

Questionnaire for Healthcare Professionals: Health Data Collection Needs Assessment

Fields marked with * are mandatory.



Addressing Electronic Health Record (EHR) Systems and Artificial Intelligence (AI) Integration Requirements

Thank you for taking the time to participate in this questionnaire!

This survey is intended for healthcare professionals who use Electronic Health Record (EHR) systems in their daily work.

Your experience with these systems is crucial. As someone directly involved in patient care, you have firsthand knowledge of what supports clinical workflows and what hinders it. By sharing your perspective, you will help identify challenges, needs, and improvement opportunities in how health data is collected.

This input will guide the i2X Project in designing user-friendly innovative tools that better serve healthcare professionals by aligning with real clinical workflows, while also meeting European interoperability standards (the technical requirements of the European Electronic Health Record Exchange Format - EEHRxF).

Participation Information

- Participation is entirely voluntary. You may withdraw at any time without any consequences.
- This survey is anonymous. No personal or identifying information will be collected.
- All collected data will be securely stored for the duration of the project (4 years) and possibly longer if the project is extended.
- The questionnaire has been reviewed to ensure it meets ethical research standards and poses no ethical concerns.
- All data processing complies with the EU General Data Protection Regulation (GDPR) and applicable national laws.
- The data gathered will be used solely for research purposes within the i2X Project.

By completing this questionnaire, you confirm that you have been informed about the purpose of the study and agree to participate.

Estimated completion time: 15–20 minutes.

For questions, please contact:

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i2X Project | Task 2.1 (Identification of Needs and Challenges)

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Important Definitions

The following terms are used consistently throughout the questionnaire. Please review them before you proceed, to ensure clarity:

- **Electronic Health Record (EHR) System:** A digital platform that stores and manages patient health information, including demographics, diagnoses, treatments, and test results, enabling secure exchange of data among healthcare providers.
- **Information Overload:** A situation where the amount of information presented in an EHR system is so extensive, fragmented, or complex that it becomes difficult for healthcare professionals to quickly find, understand, and use the most relevant details for patient care.
- **Interoperability:** The ability of different information systems, devices, or applications to connect and exchange data in a usable and meaningful way.
- **Super-users / Clinical Champions:** Healthcare professionals within the organization who receive additional training on the EHR system and act as local experts. They support colleagues by answering questions, sharing best practices, and helping solve day-to-day problems related to the system's use.
- **Structured Data:** Health information recorded in a standardized, organized format (e.g., coded fields such as diagnosis codes, lab values, or medication lists) that can be easily stored, searched, and analyzed by computer systems.
- **Terminology standards:** Coding standards that provide an unambiguous meaning to clinical terms.

Two-Factor Authentication (2FA): A security method that requires users to verify their identity in two ways (e.g., entering a password and confirming a code sent to a phone) before gaining access to a system.

- **Semantic interoperability** means that different healthcare systems can exchange data in a way that the

meaning is preserved and understood the same way everywhere (e.g., diagnoses, lab results, medications).

About the i2X Project

i2X (Intelligent Implementations of the European Electronic Health Record Exchange Format) is a European Project co-funded by the European Union's Digital Europe Programme under grant agreement No. 101195323.

It aims to demonstrate the added value of the European Electronic Health Record Exchange Format (EEHRxF) through implementation in 12 EU Member States. The project supports the vision and goals of the European Health Data Space (EHDS) and supports the rollout of MyHealth@EU services, by testing digital health tools in real clinical settings, in order to improve care integration, support data exchange, and reduce the workload of healthcare professionals.

* 1. What is your professional role in healthcare?

- ☒ Physician / Medical Doctor (please specify medical specialty)
- ☐ Clinical researcher
- ☐ Nurse
- ☐ Medical student
- ☐ Nurse student
- ☐ Pharmacist
- ☐ Administrative staff
- ☐ Hospital/clinic management
- ☐ Other

Please specify

* 2. How many years have you been working in healthcare?

