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D1.4 – Evaluation Strategy Outline for the HERA2CZ Project

Project Title:	*Genomic surveillance of selected infectious diseases in the Czech Republic*
Project Acronym:	*HERA2CZ*
Project ID:	*Grant Agreement - Project 101113387*
Type of action:	*EU4H Project Grants*
Call:	*EU4H-2022-DGA-MS-IBA-1*
Topic:	*EU4H-2022-DGA-MS-IBA-01-02*
Beneficiary:	*National Institute of Public Health, the Czech Republic*
Coordinator:	*Jana Kozáková, MD*
Authors of the Deliverable:	*Mgr. Karolína Řípová, Ph.D.*
Date of the Deliverable:	*September 2023*

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Dissemination Level

PU	Public	☒
SEN	Sensitive	☐

History of Changes

Version	Date	Name	Chapters edited	Changes tracked
v1	12/10/2023	Karolína Řípová	All	Document prepared
v1.1	20/06/2024	Karolína Řípová	Document Template. all	New project template, document revised, EC comments implemented

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List of Abbreviations

ARI/ILI surveillance	Acute Respiratory Infection and Influenza-Like Illness surveillance national system
FWD	Food- and Water-borne Diseases
MDR	Multidrug Resistant Bacteria
MPXV	Monkeypox Viruses
NIPH	National Institute of Public Health
NRLs	National Reference Laboratories
RSV	Respiratory Syncytial Viruses
RT-PCR	Reverse Transcription Polymerase Chain Reaction
WGS	Whole Genome Sequencing

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Executive Summary

The Evaluation Strategy outlined in Deliverable D1.4 focuses on systematically assessing the HERA2CZ project's progress and impact within the health sector in the Czech Republic. This strategy ensures effective data gathering, monitoring and evaluation of the project's implementation and its outcomes, utilizing established best practices in evaluation methodologies.

The overall Evaluation strategy encompasses several key components, including:

- Defining Key Performance Indicators (KPIs): Identification and measurement of specific success indicators that align with the HERA2CZ project's objectives.
- Action Level Indicators: Detailed insights into the operational aspects of the project, assessing the effectiveness of various activities and interventions.
- Dissemination Impact Indicators: Evaluation of the project's dissemination efforts to gauge the reach and influence of its findings and best practices among stakeholders.
- Implementation Strategy: A practical roadmap outlining the methodologies, tools, and techniques for executing the evaluation measures.
- Prospective Timeline: A detailed schedule of activities to ensure timely and systematic execution of the evaluation process.

Deliverable D1.4 drafted by external Evaluation manager is specifically tailored to the HERA2CZ project, aiming to achieve key goals such as strengthening disease surveillance capabilities, enhancing early detection, response, and control of infectious diseases, and addressing challenges related to limited resources and infrastructure capacities. The Evaluation strategy includes a contextual assessment, defining project-specific KPIs, performing outcome evaluations, conducting data quality assessments, evaluating communication efforts, and planning for sustainability and long-term impact.

By implementing these evaluation measures, the HERA2CZ project team aims to optimize outcomes, enhance national public health surveillance capacity, and contribute significantly to the detection and management of infectious diseases and public health threats. This comprehensive Evaluation strategy ensures the fulfilment of the project's goals and supports its long-term sustainability.

Each chapter in this document plays a vital role in creating a comprehensive and effective Evaluation strategy for the HERA2CZ project. Through this structured approach, we aim to ensure that the project meets its objectives and delivers meaningful improvements in the health sector. The D1.4 is an outline for the evaluation process, this deliverable will be complemented by the D1.10 Evaluation report that is scheduled for submission in M33 of the project realisation.

1. General Introduction to the Evaluation Strategy

The Evaluation strategy for the HERA2CZ project is an obligatory deliverable designed to systematically assess project's progress and impact. This document outlines the framework and methodologies employed to measure the effectiveness and success of the project. The strategy is organized into several key chapters, each focusing on different aspects of the evaluation process. Below is a brief overview of each chapter included in the strategy.

Executive Summary - offers a concise overview of the entire evaluation strategy. It highlights the main objectives, methodologies, and anticipated outcomes of the evaluation process, providing readers with a snapshot of the project's evaluation plan.

Chapter 1 - General Introduction of Principles for the Evaluation Strategy - This chapter introduces the foundational principles guiding the Evaluation strategy. It outlines the theoretical framework, objectives, and the overarching goals of the evaluation. This section sets the stage for understanding the purpose of the subsequent chapters.

