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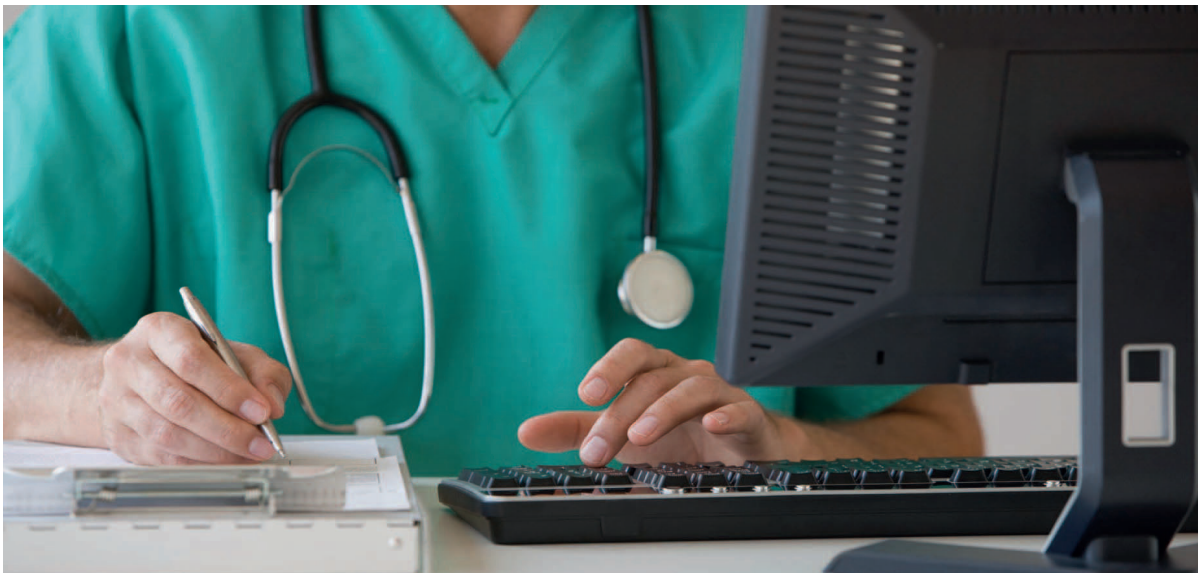
NHS Briefing
Management of Patient Administration System/Electronic Patient Record programme risks



Introduction

One of the most business critical decisions Trust Boards can make relates to the selection of a Patient Administration System (PAS) and integrated clinical systems, sometimes referred to as an Electronic Patient Record (EPR) system, to support improvements in clinical quality and to deliver improved operational and financial performance.

The criticality of the decision is not due solely to the investment required (although a PAS/EPR can cost up to about £50m, depending on the change and transition management required, along with the functionality included and the number of systems with which it integrates) but because PAS/EPR implementation programmes tend to be large, complicated and risky programmes. Specific activities and controls are required to manage a deployment through its 'programme lifecycle', which lasts a number of years.

Over the next few years, many Trusts will be required to make significant commercial decisions about their PAS/EPR. The national contracts, which were established under the NHS National Programme for IT come to an end in 2015 and 2016. Even if a Trust decides to retain the PAS/EPR it deployed under the National Programme, it is still required to establish its own commercial arrangements with the vendor, once the national contracts end. A number of Trusts have decided to collaborate on PAS/EPR procurement and have established Framework Agreements, under which the Trusts involved are able to choose from a range of suppliers. This has happened, for example, with some Trusts in London. Other Trusts have decided to procure a PAS/EPR for themselves.

Trusts need to understand that to minimise on-going running costs, they cannot customise the software packages they implement. They must therefore change their own internal operational models and processes to fit the software. This requires significant effort, cultural change and inspirational leadership.

PAS/EPR implementation programmes create significant clinical, operational, and financial opportunities and risks.

We have gained unique insight into the opportunities and risks associated with PAS/EPR replacement programmes through working alongside Trust Boards and management teams as they have progressed through the relevant decision-making and implementation processes. From this experience we have identified a number of common risks which Trust Boards and management teams should ensure they effectively manage to improve the success of these complex programmes. These programmes are not simply software implementation projects. Implementing the software does not, by itself, result in a properly functioning organisation. Trusts tend to under-estimate the leadership, capability and capacity required to deliver these programmes which can run to double the cost of the software package. Failure to manage programme risks appropriately can lead to operational and reputational damage.

