TARGET GROUPS AND BENEFITS

We contribute to public health preparedness and response to possible future pandemics by achieving the following:

1. Impact on infrastructure and preparedness:

- Rapid adaptation and adjustment of laboratory infrastructure to improve response and lay the groundwork for future needs.

- Detection of new lineages and variants of SARS-CoV-2, clades of seasonal Influenza and RSV specific genotypes in the community to assess risk and viral circulation.

- Strengthening the capacity to manage the different phases of virus circulation.

2. Implications for policy and decision makers:

- Implementation of an integrated respiratory virus surveillance for monitoring respiratory virus circulation.

- Evaluation of public health interventions, such as vaccination or use of antivirals, to support policy decisions.

3. Impact on patient health:

- Detection and analysis of suspected mild and severe respiratory infections in primary care and hospitals in the Autonomous Regions of Spain.

- Monitoring new variants of SARS-CoV-2, seasonal influenza and RSV genotypes in terms of severity and neutralising antibody escape.

- Identification of local transmission of specific lineages and variants of SARS-CoV-2 (according to geographical distribution), seasonal influenza and different RSV genotypes.

- Evaluation of current diagnostic tests (RT-qPCR) to improve sensitivity and specificity, contributing to early diagnosis (and clinical management) of patients infected with new variants of SARS-CoV-2, influenza and RSV.

- Recognition of viral mutations associated with disease severity to optimise treatment strategies.

- Refining sequencing analysis methods for accurate and harmonised classification of circulating viruses.

WORK PLAN

DELIVERABLES

- Management plan.
- Communication strategy and visibility/dissemination channels.
- Project website.
- Project leaflet.
- Description of the file transfer and bioinformatics nomenclature mechanism.
- RELECOV report describing how the genomic data and generated sequences will be released into the public domain (GISAID and ENA and other bases guidelines).
- Inclusion of sequencing data in the weekly report.
- Dissemination report.
- Evaluation report including key performance indicators report.
- Data reporting updates to ECDC-TESSy.
- Genomic surveillance of viral respiratory infections SARS-CoV-2, Influenza and RSV.

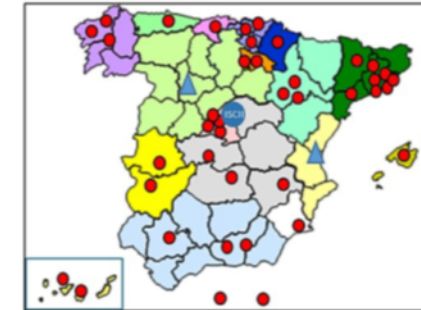- Scan the following QR code to view the full table of deriverables:

RELECOV 2.0
GA101113109
https://relecov.isciii.es/

CONSOLIDATION OF WGS AND RT-PCR ACTIVITIES FOR SARS-CoV-2 IN SPAIN TOWARDS SUSTAINABLE USE AND INTEGRATION OF ENHANCED INFRASTRUCTURE AND PROCESSES IN THE RELECOV NETWORK

RELECOV network
- Carlos III Health Institute (ISCIII)
- Laboratories (Hospitals) ●
- Regional nodes ▲

RELECOV and PUBLIC HEALTH

Aim: Consolidation of a Spanish national laboratory network (RELECOV) as a sustainable and collaborative platform in order to:

- Obtain virological information on SARS-CoV-2, Influenza and Respiratory Syncytial Virus (RSV) variants/lineages.

- Integrate genomic sequencing into Viral Respiratory Infection (VRI) surveillance.

Importance: Rapid identification of new variants to implement of medical countermeasures in Spain and improve EU cooperation.

COORDINATION

The RELECOV network is coordinated by the ISCIII, in collaboration with the Health Ministry, represented by the Alerts and Emergencies Coordination Centre (CCAES), as the national contact point.

The National Microbiology Centre (CNM-ISCIII), through the Respiratory Virus and Influenza Reference Laboratory (VRP-ISCIII), which is the World Health Organisation (WHO)-National Influenza Centre in Spain, manages the scientific-technical aspects related to sequencing.

The ISCIII's Genomics and Bioinformatics Units (GU-ISCIII and BU-ISCIII) are directly involved:

- GU-ISCIII: Provides high-quality genomics technology and support to the ISCIII scientific community.

- BU-ISCIII: Responsible for computational genomics, sequence analysis, structure prediction, scientific computing and computational proteomics.

THE NETWORK

The RELECOV network, launched in January 2021, consists of 49 laboratories distributed across the 17 Spanish Autonomous Communities (CCAA) and the Autonomous Cities of Ceuta and Melilla. The public health authorities, mainly at CCAA level, were responsible for designating the laboratories that currently make up the network.

The RELECOV laboratories provide a European and transnational dimension to Spain's research efforts. A key strength of the network is its expertise in harmonising protocols, pooling and analysing data across Spain and Europe, and communicating results. All laboratories are experienced in the implementation of cutting-edge NGS sequencing methods.

KEY POINTS OF RELECOV

By sharing protocols and integrating results at the national level, the response will be more effective than if the CCAAs acted in isolation.

RELECOV should be integrated and serve public health surveillance agencies at regional and national levels to rapidly contribute to preparedness and response to future health threats.

The purpose is to establish a national genomic surveillance platform for VRIs, and to strengthen international pandemic preparedness.

Currently, the RELECOV network analyses clinical specimens from patients with Influenza-Like Illness (ILI) and Severe Acute Respiratory Infection (SARI) according to a common protocol. The integrated surveillance of SARS-CoV-2, seasonal Influenza and RSV in Spain started in September 2020 with the SiVIRA system (Integrated Respiratory Surveillance System).

KEYWORDS

- Genomic surveillance.
- Network structure: the CCAAs and Autonomous Cities.
- SARS-CoV-2.
- Influenza.
- RSV.
- Other respiratory virus

FOCUS OF RELECOV 2.0

- Improvement of the laboratory surveillance system in Spain through the implementation of genomic surveillance, at regional level, for SARS-CoV-2, seasonal Influenza and RSV infections, thanks to the progress in technical specialisation achieved by the RELECOV network.

- Consolidation of the RELECOV platform for data management, analysis and dissemination.

BASIC DATA

- Programme: EU4Health Programme (EU4H)
- Project title: "Consolidation of WGS and RT-PCR activities for SARS-CoV-2 in Spain towards sustainable use and integration of enhanced infrastructure and processes in the RELECOV network".
- Type of action: EU4H Direct Project Grants to Member States' authorities.
- Project number and name: 101113109 - RELECOV 2.0.
- Beneficiary: ISCIII.
- Call: EU4H-2022-DGA-MS-IBA-1.
- Topic: EU4H-2022-DGA-MS-IBA-01-02.
- Coordinator: Inmaculada Casas, PhD. CNM-ISCIII.
- Project duration: 01/07/2023 - 31/03/2026 (33 months).
- Web page: https://relecov.isciii.es.