NHS Commissioning Board
A special health authority

Medicines Optimisation
Patient Safety And Medication Safety

Dr David Cousins
Associate Director
Medication Safety and Medical Devices

The key elements of medicines optimisation

- is patient centred;
- makes a difference to the patients' outcomes;
- is a partnership between healthcare professionals and patients;
- is about listening to the patients' views and opinions, supporting adherence and self care;
- is the application of clinical and pharmaceutical expertise and understanding;
- provides a personalised medication regimen for each patient;
- encourages communication with other healthcare professionals to ensure continuity across care settings; and,
- encourages good governance, including safety, quality and better outcomes

Bad outcomes includes NHS Never Events 9/25

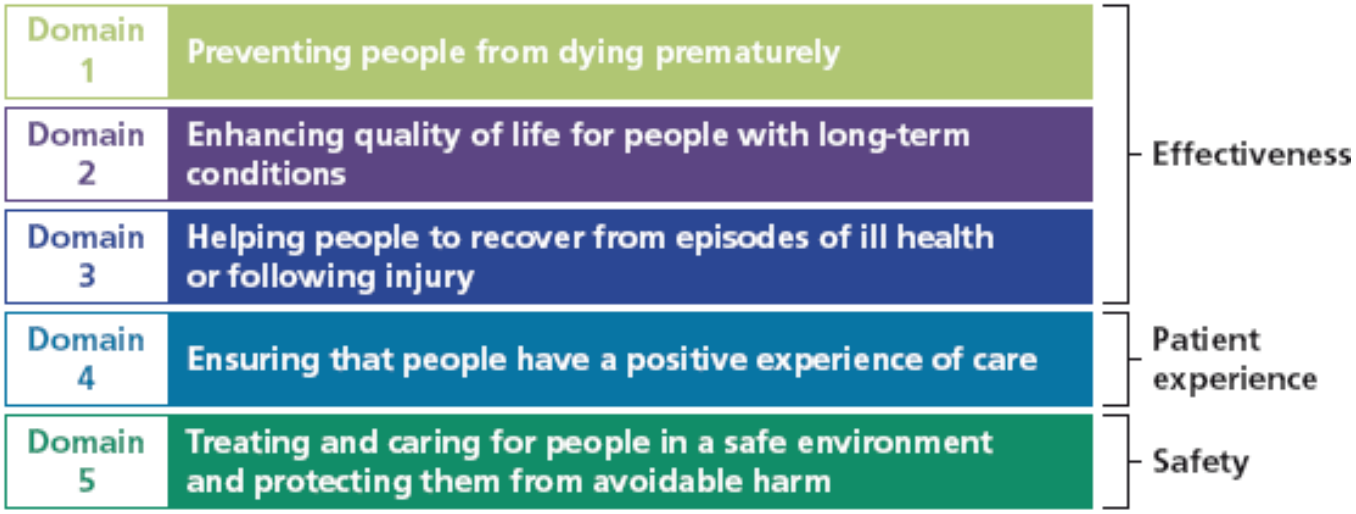
- wrongly prepared high-risk injectable medication
- maladministration of potassium-containing solutions
- wrong route administration of chemotherapy
- wrong route administration of oral/enteral treatment
- intravenous administration of epidural medication
- maladministration of Insulin
- overdose of midazolam during conscious sedation
- opioid overdose of an opioid-naïve patient
- inappropriate administration of daily oral methotrexate

www.dh.gov.uk/health/2012/01/never-events-update

NHS

NHS
Commissioning Board
A special health authority

The NHS Outcomes Framework 2012/13



NHS Commissioning Board
A special health authority

Domain 5
Treating and caring for people in a safe environment and protecting them from avoidable harm

Overarching indicators

5a Patient safety incident reporting
5b Severity of harm
5c Number of similar incidents

Improvement areas

Reducing the incidence of avoidable harm
5.1 Incidence of hospital-related venous thromboembolism (VTE)
5.2 Incidence of healthcare-associated infection (HCAI)
- i MRSA
- ii *C difficile*

5.3 Incidence of newly acquired category 3 and 4 pressure ulcers
5.4 Incidence of medication errors causing serious harm

Improving the safety of maternity services
5.5 Admission of full-term babies to neonatal care