PAS/EPR implementation programmes create significant clinical, operational, and financial risks. Trusts will need to ensure that they have robust arrangements in place to mitigate these risks, including those risks to: delivering quality patient care; delivering value for money from the project; and the risks to the quality of data produced for management and external reporting. Boards will need to consider whether they are receiving sufficient assurance that the Trust's governance arrangements, and financial and operational plans, are robust and operating effectively. This is also likely to be an area of focus for Trusts' internal and external auditors.

This NHS Briefing provides further insight into seven key risks and suggested associated actions to mitigate them, which broadly follow a PAS/EPR programme lifecycle, comprising:

1. **Aligning Information Management & Technology and Trust business strategy**
   There is a need to ensure clarity of the Information Management & Technology (IM&T) strategy and its clear alignment to the Trust's business strategy.

2. **Making the Business Case**
   The ability to produce and then refine an Outline Business Case (OBC), followed by a Full Business Case (FBC) clearly linked to the Trust's Long Term Financial Model, is critical to both securing internal understanding and support for the programme, and being able to successfully engage with other key stakeholders.

3. **Securing external support**
   For Foundation Trusts, there is increasingly a requirement to discuss PAS/EPR replacement business cases, and implementation plans, with Monitor. Depending on the financial performance and position of the Trust, Monitor may view a PAS/EPR replacement as a significant transaction, which will lead to extra reporting requirements for the Foundation Trust. NHS Trusts need to consider the views of the NHS Trust Development Authority (TDA), and how Monitor will assess the business case within the context of a Foundation Trust application process.

4. **Procuring the appropriate solution and associated services**
   Trusts are required to undertake a formal procurement exercise to select the vendors, often including the use of Competitive Dialogue processes which are complex and time consuming.

5. **Optimising programme governance**
   Good governance is critical to all aspects of the programme including Board and Trust wide capacity and capability to deliver the organisation changes associated with the deployment.

6. **Keeping the programme on track**
   Delivering a multi-year programme to planned time, cost and quality expectations, within the context of other Trust change programmes, including CIP, is challenging. It is critical to maintain clinical involvement and confidence throughout the programme.

7. **Delivering clinical, operational and financial benefits**
   Delivering the clinical, operational and financial benefits associated with the business case does not simply occur after the technology is deployed, but occurs through changing working practices and ensuring successful and continued clinical staff utilisation of new technology.

Aligning Information Management & Technology and Trust business strategy

IM&T represents a critical business platform for every Trust, yet not all Trusts have clarity about how to exploit technology to enhance patient care and deliver improved operational and financial performance. There are three key risks:

- *A drift towards an "accidental" strategy*: Trusts need to take control of their own strategic informatics agenda. This requires an understanding of existing systems architecture and operating model, but also an understanding of their functional and integration requirements. Good practice sees an Informatics Strategy Governance body with Trust executive leadership, setting direction and assuring the development of strong, relevant capabilities for the organisation.

- *Isolation or misalignment of those who create and manage informatics from the Trust's clinical and business operations.* Although the IM&T team may support the IT infrastructure and the procurement relationship with key vendors of PAS/EPR solutions, the Trust's clinical community must be fully engaged to co-author and co-own both the target operating model for the Trust (ensuring that clinical and administration processes 'fit' the technology solution) and be responsible for the delivery of the planned clinical, operational and financial benefits.

- *Challenges of short termism:* Many Trusts are only able to effectively afford and therefore plan for the tactical replacement of the current PAS/EPR due to expiry of national contracts or old technology which requires an upgrade to a more modern platform. This prevents a more strategic approach that would include the deployment of a fully integrated PAS/EPR, which provides greater clinical, operational and financial benefits. Clarity over these short and longer term opportunities within the IM&T strategy helps to manage down financial and technical implementation risks, whilst providing priorities for medium term clinical systems decommissioning, to simplify the architecture ready for an integrated PAS/EPR deployment.

Making the Business Case

The creation of Outline and Full Business Cases is required in order that expenditure can be appropriately approved by the Trust Board, but also to ensure that appropriate clinical, operational and financial benefits are specifically identified, linked to the Trust's Long Term Financial Model (LTFM) and supported by defined benefits realisation plans.

