State-of-play of the COVID-19 Health Information System
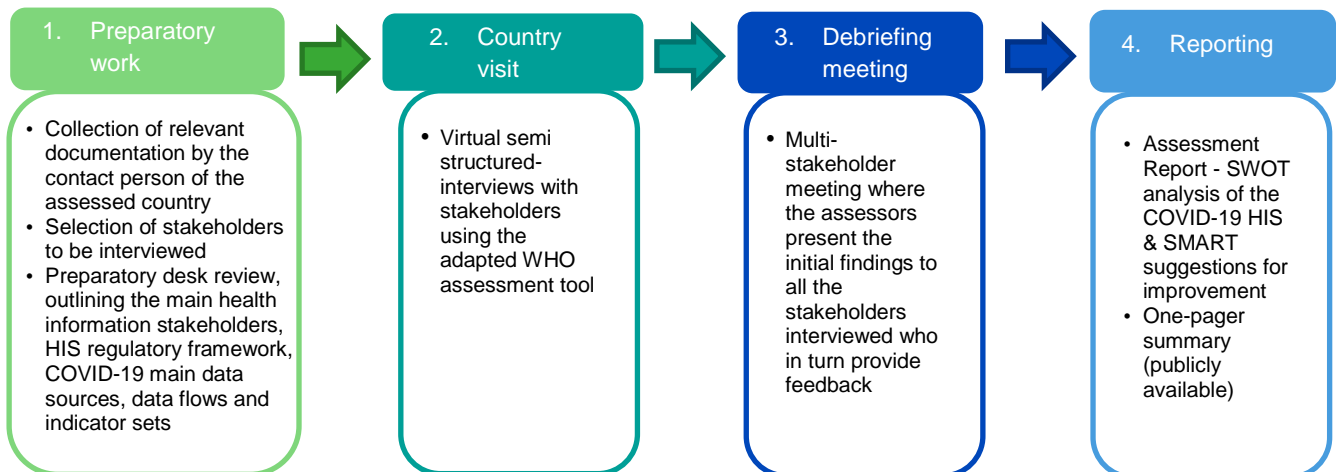# Italy

The Population Health Information Research Infrastructure (PHIRI) carries out COVID-19 Health Information System (HIS) assessments in selected countries that are part of the PHIRI consortium, mapping the Health Information System behind the data and information flows that monitor the effects of COVID-19 on population health.

AIMS OF THE COVID-19 HIS ASSESSMENTS

1. **Identify strengths and weaknesses** of the different data flows across Health Information Systems, whilst monitoring the (broader) effects of COVID-19 in the examined countries.
2. Provide opportunities for other countries to **learn from the experiences** gained during the assessments, and build on these when assessing their own Health Information systems and/or data flows.
3. Potentially **identify data sources** that may not have been used or fully exploited yet and feed them to the Health Information Portal.

4. **Create opportunities** for **engagement** and **knowledge exchange** with national stakeholders and authorities.
5. Contribute to **capacity building** across Europe, which in turn can contribute towards reducing health information inequalities within and between countries.
6. Identify key recommendations for **resilient Health Information Systems** and towards **increased preparedness** for future crisis.

METHODOLOGY OF THE COVID-19 HIS ASSESSMENTS

Each country is assessed by experts from another country within the PHIRI consortium. A detailed manual explains the procedure followed in the assessments, with the steps summarised below.

1. Preparatory work	2. Country visit	3. Debriefing meeting	4. Reporting
• Collection of relevant documentation by the contact person of the assessed country • Selection of stakeholders to be interviewed • Preparatory desk review, outlining the main health information stakeholders, HIS regulatory framework, COVID-19 main data sources, data flows and indicator sets	• Virtual semi structured-interviews with stakeholders using the adapted WHO assessment tool	• Multi-stakeholder meeting where the assessors present the initial findings to all the stakeholders interviewed who in turn provide feedback	• Assessment Report - SWOT analysis of the COVID-19 HIS & SMART suggestions for improvement • One-pager summary (publicly available)

An adapted version of the Health Information System assessment tool developed by the WHO Regional Office for Europe (2015), including the add-on module on Infectious Diseases (2021), is used to guide the interviews. The assessment covers data collections and data sources, data analysis, reporting, knowledge translation, governance and resources, best practices and identified gaps.

COUNTRIES INVOLVED IN THE PHIRI COVID-19 HIS ASSESSMENTS

The assessments are performed in Austria, Belgium, Italy, Greece, Hungary, Ireland, Malta, the Netherlands, Norway and Portugal by the end of the project (November 2023). Italy, Portugal, Ireland, Malta and Norway were assessed in the first semester of 2022.

Health Information System (HIS)

The Ministry of Health (MoH), established the COVID-19 surveillance system in Italy. It set out the criteria and methods for reporting cases of SARS-CoV-2 infection jointly agreed with the Department of Infectious Diseases of the Italian National Institute of Health (ISS). These stakeholders, together with the Italian Office for Statistics (ISTAT) and Regions are important stakeholders in the Italian COVID-19 Health Information System.

Data collections/sources

- COVID-19 testing: Regions (Local health units) & ISS
- Molecular surveillance: ISS
- Mortality
    - Demographics (population register): ISTAT
    - Cause of death: ISTAT
- Vaccination: MoH vaccination information system
- Long term effects: ISS & ISTAT
- Seroprevalence: ISTAT
- Health surveys: ISTAT & ISS
- Long term care and nursing homes: ISS
- Long COVID: ISS

Data Analysis

- Indicators on monitoring capacity, capacity of diagnostic assessment, investigation and management of contacts, and transmission stability and the maintenance of health services (ISS)
- Quality control and feedback to the regions regarding test statistics (ISS)
- Compare mortality data flows and eliminate duplicates (ISTAT)
- Analyse mortality data in relation to population data for impact of COVID-19 (ISTAT)
- Foresight scenarios (ISS)

Reporting and knowledge translation

- Dashboards:
    - COVID-19 overview by the MoH
    - EpiCentro by ISS
- Weekly monitoring reports by ISS
- Ad hoc requests from the government to both ISS and ISTAT for reports
- Formal and informal communication between regions and national institutes
- Communication with regions on (upcoming) peak or cluster of COVID-19 cases

Governance and resources

- Data flows based on emergency legislation
- National scientific committee for translating scientific evidence to recommendations for policymakers
- Microdata on hospitalizations governed by MoH available for researchers
- Recovery and Resilience Plan with investments in eHealth
- Long recruitment process in administrations
- Same surveillance system used across all regions as well as at a national level

Best practices

- Health trajectories can be rebuilt as the MoH uses the same pseudonymised patient identifier
- Telemedicine as integral part of the Resilience and Recovery Plan
- Strong vaccination information system implemented before the COVID-19 crisis hit
- Short communication lines between both national and regional stakeholders
- Use of the same information system in all regions as well as on a national level, allowing for fast communication and feedback loops e.g. quality checks

Identified gaps

- Limited opportunities to link databases outside of the MoH
- Secondary use of data is hampered due to strict legislation and bureaucratic data access processes
- Shortage of public health professionals in administrations
- Need for a long term monitoring and surveillance strategies for COVID-19
- Communication gaps to the public at regional and national level
- Limited infodemic management awareness and practices

Assessment performed in:
January 2022