

# Role of ESR in Communicable Disease Surveillance

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# Science Centre locations

## Mt Albert Science Centre



- Forensic Science
- Analytical Chemistry Lab
- Public Health Lab

## Kenepuru Science Centre



- Communicable Disease Labs
- Forensic Science
- Population & Environmental Health
- Pharmaceutical Testing Services

## National Centre for Biosecurity and Infectious Disease

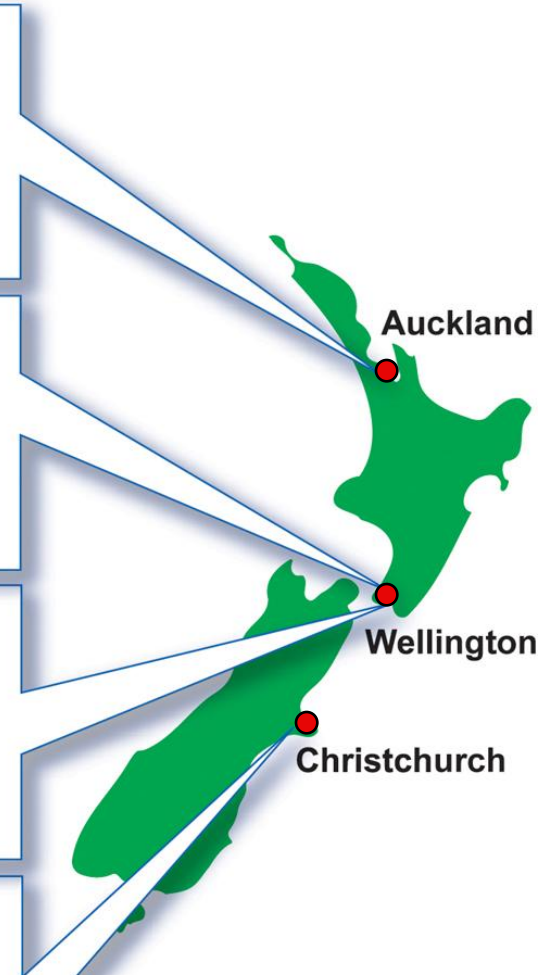


- Zoonoses research
- CBRE response
- Aberrant event surveillance
- Laboratory Networks

## Christchurch Science Centre



- Food Safety Group
- Analytical Chemistry Lab
- Water Management Group
- Public Health Lab
- Forensic Science

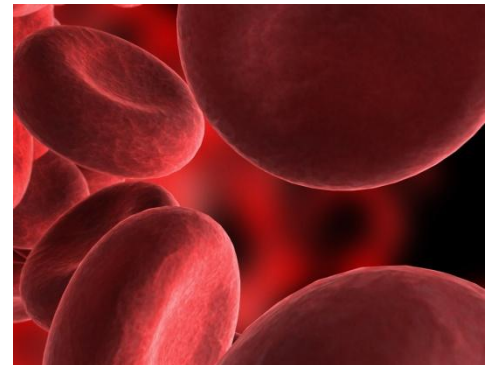


# Major programme areas

- Forensic science
- Communicable disease
- Population & environmental health
- Food safety
- Water quality & management
- Social science
- Pharmaceuticals
- Drug & alcohol free workplace programmes
- Science information management systems

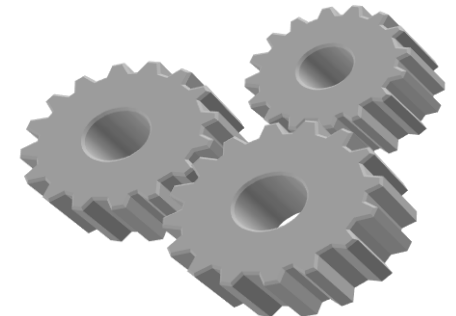
# ESR: Kenepuru Site

- Population & Environmental Health
  - Disease trends and surveillance
  - Envirogenomics
  - Pesticide spraydrift
  - Waste management
- Communicable Disease Programme
  - Microbiology of pathogens
  - Detection, identification and characterisation
  - Public health management of infectious disease
  - Rapid response capability
  - National reference service
  - Culture collection
  - Antibacterial resistance



