

Authors

Catherine Foot

Lara Sonola

Jo Maybin

Chris Naylor

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Service-line management

Can it improve quality and efficiency?



Key messages

- To manage services well and achieve improvements in quality and productivity, hospital trusts need to gather and analyse detailed information about the performance of services and to support clinical leaders of those services to manage their services and lead improvement. Service-line reporting (SLR) and service-line management (SLM) together offer an approach to achieving this.
- We conducted interviews with staff in seven trusts using or developing SLR and SLM, and found considerable variation both in how successfully they were being applied and in the impact they could have.
- Realising the benefits of SLM requires skilful implementation within trusts. The role of the board is critical to drive the roll out and progression of SLM, enable real devolution of decision-making to take place, provide strategic leadership and promote co-ordination across services. Clinical engagement is essential and can be facilitated by working with and supporting clinicians to use SLR data, ensuring that expectations are realistic and recognising and responding to the different motivations and interests that different staff will have. Effective use of data involves working with clinicians to identify useful data sources, tailoring presentation to the audience and understanding that improving data quality will be an ongoing process. Time, expertise and continuous training are needed to support implementation and minimise the effect of staffing changes.
- Despite its potential, there are a number of tensions and challenges inherent to the SLM approach, for both policy-makers and local leaders. Clinical interdependencies and overall population needs mean that cross-subsidisation of unprofitable service lines is often inevitable. Trust boards need to guard against allowing current financial pressures to prompt them to reverse progress made towards devolving decision-making to clinical teams.
- SLM is designed for use within hospitals, and is not able to support the wider opportunities for quality and productivity improvements derived from looking at clinical pathways across care settings. SLR and ultimately even SLM approaches could, however, be adapted over time to support more integrated care.

Introduction

First introduced into health care in the 1980s in the United States, and later developed and championed by Monitor in England as part of its function to support good financial and performance governance in foundation trusts, service-line reporting (SLR) and service-line management (SLM) are one approach to informed clinical leadership that is increasingly being adopted across the hospital sector.

In SLM, a hospital trust is divided into specialist clinical areas that are then managed as distinct operational units led by clinicians. SLR provides data on financial performance, activity, quality, and staffing. The SLM structure enables clinicians and managers to plan service activities, set objectives and targets, monitor their service's financial and operational activity, and manage performance (Monitor 2009).

The fundamental elements of SLM – better use of information and clinical leadership – have long been priorities of those interested in improving NHS performance. Efforts to engage hospital clinicians in management began in earnest in the 1970s and 1980s (Chantler 1989) and thousands now hold management roles in addition to their clinical responsibilities (Walshe and Smith 2011). As The King's Fund's recent Commission on Leadership and Management in the NHS highlighted, effective clinician-led management is more important than ever if the NHS is going to meet current funding challenges (The King's Fund 2011). This effective management must be underpinned by the greater use of information by clinical teams to monitor and understand their own activity and performance (Baker 2011; Tomson 2009; Berwick *et al* 2003).

In The King's Fund report *Improving NHS productivity: More with the same, not more of the same*, we highlighted the potential role that SLM can play in improving productivity (Appleby *et al* 2010). In this report, we present findings from interviews with NHS staff who are using SLR or SLM, revealing how they are implementing this approach and what helps and what hinders working in this way. We also offer a set of lessons and tips for organisations looking to introduce or develop SLM and discuss some of the wider challenges and implications of the SLM approach.

About the study

We conducted a series of semi-structured staff interviews in seven NHS trusts between February and May 2011. The trusts were selected with advice from Monitor to provide a broad spectrum of levels of experience with SLM and a range of clinical areas. They are:

- Birmingham Children's Hospital NHS Foundation Trust
- Cambridge University Hospitals NHS Foundation Trust
- Northumbria Healthcare NHS Foundation Trust
- Royal Free Hampstead NHS Trust
- South London and Maudsley NHS Foundation Trust
- University College London Hospitals NHS Foundation Trust
- University Hospital of North Staffordshire NHS Trust.

The seven trusts have been randomly allocated a letter A–G when quoting staff or referring to them in this report.

We interviewed between three and seven members of staff in each trust. The interviewees were selected to give a range of perspectives at different levels and from different professions within each trust. They are a combination of:

- board members (such as chief executives, directors of finance, and medical directors)
- heads of directorates or divisions (both clinicians and general managers) and their finance support staff, referred to as senior clinicians or managers
- heads of service lines (medical, nursing and general management) referred to as managers or clinicians
- staff given specific responsibility to support SLR or SLM across the trust (typically based in the finance directorate) referred to as managers or support staff.