Delivering safe care to children in acute settings
5.6 Incidence of harm to children due to 'failure to monitor'

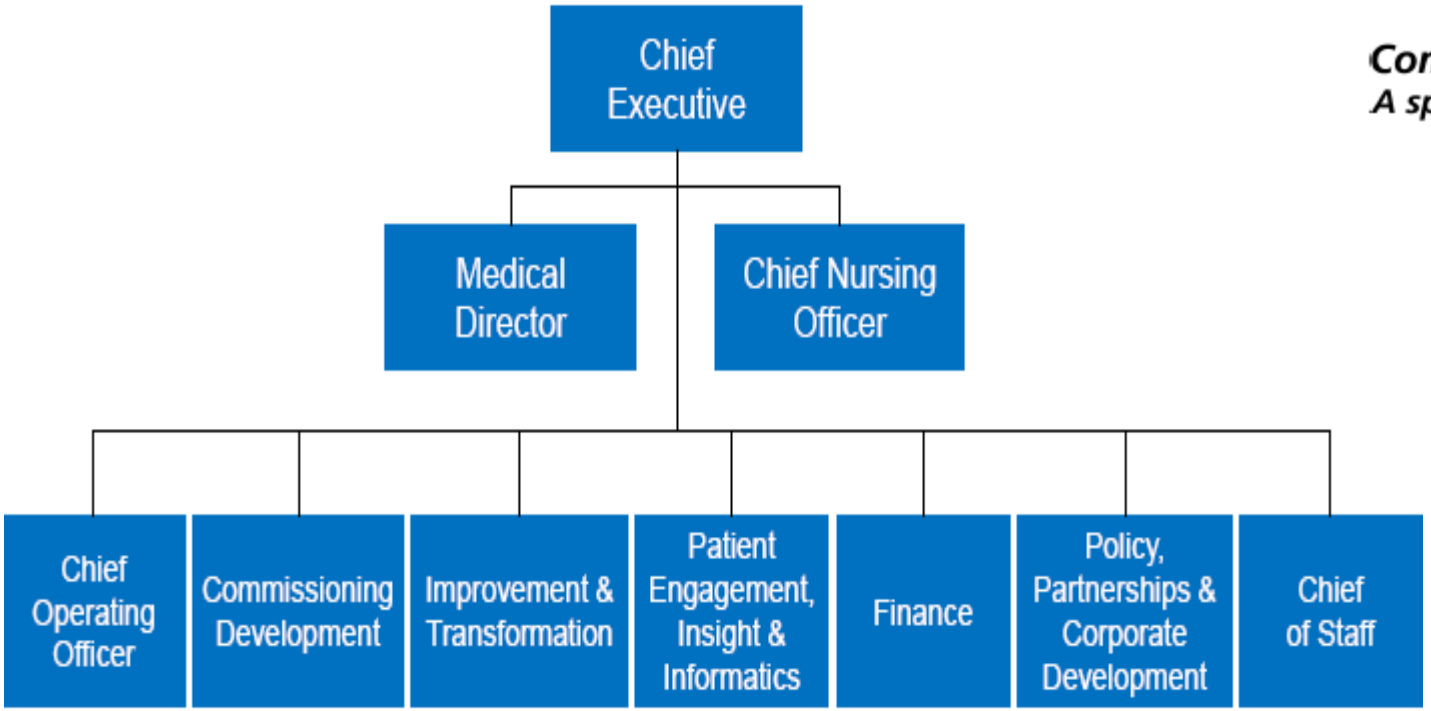
NHS
Commissioning Board
A special health authority

Patient safety incident reporting

- **Patient safety incident reporting**
  This should be initially increasing, probably for several years, as the culture of reporting all incidents spreads more widely and deeply across the NHS, and then eventually remaining steady or even decreasing, as the habit of reporting incidents becomes routine and incidents are learnt from.

