Effective Electronic Patient Record Implementations
Helping You Navigate Your EPR Journey

February 2021
Effective EPR Implementations: Overview of the Series, Purpose, and Schedule

The Effective EPR Implementations webinar series is a set of seven one-hour virtual sessions with Healthcare providers. This series is focused on EPR implementations and driving your success through a holistic implementation approach.

### Purpose
- Focus on effective partnerships necessary to succeed in EPR implementations
- Highlight common pitfalls faced by clients and areas needing support
- Share key strategies necessary for healthcare practice transformation through EPR implementations

### Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Purpose</th>
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<tbody>
<tr>
<td>25 Feb</td>
<td>Helping You Navigate Your Electronic Patient Record Journey</td>
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<tr>
<td>31 Mar</td>
<td>Change Management and Communication</td>
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<td>29 Apr</td>
<td>Integration and Reporting</td>
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<td>27 May</td>
<td>Interoperability and System Integration</td>
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<td>24 Jun</td>
<td>Clinical Workflow Design and Content</td>
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<td>29 Jul</td>
<td>Testing for Excellence</td>
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<td>2 Sep</td>
<td>Sustainability and Optimisation</td>
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Speaking With You Today

Fran Cousins
Partner, UK

Marc Perlman
Global Digital CARE Leader, US

Nick Wong
Managing Director, US

Minakshi Krishnan
Managing Director, US

Imran Chaugule
Senior Manager, US
<table>
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<tr>
<th>Topic</th>
<th>Speaker</th>
<th>Timing</th>
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<tr>
<td>Welcome</td>
<td>Frances Cousins and Marc Perlman</td>
<td>5 mins</td>
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<tr>
<td>Effective EPR Implementations: Overview of the Series, Purpose, and Schedule</td>
<td>Frances Cousins</td>
<td>5 mins</td>
</tr>
<tr>
<td>Overview of Successful Project Startup</td>
<td>Marc Perlman, Nick Wong, Minakshi Krishnan, Imran Chaugule</td>
<td>30 mins</td>
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<tr>
<td>• The Big Picture</td>
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<td>• Setting the Foundation: Governance, Guiding Principles, and Effective Decision Leadership Support and Alignment</td>
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<td>• Total Cost of Ownership (TCO)</td>
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<tr>
<td>• Strategies for Clinical Design, Change Management, Training, Technology, and Testing</td>
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<tr>
<td>Our Practice</td>
<td>Marc Perlman</td>
<td>5 mins</td>
</tr>
<tr>
<td>Q&amp;A</td>
<td>Frances Cousins</td>
<td>15 mins</td>
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UK EPR Landscape
The NHS Long Term Plan commits to fully digitising acute, community and mental health providers by 2024, and introducing an EPR system is an important milestone in any Trust’s digital transformation journey.

2023
Target date for secondary NHS healthcare providers to transition to digital records

16-24 months
Average time it takes a hospital to implement an EPR

23%
Proportion of NHS Trusts confirming that the majority* of their patient records are digitised

£3.7bn
Government funding confirmed for 40 digitised hospitals in the biggest hospital building programme in a generation

The transition has required major organisational change and has not been completely painless
- CEO of one Trust transitioning between EPRs

* Between 76 – 99% of patient records

1 "Improving data sharing between acute hospitals in England" Institute of Global Health Innovation at Imperial College London (2019)
Overview of Successful Project Startup
The Big Picture

Trusts and Partners work with major EPR vendors for implementations using leading practices

<table>
<thead>
<tr>
<th>EPR Vendor</th>
<th>Implementation Goals</th>
<th>Trust/Partner</th>
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</table>
| Vision & Plan | • Define Value and Objectives  
• Identify Stakeholders and Governance  
• Collect client specific data  
• Conduct site visits  
• Localise System configuration and workflow | • Develop business case and process vision  
• Set up governance structure and develop communication infrastructure  
• Develop Project Charter, Project Plan, processes for managing risks, issues, change requests, etc.  
• organisational change management strategies |
| Design & Build | • Coordinate data collection, design, and build “sprints”  
• Document business processes with operational input  
• Develop Training Curriculum  
• Configure the software based on the design  
• Support testing issue resolution  
• Support training approach and execution | • Track fit/gap of all requirements  
• Perform a Proof-of-Concept prototype  
• Perform the testing of the system  
• Lead development of training content and approach  
• Lead Dress Rehearsals / Mock Go-lives  
• Develop testing and training strategy and plan  
• Data migration |
| Deliver & Operate | • Support Go-Live  
• Monitor Key Performance Indicators  
• Measure and communicate value achieved  
• Identify opportunities for improvement | • Execute system cutover to the new EPR  
• Conduct user-acceptance testing  
• Perform end-user training  
• Conduct go/no-go evaluations  
• Establish the support organisation to help the client after cutover  
• Production monitoring and support activities |
Setting the Foundation: Governance, Guiding Principles, and Effective Decision Making

Setting a strong foundation from the beginning enhances overall outcomes and Programme success.

