

DIGITALISATION OF HOSPITALS' MEDICATION MANAGEMENT PATHWAYS IN EUROPE



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18 November 2025

EPACT – THE ALLIANCE FOR THE DIGITALISATION OF HOSPITALS' MEDICATION MANAGEMENT PATHWAYS

The purpose of the Alliance is to:
foster multistakeholder collaboration to advocate for the inclusion of the digitisation of medication management in EU policies, such as:

- EU New Pharmaceutical Legislation.
- EU Digital Strategy.
- EU4HEALTH Programme.
- European Health Data Space

Objective



Improve patient safety



Reduce health professional harm



Reduce healthcare professionals' administrative burden

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Currently 22 Alliance Members including



STRATEGIC INVESTMENTS FOR HOSPITAL DIGITALISATION: WHY NOW?

● COVID-19 exposed vulnerabilities in global supply chains and **amplified existing causes of shortage.**

● Medicine shortages have increased over the last 5–10 years across the EU.

● **95% of hospital pharmacists across 36 European countries** reported experiencing medicine shortages in 2023.

● Shortages can affect any medication, but are **most frequent in older, off-patent and generic medicines**, particularly: *Pain relievers; Antihypertensives; Anti-infectives / antimicrobial agents; Oncology drugs; and Anaesthetic agents.*

● Consequences: **Delays in care delivery, cancellations, and use of less effective or riskier alternatives.**

THE PROBLEM: SHORTAGES & MANUAL MEDICATION MANAGEMENT

Before shortages

- Inability to predict potential shortages due to manufacturers / wholesaler supply chain issues.
- Low reliability of medication ordering, driving potential medicinal product stockouts.
- In case of a product recall, time-consuming tasks to investigate and find impacted drugs batches on hospital wards.

During shortages

- Inability to allocate production among hospitals in a region, a country, or within the EU during shortages crises.
- Incremental time and resources for the best management of alternatives medicines.

