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Developing a safety culture and how to progress effectively

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Conflict of interest statement

No conflict of interest

Definitions

Patient safety

the prevention of errors and adverse effects to patients associated with health care

http://www.euro.who.int/en/health-topics/Health-systems/patient-safety

Safety Culture

the way patient safety is thought about, structured and implemented in an organisation

Safety climate

is a subset of safety culture and concern staff perceptions of safety in relation to management support, supervision, risk- taking, safety policies and practices, trust and openness

http://www.health.org.uk – Does safety culture affect patient outcome 2011

Evidence of preventable harms in hospital

| | Study | Study focus (date ofadmissions) | Number of hospital admissions | Number of adverse events | Advanse event rate (%) |
|---|---|------------------------------------|-------------------------------------|--------------------------------|------------------------------|
| 1 | United States (Harvard Medical Practice Study) | Acute care hospitals (1964) | 30 195 | 1 133 | 3.8 |
| 2 | United States (Utah-Colorado study) | Acute care hospitals (1992) | 14 565 | 475 | 3.2 |
| 3 | United States (Utah-Colorado study)* | Acute care hospitals (1992) | 14 565 | 787 | 5.4 |
| 4 | Australia (Quality in Australian Health Care Study) | Acute care hospitals (1992) | 14 179 | 2 353 | 16.6 |
| 5 | Australia (Quality in Australian Health Care Study) ^b | Acute care hospitals (1992) | 14 179 | 1 499 | 10.6 |
| 6 | United Kingdom | Acute care hospitals (1999-2000) | 1 014 | 110 | 11.7 |
| 7 | Denmark | Acute care hospitals (1998) | 1 097 | 176 | 9.0 |

Source: World Health Organization, Executive Board 199th seasion, provisional agenda item 3.4, 5 December 2001, EB 109/9.

a Revised using the same methodology as the Quality in Australian Health Care Study (namonising the four methodological discrepancies between the two etudies).

b Review using the same methodology as Uten-Colorado Study (harmonising the four methodological discrepancies between the two studies). Studies 3 and 5 present the most directly comparable data for the Uten-Colorado and Quality in Australian Health Care studies.

Preventable deaths in English acute hospitals

- Retrospective case record reviews of 1000 adults who died in 2009 in 10 acute hospitals
- Reviewers judged 5.2% of deaths as having a > 50% of being preventable (11,859) patients
- Poor clinical monitoring 31%,
- Diagnostic error 30%,
- Drug or fluid management 21.1% (2,502)

Hogan H, Healey F, Neale G, et al. BMJ Qual Saf (2012). doi:10.1136/bmjqs-2012-001159

Medicine related admissions to hospital

Review of 18,820 unplanned admissions to a hospital in the UK found 1,225 (6.5%) admissions involved an adverse drug reaction. It was judged that in 80% cases the ADR directly led to the admission. The majority (72%) of ADR-related admissions were judged as avoidable, including medication errors. The median bed stay was eight days, accounting for 4% of the hospital bed capacity. The projected annual cost of such admissions to the NHS was £466 million.

Pirmohamed M, et al BMJ, 2004:329:15-19 do1:10.1136/bmj.329.7456.15

Almost 13 000 unplanned admissions to a hospital in the Netherlands were screened, of which 714 (5.6%) were medication related. Almost half (46.5%) of these admissions were potentially preventable.

Leendertse AJ et al. Arch Intern Med. 2008;168(17):1890-1896. doi:10.1001/archinternmed.2008.3

Example 1 of a medication error report

Baby dies after blundering doctors gave him TWELVE times the normal dose of epilepsy drugs

A seven month old baby boy died after doctors gave him 12 times the correct amount of antiepilepsy drugs he should have received in 24 hours, an inquest heard.

Lucas Holzscheiter died in hospital as a result of a massive accidental overdose

http://www.dailymail.co.uk/news/article-1289437/Baby-died-doctors-gave-12-times-normal-dose-epilepsy-drugs.html



Example 2 of a medication error report

Mother of four dies after blundering nurse administers a TEN times drug over doses

A mother of four died after a nurse at a trouble-hit hospital gave her ten times the amount of a drug she was supposed to receive.

