GOVERNMENT OF MALTA
MINISTRY FOR HEALTH
AND ACTIVE AGEING

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Executive Summary Section only

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1. EXECUTIVE SUMMARY

The Infectious Disease Prevention & Control Unit (IDCU), which forms part of the Health Promotion and Disease Prevention Directorate (HPDP), oversees disease surveillance and manages notifiable infectious diseases in Malta. They are mandated to monitor, prevent, and control communicable diseases, reporting to both national authorities and the European Centre for Disease Prevention and Control (ECDC). The need for robust, real-time surveillance has become increasingly important due to the high mobility of the population, cross-border health threats, and the requirements for timely reporting to national and European/international health authorities. Malta's infectious disease surveillance sector operates under the strategic direction of the Ministry for Health and Active Ageing, guided by national policies aligned with EU health security frameworks and GDPR. The sector's organisational structure has evolved in response to EU integration, the COVID-19 pandemic, and increasing cross-border health threats, with a shift towards digitalisation and data-driven decision-making.

Malta has received funding from the EU4health programme 2021-2027, in the form of a direct grant for strengthening and improving national surveillance systems. The EU4Health programme was adopted as a response to the COVID-19 pandemic and to reinforce crisis preparedness in the EU. The overall aim of this programme is to address different health challenges by developing more robust and integrated digital surveillance systems. In Malta, the project for the grant is called the Malta Infectious Diseases Integrated Surveillance System (MIDISS), which aims to develop a new Public Health Surveillance IT Infrastructure to address current gaps in Malta's Surveillance of infectious diseases.

This Gap Analysis Report serves as a foundational document for the proposed Integrated Data Warehousing solution of MIDISS. Between August and October 2025, the team held 18 stakeholder meetings and reviewed existing system artefacts and data extracts. Participants included IDCU, Mater Dei Hospital services, Primary Health Care, the Infectious Disease Unit, GU Clinic, National Blood Transfusion Service, Food Safety and Security Authority, National Immunisation Unit, and others. The review combined interviews, process walkthroughs, and document/data sample reviews to map current data flows, governance and technology, and to identify gaps against EU reporting expectations and good practice for public health surveillance.

The following systems were assessed:

Source	Data Systems
Mater Dei Hospital (MDH)	Clinical Patient Administration System (CPAS), Electronic Case Summary (ECS), Patient Dashboard, iSoft Clinical Manager (iCM)
MDH Pathology Laboratory	Lab Information System (LIS) / CorVu, Sequencing Data Systems
MDH Specific Units	Infection Control Unit on AMR data Infectious Diseases Unit (IDU) on HIV data
Primary HealthCare (PHC)	Genitourinary (GU) Clinic STI System Electronic Patient Records (EPR)/Qlik, National Immunisation Services (NIS)
St James Hospital (laboratory)	Medical Laboratory Services (MLS)

Source	Data Systems
National Blood Transfusion Service (NBTS)	NBTS database
Food Safety and Security Authority (FSSA)	National Animal and Food Info System (NAFIS)/ National Livestock Data (NLD)
Infectious Disease prevention and Control Unit (IDCU)	Sever Acute Respiratory Infections (SARI) Surveillance, IDCU Reporting, National Electronic Disease Surveillance System (NEDSS)

Positive Findings:

- **Strong public-health mandate & experienced teams**
  IDCU and clinical counterparts have robust reporting know-how, with established workflows for ECDC submissions and outbreak monitoring.

- **Rich data footprint across sectors**
  Multiple sources already capture most variables required for case-based and syndromic surveillance.

- **Momentum for digitalisation**
  Planned upgrades of existing data systems create opportunities for API-enabled, standards-based integration (e.g., Patient Dashboard, new LIS procurement, NAFIS at FSSA, NEDSS ramp-up, NIS).

- **Practical interim automation**
  Existing scripts and scheduled extracts (e.g., CorVu, Qlik downloads, R-based text processing) provide interim solutions for respiratory surveillance and can be a practical template to expand automated surveillance across diseases in preparation for the transition toward MIDISS.

Areas for Improvement:

- **Fragmented, manual data flows**
  Many streams rely on emails, portals, and spreadsheet downloads, creating delays, duplication risk, and limited auditability (e.g., bed occupancy/deaths from CPAS, PDFs from private labs, quarterly GU reconciliations).

- **Identity and linkage complexity**
  Different identifiers across systems (ID card/C-number/F-number/HIV codes) complicate deterministic linking, impacting patient journey continuity, de-duplication, and indicator accuracy.

- **Unstructured clinical text**
  Heavy use of free-text in admission/discharge notes and primary-care narratives hinders automation requiring text mining and introducing variability without systematic quality assurance.

- **Timeliness vs. Expectations**
  Modern expectations of surveillance require near real-time monitoring of infectious diseases including reports with visualisations and alerts that clearly demonstrate surveillance trends. Currently, this is only available in semi-automated form on a weekly basis for respiratory surveillance. For other disease surveillance this is not available and only monthly or yearly tables/datasets are produced.

- **Governance & security during transition**
  Interim processes increase GDPR and audit-related exposure, particularly where encryption standards, access-logging practices, and data-lineage controls are not applied consistently.

- **Schema drift & reproducibility**
  Forthcoming rollouts of data systems (National Electronic Health Records (NEHR)-related changes, new LIS, NAFIS, GU/PHC) require versioning, lineage, and observability to avoid silent breaks and to recreate historic outputs reliably.

The Malta Infectious Diseases Integrated Surveillance System (MIDISS) project is designed to address these gaps by establishing a unified, automated surveillance data warehouse and surveillance dashboard, enabling timely, secure, and comprehensive data integration, analysis, and reporting—thereby strengthening Malta's capacity for early detection and effective management of infectious disease threats.

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