# National Centre for Biosecurity & Infectious Disease (NCBID)

- Wallaceville site with PC3+ capability
- Ministry of Agriculture & Fisheries; AgResearch; AsureQuality on same site
- Collaborative efforts
- Protecting human health from
  - Existing and emerging disease outbreaks
  - Chemical and biological threats and events
  - Biosecurity threats

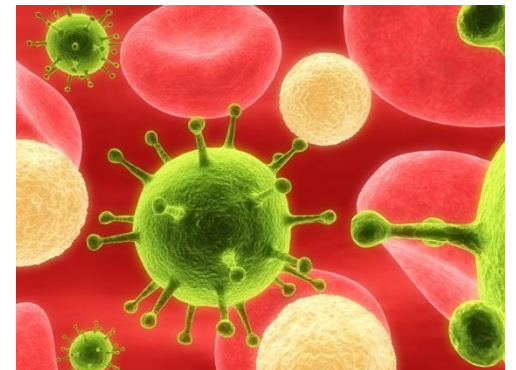


# ESR: Public Health Surveillance

## *Information for NZ Public Health Action*

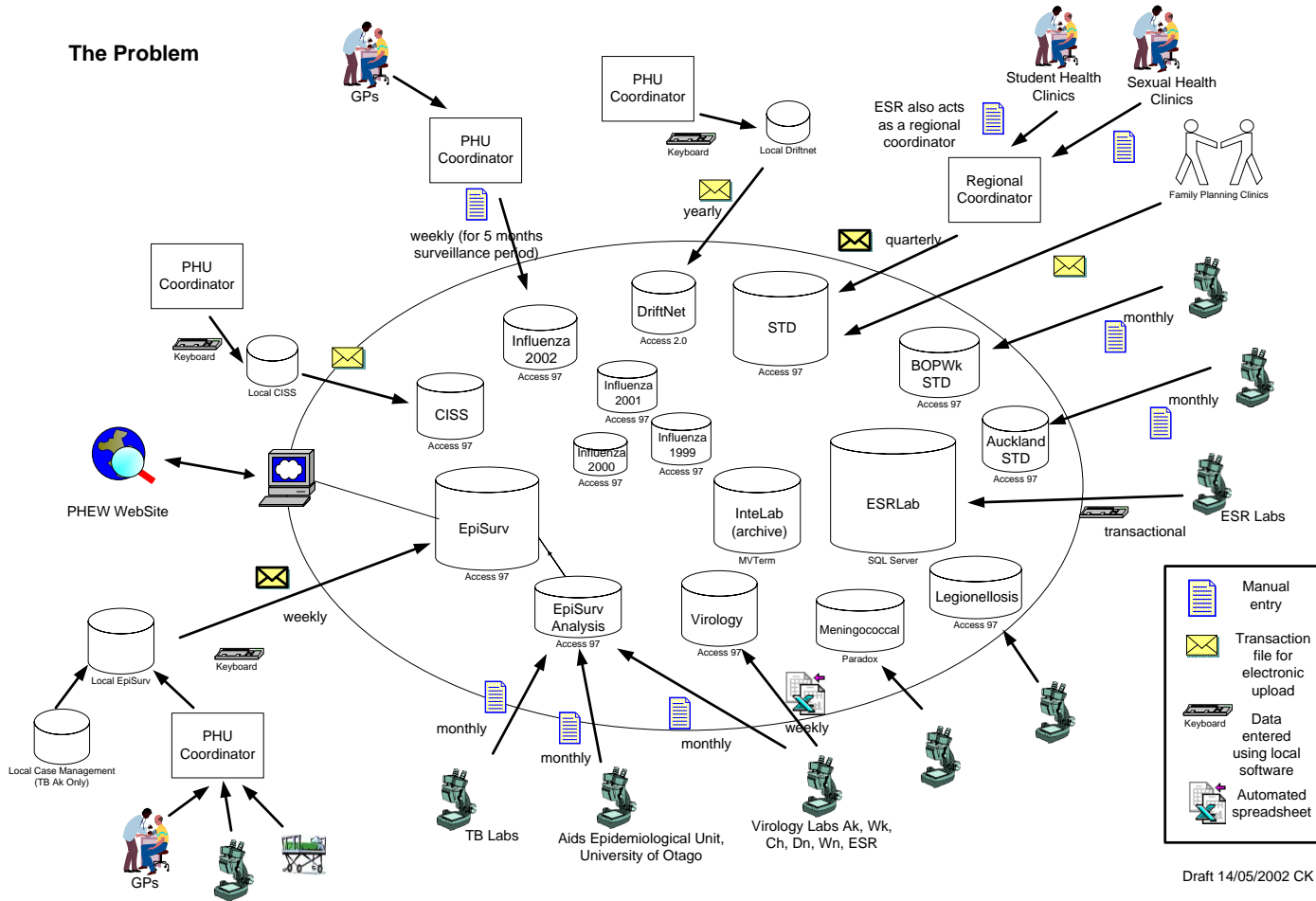
- Surveillance Reports
- Antimicrobial Resistance
- Virological Surveillance
- Enteric Reference Laboratory
- EpiSurv
  - LabSurv
  - PacSurv