Arsula Samson, 80 had a heart attack in hospital after she was give an over dose of potassium chloride injection



http://www.dailymail.co.uk/health/article-1359778/Mother-dies-nurse-administers-TEN-timesprescribed-drug.html

Example 3 of a medication error report

Two cancer patients died just hours after being given medication overdoses

Two cancer patients died hours after being given overdoses of drugs used to combat side effects of treatment.

Paul Richards 35, and Baljit Singh Sunner 36 died hours after being given up to five times the recommended doses. They were both being treated for different forms of cancer

There was confusion over amphotericin injection having different forms and doses. Fungizone is prescribed 1 mg per kg patients weight and Ambizone and Abelcet with doses of 3 -5 mg per Kg

http://www.dailymail.co.uk/news/article-472707/Two-cancer-patients-died-just-hours-given-medication-overdose.html



Example 4 of a medication error report

Diabetic patient unlawfully killed after newly qualified nurse gave her TEN times too much insulin

A diabetic pensioner was injected with ten times too much insulin

Margaret Thomas aged 85 years was injected with 3.6ml of insulin instead of 0.36ml

http://www.dailymail.co.uk/news/article-1165072/Diabetic-patient-unlawfully-killed-newly-qualified-nurse-gave-TEN-times-insulin.html



Example 5 of a medication error report

Widow, 71, died after doctors ignored penicillin warning

A grandmother died in hospital after doctors gave her penicillin even though her notes and drug chart made it clear that she was allergic to the drug.

June Cutmore was even wearing a red wristband to draw attention to her allergy.

The 71 year old widow went into anaphylactic shock and died after being injected with Augmentin



http://www.dailymail.co.uk/news/article-1080842/Widow-71-died-doctors-ignored-penicillinwarning.html

World Health Assembly Resolution WHA55-18, 2002



Patient Safety

A World Alliance for Safer Health Care

- all workers accept responsibility for the safety of themselves, their co-workers, patients and visitors
- prioritise safety above financial and operational goals
- encourage and reward the identification communication and resolution of safety issues
- provide organisational learning from accidents
- Provide appropriate resources, structure and accountability to maintain effective safety systems

http://www.who.int/patientsafety/about/wha_resolution/en/

Manchester Patient Safety Framework (MaPSaF)

| Level | Description |
|------------------|--|
| A – Pathological | Why do we need to waste our time on patient safety issues? |
| B – Reactive | We take patient safety seriously and do something when we have an incident. |
| C – Bureaucratic | We have systems in place to manage patient safety. |
| D – Proactive | We are always on the alert/thinking about patient safety issues that might emerge. |
| E – Generative | Managing patient safety is an integral part of everything we do. |

http://www.nrls.npsa.nhs.uk/resources/?entryid45=59796

MaPSaF 2

| Evender on Street Voertible) | | | | | |
|---|---|---|---------|-----------|-----------|
| Dimension of patient safety culture | А | В | С | D | Е |
| 1. Commitment to overall continuous improvement | | | | | |
| 2. Priority given to safety | | | | | |
| 3. System errors and individual responsibility | | | | | |
| 4. Recording incidents and best practice | | | | | |
| 5. Evaluating incidents and best practice | | | | | |
| 6. Learning and effecting change | | | | | |
| 7. Communication about safety issues | | | | | |
| 8. Personnel management and safety issues | | | | | |
| 9. Staff education and training | | | | | |
| 10. Team working | | | | | |
| | | | T = Tea | m O = Org | ganisatio |

MaPSaf 3

| Resident lang datas management in the | |
|--|--|
| Dimension | Description |
| 1. Commontment to contrall employees sequences | Hence remarks is involved of a subject spectra provide the standard space result. A structure is a subject to the structure of the structure spectra structure of the structure spectra structure stru |
| 2. Encody govern to safety | How sensorially is the issues of perbern safety taken writin the degarithation? Where does responsibility he for parkent safety essues? |
| System enters and industrial inspectation; | While sets of representing systems are them? Here are reports of evolution to reconcept? How are accelerate second - as an experimenty in them is retrieved? |
| 4. Recording incidents and best practice | White Investigates incidents and how are they investigated? What is the arm of succeding the incident? |
| 5 Containing inclusion and new process | Minek alte ang Michigenin evaluation? Mines reningprimos is there of safe products? Mean is the evaluation? Mean case?? |
| 6. Learning and officiling change | What happens after an event? What machanisms are in picce to learn from the incident? How are changes introduced and evaluated? |
| 2. Common alter about safety many | What internet ansatzers applieres are in adapted 300 bits are then the base 7 over an 5 the quality of accord longing to commune are about acting internet |
| Periodentel management and safety issues | How are safety easies managini in the workplace? How are shaft problem managini? What are the recruitment and safection precedure? |
| Error Inducation and Institution | Horse, while divident advances and as allows and in allowing programments already partners is already demonstrated? We are share? The is of Weater? |
| 10. Team working | How and why are teams developed? How are teams managed? How much team working is there around potential safety issues? |

