



ECAMET

European Collaborative Action on
Medication Errors and Traceability



**World Health
Organization**



European Alliance for
Access to Safe Medicines

World Patient Safety Day

17 September 2022

Medication errors: the most common adverse events in hospitals
It's time to act! - Tuesday 13th September 2022



World Patient Safety Day 2022

العربية

中文

Français

Русский

Español

House keeping rules

Please don't forget to mute yourself.

This meeting will be recorded.

All participants have access to the chat.

It is possible to send separate messages by clicking on the image of the person you want to talk to, and so you will be able to start a private conversation with him/her.

We will have a Q&A session at the end, but feel free to write your questions down in the chat. We will share with them with our speakers in due time.



Agenda 11:00-12:00CET

- Introduction - **Mike Isles**, EAASM Director
- **Irina Papieva**, Technical Officer, WHO Patient Safety Flagship
ECAMET Alliance Call to Action
- **Mike Isles**, The ECAMET Alliance
- **Evelyn Donohoe**, Policy Officer, European Health Management Association
- Questions from the floor
- Conclusion





World Health
Organization



World
Patient Safety
Day 17 September 2022

MEDICATION
WITHOUT HARM
Global Patient Safety Challenge

Irina Papieva
Patient Safety Flagship, WHO Headquarters



**The theme of World Patient Safety Day 2022 is Medication
Safety**



Every person around the world will, at some point in their life, take medicines to prevent or treat illness



Unsafe medication practices and medication errors are a leading cause of injury and avoidable harm in health care systems across the world



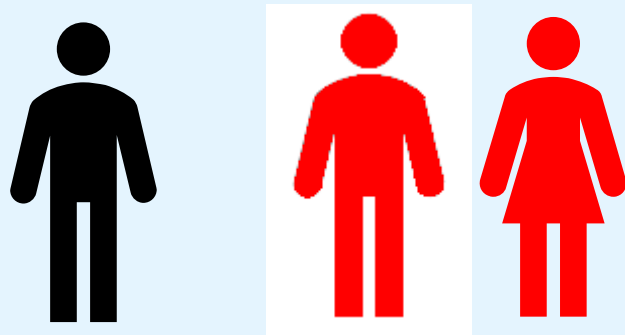
Medication-related harm accounts for up to half of the overall preventable harm in medical care





The highest rates of avoidable medication harm occur during prescribing, administering and monitoring of medications

DE 41 A 45 UI	1 (UM) FRASCO	44 DI
DE 46 A 55 UI	1 (UM) FRASCO	30 DI
DE 56 A 66 UI	1 (UM) FRASCO	25 DI
DE 67 A 83 UI	1 (UM) FRASCO	22 DI
DE 84 A 99 UI	1 (UM) FRASCO	18 DI
DE 91 A 100 UI	1 (UM) FRASCO	15 DI



Patients in low- and middle-income countries are twice more likely to experience preventable medication harm than patients in high-income countries



**Globally, the cost associated
with medication errors has
been estimated at US\$ 42
billion annually**

**(not counting lost wages,
productivity or resulting
health care costs)**

The third WHO Global Patient Safety Challenge: *Medication Without Harm*

Strategic Framework



Objectives of World Patient Safety Day 2022

1. **RAISE** global awareness of the high burden of medication-related harm due to medication errors and unsafe practices, and **ADVOCATE** urgent action to improve medication safety
2. **ENGAGE** key stakeholders and partners in the efforts to prevent medication errors and reduce medication-related harm
3. **EMPOWER** patients and families to be actively involved in the safe use of medication
4. **SCALE UP** implementation of the WHO Global Patient Safety Challenge: *Medication Without Harm*