- ☐ Less than 2 years
- ☐ 2-5 years
- ☐ 6-10 years
- ☐ 11-20 years
- ☐ More than 20 years

* 3. In which setting do you primarily work?

- ☐ University hospital
- ☐ General hospital/clinic
- ☐ Psychiatry hospital/institution
- ☐ Primary care centre
- ☐ Specialty clinic

- ☐ Academic/research institution
- ☐ Government/Public body
- ☐ Other

4. In which country do you currently reside?

- ☐ Austria
- ☐ Belgium
- ☐ Bulgaria
- ☐ Croatia
- ☐ Cyprus
- ☐ Czechia
- ☐ Denmark
- ☐ Estonia
- ☐ Finland
- ☐ France
- ☐ Germany
- ☐ Greece
- ☐ Hungary
- ☐ Iceland
- ☐ Ireland
- ☐ Italy
- ☐ Latvia
- ☐ Liechtenstein
- ☐ Lithuania
- ☐ Luxembourg
- ☐ Malta
- ☐ Netherlands
- ☐ Norway
- ☐ Other
- ☐ Poland
- ☐ Portugal
- ☐ Romania
- ☐ Slovak Republic
- ☐ Slovenia
- ☐ Spain
- ☐ Sweden

5. On a scale of 1-10, how would you rate the overall usability of your EHR system, currently used most?

1 being very poor, 10 being excellent

5

6. What percentage of your workday is typically spent on documentation and administrative tasks versus direct patient care?

- ☐ Less than 25% on documentation/administrative tasks
- ☐ 25-40% on documentation/administrative tasks
- ☐ 41-60% on documentation/administrative tasks
- ☐ More than 60% on documentation/administrative tasks

7. Which EHR-related tasks consume most of your time?

Maximum 3 selection(s)

- ☐ Entry of clinical information, such as patient history, clinical symptoms, etc.
- ☐ Searching for specific patient information
- ☐ Locating and synthesizing information across various documentation sources
- ☐ Navigating between different screens/modules
- ☐ Authentication processes (strong authentication, two factor, account sharing)
- ☐ Generating reports
- ☐ Reviewing data from other providers
- ☐ Other

8. How easy is it to find the specific information you need in your current *EHR system?

- ☐ Very easy - information is logically organized
- ☐ Somewhat easy - takes some navigation, but generally findable
- ☐ Somewhat difficult - often requires extensive searching
- ☐ Very difficult - regularly struggle to locate needed information

9. What types of clinical information do you believe should remain as free text? (Select all that apply)

- ☐ Patient history narratives
- ☐ Clinical impressions and reasoning
- ☐ Assessment details
- ☐ Treatment plan rationale
- ☐ Patient-reported experiences
- ☐ Other

10. How concerned are you about *information overload in EHR systems?

- ☐ Very concerned - frequently delays consultations
- ☐ Somewhat concerned - occasionally impacts workflow
- ☐ Not very concerned - manageable with current systems
- ☐ Not at all concerned

11. How often do you need to re-enter the same information relating to one patient in different software systems to comply with clinical documentation requirements?

e.g., the main EHR, lab system, imaging system, prescribing software, disease registers, referrals, reporting diseases, etc.

- ☐ Multiple times per day

- ☐ A few times per day
- ☐ A few times per week
- ☐ Rarely or never

12. How many different software systems are you using in your medical practice? Please select all that apply

- ☐ General electronic Health Record (EHR / EMR) software system
- ☐ ePrescription software
- ☐ Laboratory Information System (LIS)
- ☐ Radiology Information System (RIS) / PACS
- ☐ Billing system
- ☐ Insurance / Reimbursement system
- ☐ Patient portal system
- ☐ Telemedicine platform
- ☐ Appointment scheduling system
- ☐ Data analytics / registry / research tool
- ☐ Software for supporting clinical decision-making specific to the medical specialty
- ☐ Referrals system
- ☐ Software system to register oncology patients
- ☐ Software system to report infectious diseases
- ☐ Software system to report COVID-19 cases
- ☐ Human resources system (working schedules, teams/patients' allocation)
- ☐ Other