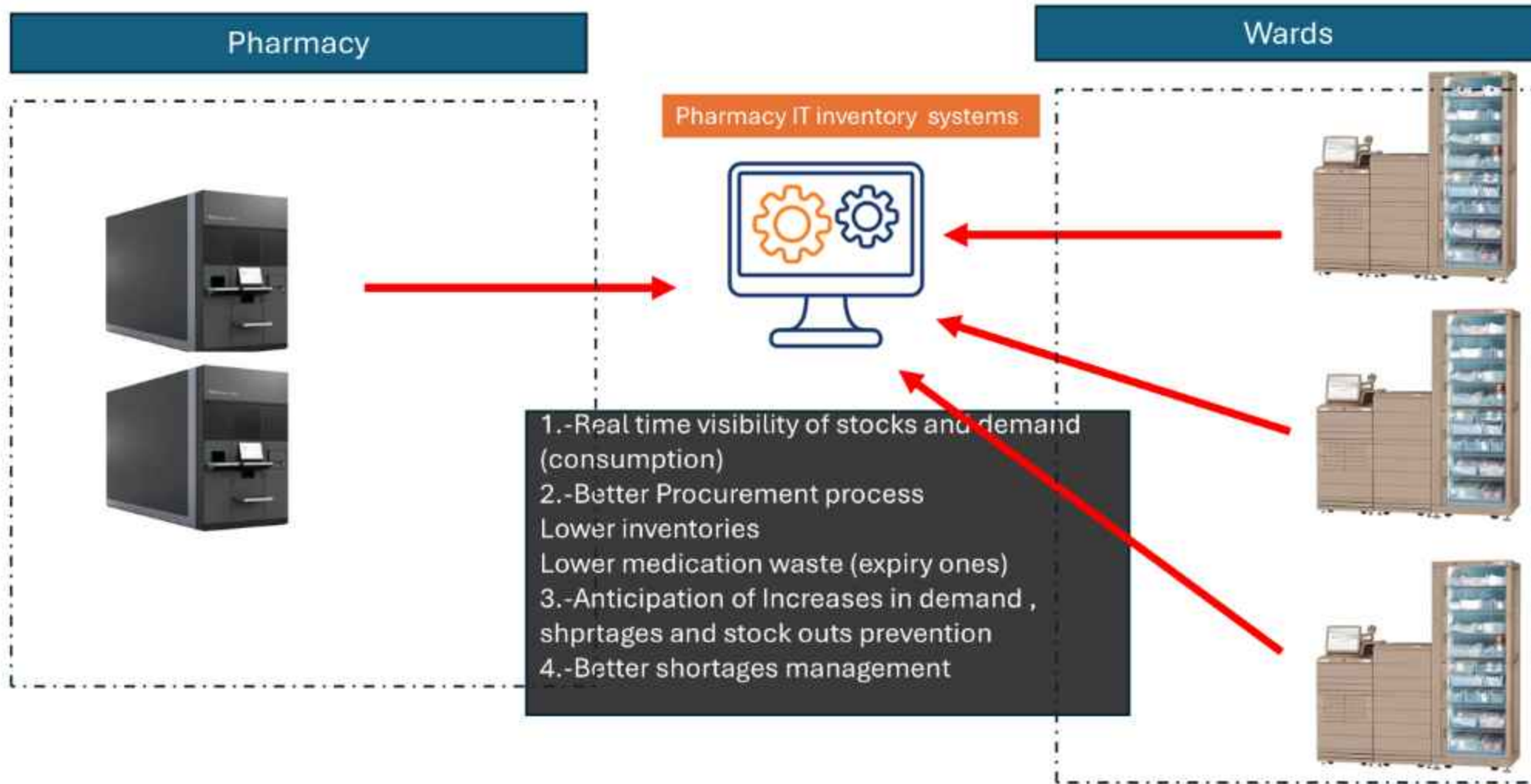
Efficient supply chain operations

Inventory management

















Public and stakeholder awareness

Stakeholder collaboration

WHY DIGITALISATION & AUTOMATION ARE NEEDED



MANUAL INVENTORY VS DIGITAL INVENTORY SYSTEMS

MANUAL	DIGITAL
 <p>Inaccurate records Prone to human error, time-consuming</p>	<p>Automated, accurate records Automate inventory records </p>
 <p>Static ordering Unresponsive to demand changes</p>	<p>Adaptive, data-driven Adjusts to consumption patterns </p>
 <p>No real-time view Slow response to shortages</p>	<p>Live dashboards & alerts Predictive analytics </p>
 <p>No forecasting Missed signals & spikes</p>	<p>Predictive analytics Forecasts demand & prevents stockouts </p>
 <p>No forecasting Missed signals & spikes</p>	<p>Predictive analytics Forecasts demand & prevents stockouts </p>
 <p>Hard expiry tracking Expired medicines & waste</p>	<p>Automatic expiry alerts FEFO management </p>
 <p>Overstocking & waste Stockouts</p>	<p>Optimized stock levels Using consumption trends & predictive tools </p>
 <p>Data silos</p>	<p>Full system integration Connecting pharmacy wards, suppliers & EHRs </p>

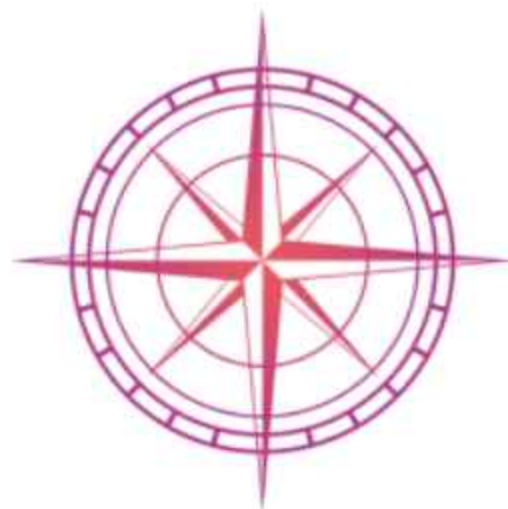
POLICY MOMENTUM: DIGITAL EUROPE PROGRAMME

Skills

20 million employed **ICT specialists**, more graduates + gender balance
80% of adults can **use tech** for everyday tasks

Government

Key Public Services - 100% online
Everyone can **access health records online**
Everyone can use **eID**