EAHP statements 2014 SECTION 5: PATIENT SAFETY AND QUALITY ASSURANCE



- 1. The 'seven rights' (the right patient, right medicine, right dose, right route, right time , right information and right documentation) should be fulfilled in medicines related activities in the hospital
- 2. Hospital pharmacists should ensure the development of appropriate quality assurance strategies for medicine use processes to detect errors and identify priorities for improvement
- 3. Hospital pharmacists should ensure their hospitals seek review of their medicines use processes by an external quality assessment accreditation programme, and act on reports to improve the quality and safety of these processes.
- 4. Hospital pharmacists should ensure the reporting of adverse drug reactions and medication errors to regional or national pharmacovigilance programmes or patient safety programmes
- 5. Hospital pharmacists should help decrease the risk of medication errors by disseminating evidence based approaches to error reduction including computerised decision support

http://ejhp.bmj.com/content/21/5/256.full.pdf+html

Performance metrics in hospital pharmacy



pharmacy. Am J Health-Sys Pharm. 2009; 66 (suppl 3): S49-56

EAHP Survey 2014



Use Of Metrics For Medicines Distribution

| Activity | Yes (%) Service provided n = 190 | Data collected (%) In previous 12 months | Shared outside (%) pharmacy department | | |
|--|---|---|---|--|--|
| Supply of ward stock medicines | 82.4 | 73.5 | 62.7 | | |
| Supply of medicines for named patients | 48.9 | 80.6 | 66.7 | | |
| Supply of medicines for outpatients | 57.9 | 60.9 | 47.3 | | |
| Supply of medicines for discharge | 45.35 | 44.2 | 33.7 | | |

D. Cousins The use of service performance measurement in European hospital pharmacies. Eur J Hosp Pharm 2014, 21: 285-287

Use of Metrics for Medicines Manufacture and Preparation

| Activity | | Data Collected (%) | Shared outside (%) |
|-------------------------|------|--------------------|--------------------|
| Sterile medicines | 47.4 | 78.9 | 53.3 |
| Aseptic medicines | 56.8 | 78.7 | 52.8 |
| Non – sterile medicines | 79.5 | 70.2 | 42.4 |
| Quality control | 57.4 | 63.3 | 22 |

D. Cousins The use of service performance measurement in European hospital pharmacies. Eur J Hosp Pharm 2014. 21: 285-287

Use Of Metrics For Pharmacy

| Activity | Yes (%) N = 190 | Data collected (%) | Shared outside (%) |
|-----------------------------------|--------------------|--------------------|--------------------|
| Cost of medicines | 94.7 | 96.1 | 88.6 |
| Cost of devices | 53.7 | 94.1 | 77.5 |
| Cost of consumables | 42.1 | 71.3 | 46.3 |
| Cost/number of pharmacy employees | 64.7 | 74.8 | 59.3 |

D. Cousins The use of service performance measurement in European hospital pharmacies. Eur J Hosp Pharm 2014. 21: 285-287

Use of Metrics For Clinical And Safety

| Activity | Yes (%) | Data collected (%) | Shared Outside (%) |
|--------------------------|---------|--------------------|--------------------|
| Medicines information | 81.6 | 43.9 | 27.7 |
| Adverse reaction reports | 78.4 | 54.4 | 38.9 |
| Medication error reports | 58.4 | 78.4 | 62.2 |
| External accreditation | 52.6 | 56.0 | 42.0 |

D. Cousins The use of service performance measurement in European hospital pharmacies. Eur J Hosp Pharm 2014. 21: 285-287



European hospital pharmacists should be able to answer:

- The number and types of ADR and medication errors reported in their hospital / clinical area / department last year/quarter/month
- The most serious risks to patient safety
- What has been done and is being done to address these risks both locally, nationally and internationally
- What is their own role in improving patient safety
 - Reporting ADR and medication errors
 - Assisting with their analysis
 - Develop solution to improve patient
 - Assisting with the implementation of safer practice







Analysis of incidents reported to the NRLS 2005 - 2010

| Year | Total number of incident reports | Number of medication incident reports† | Medication incident reports as a percentage of all incident reports received |
|-------|-------------------------------------|---|--|
| 2005 | 517415 | 42398 | 8.19 |
| 2006 | 742418 | 64484 | 8.69 |
| 2007 | 874148 | 79118 | 9.05 |
| 2008 | 986981 | 94280 | 9.55 |
| 2009 | 1118336 | 113837 | 10.18 |
| 2010 | 1198701 | 132069 | 11.02 |
| Total | 5,437,999 | 526,186 | |
| | | | |

Cousins D, Gerrett D, Warner B. Br J Clin Pharmacol. 2012:; 74: 597-604 http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3477327/

Analysis of NRLS Medication Incident Reports 2005 – 2010

| Actual clinical outcome | Incidents | Percent of medication incidents |
|-------------------------|-----------|---------------------------------------|
| Death | 271 | 0.05 |
| Severe | 551 | 0.10 |
| Moderate | 17421 | 3.31 |
| Low | 68578 | 13.03 |
| No harm | 439318 | 83.46 |
| N/A | 240 | 0.05 |
| Total | 526379 | 100.00 |
| | | |

Cousins D, Gerrett D, Warner B. Br J Clin Pharmacol. 2012:; 74: 597-604 http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3477327/

Analysis of NRLS Medication Incident reports 2005 – 2010

| Stage of medication process | Incidents | Percent of medication incidents |
|--|-----------|---------------------------------------|
| Administration of medicines | 263228 | 50.01 |
| Prescribing of medicines | 97097 | 18.45 |
| Preparation / dispensing of medicines | 87057 | 16.54 |
| Other | 48410 | 9.20 |
| Monitoring / follow-up of medicine use | 23648 | 4.49 |
| Advice | 3537 | 0.67 |
| Supply or use of over-the-counter (OTC) medicine | 3045 | 0.58 |
| N/A | 240 | 0.05 |
| (blank) | 117 | 0.02 |
| Other / Unspecified | 48410 | 9.20 |
| Total | 526379 | 100.00 |

Cousins D, Gerrett D, Warner B. Br J Clin Pharmacol. 2012:; 74: 597-604 http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3477327/

Analysis of NRLS Medication Incident reports 2005 – 2010

| Category of error | Incidents | Percent of medication incidents |
|--|-----------|---------------------------------------|
| Omitted and delayed medicine | 82028 | 15.58 |
| Wrong dose or strength | 80170 | 15.23 |
| Wrong medicine | 48834 | 9,28 |
| Wrong frequency | 44165 | 8.39 |
| Wrong quantity | 28764 | 5.46 |
| Mismatching between patient and medicine | 21915 | 4.16 |
| Wrong / transposed / omitted medicine label | 13755 | 2.61 |
| Patient allergic to treatment | 11695 | 2.22 |
| Wrong formulation | 11254 | 2.14 |
| Wrong / omitted / passed expiry date | 10998 | 2.09 |
| Wrong storage | 10447 | 1.98 |
| Unknown | 10024 | 1.90 |
| Wrong method of preparation / supply | 9840 | 1.87 |
| Wrong route | 7934 | 1.51 |
| Contra-indication to the use of the medicine in relation to medicine or condition | 7632 | 1.45 |
| Adverse drug reaction (when used as intended) | 5939 | 1.13 |
| Wrong / omitted verbal patient directions | 1383 | 0.26 |
| Wrong / omitted patient information leaflet | 1156 | 0.22 |
| Blank | 129 | 0.02 |
| Other/not specified | 118317 | 22.48 |
| Total | 526379 | 100.00 |

Cousins D, Gerrett D, Warner B. Br J Clin Pharmacol. 2012:; 74: 597-604 http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3477327/



New EU Directive on Pharmacovigilance

Under the new EU Directive 2010/84/EU1 that came into force in July 2012.