Chapter 2 - Specific Success Indicators in Context of the HERA2CZ Project – this chapter delves into the specific success indicators tailored to the HERA2CZ project. It identifies and explains the key performance indicators (KPIs) that will be used to measure the project's success in achieving its goals. These indicators are critical for tracking progress and assessing the impact of the project.

Chapter 3 - Action Level Indicators in Context of the HERA2CZ Project - this part focuses on the action level indicators, which provide detailed insights into the operational aspects of the project given by the call EU4H-2022-DGA-MS-IBA-1. It examines the various activities implemented and how they contribute to the overall objectives.

Chapter 4 - HERA2CZ Project Dissemination Impact Indicators - chapter 4 assesses the impact of the project's dissemination efforts. It evaluates how effectively the project's findings, outcomes, and best practices are communicated to stakeholders, including policymakers, healthcare professionals, and the general public. This chapter is crucial for measuring the reach and influence of the project's dissemination activities.

Chapter 5 - Strategy for Implementation of the Evaluation Measures - This chapter outlines the practical steps for implementing the evaluation measures. It details the methodologies, tools, and techniques to be employed in the evaluation process. This section provides a roadmap for executing the evaluation plan effectively.

Chapter 6 - Prospective Timeline for Implementation of the Evaluation - chapter 6 presents a prospective timeline for the implementation of the evaluation. It includes a detailed schedule of activities, milestones, and deadlines. This timeline ensures that the evaluation process is systematically and timely executed, facilitating ongoing monitoring and adjustments as needed.

Chapter 7 - Concluding Remarks on the HERA2CZ Project's Context – summarises the context of the HERA2CZ project and its objectives.

2. Specific Success Indicators in Context of the HERA2CZ Project

The HERA2CZ project aims to strengthen disease surveillance capabilities in the Czech Republic to improve the early detection, response, and control of infectious diseases. The country currently faces challenges related to limited resources, infrastructure, and data management practices. The proposed Evaluation strategy will assess the effectiveness of the disease surveillance system in terms of data quality, timeliness, completeness, and overall performance. The evaluation process outlined in this deliverable will involve key stakeholders, including governmental health agencies, local health facilities and specialists in health sector as well as international partners, to ensure a collaborative and inclusive approach and improvement in data comparability across different systems.

Project key performance indicators for measuring achievements across the individual project tasks are summarized in the following table and will be evaluated on the basis of a simple questionnaire distributed to Work Package (WP) leaders.

Key performance indicator name	Task ID	Baseline value	Target Value
EC Grant Agreement	T1.1	0	1
Project summary report	T1.1	0	1
Reports to the EC	T1.2	0	2
Dissemination tools	T1.3	0	1
Dissemination report	T1.3	0	1
Evaluation report	T1.4	0	1
Sustainability report	T1.5	0	1
Sequencing data sharing report	T1.5	0	1
Purchase the external tip feeder compatible with Biomek i5	T2.1	0	1
Purchase of Qubit Flex Fluorometer	T2.1	0	1
Set up the WGS protocols for influenza A/H1N1, A/H3N2, RSV and MPXV sequencing	T2.1	0	4
WGS data for influenza A/H1N1, A/H3N2, RSV and MPXV sequencing uploaded to GISAID	T2.1	0	96
Set up the web-based application for the self-testing-based sentinel surveillance, pilot project of self-sampling.	T2.2	0	1
Web application for the collection aggregated sentinel and non-sentinel data from sub-national microbiological laboratories.	T2.2	0	1

Key performance indicator name	Task ID	Baseline value	Target Value
Software enabling the selection of a representative proportion of samples	T2.2	0	1
Protocol for MASS Array detection of the most important SNP responsible for anti-virotic resistance of influenza viruses	T2.3	0	8
Samples analysed by the MASS Array	T2.3	0	96
Quantity of sequenced and analysed salmonellae and Shiga toxin-producing E. coli strains	T3.1	0	500
Protocol preparation for WGS of N. meningitidis (*)	T4.1	0	1
Protocol preparation for WGS of S. pneumoniae (*)	T4.1	0	1
Protocol preparation for WGS of H. influenzae (*)	T4.1	0	1
Protocol preparation for WGS of B. pertussis (*)	T4.1	0	1
Analysis of WGS data of each microorganism mentioned: N. meningitidis, S. pneumoniae, H. influenzae, B. pertussis	T4.2	0	200
Quantity of sequenced and analysed strains of carbapenem and/or colistin resistant Enterobacterales	T5.1	0	100

Table 1: Project indicators

(*) Note: for protocols under WP4 (Protocol preparation for WGS of N. meningitidis, S. pneumoniae, H. influenzae, B. pertussis) we are considering preparing one overarching Protocol, instead of four separate ones. In this case, at the end of the project realisation, the indicator for Task T4.1 would be only one overarching protocol with baseline value "0" and target value "1".