The specific clinical service lines and divisions where interviewees are based included: medicine, emergency care, urgent care, cardiac and cardiothoracic services, obstetrics and gynaecology, complex care, psychological medicine, specialist services, paediatric and adolescent services, and imaging and investigations.

Staff from all the sites came to a half-day workshop at The King's Fund in September 2011 to input into the final report and to share experiences of SLM with each other.

What is service-line management and what can it achieve?

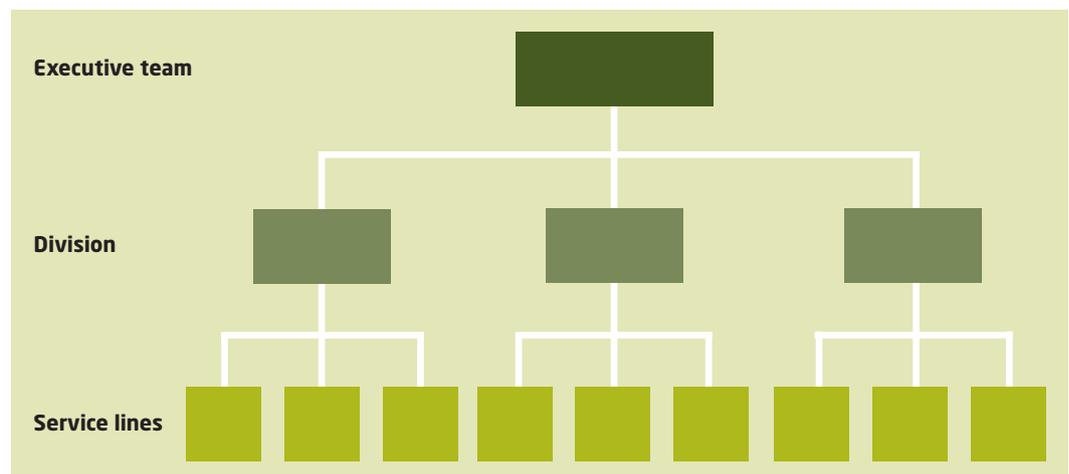
This section briefly sets out the theory of SLM and then goes on to present findings from our interviews about how SLM is understood and used in practice.

SLM in theory

In SLM, a hospital trust is divided into specialist clinical areas called service lines that are then managed as distinct operational units. Clinicians, often consultants, typically lead these service lines. By devolving management decisions to the service-line level, hospitals operating with an SLM structure foster clinical leadership and encourage greater staff engagement in the delivery and planning of the service. The basic organisational structure of the trusts we studied was typically as shown in Figure 1 below.

SLR systems underpin this management approach by providing data on financial performance, activity, quality and staffing at the service-line level. Some of these data can come from routine sources such as hospital episode statistics, and other data on areas

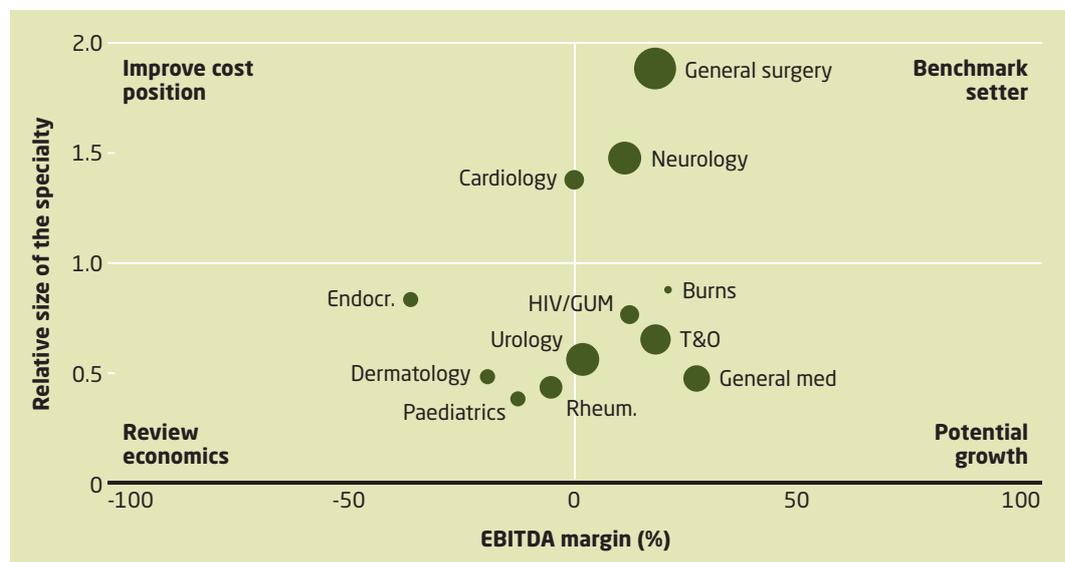
Figure 1 A typical organisational structure under SLM



such as staff pay or central overhead costs have to be allocated to each service line. These data should then be used by service-line leads to monitor and manage performance.

