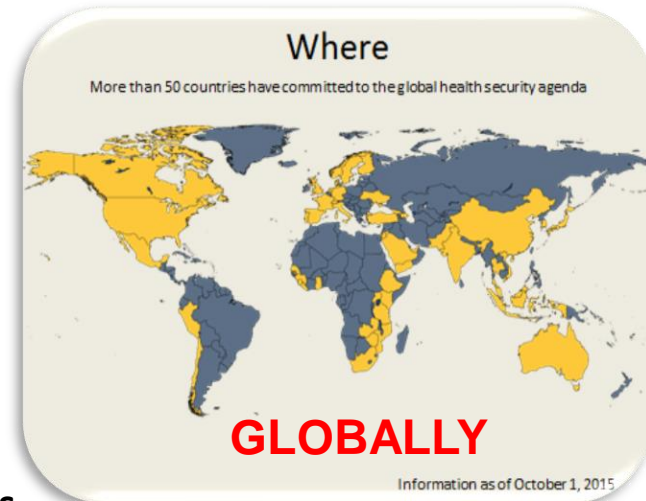
Respond

- 12-Preparedness
- 13-Emergency Response Operations
- 14-Linking Public Health & Security Authorities
- 15-Medical Counter Measures & Personnel Deployment
- 16-Risk Communication

Others

- 17-IHR related Hazards and Points Of Entry (POEs)
- 18-Chemical Events
- 19-Radiation Events

- **4 objectives**
- **19 core capacities**



REAL TIME SURVEILLANCE

Overview – IHR targets



Target:

Strengthened, interoperable, interconnected electronic reporting systems for efficient indicator- and event-based surveillance to

1. detect events of significance for public health, animal health and health security;
2. improve communication regarding surveillance of events of public health significance and collaboration across sectors
 - local, national and international levels of authority;



REAL TIME SURVEILLANCE

Overview – IHR targets



Target:

3. improve local, national and regional epidemiologic, clinical, laboratory, environmental testing, product safety, and bioinformatics data analyses and data linkage capacity
4. advancement in fulfilling the core capacity requirements for surveillance in accordance with the IHR and the OIE standards