The term 'adverse drug reaction' (ADR) was redefined as:

'a response to a medicinal product that is noxious and unintended effects resulting not only from the authorised use of a medicinal product at normal doses, but also from medication errors and uses outside the terms of the marketing authorisation, including the misuse, off-label use and abuse of the medicinal product.'

National pharmacovigilance centres are required to expand their activities to include reporting and learning systems for medication errors.

http://ec.europa.eu/health/files/eudralex/vol1/dir_2010_84/dir_2010_84_en.pdf http://www.ema.europa.eu/ema/index.jsp?curl=pages/special_topics/general/general_content_000570.jsp

D Cousins. Initiatives to Identify and Mitigate Medication Errors in England. Drug Safety. 2015: D10.1007/s40264-015-0270-3 http://link.springer.com/article/10.1007/s40264-015-0270-3

UK ADR reports 2008 - 2012





2

UK ADR reports 2008 - 2012

MHRA



UK ADR reports 2008 - 2012





<list-item><list-item><list-item><list-item><list-item><list-item>

| Data quality issue | NRLS field name | Description | % of total | |
|-----------------------|--------------------|---|---|--|
| Delayed report | IN01 | Date of incident. Incident reported more than four weeks after the incident | 53% | |
| Data not recorded | MD05 | Medione name | 32% | |
| Data not recorded | MD06 | Proprietary name | 99% | |
| Data not recorded | MD10 | Manufacturer | 99.9% | |
| Data miscoded | MD01 | Use of the term 'other' in the medication process field. Options include: prescribing/preparation/dispensing, administration, monitoring etc. | 12% | |
| Data miscoded | MD02 | Use of the term 'other' in type of medication error. Options include: wrong patient, medicine, route, dose frequency, quantity, omitted etc. | 25% | |
| Data not recorded | 5701 | Staff type reporting the incident. Options include doctor, nurse pharmacht etc. | 71% | |
| Quality of data | 11407 | Review of free text description of what happened, death or severe harm reports. | 7% of incidents stated very little meaningful information to aid learning 18% did not report the reaction to the error that led to harm. | |
| Data not recorded | IN010 | Actions taken to prevent recurrence | 40% | |
| Data not recorded | IN11 | Apparent causes | 69W | |
| Data mitcoded | PD09 | Clinical outcome codes indicating death or severe harm | 44% | |



Patient Safety Alert - objectives

NHS England and MHRA are working together to simplify and increase reporting, improve data report quality, maximise learning and quide practice to minimize harm from medication enrors by:

- sharing incident data between MHRA and NHS England reducing the need for duplicate data entry by frontline staff;
- providing new types of feedback from the National Reporting and Learning System (NRLS) and MHRA to improve learning at local level;
- clarifying medication safety roles and identifying key safety contacts to allow better communication between local and national levels; and,
- setting up a National Medication Safety Network as a new forum for discussing potential and recognised safety issues, identifying trends and actions to improve the safe use of medicines. The network will also work with new Patient Safety Improvement Collaboratives that will be set up during 2014.

The Yellow Card Scheme for reporting suspected adverse drug reactions to the MHRA will continue to operate as normal.

Actions (Target date for completion 12 September 2014)

Patient Safety Alert – Required actions



Oversight by agencies of medication incident reports

| Preventable medication errors rep | Adverse Drug Reactions re- | |
|---|---|---|
| Where no harm occurred to the patient but there was potential for harm, or where harm resulted from omission or delay in using a medicine. | Where harm occurred to the patient when a medicine was used | Yellow Card Scheme when medication was used cor- rectly according to the Product Licence. Unicensed and 'off-label' use |
| NHS England review | NHS England re- view and share with the MHRA | where no medication error has co- curred. associated with abuse and deliber ate misuse MHRA review |



Role of medication safety officer

Responsibilities should include the following:

- i. active membership of the National Medication Safety Network;
- ii. improving reporting and learning of medication error incidents in the organisation;
- iii. managing medication incident reporting in the organisation. This may entail reviewing all medication incident reports to ensure data quality for local and national learning and where necessary to investigate and find additional information from reporters. Also, to authorise the release of medication error reports to the NRLS each week;
- iv. receiving and responding to requests for more information about medication error incident reports from the Patient Safety Doman in NHS England and the MHRA;
- v. work as a member of the medication safety committee to deliver the responsibilities listed in 7.1.4; and,
- vi. supporting the dissemination of medication safety communications from NHS England and the MHRA throughout the organisation.

