Delivering the Paperless and Filmless NHS

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Overview

• Why paperless?
• Why filmless?
• Overview of PACS and RIS
• EPR and diagnostic/support services
• Working across boundaries
• The role of the CCIO
Why paperless

• NHS 5 year Forward View

Fully interoperable electronic health records so that patients’ records are largely paperless. Patients will have full access to these records, and be able to write into them. They will retain the right to opt out of their record being shared electronically. The NHS number, for safety and efficiency reasons, will be used in all settings, including social care.
National Information Board

- Personalised Health and Care 2020;
- Using Data and Technology to Transform Outcomes for Patients and Citizens. A Framework for Action

‘give care professionals and carers access to all the data, information and knowledge they need’ – real-time digital information on a person’s health and care by 2020 for all NHS-funded services, and comprehensive data on the outcomes and value of services to support improvement and sustainability;
Standards

• All patient and care records will be digital, real-time and interoperable by 2020.
• By 2018 clinicians in primary, urgent and emergency care and other key transitions of care contexts will be operating without needing to use paper records.
• This will be achieved by alignment of national technical and professional data standards with regulatory and commissioning requirements.
• Guidance to commissioners and providers will be published by June 2015. NHS England will support national and local commissioners to develop roadmaps for the introduction of interoperable digital records and services by providers (..which will be published..) by April 2016.
Why filmless?

Data
- Recording/Acquisition; Volumes

Information
- Context; Change; Knowledge

Intelligence
- Sharing; Audit; Research; HIE
Overview of PACS

• History
  – University of Kansas, Kansas City 1982
  – Hammersmith; 1990s first filmless hospital in UK
  – Explosion of COTS products from modality vendors and medical IT companies.
  – NPfIT; CFH and LSP 2005-2015

• Why PACS
  – Replaces hardcopy;
    • Storage costs
    • Reporting large data sets
  – Allows remote access and wide area sharing
    • Democratisation of knowledge generated by imaging data
  – Manages Imaging Department workflow
    • Gateway to imaging data life-cycle management
  – Facilitates integration with the wider electronic record
Components of PACS

- DICOM standard.
- Modalities
  - Generating exponential increase in data
  - Advanced image manipulation and modality workstations
- Transmission network
  - Secure trust networks; VPN; N3
  - The Internet and The Cloud
- Viewing platform
  - Expensive location specific workstations
  - Web enabled, thin client
  - Portable devices
- Archive
  - Reducing cost
  - Disaster Recovery
  - ‘Vendor Neutral Archive’
Radiology Information Systems (RIS)

Radiology Department workflow management
• Patient Tracking
• Interactive Documents
• Modality and Material management.
• Patient Registration and scheduling
• Patient List Management

Diagnostic and Reporting Workflow
• Request and document scanning
• Interface with Ordercomms/erefer
• Interface with modality via Worklist.
• Reporting; VR or DD
• Result(s) Delivery including printing faxing and e-mailing of clinical reports
Integration with EPR

- Spine-PDS
- HIS/PAS
- RIS
- PACS
Maximising benefits of integration

• Patient pathways
  – Smart decision support for Ordercomms
  – MDT management
  – Prioritising IP requests
  – Realtime bedstate

• Viewing
  – Better enterprise viewing capability.
  – Remote/mobile working

• Reporting workflow
  – Integrated into PACS
  – 24/7 capability

• Archiving
  – Data lifecycle management
  – Wider use of VNA;
Diagnostic Services and EPR

• RIS system functionality not reproduced in other diagnostic /support domains; significant blocker to a paperless environment
  – Endoscopy
  – Cardiology diagnostics
  – Physiological measurement

• Enterprise reporting Workflow

• Referrals
  – Therapies
  – Other specialists

• Accessible to Primary Care
  – GP ordering systems
  – E referral (Choose and Book Mark 2)
Enterprise diagnostic Imaging

• Across organisation
  – Democratisation of primary reporting
  – Implications for training
  – Impact on Radiology?

• Between organisations
  – 24/7 and specialty rotas
  – NHS ‘in sourcing’
  – Collaborative PACS/RIS procurements eg Manchester, Hampshire
  – Image Exchange Portal

• And beyond
  – XDS standard
    • Affinity domains; MPI, Taxonomy
    • XCA
The role of the CCIO

- Lessons learned from PACS and RIS – bridging the mismatch
- Clarity about why paperless/filmless
- Prompting necessary and transformational change
- Articulating to clinical colleagues
- Translating to IT colleagues
- Influencing at Board level
- Networking across boundaries
Questions?