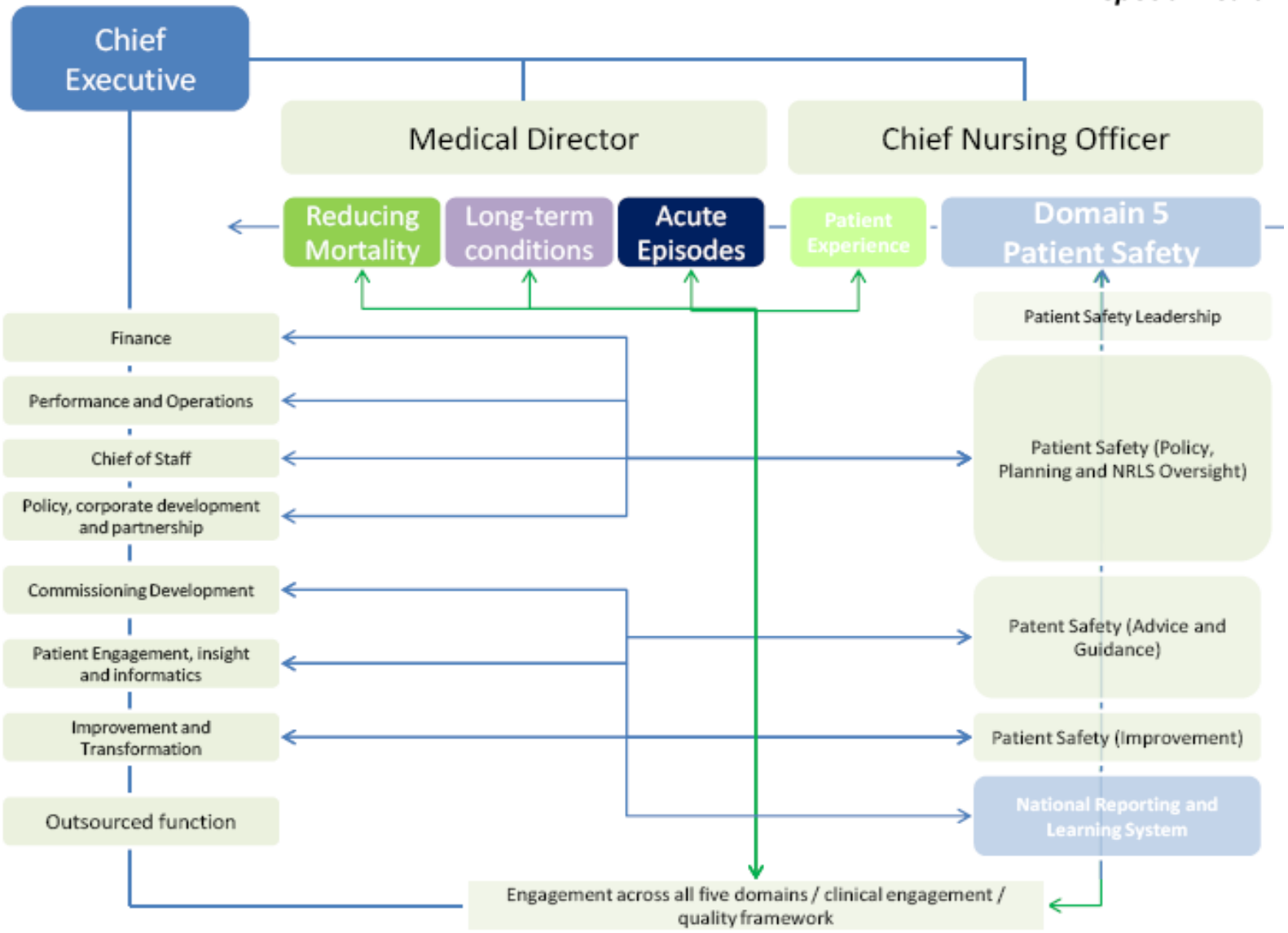
- **Severity of harm (measuring the number of incidents resulting in severe harm or death)**
  This should be decreasing as fewer serious incidents should occur if a patient safety culture is developing and lessons are being learnt.