13. Are you able to see information from other centres/hospitals at your workplace in your main EHR software?

(select all that apply)

- ☐ National Patient Summary
- ☐ Discharge letters from hospitals
- ☐ After-visit summaries from other specialists in your country
- ☐ Laboratory results from other centres in the country
- ☐ Images from imaging investigations
- ☐ Imaging summaries

14. What aspects of the current health information exchange most disrupt your clinical workflow?

Maximum 3 selection(s)

- ☐ Multiple logins/authentication requirements (separate user accounts, two factor authentication)
- ☐ Inconsistent terminology across systems (when the same clinical concepts are labelled or coded differently)
- ☐ Lack of standardization in data presentation
- ☐ Difficulty identifying relevant information
- ☐ Time required to enter *structured data
- ☐ System downtime or performance issues
- ☐ Other

15. Which AI applications would be most valuable in improving your EHR experience? (Rank from 1–6, with 1 being most valuable)

Use drag&drop or the up/down buttons to change the order or accept the initial order.

⋮	Auto-population (pre-filling) of fields from existing data
⋮	Automated clinical coding/classification
⋮	Voice recognition and transcription
⋮	AI-assisted documentation suggestions
⋮	Intelligent search and information retrieval
⋮	Clinical decision support

16. What concerns do you have about AI integration with *EHR systems? (Select all that apply)

- ☐ Accuracy of AI-generated content
- ☐ Unknown source of data used to train AI
- ☐ Bias in data used to train AI
- ☐ Potential for clinical errors
- ☐ Overreliance on technology/deskilling
- ☐ Data privacy and cybersecurity
- ☐ Unclear liability for AI-related decisions
- ☐ Additional technical complexity
- ☐ Slowing down the system
- ☐ Other

17. What level of training have you received on your current EHR system?

- ☐ Comprehensive formal training
- ☐ Basic introduction only
- ☐ Self-taught/learned from colleagues
- ☐ No training received

18. What challenges do you face with terminology standards (coding standards that provide an unambiguous meaning to clinical terms) in current systems? (Select all that apply)

- ☐ Inconsistent terminology across systems (when the same clinical concepts are labelled or coded differently)
- ☐ Terminology does not match clinical language
- ☐ Too many required coding systems
- ☐ Time needed for coding/classification
- ☐ Lack of training on terminology standards
- ☐ No challenges faced
- ☐ Other

19. *Semantic Interoperability can result in several advantages. Which of the following are most important for you?

Maximum 3 selection(s)

- ☐ Improved continuity of patient care across providers
- ☐ Reduced errors from misinterpretation of clinical data
- ☐ Less time spent on duplicate data entry / manual work
- ☐ Better access to complete patient history
- ☐ Easier communication and collaboration with other healthcare professionals
- ☐ Faster, more accurate diagnostics and treatment decisions
- ☐ Improved reporting for public health and research
- ☐ Cost savings through efficiency and reduced duplication
- ☐ Compliance with national / EU regulations and standards
- ☐ Other

20. Any other comments or suggestions regarding EHR systems, AI integration, or health data exchange?

You are invited to optionally provide a short audio message to share any thoughts, suggestions, or experiences that were not covered in the previous questions. This additional input will help the research team understand usability challenges, interoperability needs, and opportunities for improvement.

Please download the Formal Consent using the following link. After you complete the consent form, please drag and drop your recorded voice message inside the gray section of the document (Accepted file formats: MP3, WAV, M4A)

Download Formal Consent:

[I2X i2X Digital Europe Project Formal Consent for Voice Comment.docx](#)

Upload the completed Formal Consent with the embedded voice note here.

Instructions for submitting a voice comment: Record your message using your preferred device, then open a new Microsoft Word document and drag the audio file into it. Save the document as .doc or .docx.

Only files of the type doc,docx are allowed

Contact

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