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Change management in an e-Prescribing era

Bhulesh Vadher, Chief Pharmacist

Scott Harrison, Lead Pharmacist Clinical Informatics

Gurpreet Bahra, Specialist Anticoagulation & Thrombosis Pharmacist

Victoria McDonnell, Lead Anticoagulation and Thrombosis Pharmacist

How the e-Enabled environment can impact on complex switches to “Best Value” medicines.

A case study: Switching: Dalteparin → Enoxaparin

What this presentation will cover.

1. OUH and the pharmacy context and why this matters now
2. The financial and the case for moving from dalteparin to enoxaparin
3. The clinical risks and safeguards needed during transition
4. The operational and digital changes required across systems and workflows
5. The change management approach and lessons learned
6. Key takeaways and the asks for partners in the future

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OUH in numbers
2024/25

We are one of the UK's **largest teaching hospital trusts**.

The Trust provided services to our patients through **16,130 staff**

Serving Our Populations through:

1. **Local** care delivered via **four main hospitals**
2. **Regional** services
3. **National** specialist services
4. **International** world-class research and innovations

Maternity

7,401
Babies delivered

Our patients
Admissions 2024/25

95,207
Planned (elective) inpatient admissions and day cases

107,100
Emergency and unplanned patient admissions

Our patients
Other vital statistics

1,353,173
Planned (elective) outpatient appointments

254,800
Planned (elective) diagnostic tests

163,865
Emergency Department (A&E) attendances
JOHN RADCLIFFE & HORTON GENERAL

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These are the most up-to-date numbers available. You can find out more in the OUH Annual Report and Accounts 2024/25, published on the OUH website:

www.ouh.nhs.uk/about/publications

Beds in our hospitals
2024/25

1,051
General and acute care beds *(total number)*

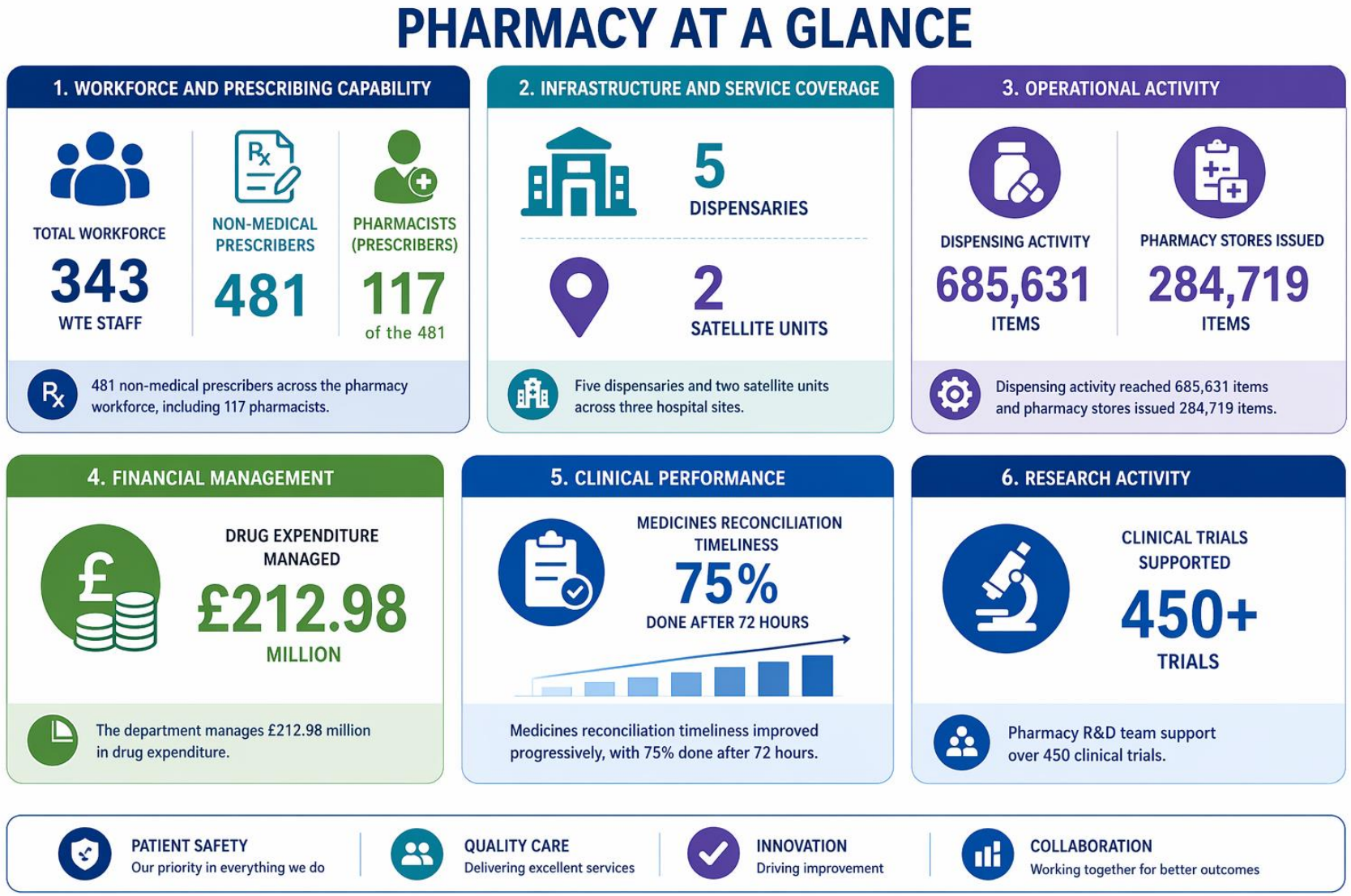
970
Adult beds

81
Children's beds

60
Adult critical care beds

101
Maternity beds

Oxford University Hospitals Pharmacy



Total drugs spend for 2025/2026 - £212,983,786.23

What is the total LMWH forecast spend to the nearest pound for the FY 2027?

LMWH	FY 2025 Actual	
Dalteparin	£	2,136,445
Enoxaparin	£	6,815
Grand Total	£	2,143,261

The Case for Switching: Dalteparin → Enoxaparin

Rationale for switching

- Enoxaparin (Inhixa) = 'Best Value'
- Clinical equivalence
- Supply resilience
- Alignment with national practice, standardisation opportunity

"Financial case is clear - implementation complexity is the real barrier."

Scope and clinical complexity of change

- High-risk product
  - High-risk of major bleeding, including intracranial and gastrointestinal haemorrhage
  - Risk of thrombosis if under-treated (e.g. stroke, DVT, PE)
  - Patient variability (renal function, weight) affecting dosing
  - High error rates during transitions of care (admission, discharge, perioperative)

- For enoxaparin specifically
  - Additional dosage considerations not previously experienced with dalteparin - 'high-risk dosing', dose reduction in renal impairment
  - Determining new weight bands

Approach to Switching: Dalteparin → Enoxaparin

Decision-making process:

1. National scoping of doses used
2. Evidence review and scrutiny (limitations of product license vs national practice)
3. Dosing proposal for local review by thrombosis team
4. Dissemination and agreement from specific clinical areas (cardiology, renal, maternity, paediatrics)
5. Trust-wide agreement of dosing at Therapeutics Committee
6. Sign off agreed to then trigger EPMA build to start

- **Resources to update**
  - Over 40 guidance documents/policies/primary care documents/patient information leaflets
  - Over 30 electronic PowerPlans
  - 5 Trust-wide e-learning packages
  - Local documents held by other specialties not covered in the above

Clinical Perspective (1)

- Clinical complexity and Human factors

  Differences in:

  - Indications/licensing nuances
  - Dosing regimens
  - Monitoring practices
  - Clinician familiarity & behaviour
  - Specialty-specific resistance (e.g. haematology vs general medicine)
  - Transfer of care into the community

Clinical Perspective (2)

- Clinical safety risks during transition
  - Risk of:
    - Incorrect dosing if conversion poorly designed
    - Dual prescribing (parallel products)
    - Confusion across teams
  - Risk highest at:
    - Interfaces (admission / discharge)

Operational Readiness for Transition to Enoxaparin

- **Operational/implementation considerations:**
  - Timely approval of new dosing decisions to allow EPMA build to start
  - Decision about which patients to switch – initially new patients only for a defined period