Policy options and approaches to implementation



Policy options and approaches to implementation

- Adoption of systemic and systematic approaches in addressing medication-related harm in health care
 - At all levels of care provision
 - Across all settings
 - In all clinical and disease specific programmes
 - Through continuum of care
- Strategic approach across four domains of the Challenge:
 - Health and care workers (capacity building, communication and teamwork, reporting and learning systems, safety culture)
 - Patients and the public (e.g., medication literacy, patient empowerment and engagement in shared decision-making)
 - Systems and practices of medication (e.g., safe medication use process)
 - Medicines as products (e.g., safety and quality, naming and labeling)

Policy options and approaches to implementation (2)

- Focused efforts in three key priority areas: polypharmacy, transitions of care and high-risk situations
- Evidence-based and sustainable solutions, including fostering research
- Institutionalization of safe systems and practices and ensuring investments
- Ensuring innovations approaches, including technological solutions (e.g., electronic prescribing, mobile applications)
- Continuous awareness raising among different stakeholder groups
- No “one-size-fits-all” strategy: contextual considerations and step-by-step approach

Technical resources

- Communication products and campaign materials
- Technical reports
 - Transitions of care
 - High-risk situations
 - Polypharmacy
- 5 Moments for Medication Safety patient engagement tool and corresponding guidance notes
- WHO Patient Safety Curriculum Guide: Multi-professional edition
- Global Patient Safety Action Plan 2021-2030
- *Policy brief on medication safety*
- *Medication safety solution for Look Alike Sound Alike Medications*
- *Medication safety solution in maternal and newborn care*
- *Burden of medication harm: systematic review and meta-analysis*



Join us in achieving...

Medication Without Harm



Medication errors (MEs) causing great patient harm

- WHO estimates that there is one death per 1 million of population caused by MEs
- In the EU with a population of **447 million - 163000 deaths per year**
- Medication error rates:
 - EMA state ME 0.3% and 9.1% at prescription initiation and between 1.6% and 2.1% at the dispensing stage.
 - A UK study calculated 237 million medication errors in one year in its hospitals.
 - In Spain, the National *Study on Hospitalisation-Related Adverse Events* was 8.4%, MEs accounted for 37.4%. SEFH estimate 8000 deaths per year.
- **Hospital Traceability systems produces a significant reduction in medication errors,** as well as improving the efficiency and quality of care of nursing staff. (MEs reduced by 58%)



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World Patient Safety Day
17 September 2022

European Alliance for
Access to Safe Medicines

The European Collaborative Action on Medication Errors and Traceability (ECAMET)



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Pan-European Survey on Medication Errors

REDUCTION OF MEDICATION ERRORS

Research with Chief Hospital Pharmacists in Europe

IPSOS

February 2022



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REDUCTION OF MEDICATION ERRORS

Research with Chief Hospital Pharmacists in Europe

IPSOS
February 2022



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NEWS

BREAKING NEWS · 22nd March 2022

Launch and publication of WHITE PAPER ECAMET – THE URGENT NEED TO REDUCE MEDICATION ERRORS IN HOSPITALS TO PREVENT PATIENT AND SECOND VICTIM HARM

[Read more](#)

NEWS · 18th February 2022

EVENT: Preventing Medication errors across European hospitals to protect patient safety: Launch of the White Paper on Medication Errors and Traceability – 22 March 2022

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REDUCTION OF MEDICATION ERRORS

Research with Chief Hospital Pharmacists in Europe

IPSON
February 2022

AGENDA

- 1 - HOSPITAL BACKGROUND INFORMATION
- 2 - MEDICATION ERRORS (MEs) AND PREVENTABLE ADVERSE EVENTS
- 3 - INFORMATION SYSTEMS
- 4 - UNIT DOSE MEDICATION SYSTEMS
- 5 - PHARMACY INVENTORY SYSTEMS
- 6 - FUTURE
- 7 - CONCLUSIONS

HOSPITAL BACKGROUND INFORMATION

1

SAMPLE DISTRIBUTION

COUNTRY DISTRIBUTION

Country	Count
Belgium	25
France	20
Germany	15
Italy	10
Spain	10
Sweden	10
Switzerland	10
United Kingdom	10
Other	10
TOTAL	120