NHS
Commissioning Board
A special health authority

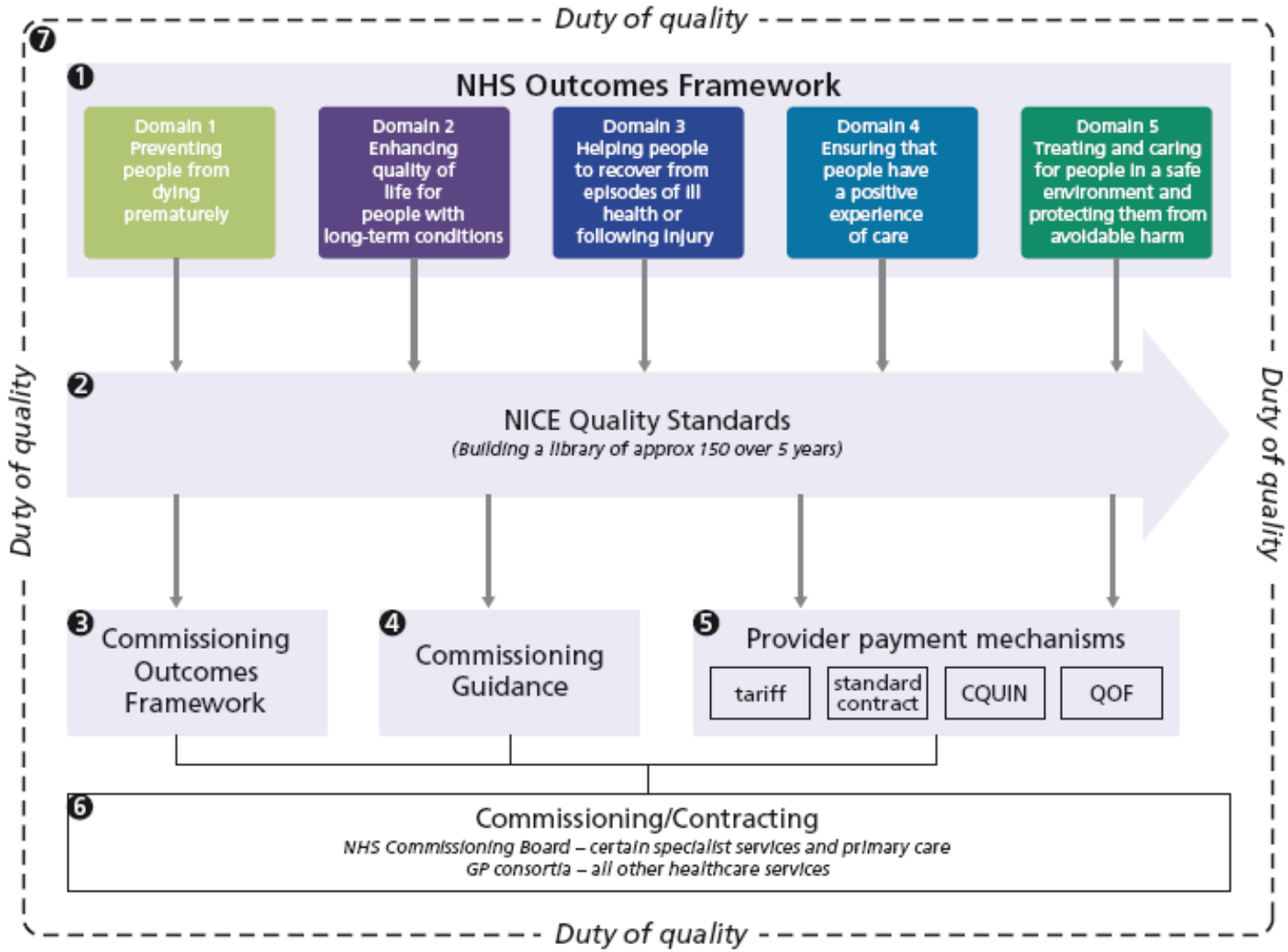


The NHS Commissioning Board Special Health Authority, established on 31 October 2011, plays a key role in the Government's vision to modernise the health service and secure the best possible outcomes for patients.