Governance
A well-structured governance model helps ensure decisions are made at the right level, by the right stakeholders, at the right time.

Establish Leadership Support
Leadership support and buy-in is cultivated from the very beginning of the Programme.

Guiding Principles
Establishing appropriate Guiding Principles sets the ground rules for system design and implementation, guides decisions, and keeps teams focused on overall goals, objectives, and the desired end state.

Effective Decision Making
Decisions that could potentially impact the programme timeline, cost, quality, safety and/or future-state operating model should be escalated to programme and clinical governance.

Key Success Factors
- Timely decisions that are efficiently communicated
- Membership provides representation of the collective voice of the organisation
- Steering committee members are vocal change advocates

Guiding Principles
- Proactive issue management
- Forward-looking risk management
- Leverage standard functionality
- Timely decision-making
- Adherence to project processes and procedures

Importance of Governance, Guiding Principles and Effective Decision Making

1. Commitment from key stakeholders
2. Align direction
3. Better decisions
Total Cost of Ownership (TCO)
As a component of the overall business case, a TCO model can be built to estimate overall capital and operating expenses for leadership to make an informed decision. More mature organisations will identify both quantitative and qualitative benefits.

Directly impact the staffing model and project costs
Impacts staffing model and overall costs.
Establishes an overall percent to gross up all costs and mitigate risk due to unforeseen project expenses and optimism bias.

Delineates the effects of inflation, raises, and benefits on resources
Estimates opportunities for cost consolidation such as licensing, hardware and ongoing operating expenses
Savings of software fees for applications no longer needed and other expected quantifiable benefits

Importance of TCO
1. Build a strong business case
2. Make strategic, data driven decisions
3. Communicate capital and operational funding requirements to the Board
Strategies for Clinical Design

Clinical Design develops the sum of all non-patient specific knowledge integrated into the EPR to enable the delivery, documentation and reporting of patient care.

1. Deliver high quality patient care
2. Improve standards and consistency
3. Build efficient clinical workflows

Pathways

Optimises end to end patient pathways for specific conditions through an organisation or health system

Elective surgery pathway
GP referral of 78-year old patient with AAA

- GP referral
- 6th Outpatient appointment
- Diagnostic imaging appointment
- Admission, surgery and recovery (Bed 2-3 days)
- Older adults assessment unit
- 2nd Outpatient appointment
- Telephone follow-up
- Diagnostic imaging follow-up
- Follow-up Outpatient appointment

Workflows

Optimises individual component activities of patient pathways, defining the workflow

Content (examples)

✓ Order Sets
✓ Clinic letters templates
✓ Discharge letter templates
✓ Results ranges
✓ Drug regimes
✓ Assessment tool (Waterlow)
✓ Problem lists
✓ Care planning tools

Provides the tools for clinicians to document care, incorporating clinical decision support and standardisation

Importance of Clinical Design
Strategies for Change Management
Four Essential Elements guide your organisation’s transformation

Define Purpose
- Visualise the business future, build the conditions for leader-led change, mobilise and engage communities

Design for Impact
- Define the case for change, personalise the change experience, use data analytics to direct the change effort

Develop Capability
- Accelerate future skill sets, activate business networks to drive a tipping point in change adoption, make behaviours everyday habits

Drive Through Performance
- Onboard people to their new reality, follow through with performance support, recognise success and evolve

Expected Value for Each Essential Element

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<th>Define Purpose</th>
<th>Design for Impact</th>
<th>Develop Capability</th>
<th>Drive Through Performance</th>
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<tbody>
<tr>
<td>Clear need for change and sense of urgency</td>
<td>A comprehensive change roadmap, using data</td>
<td>Business networks are equipped to drive the change agenda.</td>
<td>Everyone working in the new way</td>
</tr>
<tr>
<td>Articulated benefits &amp; impacts</td>
<td>Identification and mitigation of key risks</td>
<td>People introduced to new roles, skills and behaviours</td>
<td>People feel empowered and able to adapt</td>
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<tr>
<td>Alignment of leaders</td>
<td>Defined process to shape culture</td>
<td>Learning drives individualised ways of learning</td>
<td>Tools and accelerators ensure successful transformation</td>
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<tr>
<td>Engagement with key communities</td>
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Importance of Change Management

1. Establish buy-in from key stakeholders
2. Highlight impact of changes
3. Drive adoption throughout the organisation
Strategies for Training

End users will need to learn how to use the new system. Effective training will maximise the investment made in the implementation.

1. **Enhance user comfort in new system**

2. **Effectively coordinate content development, trainers, and trainees**

3. **Enable end users to ‘hit the ground running’**

**Vision and Objectives**
The goals and objectives of the training strategy to guide activities throughout the project.

**What We Know**
Understanding end user needs, desires, and lessons learnt from other training efforts.

**Team Structure**
High level outline of team structure, roles, and responsibilities.

**Content Development**
Approach to designing curricula, lesson plans, delivery method, curriculum build, review process, materials, etc.