In conclusion, key performance indicators that will be evaluated under this activity are based on the indicators set in the Grant Agreement. Background questionnaires that will provide the background data will be stored in project archive and outputs of this screening will be included into relevant part of the D1.10.

3. Action Level Indicators in Context of the HERA2CZ Project

Action level indicators given by the call EU4H-2022-DGA-MS-IBA-1 (Direct grants to Member States' authorities: Enhancing whole genome sequencing (WGS) and/or reverse transcription polymerase chain reaction (RT-PCR) national infrastructures and capacities to respond to the COVID-19 pandemic and future health threats) encompass various aspects related to the analysis and sequencing of SARS-CoV-2 samples within the national public health system.

(i) Firstly, we will aim to demonstrate additional metrics generated on SARS-CoV-2 samples analysed or sequenced post-implementation of the proposal activities compared to the period before project's implementation.

(ii) Secondly, we will provide detail number of SARS-CoV-2 sequences made publicly available following the execution of the proposal activities, contrasting with the figures prior to implementation.

(iii) Thirdly, we will aim to measure the increase in total sequencing capacity of the national public health system, quantifying the rise in the number of samples processed per week or month after the proposal activities are put into effect.

(iv) The action level indicators require monitoring of the number of pathogens for which genomic surveillance has been integrated within the national public health system post-implementation of the proposal activities, compared to the situation before.

(v) Lastly, we will report on their progress in adhering to Council Recommendation (EU) 2021/961 of 14 June 2021 on coordinated approach to the restriction of free movement in response to COVID-19 pandemic. This entails explaining how project data are utilized in assessing the prevalence of variants of concern or interest, informing decisions regarding potential restrictions on free movement in response to the pandemic.

3.1. Additional metrics produced on SARS-CoV-2 samples analysed and/or sequenced through the national public health system prior following the implementation of the proposal activities in comparison with prior to implementation of the proposal activities

Below are defined the indicators that will be considered for measuring the impact of proposal activities on SARS-CoV-2 sample analysis and sequencing within the national public health system. SARS-CoV-2 sequencing itself is not the topic of this project, so it is quite difficult not even tricky to set up the metric concerning increasing WGS capacity of this virus. In evaluating the WP2 activities we will assess these indicators on theoretical level:

⇒ **Change of the sequencing capacity based on the technical laboratory equipment**

⇒ **Change in processing time from sampling to sequencing**

Note: indicators related to metrics generated on SARS-CoV-2 samples analysed and/or sequenced through the national public health system prior following the implementation of the proposal activities in comparison with prior to implementation of the proposal activities could only be set in theory. This indicator depends not only on the sequencing capacity but also on the measures defined by the national public system implemented by the Ministry of Health. The NRL for influenza is heavily dependent on the supply of specimens from testing laboratories and hospitals. NRL typically sequences samples collected in a sentinel tracking system. The transport of samples from subnational laboratories to the NRL is not part of the project and must be financed based on the decision of the Ministry of Health. Declining interest in funding robust SARS-CoV-2 WGS is related to the declining impact of COVID-19 morbidity on the health system and relatively mild clinical symptomatology. This trend can be observed not only in the Czech Republic, but also throughout Europe, if not worldwide. This is why we will evaluate only these metrics on theoretical level.

3.2. Number of SARS-CoV-2 sequences released into the public domain following the implementation of the proposal activities in comparison with prior to implementation of the proposal activities

Below are defined the indicators that will be considered for measuring number of SARS-CoV-2 sequences released into the public domain.