NHS
Commissioning Board
A special health authority



NHS
Commissioning Board
A special health authority



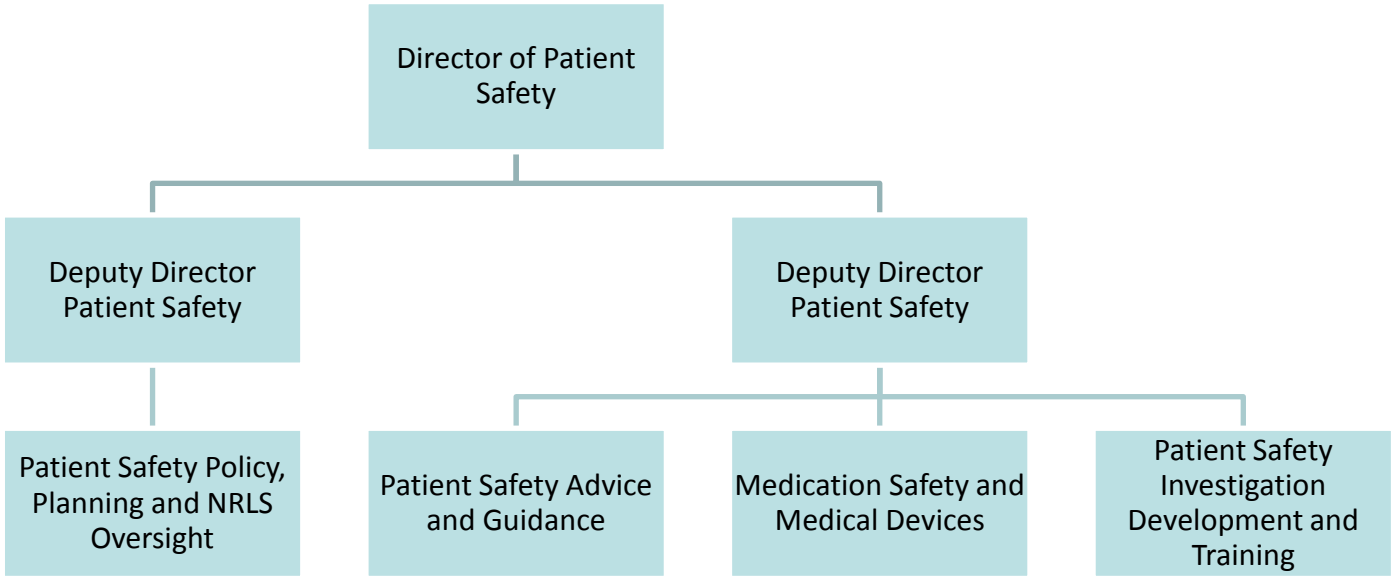
NHS Commissioning Board
A special health authority

Duty of quality

- NHS chief executives are responsible for clinical standards in their organisations with the duty of quality set out in the Health Act 1999.
- The duty of quality adds to the responsibilities of chief executives and changes relationships with those inside and outside the organisation.
- Support for chief executives is required at the organisational and national level so that they meet expectations regarding quality and performance objectives.

NHS Commissioning Board
A special health authority

The Patient Safety Function



NHS Commissioning Board
A special health authority

Role of The Patient Safety Group within NHS Commissioning Board 1

- Provide oversight of systems for collecting and analysing information relating to the safety of the services including the National Reporting and Learning system
- Ensure that this information is analysed and made available to the NHS

NHS Commissioning Board
A special health authority

Role of The Patient Safety Group within NHS Commissioning Board 2

- Provide expert patient safety advice and guidance for the purpose of maintaining and improving the safety of the services provided by the health service and monitor the effectiveness of the advice and guidance given by it
- Particularly focus of advice and guidance for the Clinical Commissioning Groups