An assessment of the impact of any PAS/EPR procurement upon the LTFM, working capital position and associated headroom will need to consider both the baseline and downside case, to provide the Board with an understanding of the affordability of the proposed investment in the context of the Trust's financial outlook.

Key components include:

- *Costs* – Programme costs should be based on structured, external evidence such as tender prices, published NHS staff costs or case studies involving similar implementations.

  However, risks relating to inherently complicated IT infrastructure and PAS/EPR implementations may result in additional costs being incurred which impact the delivery of the original business case. Specifically, where the scope of the programme is poorly defined, including the final functionality of the PAS/EPR solution, there is a risk that the Trust continues to request functionality 'add-ons' as clinical teams request ever greater functionality, adding to the overall cost, rather than utilising standard functionality and adapting Trust's processes to what is provided. Preparation of business cases should be aligned with the HM Treasury *'Green Book: appraisal and evaluation in central government'* and related guidance, including the Five Case model for public sector business cases.

- *Benefits* – Business Cases must include detailed 'bottom-up' assumptions for each potential cost saving associated with the PAS/EPR deployment. The most significant operational and financial benefits are associated with changing Trust clinical and administration procedures to 'fit' the functionality of the new PAS/EPR technology. Many Trusts are challenged to identify costs associated with current 'As Is' processes and the benefits associated with the change to revised 'To Be' processes supported by new technology. Consequently the level of clinical, operational and financial benefits defined within Business Cases are consistently understated.

  In order to identify effectively the clinical, operational and financial benefits associated with the deployment of a PAS/EPR solution, Trusts must ensure high levels of clinical involvement in the analysis of changes to clinical and administrative processes which will occur through the full use of PAS/EPR functionality. It requires the Trust to articulate a revised operating model for how the Trust will operate with new PAS/EPR functionality.

  This future Trust operating model, and therefore the potential impact of the PAS/EPR deployment on Trust operations, should become more detailed as the OBC matures into the FBC. Sensitivity analysis of Business Case costs and benefits should support the Trust Board's assessment of affordability, including under the LFTM downside case (which should include any downside PAS/EPR risks), in particular where the planned benefits are not achieved within the LTPM period.

Securing external support

PAS/EPR deployments are large complex programmes, requiring Trusts to re-engineer significant elements of clinical and operational processes to 'fit' the new deployed technology to ensure it can achieve the planned benefits. Monitor is increasingly focused on Foundation Trust undertaking significant investment. The Board must make the decision whether or not to invest: Monitor's expectation is that the Board should undertake appropriate due diligence prior to making a decision and have appropriate governance in place to ensure that they make the right decision.

Monitor and the TDA are increasingly focused upon ensuring that the level of clinical and financial risk to a Trust is minimised as a result of PAS/EPR replacement programmes. An element of this assessment includes considerations of the Trust's capability and capacity, including Board level capacity, to support such large programmes.

A critical element of this assessment is the Trust's historical record of delivering organisational change as an indication of its ability to deliver the process level change required to support the deployment of new PAS/EPR functionality and ensure the realisation of financial benefits within the Business Case. A Trust's ability to explore and evaluate each area impacting financial costs and benefit within the OBC and the FBC demonstrates the strength of governance that underpins the Board's financial decision.

Our experience demonstrates that too many Trusts rely on technology suppliers to deliver change and there is often a lack of sufficient self-examination of the wider changes proposed within the Business Case and of clarity on accountability for their delivery at Board level. In addition the commercial levers available to the Trust in negotiating the terms and conditions with suppliers can be limited by the timetable for the replacement of legacy systems, affecting the risk mitigations available.

Monitor and the Trust Development Authority are increasingly focused on minimising the clinical and financial risks around implementing PAS/EPR replacement programmes.

Procuring the appropriate solution and associated services

With one or two notable exceptions, Trusts buy, rather than build, a PAS/EPR solution. A compelling reason for Trusts to 'Buy, not Build' is risk reduction; however, if the Buy process is not effectively approached, it can become a major risk in itself.