» <http://www.surv.esr.cri.nz/>

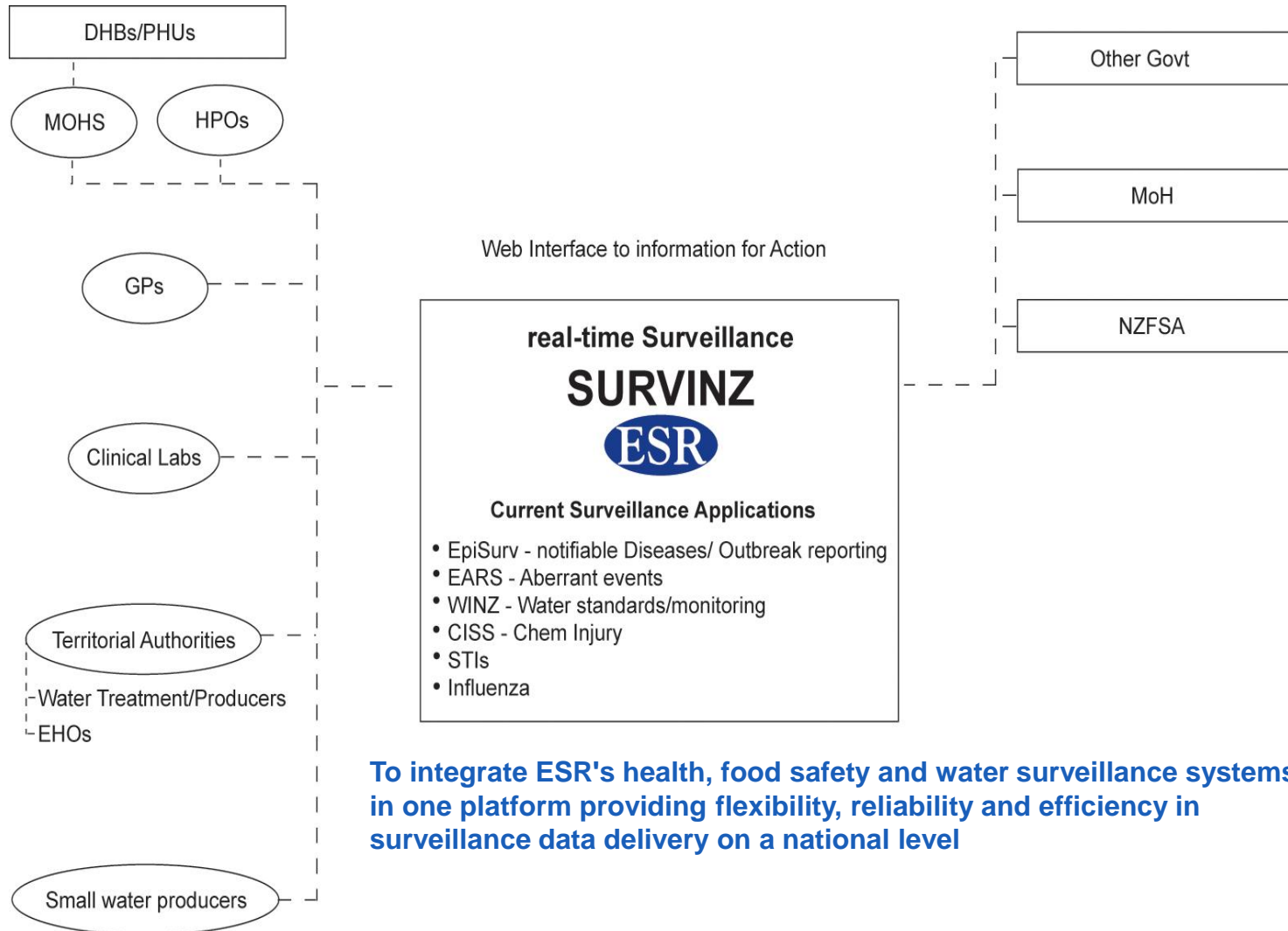


# Surveillance at ESR - Current

## The Problem



# Surveillance at ESR - Future

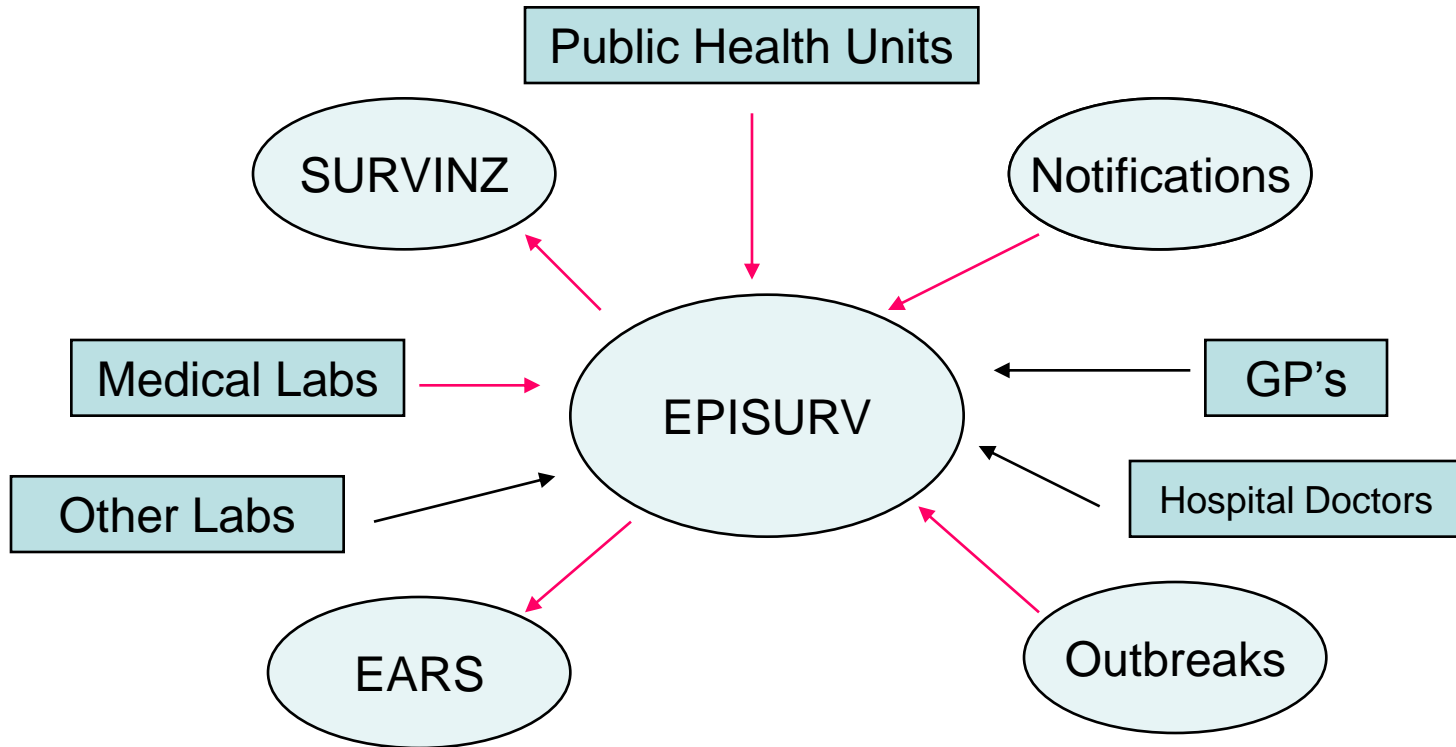


**To integrate ESR's health, food safety and water surveillance systems in one platform providing flexibility, reliability and efficiency in surveillance data delivery on a national level**

# EPISURV 7

- is a web based application – simple to deploy
- is a secure application with a role based security model
- assists improved quality of data at the point of entry
- has enhanced Geographical Information System (GIS) capability
- has enhanced reporting capabilities
- provides real-time national data views
- is flexible - can add new diseases without application development change
- Is robust – can adapt to facilitate new databases eg. Labsurv, Pacsurv

# EPI SURV: WISH LIST



# ESR: Public Health Surveillance

## Early Aberration Reporting System (EARS)

- Automated analytical tool
- Notifiable Disease list
- Salmonella serotyping results
- Weekly analysis