MOST HOSPITALS ARE ACCREDITED

However, not all of them include MEs in their accreditation process

82% of hospitals are accredited

13% of them do not include medication errors in the accreditation process

MOST HOSPITALS RECORD MEs AND MOST OF THEM IN CIRS SYSTEMS

8% of EU hospitals do not record MEs in a database

DATABASE FOR RECORDING MEDICATION ERRORS

Database	Count
Critical Incident Reporting System (CIRS)	25
Local data system	15
National data system	10
Regional data system	10
No, they are not recorded	10
Other	10

MOST MEs ARE NOT AVAILABLE TO THE PUBLIC

Only 20% of hospitals make MEs accessible to a DB for clinical incidents

13% of hospitals make medication errors available to the public

20% Accessible data bases for clinical incidents

HIGH AVAILABILITY OF ME DATABASES IN THE COUNTRY FOR SHARING CONTINUAL IMPROVEMENT INITIATIVES

However, those who do not have one believe they should improve patient safety

94% of those who have one in their country, state it is being used for practical purposes to improve patient safety

90% The respondent who doesn't have one in their country, state it should be one. However, the respondent didn't have a regional database system to record MEs

THERE IS A WIDE VARIATION OF MEs REGISTERED PER YEAR WITH 40% OF HOSPITALS <100 BUT 11% >500

25% of hospitals do not know the number of MEs registered

ESTIMATED NUMBER OF MEDICATION ERRORS PER YEAR

Range	Count
< 100	45
100-250	15
250-500	10
500-750	10
750-1000	10
Don't know	10

MEs MAINLY OCCUR AT ADMINISTRATION AND ELECTRONICALLY PRESCRIBED STAGES

Preparation, dispensing and manually transcribed stages show the lowest frequency of MEs

FREQUENCY OF EACH MEDICATION ERROR

Error Type	Count
Administration	25
Prescription (electronic)	20
Prescription (manually transcribed)	15
Dispensing	10
Preparation	10

ENVIRONMENTAL, STAFFING OR WORKFLOW PROBLEMS ARE THE MAIN CAUSES OF MEs

With many other causes being stated

MAIN CAUSE OF MEDICATION ERRORS (reasons)

Reason	Count
Environment including workflow problems	25
Lack of staff education	20
Miscommunication of drug order	15
Drug name, label, packaging problem	10
Critical information missing	10
Lack of quality control or independent check system	10
Drug storage or delivery problem	10
Pharmaceutical problem	10
Drug delivery device problem	10
Drug information missing	10
Not supplied from manufacturer	10

OPEN DISCUSSIONS ARE THE BEST SOLUTION TO ENSURE CONTINUAL IMPROVEMENT

ACTIONS USED TO DRIVE IMPROVED MEDICATION SAFETY PERFORMANCE

Action	Count
Open discussion and error review	25
Targeted staff education	20
Pharmaceutical problem	15
Drug storage or delivery problem	10
Drug delivery device problem	10
Drug information missing	10
Other	10

REDUCTION OF MEDICATION ERRORS

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HOSPITAL BACKGROUND INFORMATION

1

SAMPLE DISTRIBUTION

COUNTRY DISTRIBUTION

Belgium	10
France	10
Germany	10
Hungary	10
Italy	10
Poland	10
Portugal	10
Spain	10
Sweden	10
Switzerland	10
UK	10
TOTAL	100

MOST HOSPITALS ARE ACCREDITED

However, not all of them include MEs in their accreditation process

82% of hospitals are accredited

13% of them do not include medication errors in the accreditation process

9% of EU hospitals do not record MEs in a database

Only 20% of hospitals make MEs accessible to a DB for clinical incidents

13% of hospitals make medication errors available to the public

20% Accessible data bases for clinical incidents

HIGH AVAILABILITY OF ME DATABASES IN THE COUNTRY FOR SHARING CONTINUAL IMPROVEMENT INITIATIVES

However, those who do not have one believe they should improve patient safety

94% of those who have one in their country think it is being used for practical purposes to improve patient safety