Red flag safety risk

Concurrent use of dalteparin and enoxaparin within the Trust during this time

  - Powerplans for enoxaparin made live, dalteparin via freetext only
  - Dalteparin guidance documents still hosted online for reference until all patients transitioned
  - Robust communication strategy
  - Education and training
  - Alignment with primary care

ePMA changes – beyond what you see

Metrics	Daily Average	May 2026
Total Discern Alerts Fired Alerts	46,202	1.4M
Total Meds Administered Med Management	19,724	607,356
Parent Orders Ordered Using PowerPlans Orders: All	7,484	222,161
PowerPlans Ordered Orders: All	2,702	82,504
Parent Pharmacy Orders Orders: Rx	9,137	273,150
Total Measured Transactions Performance	3.0M	89.9M

"At this scale, even small percentage switches deliver multi-million savings—but require system-level change."

LMWH Decision Support and Clinician Assistance

- Where:
  - Order sets:
    - VTE prophylaxis
    - Treatment pathways
  - Embedded logic:
    - Dose banding
    - Weight-based dosing
  - Linked components:
    - PowerPlans
    - Clinical decision support
    - Defaults and favourites
- Depth of Integration
  - Appears in:
    - Admission pathways
    - Surgical bundles
    - Oncology/haematology protocols
  - Associated with:
    - Nursing workflows
    - Administration timing logic
    - Pharmacy verification rules
- Why this improves patient safety
  - Standardised prescribing
  - Reduced variation
  - Pre-defined safe doses
  - Embedded protocols
  - Reduced cognitive load for clinicians

"The system intentionally removes variability—this is its strength."

Challenges – Digital / System Perspective

- System complexity
  - Governance
    - Clinical Governance
    - Pharmacy Governance
    - EPR Clinical Advisory Group
    - EPR Design Authority Group
    - Digital Change Authority Board
    - Digital Oversight Committee
  - Changes required:
    - Orders/Products
    - Order Sentences
    - PowerPlans
    - Decision support rules
    - Dose calculators
    - Reports
  - Testing
  - Clinical validation

- Implementation risks
  - Partial update = safety risk
  - Legacy builds persisting
  - Downtime constraints
  - Coordination across:
    - Pharmacy Ops
    - Pharmacy Digital
    - Corporate
    - Trust Digital
    - Clinical team

"This is not a drug switch—it is a system rebuild."

Change Management Approach

- Governance model
- Joint leadership:
- Pharmacy + Digital + Clinical specialties
- Clear decision-making structure
- Risk register / safety case

- Stepwise approach
  - Pre-work:
    - Mapping all touchpoints in EPR
  - Build Phase
    - Parallel build of enoxaparin
  - Validation:
    - Clinical sign-off
  - Deployment:
    - ‘Big bang’ vs phased
  - Decommissioning:
    - Removal of dalteparin pathways

- Communication strategy
- Targeted:
  - Prescribers
  - Nursing staff
  - Pharmacists
- Tools:
  - Alerts in EPR
  - Quick guides
  - Grand rounds

“Switch risk is transient but real—and must be actively managed.”

- Mitigation:
  - Consultation with clinical areas
  - System wider governance approach with all policies and SOP updated
  - EPMA also updated
  - Switch over period and dual running for the minimum period
  - Communication internally and to all partners

The Challenge of Changing Products

- The paradox of digital maturity:
  - The more embedded the drug:
  - ✅ Safer day-to-day use
  - ❌ Harder to change

  - Future proofing
    - Measurable benefits from Decision Support (One way street)
    - Build safe systems and retain resources to stay flexible

Lessons Learned

- What worked?
  - Early clinical engagement
  - Full mapping of digital footprint
  - Strong governance
  - Data-led decision making
- What we would do differently?
  - Allow more time for:
    - Testing
    - Behavioural change
  - Earlier comms strategy
  - Better visibility of hidden system dependencies

Key Takeaways

- E-Prescribing changes the nature of medicines optimisation
- Switching is:
  - Less about drug choice
  - More about system architecture
- Success requires:
  - Clinical leadership
  - Digital capability
  - Structured change management

"In an e-Enabled NHS, the safest systems are also the hardest to change"

Ask of industry partners and EPR/EPMA providers

- Consider what would make your product safe to use and allow easier transitioning.
- Work with major EHR vendors to provide switching guidance
- Business case support that includes digital as well as clinical and operational
- Recommended Key Stakeholders

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Thank you

Any questions…?