- ⇒ **Total number of SARS-CoV-2 sequences generated and released publicly in post-implementation phase**
- ⇒ **Comparison of the monthly or quarterly sequence output before and after implementation**

Note: This obligatory indicator will be assessed in relation to the WP2. The number of SARS-CoV-2 sequences released into the public domain before and after the implementation of proposal activities are not increasing. The reason is the same as in case of the previous indicator. NRL does not examine samples other than those actively obtained as part of sentinel surveillance and possibly in the SARI system. Sending samples from national laboratories is mostly voluntary and is not funded in any way by the decision of the Ministry of Health. Triggered by the facts explained in point 3.1, the number of sequences released in public domains is decreasing corelating with the fact that the interest of the state to fund these activities declined.

3.3. Increase in total sequencing capacity (i.e. number of samples per week/month) of the national public health system following the implementation of the proposal activities

Following are the indicators for measuring the increase in total sequencing capacity of the national public health system following the implementation of proposal activities, this indicator is relevant to all technical WPs:

- ⇒ **Change of the sequencing capacity based on the technical laboratory equipment (number of samples that could be sequenced per week/month)**
- ⇒ **Change in the processing time taken from sample collection to result reporting in post-implementation phase**

3.4. Number of sites, local and/or regional laboratories with consolidated capacities, stratified by country for multi-country projects

As the HERA2CZ project is a mono-beneficiary project we acknowledge that this mandatory indicator is not relevant for D1.4 or D1.10.

3.5. Number of pathogens for which genomic surveillance was integrated within the national public health system following the implementation of project activities in comparison with prior to implementation of the project activities

Indicators for measuring the integration of genomic surveillance for multiple pathogens within the national public health system following the implementation of proposal activities are defined below:

⇒ **Number of Pathogens Under National Surveillance in Comparison of pre-implementation and post - implementation (where relevant)**

Note: Here we will focus on the comparison of number of pathogens for which genomic surveillance was uploaded to national public health databases for research purposes; the comparison of number of pathogens for which genomic surveillance was uploaded to EpiPulse system for the European surveillance of infectious diseases and the comparison of number of pathogens that were requested by the DG Sante or European Commission for policy making purposes.

⇒ **Standardized Protocols (where relevant)**

Note: Here we the adoption of standardized protocols and workflows for sample collection, sequencing, and data analysis across different pathogens will be summarised.

⇒ **Impact of the project on national preparedness for cross border health threats (following Regulation (EU) 2022/2371 of the European Parliament and of the Council of 23 November 2022 on serious cross-border threats to health and repealing Decision No 1082/2013/EU)**

3.6. Progress on compliance with Council Recommendation (EU) 2021/961, i.e. on how the data from the project are used in the assessment of the prevalence of variants of concern or interest in order to inform decisions on the potential restriction of free movement in response to the pandemic

The progress on compliance with Council Recommendation (EU) 2021/961 (amending Recommendation (EU) 2020/1475 on a coordinated approach to the restriction of free movement in response to the COVID-19 pandemic) regarding the use of project data in the assessment of the prevalence of variants of concern or interest to inform decisions on the potential restriction of free movement in response to the pandemic:

⇒ **Are the key Indicators for Introduction of the Restriction on the Free Movement Set in the Article 8 of the Council Recommendation (EU) 2021/961 Reported to the ECDC on weekly level? (relevance to WP2)**

Note: According to the ECDC website (Variants of concern, https://www.ecdc.europa.eu/en/covid 19/variants-concern, acceded on 11 June 2024), there are currently no SARS-CoV-2 variants meeting the VOC criteria. Currently there is no evidence that the restriction of the free movement based on the Council Recommendation (EU) 2021/961 will be revoked. As explained in point 3.1 and 3.2, the severity impact of Covid-19 is nowadays evaluated as moderate with declining morbidity and relatively mild clinical symptomatology.

⇒ **Are the Sequencing Volumes given by the Council Recommendation (EU) 2021/961 met? (relevance to WP2)**

⇒ **Is the Threshold of Cumulative Vaccination Uptake Set by the Council Recommendation (EU) 2021/961 met? (relevance to WP2)**

⇒ **Reporting to National and International Surveillance Systems (relevance to all technical WPs)**

Note: Integration of project data into existing national or regional surveillance systems for monitoring variant prevalence and transmission.

⇒ **Impact on Protection of Public Health and Restrictions on the Free Movement (if relevant, dependent of actual epidemiological situation)**

Note: Explanation of how project data on variant prevalence have been used to inform policy decisions regarding the potential restriction of free movement (WP2, if relevant) and/or evaluation of the impact of publicly available sequencing data on public health decision-making, outbreak investigations, surveillance, and intervention strategies (all technical WPs).

