ISO 5477:2023-12 (E)

Health informatics - Interoperability of public health emergency preparedness and response information systems

Contents

Page

Foreword ..... **v**

Introduction ..... **vi**

1 Scope **1**

2 Normative references **1**

3 Terms, definitions and abbreviated terms **1**
3.1 Terms and definitions 1
3.2 Abbreviated terms 6

4 Requirements for PH EPR information systems **7**
4.1 Defining the PH EPR information system's domain 7
4.2 General principles of management and conformance 8
4.2.1 Conformance with general incident management principles 8
4.3 PH EPR data and information management (DIM) processes 10
4.3.1 Background 10
4.3.2 Establishing strategies and goals for the PH EPR DIM 11
4.3.3 Defining goals for the PH EPR information system 12
4.4 Supporting PH EPR mission areas 13
4.5 Establishing data and information governance 13
4.5.1 Data and information governance: Background and principles 13
4.5.2 Ongoing training 17
4.5.3 Defining Essential Elements of Information (EEIs) and Critical Information Requirements (CIRs) 18
4.5.4 Establishing a process for the collection, development, and utilization of standardized case definitions 19
4.6 Reporting — Data analytics and visualization 21

5 Interoperability in PH EPR information systems **22**
5.1 Background 22
5.2 Aligning the PH EPR information systems interoperability with the organizational interoperability of the activated IMS and overall emergency response 22
5.3 Facilitating the improvement of organizational interoperability through organizational emergency resilience 23
5.4 Assuring the expandability of PH EPR information systems without compromising interoperability 24
5.5 Usability 25
5.6 Adaptability 26
5.7 Measure-driven capabilities for PH EPR information systems 27

6 Business requirements for collecting, developing and maintaining PH EPR terminology and data vocabulary **27**
6.1 Background 27
6.2 Alignment of standardized PH EPR terminology and vocabulary with critical PH EPR functions 28
6.3 Applying standardized terminology and vocabulary to emergency response to standard operations procedures (SOPs) and disaster planning 30
6.3.1 General 30
6.3.2 Utilising event grading and classifications of emergencies 31
6.3.3 Using the WHO International Classification of Diseases (ICD) 32
6.4 Assuring relevance and coverage 33
6.5 Role of stakeholders' involvement in collecting, developing, and maintaining a public health preparedness and response data vocabulary 34

6.6 Assuring flexibility and scalability of PH EPR vocabulary 35
6.7 Supporting tasks for PH EPR vocabulary quality and integrity 36
6.8 Ongoing maintenance and updates 37
6.9 Assuring compliance and fulfilment of regulatory requirements 38
6.10 Providing adequate training and support 39

Annex A (informative) **Criteria to take into account on knowledge, skills and abilities for the fulfilment of essential PH EOC functions** **41**

Annex B (informative) **Competencies for Public Health Emergency Preparedness and Response Informatics Professionals** **49**

Bibliography **57**