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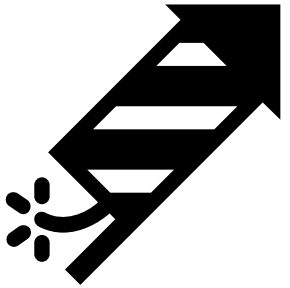
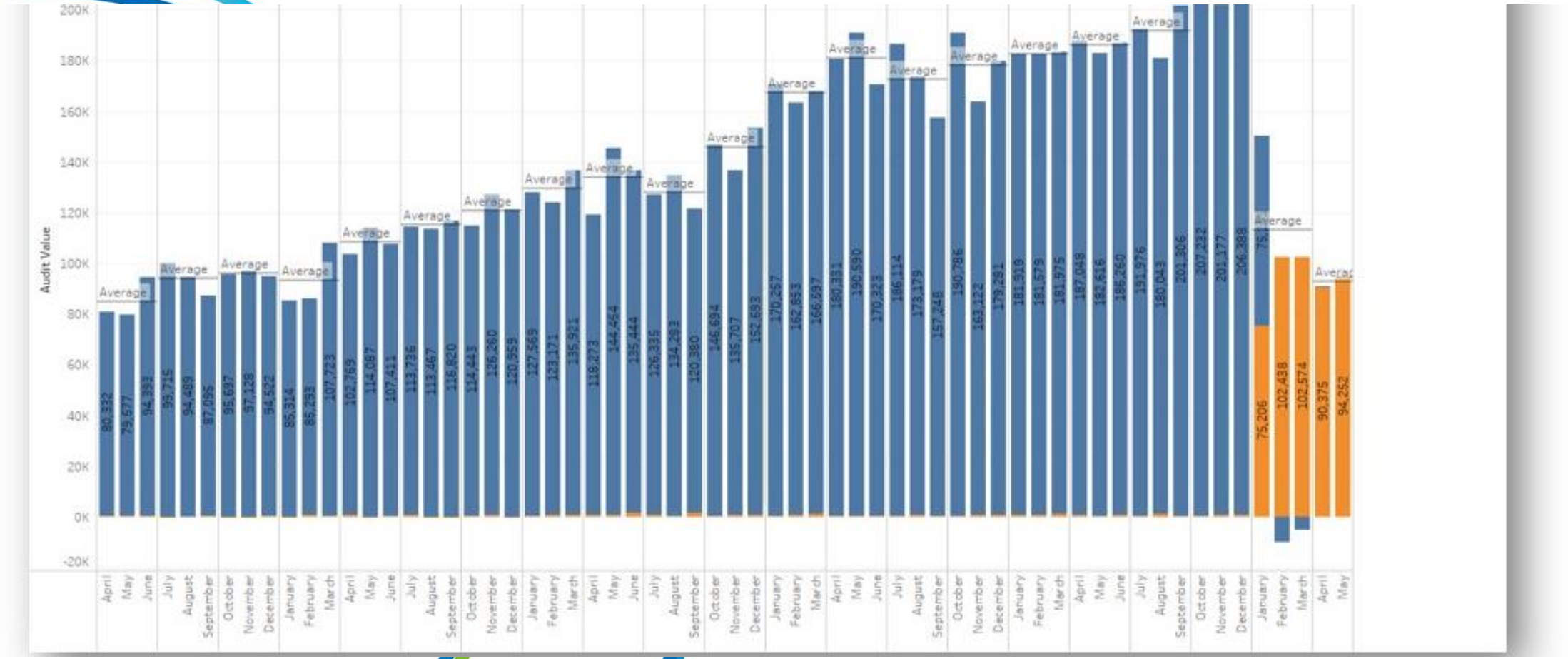
Enoxaparin	£ 6,815	£ 286,060	£ 923,135
Grand Total	£ 2,143,261	£ 2,089,933	£ 924,232



2 WINNERS

Lisa Davidson - £900k

Afshah Mahmood - £900k

Financial Impact of Dalteparin and the switch to Enoxaparin (April 2021 to May 2026)