NHS
Commissioning Board
A special health authority

Role of The Patient Safety Group within NHS Commissioning Board 3

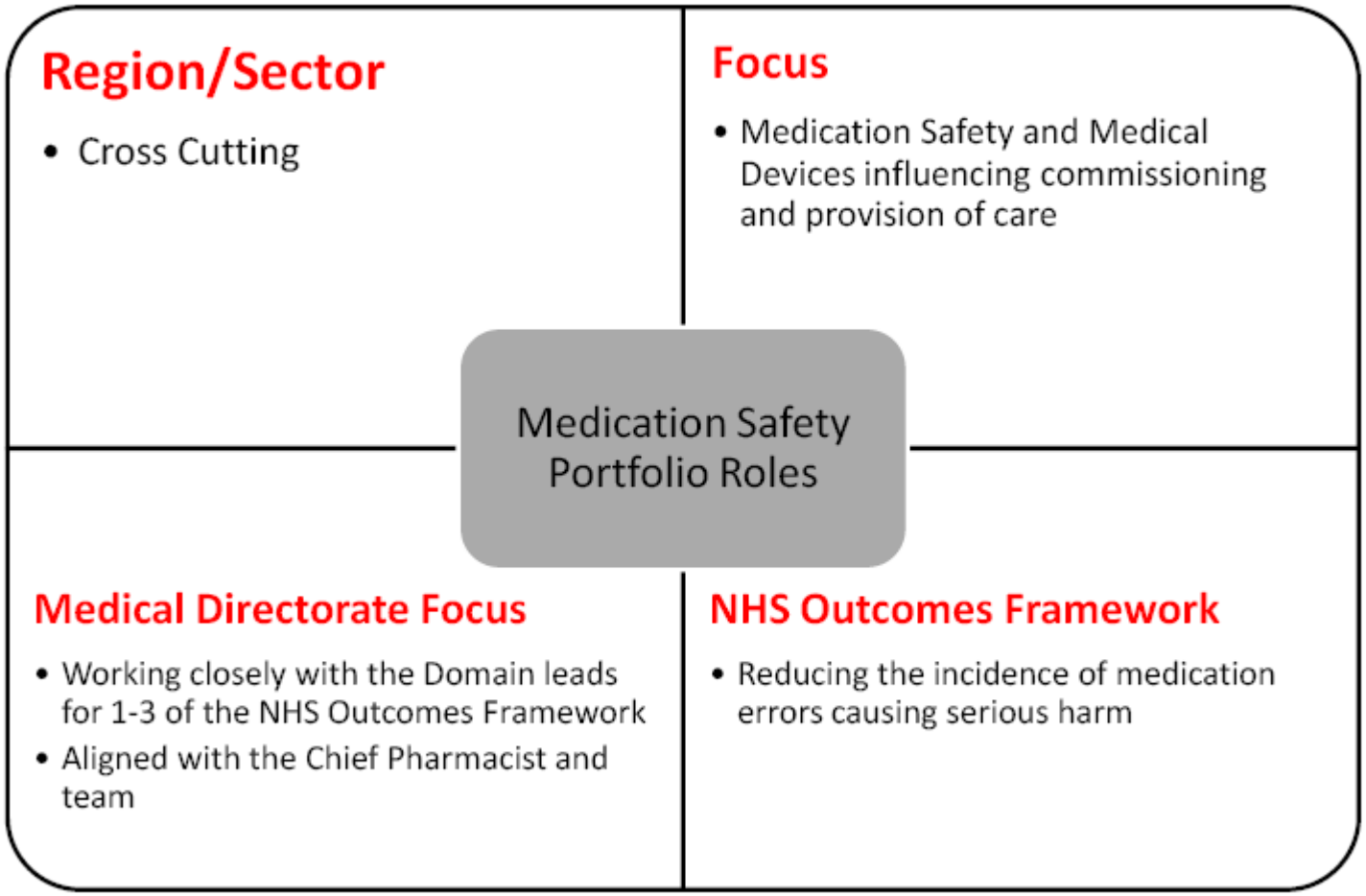
- Promote and support the Duty of Quality Improvement and the NHS Outcomes Framework to secure continuous improvement in the outcomes that are achieved from the provision of the services in particular the safety of services
- Lead on Domain Five of the NHS Outcomes Framework