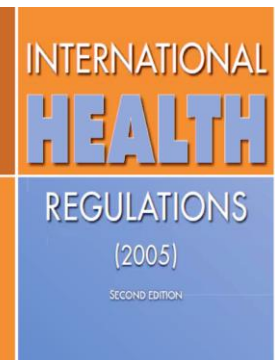


REAL TIME SURVEILLANCE

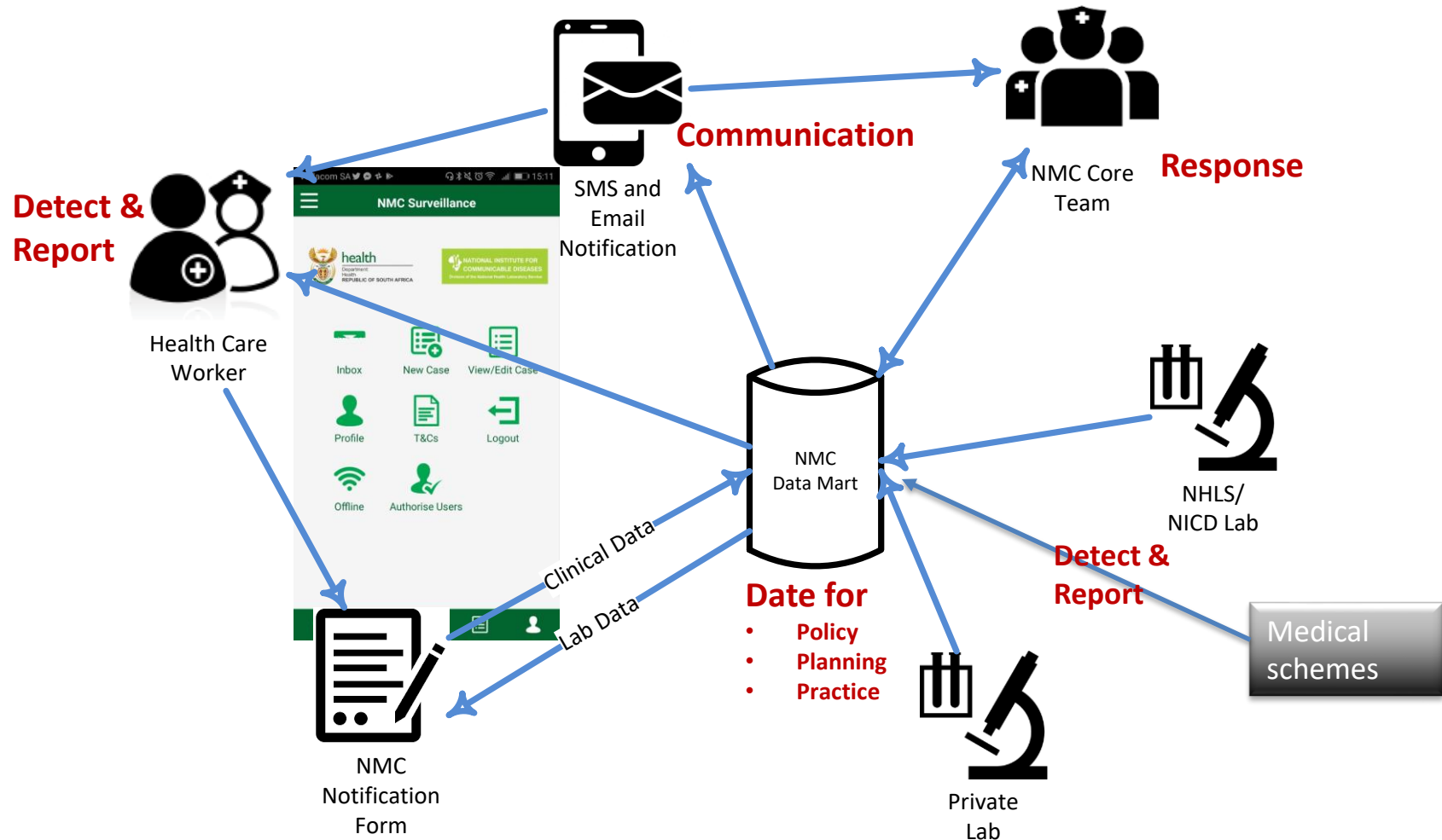
South Africa Legislation – human health



- International Health Regulations (IHR) 2005
- Global Health Security Agenda (GHSA)
- National Health Act 2003 (Act No. 61 of 2003)
 - NMC surveillance and control regulations (2017)
- National Development Plan 2030
- Strategic Plan 2015 – 2020
- NMC national surveillance strategy



Innovative solutions for surveillance of public health risks (NMC surveillance)