96% The respondent who doesn't have one in their country thinks it should be done. However, the respondent didn't have a regional database system to record MEs

THERE IS A WIDE VARIATION OF MEs REGISTERED PER YEAR WITH 40% OF HOSPITALS <100 BUT 11% >500

25% of hospitals do not know the number of MEs registered

MEs MAINLY OCCUR AT ADMINISTRATION AND ELECTRONICALLY PRESCRIBED STAGES

ENVIRONMENTAL, STAFFING OR WORKFLOW PROBLEMS ARE THE MAIN CAUSES OF MEs

OPEN DISCUSSIONS ARE THE BEST SOLUTION TO ENSURE CONTINUAL IMPROVEMENT

ACTIONS USED TO DRIVE IMPROVED MEDICATION SAFETY PERFORMANCE

13 country reports
1 private hospital report
8 translations
1 oncology report
1 ICU report
1 consolidated report

- ☒ General Hospitals
- ☒ University
- ☒ Private Hospital
- ☒ Oncology
- ☒ Other

- ☒ Small
- ☒ Medium
- ☒ Large

Medication errors survey - dashboard to compare and contrast results across Europe














[Home](#) > Interactive Dashboard

Question

Q7 - Are medication errors from your hospital available to the public?

Answer

(Please select one of the options below to colour the answers)

	EU 	BE 	FR 	DE 	HU 	IT 	NL 	PL 	ES 	SE 	CH 	PT 	UK 	IE 	Priv.H.
Yes	41	0	2	5	1	3	0	5	7	1	0	2	15	0	0
No	276	10	40	35	5	39	10	15	34	4	12	34	25	4	9
Base	317	10	42	40	6	42	10	20	41	5	12	36	40	4	9

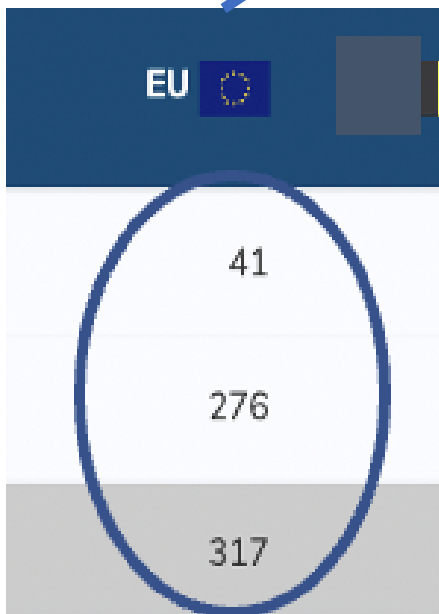
MAP

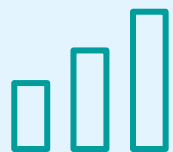
0-25%

26-50%

51-75%

76-100%

www.ecamet.eu



Medication Errors

- **Whilst 82% hospitals are accredited 13% do not include MEs.**
- **Most hospitals do routinely record MEs for sharing continual improvement initiatives but very few are available to the public.**
- ME databases are not present in all countries but respondents believe there should one for sharing continual improvement.
- **There is a wide variation of MEs registered per year with 40% of hospitals <100 but 11% >500. 25% were unable to estimate the number of MEs**
- Most MEs are centrally tracked (but 14% do not routinely track MEs) and most centres use MEs & AEs data monitoring as a root cause analysis to resolve incidents as well as investigated at regular quality meetings.
- MEs mainly occur at administration (29%) and electronically prescription stages (21%).
- **Environmental, staffing or workflow problems are the main cause of MEs.**
- **Open discussions are the best solution for continual improvement. 56% of hospitals have a trained HCP to detect MEs and enhance patient safety.**