Infrastructure

Gigabit connectivity for everyone, **high-speed mobile coverage** (at least 5G) everywhere
EU produces 20% of world's **semiconductors**
10 000 **cloud edge nodes** = fast data access
EU **quantum computing** by 2025

Business

75% of companies using **Cloud, AI or Big Data**
Double the number of **unicorn startups**
90% of **SMEs taking up tech**

POLICY MOMENTUM – EHDS



Better diagnosis and treatment:

- improved patient safety
- continuity of care
- improved healthcare efficiency

Empower **individuals** to have control over their health data

Enable **health professionals** to have access to relevant health data

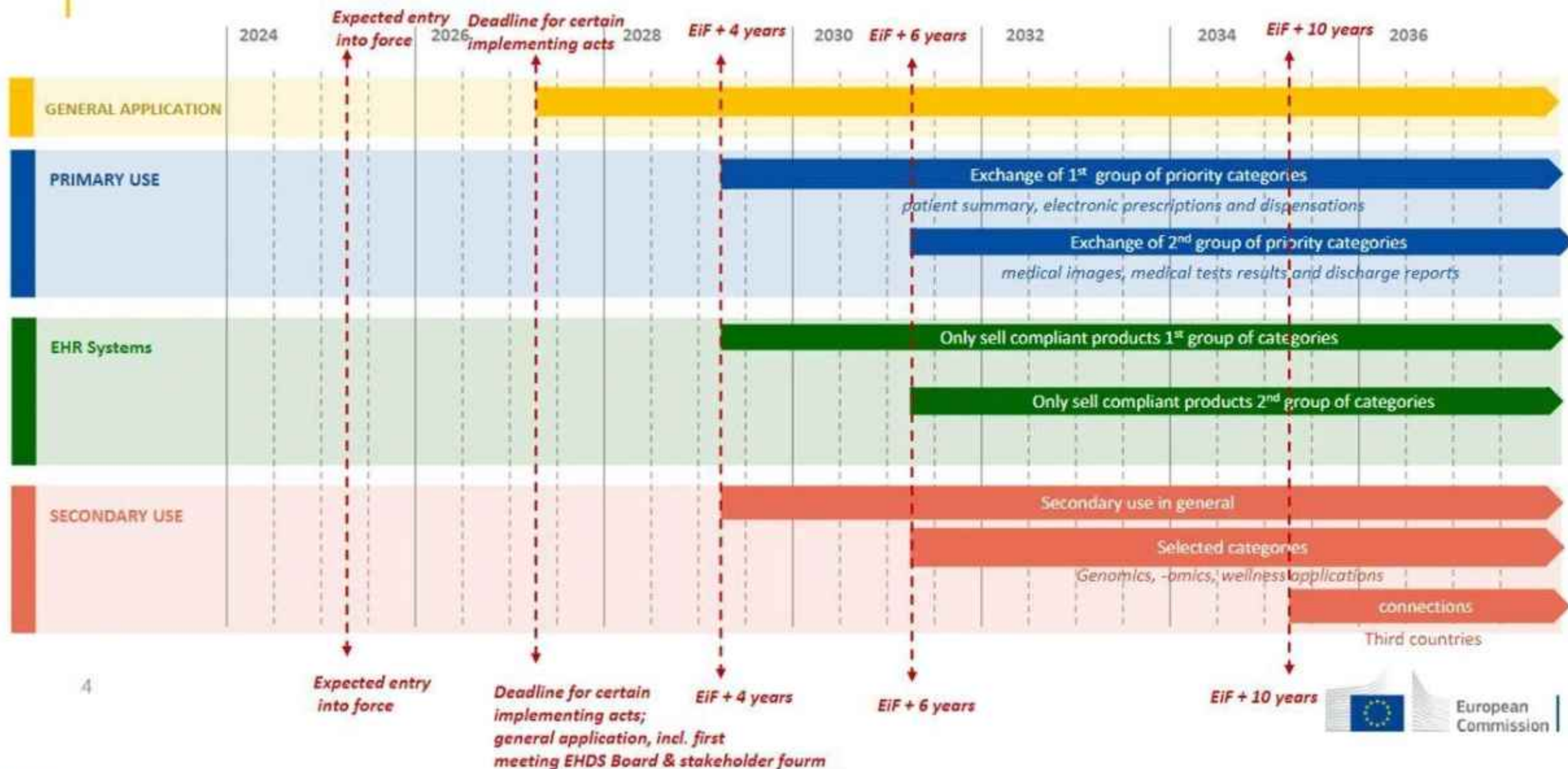


Assist **policy makers and regulators** in accessing relevant health data

Facilitate access to health data for **researchers and innovators**

Better health policy, greater opportunities for research and innovation

EHDS – Overall timeline for application



POLICY MOMENTUM

THE PHARMACEUTICAL STRATEGY FOR EUROPE

Innovative &
affordable medicines



Addressing unmet
medical needs

Enhancing preparedness
& reducing shortages



Strengthening EU
competitiveness

#EUPharmaStrategy #EUHealthUnion



POLICY MOMENTUM – CRITICAL MEDICINES ALLIANCE

Forum

- Open to all Member Organisations
- Convenes at least once a year to discuss high-level policy matters concerning the Alliance
- The Forum will be consulted before the Steering Board adopts the Strategic Plan

Steering Board

- In charge of the Strategic Plan and its implementation
- Member States
- Industry
- Patients and healthcare professionals
- Executive Steering Group on Shortages & Safety of Medicinal Products (MSSG)
- European Medicines Agency (EMA)
- All chairs of the Working Groups

