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• Patient friendly MedDRA pilot
• Interactive Drug Analysis Profiles (iDAPs)
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How the MHRA uses MedDRA

• MedDRA up versions:
  – Database dictionary updated
  – Web-form for reporting updated
• Historical cases are not recoded
• Data extraction and signal detection software use MedDRA
  – Ensure we update the MedDRA version
    • Could lead to incorrect data retrieval and analysis
    • 2 system validation
How the MHRA uses MedDRA

- We code diagnosis as well as symptoms
  - Reactions
  - Medical history
  - tests
- MedDRA points to consider used
- Internal coding guidance manual
- Consistency is key
  - Audits
QA Audits

- Audit of 100 direct cases monthly
  - All fatal reports
  - Made up of patient and HCP reports
- Audited by senior staff
- Errors discussed at meeting
- Results and statistics calculated
- Feedback to teams

A
- Influences:
  - Signal detection
  - Published data
  - Confidentiality

B
- Influences:
  - Signal assessment
  - Information provided to MAHs in ICSRs

C
- Influences:
  - Administrative aspects
  - Neatness of ICSR record
QA Audits

• Quality auditing enables us to have confidence in our data
  – Internal: signal assessment
    • Coding incorrect MedDRA terms can mean signals are not generated or false signals are generated
  – External: academic research and data provision

• Allows us to have a quantitative measure of quality to aid individual development

• Measures the error reason along side report type
  – Is there a training need?

• Resource saving- aids efficiency in ADR processing also resulting in a reduced number of MAH queries.
Graph showing the number of UK spontaneous suspected adverse drug reactions reports received over the last 5 years broken down by reporter sources.

- Over the last five years reporting has increased by 43%
ICSR submissions

- Website, app, paper, phone
- Clinical system integration
  - SNOMED CT mapping to MedDRA
- Marketing Authorisation Holders (MAHs)
- Coding errors (MHRA and MAHs) are reclassified
E-Reporting

• Online web form reporting system launch 2008, which produces xml ICSRs using the E2B standard
  – Reduces/eliminates the need for large data entry teams
  – Increased speed/turnover of ADR processing
  – Increased accuracy and transparency of ADR data
  – Enables cases to be rapidly made available for signal assessment
  – Signal assessment from a larger ‘data pool’ means very rare ADRs will be identified sooner
Integration of the Yellow Card in healthcare systems

- In the healthcare professionals workflow
- Auto-population of certain fields
- Increases speed of reporting
- Reduces paper burden
- Audit trail in patient record
- Increase the number of Yellow Cards
- Ease of reporting for Healthcare professionals

- E-reporting & integration of the reporting of ADRs into health professionals IT systems is crucial to promote and encourage reporting
YC Mobile App Launched July 2015

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**IBUPROFEN**

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**New Report**

- **RAMEPRIL, IBUPROFEN**
  - Report Date: 16 Mar 2015
- **PARACETAMOL**
  - Report Date: 16 Mar 2015
- **PARACETAMOL**
  - Report Date: 15 Mar 2015
- **TAMSULOSIN, ROACCUTANE**
  - Report Date: 13 Mar 2015
- **SEROQUEL**

**Describe what happened**

Describe what happened in your own words, any symptoms or side effects you suspect were caused by your medicine, and what happened since then.

**Add Reactions/Symptoms**

**Added Reactions/Symptoms**

- **Nausea with vomiting**

**DID THE REACTION(S) LEAD TO:**

- Caused/prolonged hospitalisation
- Disabling/Incapacitating
- Congenital anomaly/birth defect

**Thanks for your report. Our team is reviewing it now.**

**Ok**
Patient friendly MedDRA

- Medical review of the data to identify terms frequently used and commonly understood
  - Signs and symptoms
  - Natural word order
- 1,526 patient friendly terms out of >77k MedDRA
- Anonymised YC data will be sent to the researchers for review
  - Are they selecting the terms more often or are they still using the free text?
Patient friendly MedDRA

Yellow Card

4. Suspect Reactions

Suspect Reaction

- Headache
- Analgesic rebound headache
- Band-like headache
- Cervicogenic headache
- Chronic headaches
- Cluster headache
- Cluster headaches
- Cold-stimulus headache
- Drug withdrawal headache
- Drug-induced headache
- Exertional headache
- External compression headache

Please enter details of the reactions experienced by your patient below. A description of the reactions can be entered in the free-text box at the bottom of the page and more than one reaction can be entered if needed, simply click 'Add Reaction'.

Fields that you must complete are marked with this symbol: report

4. Side Effects

Side effect

- Headache
- Frequent headaches
- Headache
- Migraine headache
- Sinus headache
- Tension headache

As part of the MHRA’s efforts to continually improve side effect reporting forms we are piloting a new ‘pick list’ of side effects terms that we hope will provide you with the most appropriate term to choose. After you have submitted your form you will be asked to take part in a short, voluntary survey which we will give us valuable feedback.

Fields that you must complete are marked with this symbol: report
Interactive Drug Analysis Profiles

- Spontaneous reports are published as iDAPs
Signal Detection at the MHRA

• Empirica Signal used with complex existing thresholds
  – All DECs reviewed for additional monitoring drugs
  – Established medicines focus on most serious events using well
developed thresholds
    • Non-listed DECs with $N \geq 3$, $EBGM \geq 2.5$, $EB05 \geq 1.8$
    • All fatal, paediatric, parent-child reports, all Alert Terms
    • Frequency change ($\geq 8\%$ reports received in last quarter)

• Different ‘views’ of the data enable different thresholds for
groups of products

• eRMRs reviewed alongside UK data and used to
  supplement our existing system.
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Signal Detection and MedDRA

- MHRA signal detection
  - Algorithm includes:
    - Disproportionality
    - Alert terms (aligning with Important Medical Events, IME, list)
    - CIOMS seriousness
- Reviewed by PT and also generates fatal PT DECs
- Standardised MedDRA Queries (SMQ) (narrow and broad)
Signal Detection and MedDRA

- Empirica allows you to drill into related terms within a chosen MedDRA hierarchy.
SMQs in signal detection

• **IMI Protect**
  – *SMQs had no overall benefit compared to PTs*

• Most useful for data retrieval
  – Signal review
  – Publications e.g. Drug Safety Updates
  – Ad hoc queries (Patient, healthcare professional etc)
Analysis and Prioritisation

- Signal Management Review Meeting (SMRM)
- Regulatory Pharmacovigilance Prioritisation System - RPPS
  - Strength of evidence for a causal effect
  - Potential public health implications
  - Public perceptions
  - Agency obligations
- Aid to the management of multiple dynamic issues
- Ensures that appropriate timescales are defined to meet public health and other obligations
- Overall priority linked to timescales
Thank you for listening!

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