NHS Commissioning Board
A special health authority

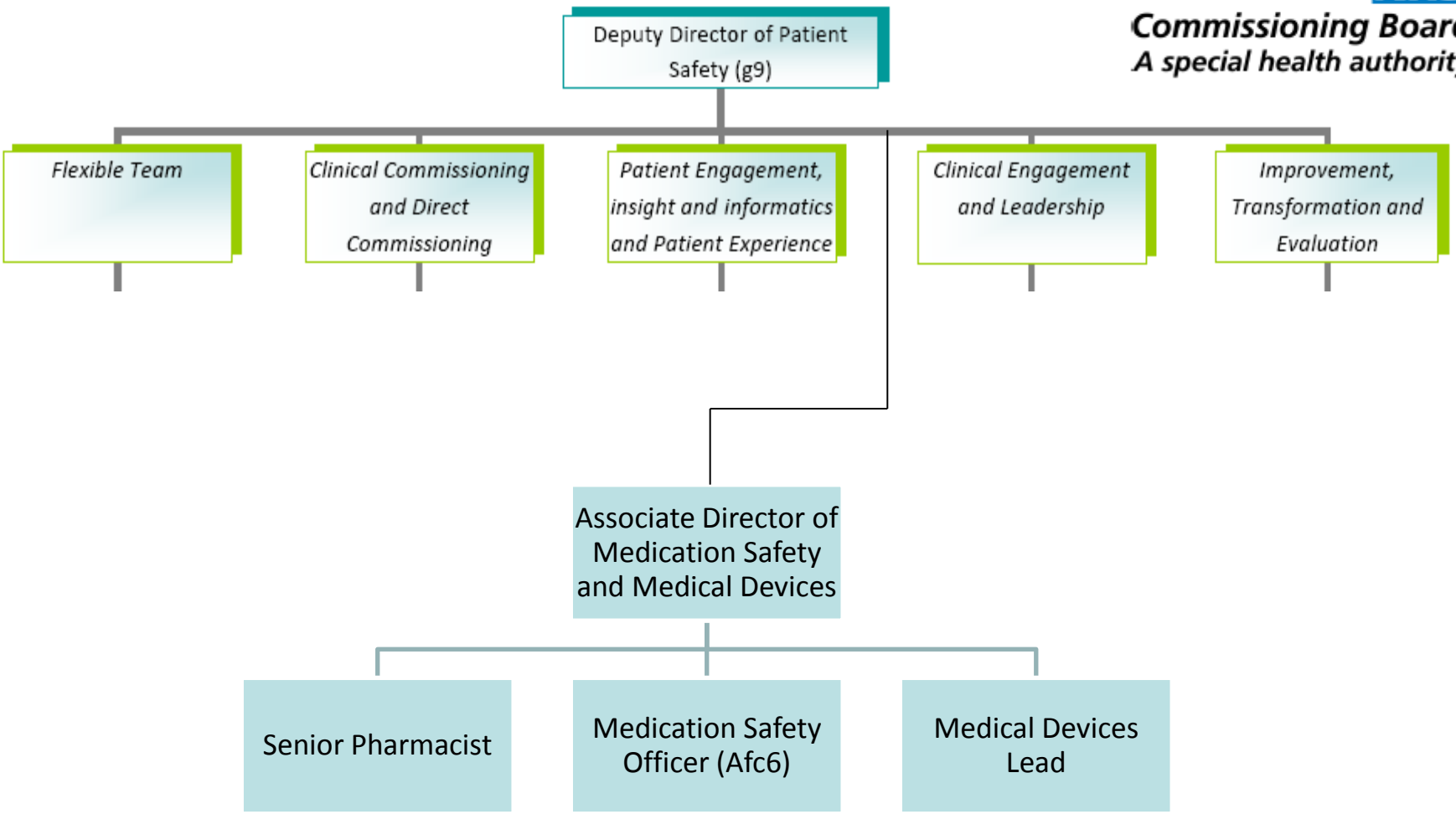
Role of The Patient Safety Group within NHS Commissioning Board 4

- Ensure that the quality standards prepared by NICE reflect the safety of services
- Align all national safety activity to create an aligned approach to patient safety for the health service
- Support the recommendations and implementation of the findings of the Mid Staffordshire Foundation Trust Public Inquiry

NHS
Commissioning Board
A special health authority



NHS
Commissioning Board
A special health authority



NHS Commissioning Board
A special health authority

Medication Safety and Medical Devices Team Agenda 1

- Access NRLS as a key information resource identifying themes and spotting trends
- Identify good practice and local patient safety improvements and ensure there is a platform for sharing the knowledge and helping people work together to improve patient safety

NHS Commissioning Board
A special health authority

Medication Safety and Medical Devices Team Agenda 2

- Co-ordinate the patient safety community platform, utilising the existing Patient Safety First infrastructure creating a easily accessible gathering point for NHS staff
- Provide evidence based guidance to help commissioners and providers of care prioritise and make the right decisions for safe health care

NHS Commissioning Board
A special health authority

Medication Safety and Medical Devices Team Agenda 3

- Commission co-produced interventions
- Medication safety, device safety promotion/networking