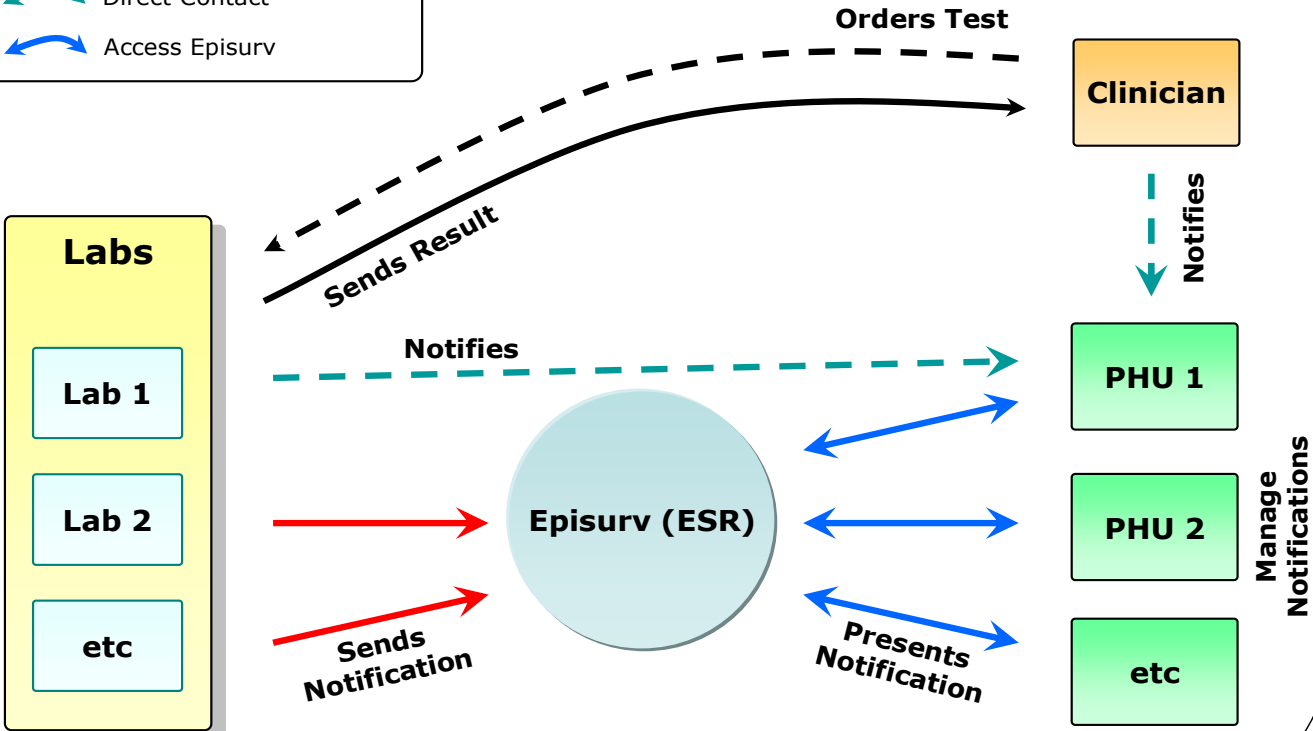
» *survqueries@esr.cri.nz*



# Current notification flows






**KEY:**