PAS/EPR procurement is a specialised area for which it is legitimate to run a Competitive Dialogue process with the known vendors. It enables the Trust to screen bidders through a pre-qualification phase, through assessment of their organisational, technical and functional capacity, their financial standing and their General Compliance Profile. Whilst a Trust may negotiate a contract for a major Trust wide operational platform perhaps once or twice every 10 years, the successful vendor may negotiate 100+ such contracts over the same period. Each Trust must recognise its strengths and weaknesses and identify its risk areas in advance of procurement.

The Competitive Dialogue process provides a Trust with flexibility to develop a more focussed dialogue with vendors over its requirements and desired contractual terms. Many Trusts do not have in house expertise to run and support a procurement process on this scale. A key risk for a Trust is its ability to manage timelines to meet Trust business imperatives and keep sufficient commercial pressure on vendors, whilst remaining compliant with relevant procurement rules.

At a practical level there are a number financial and other risks which Trusts should avoid, associated with a large software investment of this type:

- *Lack of market analysis*: Trusts need to make sure they understand indicative pricing and available functionality before they get to the pre-qualification stage;
- *Unclear total project costs:* Trusts should consider the total cost of the PAS/EPR solution, including not just capital expenditure or software licence costs but also integration interoperability costs to link the PAS/EPR deployment to existing and future clinical solutions. The VAT treatment should also be considered;
- *Unclear total running costs:* Trusts should perform full financial modelling of supplier prices including add-ons, volumetric drivers, baseline data, user driven costs and parallel running of systems to compare the realistic cost of a PAS/EPR solution against the current cost base and expected business benefits; and
- *Lack of insight into commercial mechanisms*: This may result in an increased risk for to Trusts where contract terms are attempting to protect the supplier against public sector 'flexibility'.

Optimising Programme Governance

Given the transformational impact a PAS/EPR implementation has upon a Trust operations, combined with the commitment of resources needed to ensure the transformation is successful, these programmes require sustained leadership from the Trust's Board and Executive Team. Successful programmes have been able to secure and, more importantly, sustain executive leadership involvement.

The level of internal and external resource required to successfully deliver the programme will inform the style of governance and the reliance on Non-Executive Directors to hold the Programme Board to account. Key elements of programme governance include:

- *Senior Responsible Officer* – A PAS/EPR implementation should be appropriately governed with a Senior Responsible Officer (SRO) appointed, which, given the scale of potential transformation change, should usually be the Trust's Chief Executive. The SRO role does not need to be full-time but does need to have the time to devote to the programme to provide strong leadership and be an advocate for the organisational changes that will occur. We have seen instances where PAS/EPR implementations have encountered preventable difficulties because of a lack of executive leadership.

  There should be a full-time Programme Director and/or Programme Manager (see section below for further discussion) reporting to the SRO. A PAS/EPR Programme Board should be established which the SRO chairs and which key stakeholders attend. This Programme Board should derive its authority from the overall Trust Board and should meet quarterly as a minimum, although probably more often as implementation gets nearer.

- *Trust capacity and capability* – The capacity and capability of the Trust Board and of the organisation as a whole to cope with the programme must be considered. Having a Non-Executive Director who understands IT implementation and associated business change helps. It is also important to make sure that Board agendas include time for genuine discussion about the risks involved in the programme and about progress.

  Elsewhere within the Trust, there must be sufficient capacity and capability to manage suppliers, implementation partners and the Trust's internal resources. Placing overreliance on suppliers has tended to result in failure to achieve the organisational change required to deliver the planned operational and financial benefits as suppliers tend not to pay sufficient attention to clinical content, redesign of operational processes and business change. Successful implementations are characterised by organisation-wide clinical and business change initiatives supported by appropriate technology functionality and capability. Where clinical leadership and engagement is stronger, PAS/EPR deployments have stronger sustained technology utilisation, enabling the delivery of the clinical, operational and financial benefits within the Business Case.

- *Risk management* – Almost invariably, PAS/EPR programmes are high-risk but necessary, so a key consideration for the Trust Board and Programme Board will be their view upon, and tolerance of, the risks which the programme presents to the Trust. Unclear tolerances at the corporate level may result in the programme exposing the Trust to risks which are outside the Board's expectations, so it is important to provide clear parameters within which the Programme Board can manage the implementation, escalate emerging risks and secure Board support to resolve key issues. In reaching its conclusion, the Board should consider the following risk areas:

  – Impact on maintaining clinical quality;
  – Impact on financial stability including Continuity Of Service Risk Rating, surplus/deficit, underlying profitability and working capital headroom;
  – Capacity and capability to deliver the programme in the context of the Trust's business-as-usual activities and potential changes which commissioners could impose during the programme, particularly in its early stages; and
  – Management of third-party relationships.