**As defined by the Union list of critical medicines.*

Governance structure



Health Emergency
Preparedness and
Response Authority



Working Groups

- Focusing on specific topics, these groups are open for participation to Member Organisations with relevant activities and expertise related to the designated Working Group's area of work
- They provide input to the Steering Board to aid with the drafting of the Strategic Plan



Critical Medicines
Alliance

EUROPEAN MEDICINE AGENCY SURVEY: HOSPITAL READINESS AND THE ROLE OF MEDICATION STOCK VISIBILITY IN MANAGING MEDICINE SHORTAGES IN EU MEMBER STATES



Methodology: Mixed-methods study combining

- Online survey of EMA Medicines Shortages SPOC Working Party
- Semi-structured interviews with selected NCAs

Survey responses: 16 EU/EEA countries

Austria, Belgium, Bulgaria, Croatia, Cyprus, Estonia, Finland, France, Ireland, Iceland, Italy, Lithuania, Latvia, Norway, Portugal, Slovenia, Sweden

Interviews conducted *with Belgium, France and Poland*

Timeline: May–July 2023 for both survey and interviews

Focus:

- NCA experiences managing COVID-related demand surges
- Hospitals' readiness to share stock and demand data for the ESMP
- NCA capacity and plans for real-time hospital data collection.

Read more:

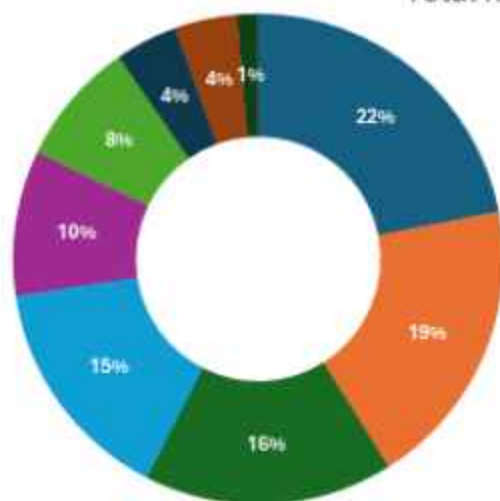
<https://ehma.org/new-report-on-hospital-medication-inventory-management-the-urgent-need-for-digital-solutions-to-prevent-shortages/>

EUROPEAN MEDICINE AGENCY SURVEY: KEY PLAYERS IN THE ECOSYSTEM

Stakeholders who played an important role in managing and preventing medicine shortages during the COVID-19 crisis

Based on your experience during the COVID crisis what stakeholders below played an important role in managing/preventing medicine shortages?