In conclusion, the action level indicators outlined in this chapter provide a comprehensive framework for evaluating the effectiveness of implementing project activities within the national public health system in response to the SARS-CoV-2 pandemic and even extended to other pathogens. By examining various metrics, including the analysis and sequencing of SARS-CoV-2 samples, the number of sequences made publicly available, and the increase in sequencing capacity, we gain valuable insights into the system's ability to respond to the ongoing challenges posed by the virus. Furthermore, the integration of genomic surveillance for multiple pathogens enhances our understanding of disease spread and evolution. Crucially, adherence to Council Recommendation (EU) 2021/961 is essential for leveraging project data to inform evidence-based decisions, particularly regarding the prevalence of variants of concern or interest and potential restrictions on free movement. Through monitoring and assessment of these indicators, NIPH better safeguards public health protection in the Czech Republic in the face of evolving threats.

4. HERA2CZ Project Dissemination Impact Indicators

Effective dissemination and communication are essential pillars of public-funded projects, serving multifaceted purposes crucial for their success and societal impact. By disseminating research findings widely, the project will reach diverse audiences, maximizing relevance and utility of its impact (Communication and dissemination tools in details - see D1.2 and D1.3). Transparent communication fosters accountability to taxpayers and other stakeholders, promoting trust in the research process and its outcomes. Moreover, by engaging with policymakers, practitioners, and the public, research projects can influence decision-making processes, leading to evidence-based policies and practices. Collaboration and knowledge exchange are facilitated through dissemination activities, fostering innovation and technological advancement. Additionally, effective communication attracts additional funding, support, and partnerships, ensuring the sustainability and growth of research efforts. In summary, dissemination and communication play pivotal roles in maximizing impact, transparency, accountability, policy influence, collaboration, innovation, educational outreach, and resource mobilization for public-funded research projects. In the following table, we summarize the HERA2CZ dissemination KPI's. Fulfilment of below mentioned indicators will be backed by materials stored internally and partly by information already shared with European Commission via Participant portal.

Means and tools	Target group	Baseline value	Target value
Popularisation articles in newspapers or wide-access journals or publications in topic- relevant journals.	HEALTH SECTOR; ACADEMIA; POLICY MAKERS; SURVEILLANCE	0	8
Participation at conferences, workshops, seminars and events relevant to project stakeholders and the project topics.	HEALTH SECTOR; ACADEMIA; POLICY MAKERS; SURVEILLANCE	0	20
Press releases and media outreach	HEALTH SECTOR; ACADEMIA; POLICY MAKERS; SURVEILLANCE	0	2
Project subsite	HEALTH SECTOR	0	400
Final conference in M30	HEALTH SECTOR; ACADEMIA; POLICY MAKERS; SURVEILLANCE	0	50

Table 2: Dissemination Impact indicators

In conclusion, the significance of dissemination and communication in public-funded research projects cannot be overstated. These processes serve as vital conduits through which the fruits of scientific inquiry are shared, understood, and applied for the betterment of society. By fostering transparency, accountability, collaboration, and innovation, effective communication ensures that research findings translate into tangible benefits for diverse stakeholders. Moreover, through educational outreach and engagement efforts, dissemination initiatives empower individuals to make informed decisions and actively participate in shaping the societal impact of research. As we navigate complex challenges and opportunities in the realm of science and technology, prioritizing robust dissemination and communication strategies remains imperative for realizing the full potential of public-funded research endeavours.

5. Strategy for Implementation of the Evaluation Measures

The evaluation strategy encompasses three distinct components, each vital for comprehensively assessing the project's progress and impact. Firstly, there's the *evaluation of the project's fulfilment of its operational objectives*, ensuring alignment with its intended outcomes. Secondly, the *evaluation extends to the project's broader impacts within the community*, gauged through third communication and dissemination activities having its specifics targets. All these evaluations operate within the framework of regular internal reporting, facilitating the monitoring and reporting of key achievements to the EC. Utilizing automated built-in tools, such as monitoring website traffic and tracking participation in dissemination events, ensures efficient data collection for these evaluations.

However, the *evaluation of action level impacts* demands a more specialized approach. This involves a separate process, characterized by deep engagement from work package leaders and scientific teams. Drawing from the Key Performance Indicators (KPIs) proposed in Chapter 3, work package leaders spearhead a data acquisition exercise. These KPIs are translated into a series of evaluation questions, both qualitative and quantitative, presented electronically to the team by the external Evaluation manager. Through this activity, relevant data pertinent to each research work package is gathered.