**Credentialing Approach**
Approach to recruit, hire, onboard and credential contract trainers to deliver end user training.

**Deployment & Delivery**
Leverage hub-based and instructor-led approach with support from Super Users and At-The-Elbow resources.

**Training Logistics**
Approach to scheduling, registration and reporting on end user classroom training.
Implementing a modern EPR solution requires an understanding of the underlying technologies to define a strategy addressing several key areas.

**Strategies for Technology**

<table>
<thead>
<tr>
<th>Infrastructure and IT Assets</th>
<th>The architecture, hardware, software, and environment hosting supporting the organisations IT vision and strategy.</th>
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<tbody>
<tr>
<td>Devices (Biomedical &amp; End User)</td>
<td>Biomedical and end-user device procurement, installation, and maintenance in addition to peripheral devices to support the EPR implementation.</td>
</tr>
<tr>
<td>Security</td>
<td>The application security strategy involves the plan to design, develop, implement, and test security controls for deployed applications.</td>
</tr>
<tr>
<td>Interoperability (Interfaces/APIs/MDIs)</td>
<td>The exchange of data from EPR to/from ancillary systems, vendors, devices, downstream systems, etc. and between hospitals/clinics. MDI bridges the data gap between bedside medical devices and EPRs.</td>
</tr>
<tr>
<td>Historical Data Conversion</td>
<td>The pre-loading of patient data (e.g., allergies, problems, notes, etc.) from legacy and paper sources to new EPR.</td>
</tr>
<tr>
<td>Change Control/Release Management</td>
<td>The setup, maintenance and management of data across EPR environments e.g., Development, Test, Production, Training.</td>
</tr>
<tr>
<td>BI and Reporting</td>
<td>The use of EPR data for operational/analytical reporting and to support development of business intelligence and data warehousing.</td>
</tr>
<tr>
<td>Downtime Planning</td>
<td>The preparations required to ensure the operational and technical readiness in case of EPR down time.</td>
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**Importance of Technology Strategy**

1. **Provide core technical infrastructure and functionality**
2. **Enable integration between core and third-party systems**
3. **Assist in a smooth transition of data from legacy systems**

**Core Technology enables a Digital Future**

- Patient engagement
- Communication & coordination
- Data-led care
- Operational efficiency & productivity
- Emerging technologies
## Strategies for Testing

A critical aspect of any EPR Implementation is the adequate testing of the new system to ensure that it will perform as expected and meet defined quality standards.

### Testing Approach and Scope

#### Approach and Methodology
- Are there organisational testing practices, standards and tools that can be leveraged and/or adapted for the EPR implementation?
- What is the EPR vendor’s testing approach and how does it differ from our best practices?
- How do we determine what needs to be tested?
- What are the acceptable conditions to move from one testing phase to the next?

#### Scope/Timeline
- What is the functional footprint of the EPR implementation? What legacy systems and how many will be replaced?
- What is the scope of testing? Does it include Volume, Stress Testing?
- Based on the overall project timeline, when can testing begin? How will testing be phased? How many cycles of testing will be adequate for each phase?

#### Staffing and Resources
- How is the Testing Team structured? How many resources are required to staff?
- What is the testing team responsible for (e.g., test execution, coordination, both)?
- What skills, experience, and/or expertise is needed for testing roles?
- What roles do SMEs, end-users and other stakeholders take in the testing process?

### Importance of Testing Strategy

1. Reduce overall implementation risk
2. Surface issues and risks early for effective resolution
3. Improves adoption with User Acceptance Testing

### Types of Testing

#### Functional Validations
- Application Testing
- Interfaces Testing
- Integration Testing
- Parallel Revenue Cycle Testing
- User Acceptance Testing
- API and Web Services Testing
- Regression Testing

#### Volume Validations
- Mapped Record Testing
- Conversion Testing
- Access/Scheduling Testing
- Clinical Focused Testing
- Claims testing

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Case Study
Case Study | Convergence at Large US Midwest Healthcare System

Our client sought to replace 274 disparate legacy systems with one centralised system, with more than 60,000 end users experiencing changes to their daily roles. This left leadership at all sites looking for a solution to promote success across multiple dimensions, from patient safety to revenue stability, through a capable and self-assured workforce. The resulting implementation marks the first time in the organisation’s history they were able to truly operate as an enterprise from both an IT and clinical perspective.

Results

• Established governance framework to engage stakeholders across four regions
• Consolidated 274 disparate legacy systems
• Collaborated with application teams comprised primarily of contractors and a client team with more than 500 resources
• Executed four successful go-lives over five years
• Converged and standardised clinical and revenue cycle practice, policy, and process
• Returned to operating baseline within a week of medical center go-live

Lessons Learnt

• Drive convergence from bottom up and top down
• Departments and specialties that invested time in readiness activities were significantly better prepared for go-live
• Ensure any customisation aligns with transformation goals and assess potential impacts on scope, resources, timeline, and maintenance
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Clinical Workflow Design and Content

Wednesday 31st March

4:00 – 5:00 pm BST