Total n = 16

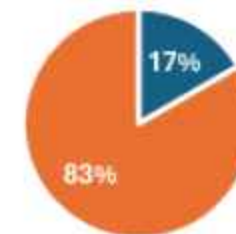


- MAH
- National Medicines Agency
- Hospitals
- Wholesalers
- Ministry of Health
- Community Pharmacies
- European Medicines Agency
- Distributors

Contact with hospitals during the COVID

As a national regulatory authority were you in regular contact with hospitals during the COVID crisis?

Combined total n= 18



- No
- Yes

EUROPEAN MEDICINE AGENCY SURVEY: GEOGRAPHICAL REPRESENTATION

In which country is your hospital located?

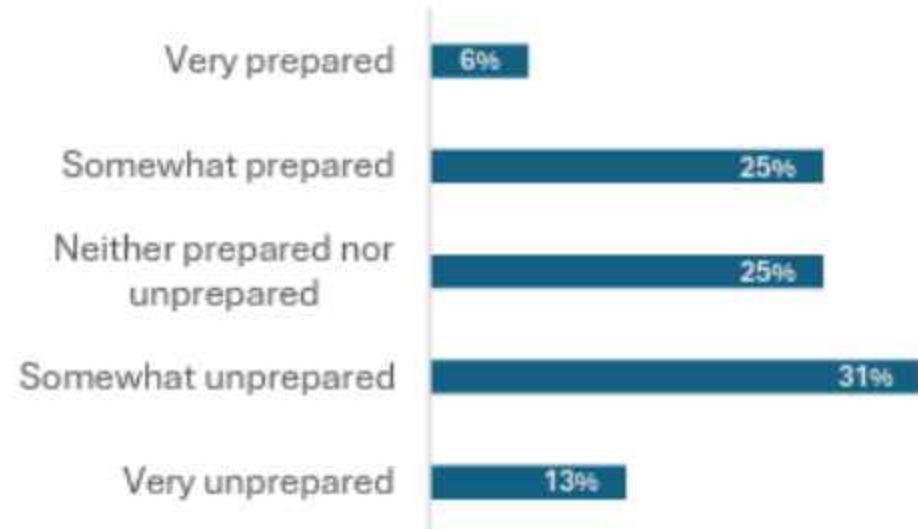


- | | | | | | | | | |
|---------------|------------|------------|-----------|------------|------------|-------------|--------------|----------|
| ■ Belgium | ■ Bulgaria | ■ Croatia | ■ Cyprus | ■ Czechia | ■ Denmark | ■ Estonia | ■ Finland | ■ France |
| ■ Germany | ■ Greece | ■ Hungary | ■ Ireland | ■ Italy | ■ Latvia | ■ Lithuania | ■ Luxembourg | ■ Malta |
| ■ Netherlands | ■ Poland | ■ Portugal | ■ Romania | ■ Slovakia | ■ Slovenia | ■ Spain | ■ Sweden | ■ Other |

EUROPEAN MEDICINE AGENCY SURVEY: HOSPITAL READINESS AND VISIBILITY OF STOCKS

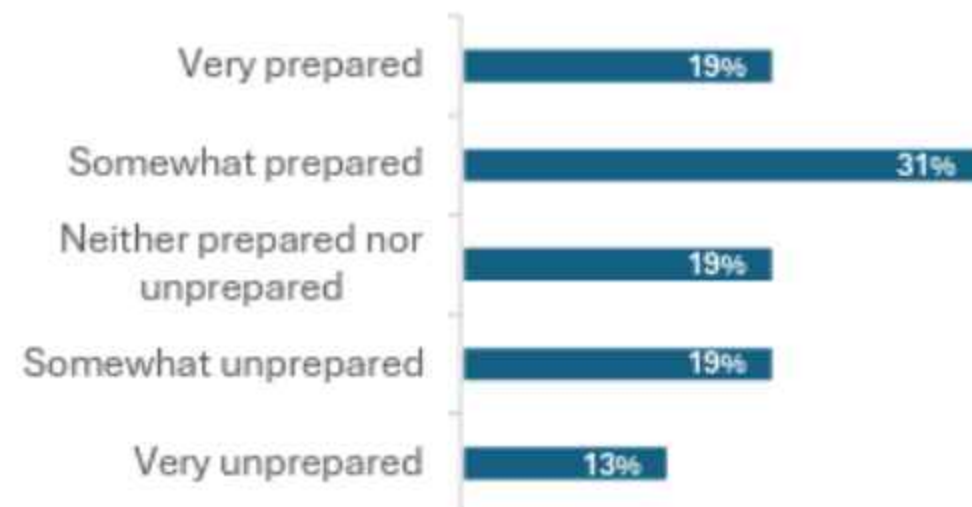
In your opinion, how prepared are your hospitals to supply real-time and accurate data on planned stocks of critical medicines for the ESMP?