Role of the medication safety committee

Committee responsibilities should include the following:

- i. improving reporting and learning of medication error incidents in the organisation;
- analysing incident data, audit and other data to identify, prioritise and address medication risks to minimise harm to patients;

iii. identifying, developing and promoting best practice for medication safety. This will include supporting the implementation of external patient safety guidance from NHS England, MHRA, NICE and other organisations - implementation will require coordination and support for process and system changes to reduce the likelihood of serious medication errors occurring and recurring, providing regular feedback to clinical staff, patient care areas and hospital committees on medication risks and planned action to minimise these risks;

- iv. coordinating education and training support to improve the quality of medication error incident reports and safe medication practices; and,
- v. assisting in development and review of medication-use policies and procedures.

http://www.england.nhs.uk/2014/03/20/med-devices

Role of national medication safety network

Objectives for the network are to:

- Improve reporting and learning of medication incidents by educating and training Medication Safety Officers in patient safety science and disseminate relevant research and information concerning new risks and best practice.
- Specific improvements include to:
- increase the number of reports of medication incidents;
- improve the timeliness of report submission;
- improve the quality of reports,
 - NRLS data fields completed;
 - Accuracy of use NRLS codes;
 - Description of the incident sufficient for learning;
- increase the number of new safety issues detected;
- implement local actions to minimise harms from identified risks; and,
- measure improvements to safer practice.

Support For Medication Safety Officers

- regular online meetings
- email discussion groups and online information forums
- conferences/workshops

to discuss topics identified at local and national level. These will include; the identification of new risks and best practices to minimise these risks, implementing patient safety guidance and improving incident reporting, quality and learning.

Numbers of MSO's identified

- 363 organisations have identified a MSO in
 - Acute care
 - Mental health
 - Learning disabilities
 - Community and Ambulance
 - Community pharmacy
 - Independent healthcare
 - Home healthcare
 - Healthcare commissioners

Medicines optimisation dashboard

NHS England launches medicines optimisation prototype dashboard

③ 12 June 2014 - 10:02

NHS England today (12 June) launches the Medicines Optimisation Prototype

Dashboard, designed to encourage CCGs and trusts to think more about how well their patients are supported to use medicine and less about focusing on cost and volume of drugs.

The prototype dashboard brings together in one place data from across sectors in areas such as medication safety, uptake of NICE approved medicines and utilisation of community pharmacy services.

http://www.england.nhs.uk/2014/06/12/mo-dash

Medication safety dashboard

Total number of medication incidents reporting harm Total number of medication incidents

The new metric provides an indication of preventable harms occurring and a surrogate measure of reporting culture

Better reporting and learning, especially of no harm incidents, will help to enable action to minimise preventable harms from medicines





Comparison of incident type nrls vs homecare

| NRLS Incident Type 2005 - 2010 | % incidents | Homecare Incident Type Aug – Dec 2014 | % Incidents |
|-----------------------------------|-------------|--|----------------|
| Omitted and delayed medicines | 15.58 | Omitted and delayed medicine | 55.52 |
| Wrong dose or strength | 15.23 | Wrong patient | 10.74 |
| Wrong medicine | 9.28 | Wrong quantity | 7.06 |
| Wrong frequency | 8.39 | Wrong dose | 7.36 |
| Wrong quantity | 5.46 | Wrong medicine | 3.99 |
| Wrong patient | 4.16 | Wrong storage | 3.07 |

Root cause of majority of omitted medicines – delayed prescriptions from hospitals

The future

- Preventable harms are still occurring in European Hospitals and improvements in patient safety culture and climate are required
- Hospital pharmacists have a key role in patient safety involving medicines and medical devices
- Improved governance of reporting and learning required European Hospitals
- There is a key role for medication and medical device safety officers
- Medication and medical device safety network enables two way communication and supports the activities of safety officers
- EAHP can support members and hospital to evolve and find new ways of reporting, learning and working together
- There is a need for European and national infrastructure to support patient safety