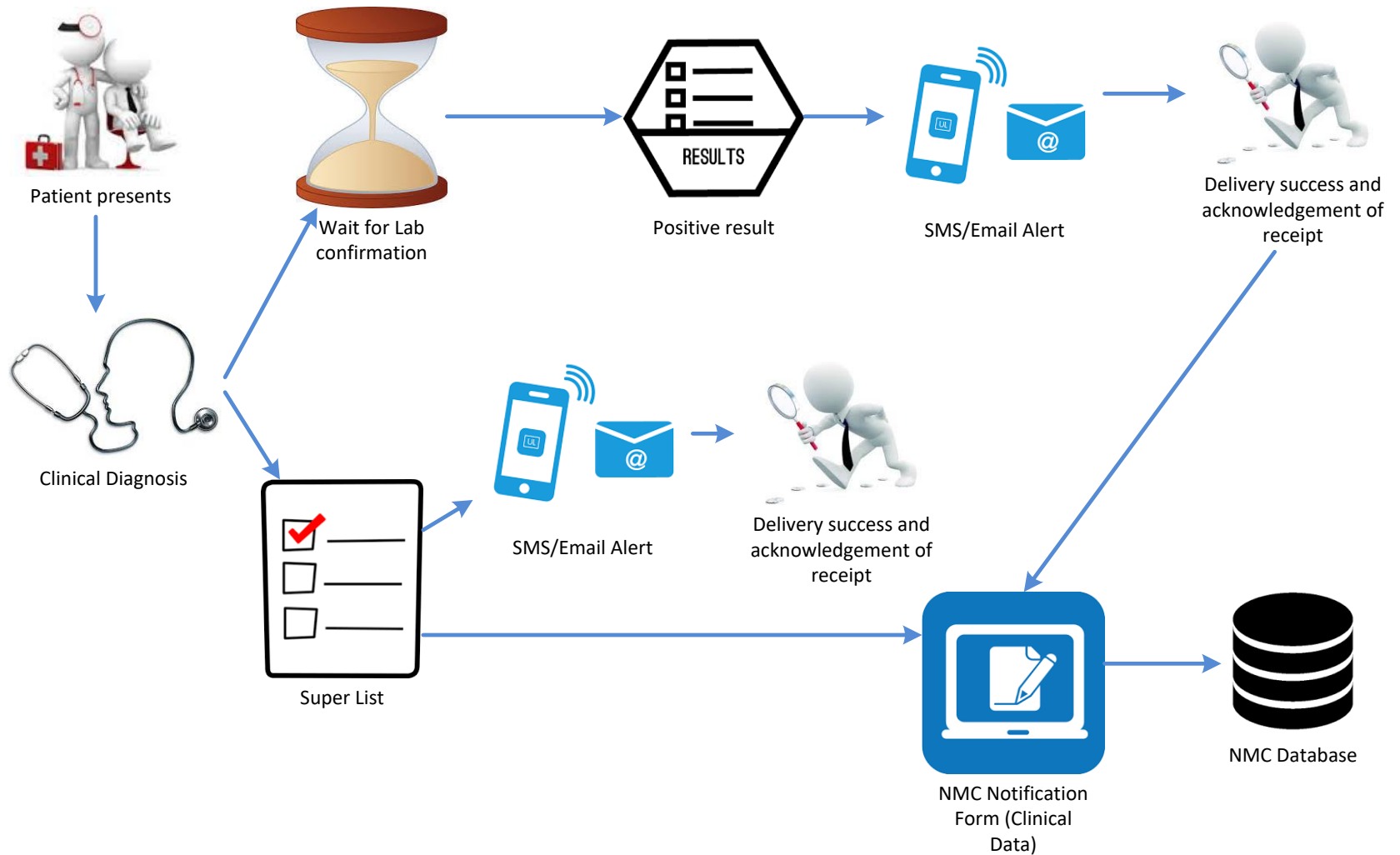
NMC processes: NMC APP functionality

Category	Health facility/clinical notification	Data stream	Laboratory notification	Data stream	Medical schemes notifications	Data stream
1	X	Paper or Electronic	X	Electronic	X	Electronic
2	X		X		X	
3		X	X			
4		X	X			

NMC APP and database processes

- Self registration – user names and passwords
- Front-end data capture
- Communication - alerts matrix (sms & email)
- Data triangulation and case de-duplication
- Case data linkage (clinical & lab)
- Case verification and confirmation
- Data management, cleaning and verification
- Data analyses & reporting (dashboards)

Case study – measles case



NMC APP Versatility

- Data security
 - ✓ Patient level confidential data
- Financial cost to the user
 - ✓ Reverse billing
- Connectivity issues
 - ✓ offline mode
 - ✓ Data automatically loads when connectivity is available
- Accessibility of the NMC APP
 - ✓ Accessible to all on all platforms



Opportunities for integration with non-communicable diseases

- Same resources
 - Patient
 - Nurses and doctors
 - Data source
 - Health facilities
 - Labs
 - Medical schemes

ACKNOWLEDGMENTS

- ✓ NMC team
- ✓ NICD
- ✓ NHLS
- ✓ NDOH, PDOH, DDOH, health facilities
- ✓ Private sector groups
- ✓ Thembisa hospital management and staff
- ✓ All contributing stakeholders

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health

Department:
Health
REPUBLIC OF SOUTH AFRICA



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