Total n = 16



In your opinion, how prepared are your hospitals to supply real-time and accurate data on available stocks of critical medicines for the ESMP?

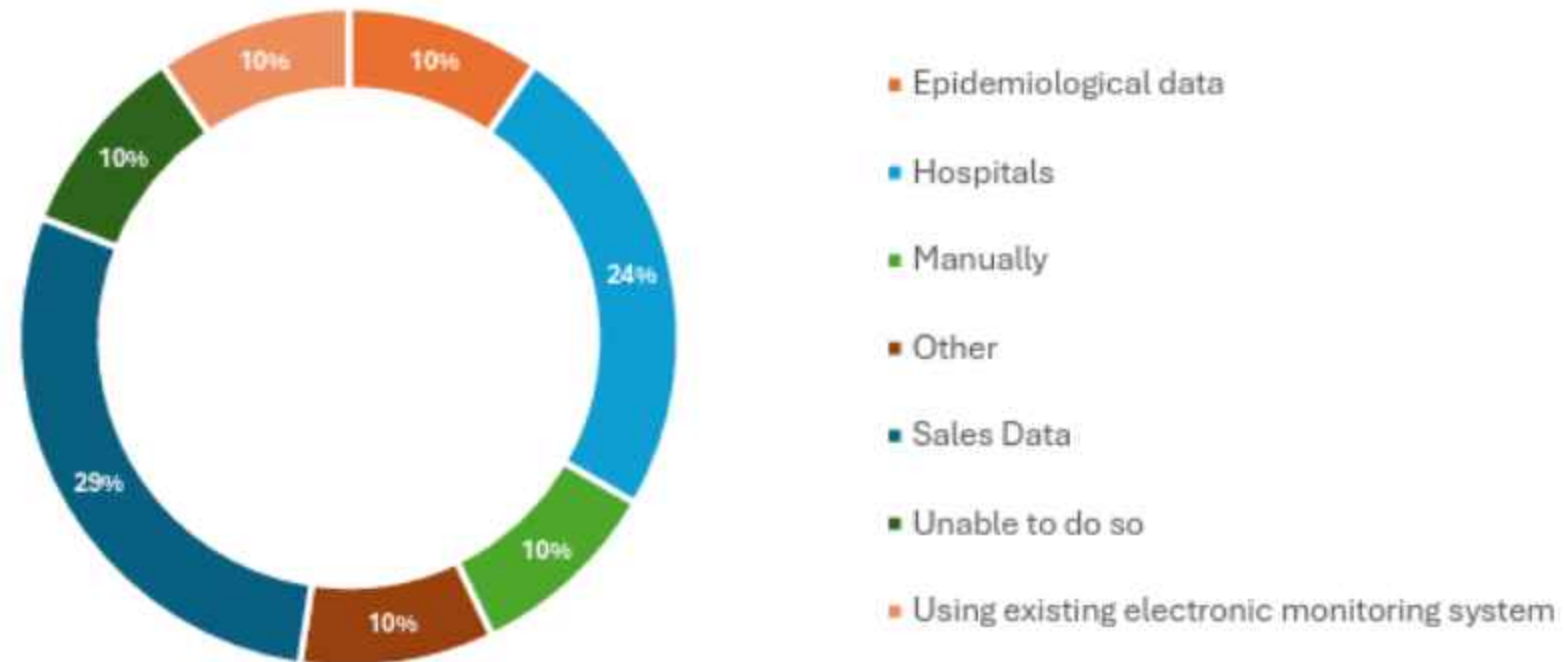
Total n = 16



EUROPEAN MEDICINE AGENCY SURVEY: FORECASTING DEMAND OF HOSPITALS

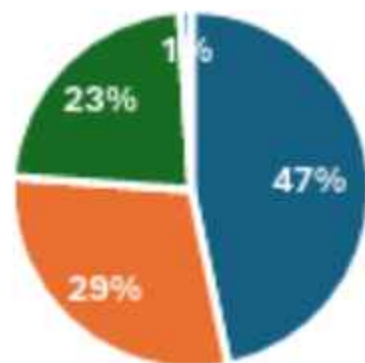
How do you plan to estimate demand from hospitals for critical medicines that are required by the new EMA mandate for the European Shortages Monitoring Platform