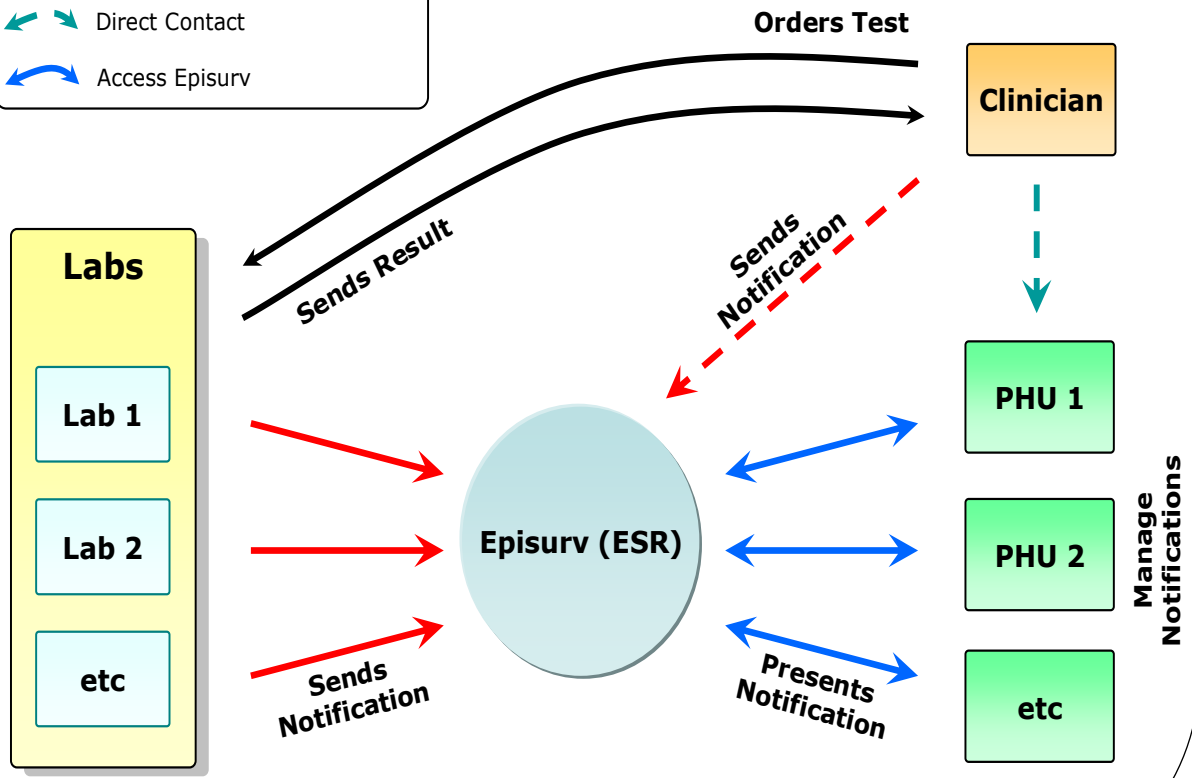
- Paper-based Order
- HL7 Result Message
- HL7 Notification Message
- Direct Contact
- Access Episurv