Keeping the programme on track

A critical risk is that the PAS/EPR deployment programme does not adhere to the planned timetable and that milestones on the programme plan continually 'drift to the right', impacting upon the Trust's LFTM as the timing of costs and associated benefits within the Business Case change. This situation can be complicated by the fact that there are often multiple suppliers to manage e.g. the PAS/EPR supplier, the infrastructure supplier, sometimes a data migration tool supplier as well as transformation activities within the Trust.

The most effective way of addressing this common risk is to ensure that there is a dedicated full-time Programme Director and/or Programme Manager in place, supported by a Programme Management Office (PMO) to ensure that there is proactive management of the plan. Its role is support the implementation of the programme plan on behalf of the Trust (not the suppliers) and to ensure that dependencies, issues and risks are tracked and addressed. It also produces timely, detailed and consistent reports for key stakeholders.

Successful programmes are based on hard data which enable Trusts to plan effectively and then measure and assess the benefits delivered.

Honest status reporting is critical to the successful PAS/EPR programme delivery. Successful programmes are more effective at addressing issues when they are known to all stakeholders, and the reasons for them clearly understood, thereby enabling clear decision making to address them appropriately.

Delivering the clinical, operational and financial benefits

The NHS's track record for successful PAS/EPR implementations has been mixed, with some well-documented challenges on the timing of deployments and the associated changes to administrative and clinical pathways. Those less successful implementations have had a clear negative financial impact upon individual Trusts, including both an impairment of fixed assets and a failure to achieve the expected financial benefits.

Clinical, operational and financial benefits are derived from successfully delivering Trust wide business change that goes beyond the direct impact of changes to the PAS and EPR, through both:

- Operational efficiency measures, which can reduce costs, increase capacity and increase revenues; and
- Changes to patient care, which can improve quality, manage costs and potentially increase revenues."

Successful programmes therefore are based on hard data which enable stakeholders to measure and assess the quantum and type of change achieved. Data forms the baseline or run-rate from which change is measured. It also defines the end target and waypoints along the process. Whilst the concept is straightforward and common in good project management, the challenge is in collating and consolidating data over the relevant time periods both to define the extent of the 'problem' and also to quantify what benefits could be brought through business change.

Continued stakeholder and clinical engagement is critical to generating leadership, vision and prioritising those areas of business change which will generate the benefits. Effective communication is critical to persuade all affected personnel to invest in the sometimes substantial level of cultural change, training and ways of working that have been identified to deliver the business benefits.

Lastly, governance over delivering business benefits must focus on timelines. Set them and stick to them. Individual and team performance should be measured against them with meaningful recognition for achieving those changes. This accountability is critical because the financial investment has usually been made and the go/no-go decision was dependent on achieving these business benefits.

Key questions

The issue of PAS/EPR and EPR replacement is significant for any Trust, even those electing to establish their own commercial arrangements with existing suppliers once national contracts come to an end. Based on our experience, well managed processes with adequate resources and appropriate profile from a governance perspective can see significantly better rates of success when it comes to limiting costs to those recognised in a Business Case, and to fully realising the planned benefits. Key questions which Trust's need to ask of themselves are:

- Has your Trust considered the implications of the national PAS/EPR contracts ending in 2015 and 2016, and the actions that it needs to take?
- Is the Trust's IM&T strategy aligned to other strategies?
- Are clinicians as well as management adequately involved in the specification design of the Trusts PAS/EPR and related systems?
- Has your Trust adequately appraised short and long term costs and benefits to PAS/EPR replacement options?
- Is the Trust clear how it can identify the relevant costs and benefits within a Business Case, with an ability to develop robust plans to contain costs and realise benefits as planned?
- Does the Trust have the capacity and capability to provide sufficient programme management oversight to a significant project such as PAS/EPR replacement?
- If your Trust has a PAS/EPR replacement programme underway, is the Board adequately appraised of the risks and progress of the programme?

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