NHS Commissioning Board
A special health authority

Current Medication Safety Team Agenda

- Change the way NRLS and NPSA guidance and general medication safety enquiries are handled
- Redesign and re-launch medication/device safety pages on Patient Safety First web site
- Develop a better understanding of serious harms arising from medication errors – including data from outside of the NRLS
- Identify risk topics for further work / communication / commissioning

NHS Commissioning Board
A special health authority

Develop a better understanding of serious harms arising from medication errors

Review of NRLS Medication Incidents 2005 - 2010

Table 6 Medication Incidents by stage of medication process*

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

Table 7 Medication Incidents by category of error reported*

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

Table 5 Medication incidents reported by clinical outcome*

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

Table 8 **Medicines/therapeutic groups identified in incident reports with clinical outcomes of death and severe harm***

Medicine or therapeutic group*	Death	Severe	Total	Percentage of medication incidents with fatal and severe harm outcome†
Opioids	46	43	89	10.83
Antibiotics	10	38	48	5.84
Warfarin	15	30	45	5.6
LMWH‡	23	23	46	5.6
Insulin	9	37	46	5.6
Benzodiazepines	15	12	27	3.28
NSAIDs§	1	17	18	2.19
Potassium	7	8	15	1.82
Adrenaline	8	4	12	1.46
Phenytoin	1	11	12	1.46
Amiodarone	3	4	7	0.85
Anti-psychotics	2	5	7	0.85
Methotrexate	2	3	5	0.61
Total	142	235	377	45.99

Identify risk topics for further work / communication / commissioning

NHS Commissioning Board
A special health authority

1. Safer use of controlled medicines
2. Better risk management of known drug allergy
3. Greater use of dose error reduction software in electronic infusion devices
4. Promote greater use of electronic prescribing and bar code medicine administration in hospitals
5. Improved reporting and learning of medicine related admissions to hospital via changes in medicine reconciliation processes
6. Extend information to support greater empowerment of patients and carers to minimise medication errors (passports)
7. Continued support for the introduction of neuraxial devices with non-Luer connectors
8. Increasing reporting and learning in primary care

NHS Commissioning Board
A special health authority

Controlled drug safety incidents

- In the calendar year 2011.
- 32,744 (23%) PSIs involved branded and generic CDs in schedules 1,2 or 3.
- 29 fatal and and 93 of severe harm outcomes
- Wrong dose errors 40 (43%) of severe harm PSIs.
- 79% medicine administration; 13% during prescribing.
- The words ‘Accountable Officer’ or ‘AO’ were not mentioned in any severe harm PSIs and in only one with a fatal outcome.
- Overall these words were mentioned in only 157 (0.5%) of PSI involving CDs. Of these 76 (48%) concerned controlled drug book documentation discrepancies.

NHS Commissioning Board
A special health authority

Prescribing errors in primary care

- In the recent GMC commissioned research report on prescribing errors in general practice one serious prescribing error was found in every 550 prescribed items.
- In 2010 there were 927 million medicine items dispensed in primary care in England
- This translates into 1.7 million serious prescribing errors

Medicines related admissions

- HES data 5,200,000 emergency inpatient episodes April 2011 – Feb 2012
- 4.68% preventable ADE related = 243,360
- Cost of an eight day inpatient stay = £3,200
- Cost of avoidable ADE causing admission = 243,360 x £3200 =£778,752,000

- Can preventable ADE be identified and coded as part of medicines reconciliation?

NHS Commissioning Board
A special health authority

What can your organisation do now?

- Recommend that healthcare provider organisations produce a annual medication safety report for distribution within their organisation, commissioners and stakeholders (Duty of quality)
- ***Reducing serious harms from medication incidents s one of the key improvement areas in the NHS Outcomes Framework***
- Describe medication risks

  NRLS reports, complaints other data sources

  Which are the areas, professional groups who do not report medication incidents? Medical staff! Pharmacist interventions!
- Describe safer practice
  - New initiatives, implementation/audit of safety guidance/improvements
- Plan for the next 12 months

NHS Commissioning Board
A special health authority

Support For Safe Medication Practice Via a Community of Interest

- Medication Safety Forum and Resources
- Patient Safety First Website

www.patientsafetyfirst.nhs.uk

NHS
Commissioning Board
A special health authority

www.commissioningboard.nhs.uk