Total n = 16



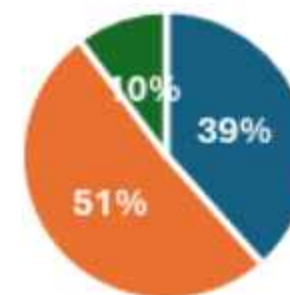
EUROPEAN MEDICINE AGENCY SURVEY: DATA SHARING WITH NATIONAL COMPETENT AUTHORITIES

Are you currently sharing data on medication inventory stocks with your National or Regional Competent Authority?



■ Yes - periodically ■ Yes - ad hoc basis ■ No ■ Do not know

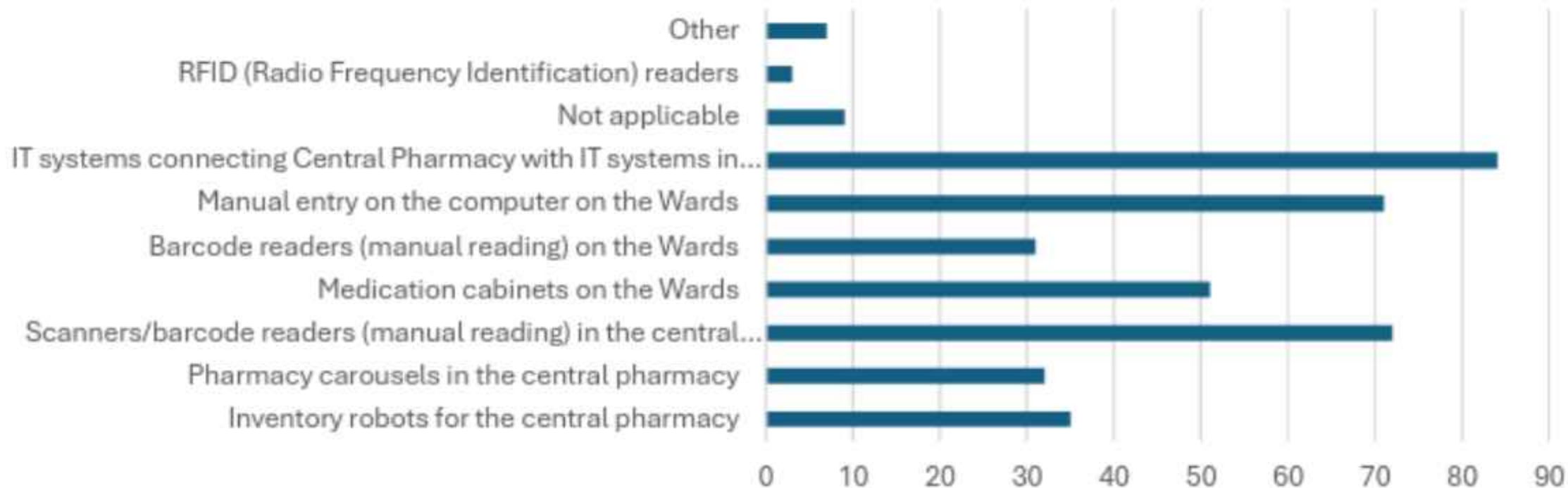
Do you have a system that keeps real-time and accurate data on the planned and available stock of medicines in your hospitals?