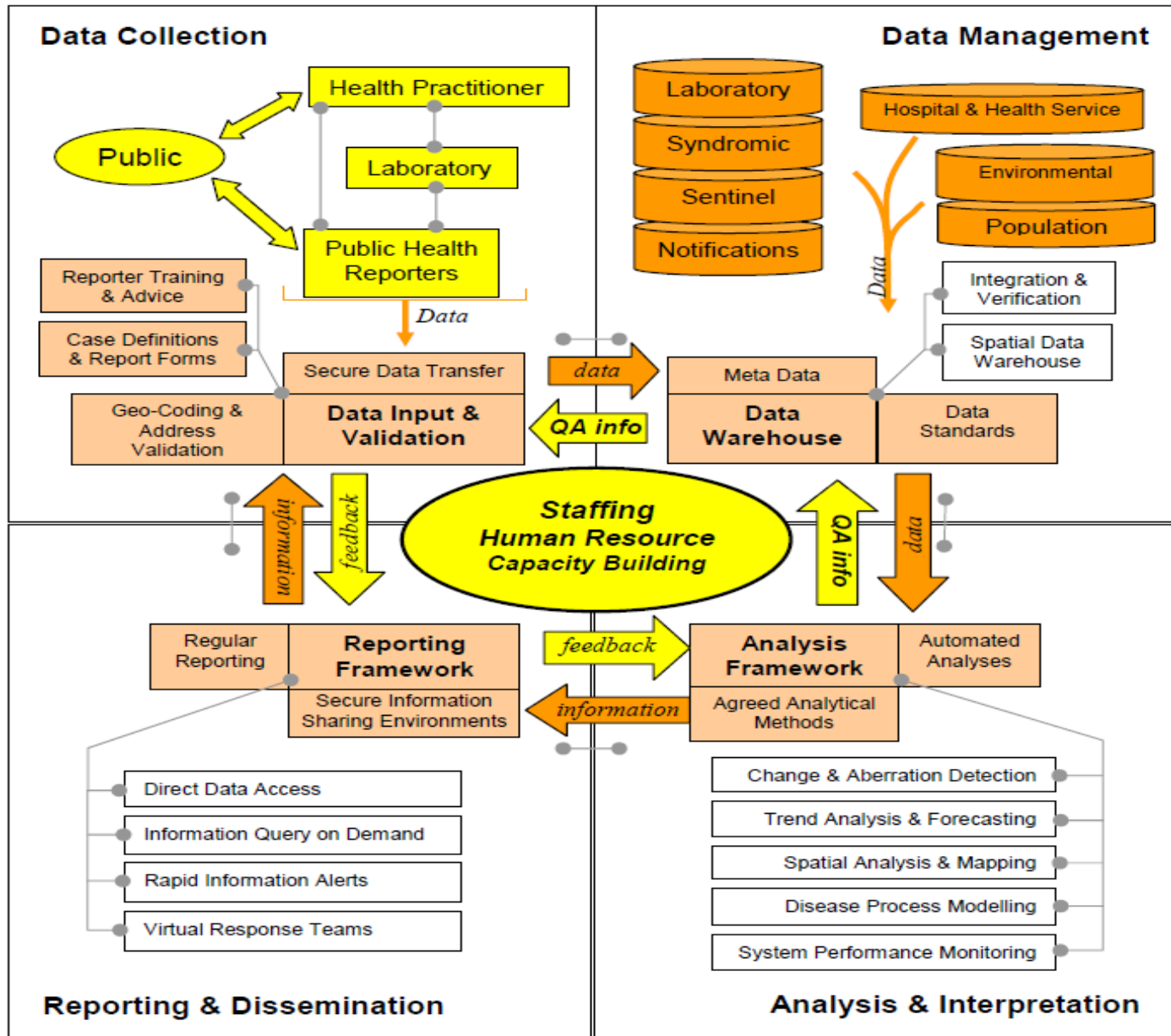
# Target Notification Flows

**KEY:**

-  HL7 Order / Result Messages
-  HL7 Notification Message
-  HL7 Notification Message - to be confirmed
-  Direct Contact
-  Access Episurv



# THE FOUR COMPONENTS OF DISEASE SURVEILLANCE



# Can this or other support help you?

- To better safeguard New Zealanders' health and economy from infectious diseases and other emerging threats?
  - Timely information on infectious diseases/ other aberrant events in New Zealand and overseas
    - epidemiology
    - modelling
    - alerts
    - PulseNet and other information
    - links with biosecurity
    - risk assessment
  - Microbiological research network and research collaboration
  - Capability in scientific support
  - Service collaboration

END

Thank You