Subsequently, the raw outcomes of this data collection phase are deliberated upon within the project team during regular implementation meetings. These discussions facilitate the identification of key trends, laying the groundwork for in-depth data analysis. Following meticulous analysis, the final outcomes of the evaluation exercise will be shared with the research team and the External Advisory Board, soliciting their valuable feedback. This comprehensive evaluation framework ensures that the project's progress and impact are rigorously assessed across various dimensions, informing strategic decisions and enhancing overall effectiveness.

6. Prospective Timeline for Implementation of the Evaluation

M1-12	Evaluation strategy outline presentation for discussion among the Project team members
M12	Evaluation strategy submitted to the EC in form of project deliverable
M12-24	Desk research and analysis of available data sources
M24	Baseline impact evaluation data collection (action level impacts evaluation)
M24-26	Data analysis and back verification if needed
M27-33	Preparation of the final Evaluation report for the EC in form of project ‘s deliverable
M33	Submission of the D1.10 - Evaluation report

7. Project's Context

Genomic surveillance of selected infectious diseases in the Czech Republic (HERA2CZ)

Enhancing Public Health Protection through the HERA2CZ Project

The HERA2CZ project aims to enhance the quality of public health protection and improve the preparedness of the Czech Republic for emergency health situations and pandemics such as COVID-19, or any future health crisis with potential international impact. The HERA2CZ project assists the National Institute of Public Health (NIPH/SZÚ) in increasing the capacities of the National Reference Laboratories (NRL) for whole genome sequencing (WGS) of infectious agents and expanding the spectrum of WGS characterization to various human pathogens, especially SARS-CoV-2 and other respiratory viruses, bacterial pathogens with cross-border impact, including antibiotic-resistant bacteria. WGS is a modern, precise, and time-efficient analytical method that enables rapid and accurate identification of infectious disease outbreaks, control of these outbreaks, monitoring the spread of infectious agents, and their mutations. Early detection of potential threats and a proper understanding of the spread of infectious diseases are crucial for timely responses from public health authorities.

Key Points of the HERA2CZ Project

- The HERA2CZ project addresses shortcomings in the healthcare system, particularly considering the experiences from the COVID-19 crisis.
- The main objective is to enhance the Czech Republic's preparedness for future health emergencies related to the spread of infectious diseases at national and global levels.
- Public health protection requires a comprehensive approach crossing national borders, strengthening healthcare systems, analytical capacities, implementing modern methods, and improving cross-border data sharing.

What is Whole Genome Sequencing (WGS)?

- WGS is a modern method used to analyse the complete DNA sequence of an organism's genome.
- WGS allows precise tracking and differentiation of individual strains, aiding in identifying sources of infection and understanding the spread of infectious diseases.
- The accuracy of the method makes WGS an indispensable tool for effective surveillance of the occurrence and spread of infectious diseases.
- WGS enables timely and accurate identification, monitoring, and prevention of the spread of infectious diseases in a global context.
- Cross-border data sharing through WGS supports collaboration between countries is necessary for efficient monitoring and prevention of global health threats.

Challenges Associated with WGS

- While WGS is highly effective, it is more resources intensive compared to other sequencing methods and requires robust technical and personnel resources.

- WGS generates complex data, the precise analysis of which demands specialized expertise, management, and storage, necessitating additional skilled personnel.
- Some of these challenges were partially addressed in the previous HERA project.

Focus of the HERA2CZ Project

- The follow-up HERA2CZ project focuses on increasing the genotypic characterization capacity within the National Reference Laboratories (NRL) of the National Institute of Public Health (NIPH/SZÚ) in the Czech Republic and expanding the spectrum of WGS characterization to various human pathogens, especially SARS-CoV-2 and other respiratory viruses, bacterial pathogens with cross-border implications, including antibiotic-resistant bacteria.
- The HERA2CZ project further refines methods based on whole genome sequencing and incorporates these modern methods into routine genomic surveillance of selected infectious diseases.

The Project's Basic Data

Project Title (acronym):	*Genomic surveillance of selected infectious diseases in the Czech Republic (HERA2CZ)*
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Topic:	*EU4H-2022-DGA-MS-IBA-01-02*
Coordinator:	*Jana Kozáková, MD*
Project duration	*1.10.2022 – 30.6.2025*

Find out more: https://szu.cz/en/project-hera-2

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