Information Systems

- **Nearly all hospitals have an electronic medical record (EMR) system although not available for all patients, and only 51% of them have it integrated with primary care**
- Nearly all hospitals have an electronic prescribing system (EPS) but electronic prescriptions are not available for all patients.
- EPSs are variably integrated with other systems and would benefit from more integration with clinical decision support systems.
- **Electronic prescriptions are not always validated by a pharmacist.**
- EPSs are mainly integrated with electronic medical records and pharmacy dispensing systems.
- Automated drug cabinets are not widely available with central Pharmacy and ICU having the highest availability.
- **Not all hospitals (66%) implement nursing standard operating procedures for aseptic or injectable preparation on the wards.**



Technology

- **Most do not have an electronic system for monitoring administration.**
- **Bar coding to verify drug selection prior to dispensing or refilling automated cabinets is low.**
- Electronic bar code / electronic system for checking patient and medication and IV dose are not widely available
- Only 19% of infusion medication is prepared in central pharmacy.
- **Double nurse check when electronic checking systems are not available is not fully implemented but is highest in central pharmacy.**
- Very limited availability of near-miss infusion medication errors tracked via DERS and infusions not monitored from a central location.
- **42% of hospitals do not have unit dose medication systems.**
- Manual shelves and counts and information systems are mostly used to manage pharmacy inventory.
- Only 25% have central pharmacy robots.



Future

- **Electronic prescription, ME surveillance and bar code medication administration systems are the most important areas to reduce MEs**
- Most pharmacists believe there are important areas to improve in order to reduce MEs (e.g. digitalisation, improvements in specific hospital areas, medication management, training and increased staffing and quality).
- **Funding, human resources and lack of trained staff are the main barriers for implementing these improvements.**

Call to Action

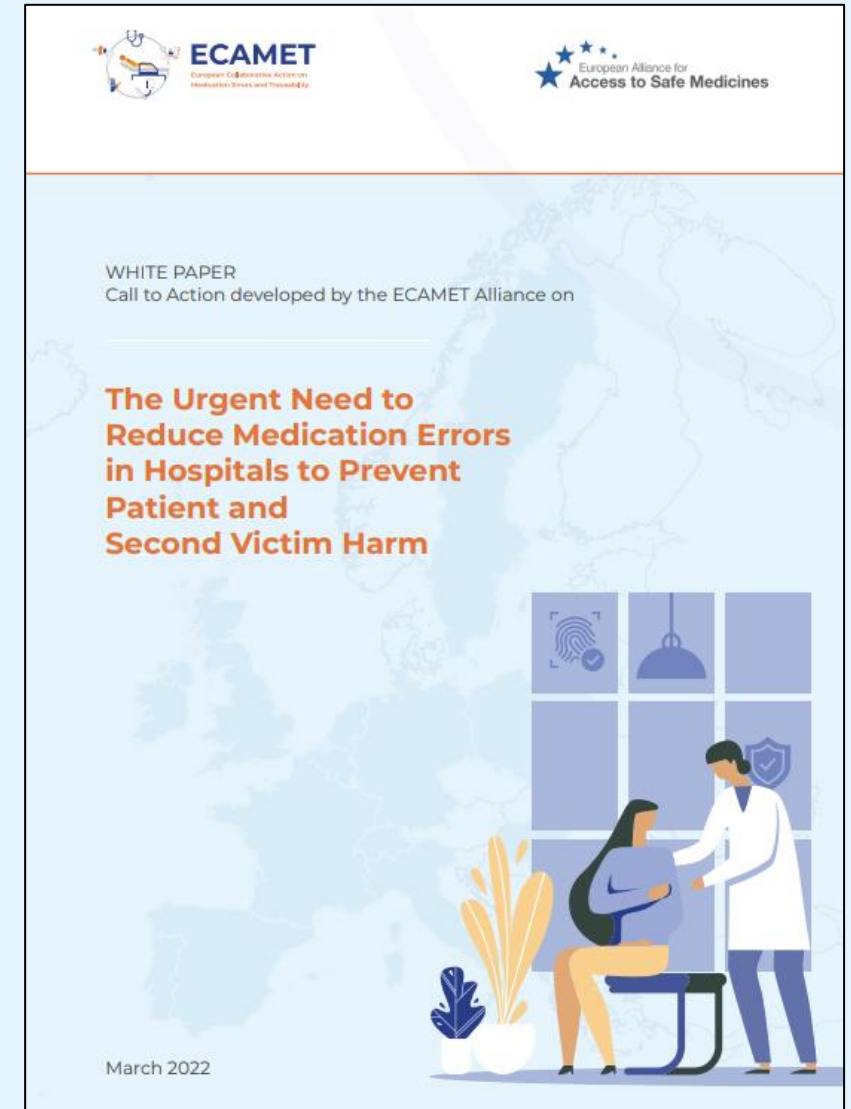
1. Include medication safety in:

- the Pharmaceutical Strategy for Europe
 - the ongoing revision of the EU general pharmaceutical legislation
 - the Europe's Beating Cancer Plan
- ... through medication traceability systems in a healthcare setting to minimise medication errors.

2. Prioritise strategic investments in medication traceability systems in the EU4Health program to minimise medication errors.

3. Foster the development and implementation of ECDC guidelines and key indicators on medication errors in EU healthcare settings. The ECDC is organising public health training programmes to assist Member States and the Commission, and these should include medication traceability systems to enhance patient safety.

4. Facilitate the systematic exchange of best practices between healthcare providers both at European and national levels to reduce medication errors in healthcare settings.



Evelyn Donohoe, Policy Officer, European Health Management Association



ECAMET's study revealed the missed opportunities in the implementation of digitalisation and automation to ensure safe medication management practices in hospitals.

Medication management is a critical activity for the procurement, supply, and safe administration of medicines



To increase the visibility, and traceability of medication in hospitals' it is crucial that **medication management process** (which includes prescribing, dispensing and administration) **is fully digitalised** and automated.

Evelyn Donohoe, Policy Officer, European Health Management Association



Digital tools and solutions exist, yet levels of digitalisation of medication management in EU hospital settings are low

Many hospitals do not have automated unit dose medication systems.

Low availability of electronic prescription and preparation systems in critical areas

Low availability of barcode medication systems to safely adhere to the five rights of medication

Very limited near-miss infusion medication errors are tracked via systems to reduce dose errors.

Very low availability of electronic medication cabinets in wards <20%

While most hospitals have electronic systems, they are not available for all patients and are not integrated with clinical decision support.

[Ref: ECAMET White Paper – European Collaborative Action on Medication Errors and Traceability](#)

Evelyn Donohoe, Policy Officer, European Health Management Association

Alliance position: To mitigate and prevent medication errors it is crucial that medication management is digitised and automated in hospital settings in collaboration with health care professionals.

This will :

1. Reduce the incidence of harm to patients from medication errors occurring
2. Enhance healthcare staff's wellbeing, productivity and satisfaction levels (reduces workload)
3. Increase hospitals' resilience, e.g. decreasing bed occupancy and shorter admissions
4. Generate real-world data on medication use (prescribing, dispensing, disposing and ordering)
5. Support efforts to combat antibiotic resistance arising associated with overprescribing antibiotics in healthcare settings



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Evelyn Donohoe, Policy Officer, European Health Management Association

For this reason, the Alliance for the Digitalisation of Medication Management in European Hospitals, a group of Brussels-based NGOs, calls on the European Union to include the digitisation of medication management in the EU4Health Programme, the revised Pharmaceutical Legislation, the Digital Europe Programme, and the European Health Data Space.

Open debate



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THANK YOU!

Do not hesitate to stay in touch with us:

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- Laura Cigolot (laura.cigolot@eaasm.eu)

<https://eaasm.eu/>

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