- Yes, for all medicines within the entire hospital (pharmacy warehouse & hospital wards)
- Yes, but only for medicine stored in the pharmacy warehouse
- No

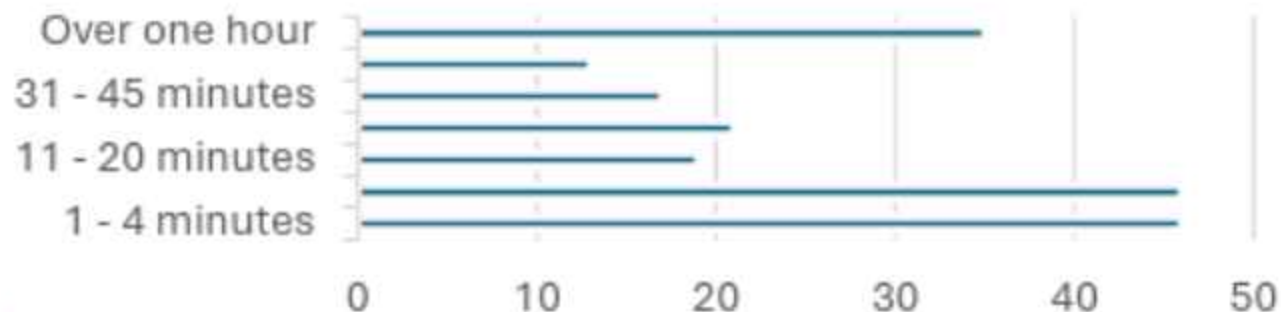
EUROPEAN MEDICINE AGENCY SURVEY: AVAILABLE DIGITAL SOLUTIONS

What digital tools do you have in place? Please select all that apply from the following:

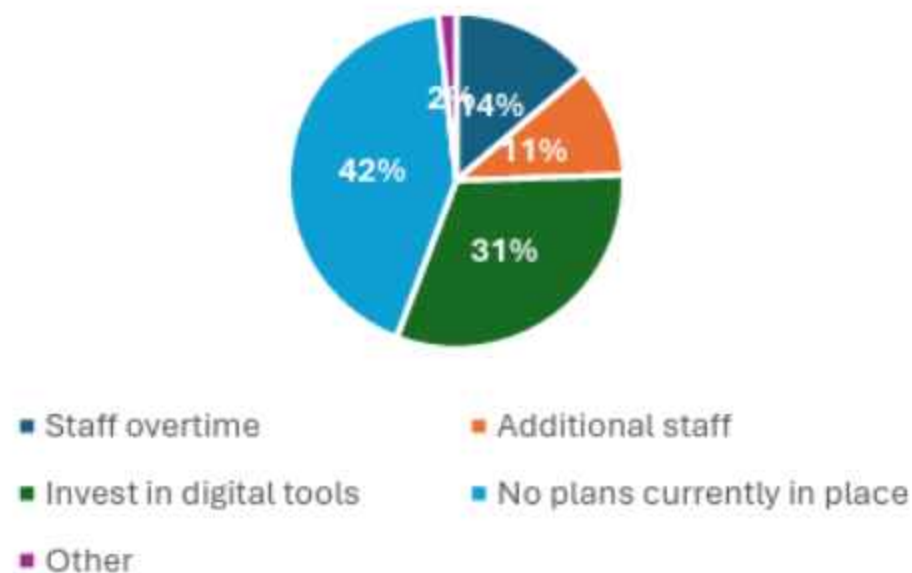


EUROPEAN MEDICINE AGENCY SURVEY: TIME ALLOCATION

How much time do you estimate you will need to collect information on the available stock for one specific medication in the entire hospital?



How will you digitally report medication stock information, including Central Pharmacy and ward supplies, for a specific group of medicines to your Medicines agency starting in 2025?



CALL TO ACTION



Legislative support: Integrate digitalisation into upcoming EU legislation to streamline regulatory processes and better prepare for future crises and pandemics.



Focus on digitalisation within the CMA: Highlight automation in hospital stock management and pharmacy inventory systems by establishing a Critical Medicines Act to strengthen EU supply chain resilience.



Allocate EU Funding for the digitalisation of medication management pathways: Allocate EU funding (such as the EU 4Health and Digital Europe programmes) to support hospital digital transformation, automating the capability to manage and report medicine stock data effectively in European hospitals.



Development of national interoperable IT systems to enable automated information exchange on supply chains: Encourage EU Member States to establish national digital platforms compatible with ESMP for standardised, real-time data collection on supply chains.

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THANK YOU

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