Aggregated to provide an overview of performance across the trust, SLR data can be used by boards to support their strategic decision-making. For example, Figure 2, below, shows an example ‘portfolio matrix’ of the sort often presented to boards using SLM. Each service line is represented by a circle, and all are placed on a simple grid of size (volume of activity) against profitability (presented here as the EBITDA margin – earnings before income, taxes, depreciation and amortisation). Service lines in the top-right quadrant are the ‘benchmark setters’, generating high volumes and good profitability. ‘Potential growth’ areas come in the bottom-right quadrant, with good profitability but low volumes. On the left-hand side, larger specialties can be looked at for their potential to reduce costs and improve efficiency, and small and unprofitable services can be reviewed for their viability.

Figure 2 An example of a portfolio matrix under SLM



Monitor recently published a framework to help trusts assess themselves in terms of their implementation of SLM (Monitor 2011). The framework, alongside other toolkits and guidance from Monitor, provides a wealth of detail about how to implement and develop SLM. Overall, however, the framework stresses four fundamental elements, each with an overall description of what a high-performing SLM trust would look like (see Table 1 below).

Table 1 Monitor’s SLM self-assessment framework: high-level dimensions

Dimension	Summary description of high performance
Organisational structure	Service lines are clearly defined and agreed, with identified leaders who are accountable for integrated service-line performance management. Service-line leaders are supported, incentivised and performance managed.
Strategy and service-line planning	The service-line strategy is defined. Service lines are embedded in the annual planning process and service-line leaders are incentivised to deliver.
Performance management	Performance management enables the development of accountability and transparency in the progress made against specific initiatives and objectives.
Information management	Accurate, integrated and comprehensive service-line information is provided for improved decision-making.

Source: Monitor (2011)

SLM in practice

There are many examples of the theory of SLM being understood and translated into practice across our seven sites. However, there was interesting variation between trusts, between service lines, and between different levels and types of staff. When describing what SLM is for and what it has achieved, staff particularly talked about:

- SLM as central to trusts' overall management strategy
- devolving decision-making
- making investment and disinvestment decisions
- understanding cost drivers and addressing clinical variations.

SLM as central to trusts' overall management strategy

Several trusts explained that SLM is hard to divorce from their overall management strategy. *'It sets the pace and tone for anything else that goes on in the hospital.'* (Manager, trust D). Some saw it as the natural progression of the sort of management approach that people have been trying to develop in the NHS for ten years or more, with *'managers and clinicians working closely together to be clear about what we deliver and the financial implications of delivering or not delivering it'* (Manager, trust B).

Many senior staff felt that clinicians, as those closest to patients, were best placed to take management decisions. They saw this as a matter of organisational culture and stressed that this was more important than some of the technical details.

I think it's really about a cultural shift in which the chief exec needs to create an environment in which those nearest to the patients can make decisions about improving patient care. It's not about how many service lines you have or whether you've let people keep 3 per cent of their profits or whatever... it's not a project, it's how you run your business.

(Board member, trust D)

However, the terminology of SLM does not have universal appeal. A few interviewees rejected the language and terminology as 'management speak' or as unnecessary rebranding of things they already did.

Devolving decision-making

All the trusts we spoke to saw SLM as a form of devolved decision-making, with some describing service lines as *'mini foundation trusts'*. Several trusts either have or are developing compliance frameworks, accreditation schemes, or processes where the service lines formally prove themselves capable of greater freedom and responsibility, echoing the system for trusts receiving foundation trust status.

For several trusts, SLM is a natural and necessary approach to managing the complexity of patient care. *'All decisions we try to take in this trust immediately become very complex, so actually trying to devolve these things to the people who know has a real benefit.'* (Board member, trust F).

In practice, variable progress has been made in devolving operational decision-making. In one clinical team in trust B, the lead clinician has been highly successful in using financial data to make a number of decisions about staffing levels, rotas and performance management. This service has seen significant improvements in productivity and fewer complaints, although data on clinical outcomes are not yet available. However, in other trusts, few decision-making rights had been devolved in practice and clinicians were becoming frustrated by the lack of progress in this area.

Greater control at service-line level can occur only if trust boards cede that control. Boards need to be prepared to *'let go'* and sign up to a *'philosophy of devolution'* (Board member, trust A). Instead of direct performance management, the role of the board becomes more about *'capability building on the front line... to enable them to do those things themselves'* (Board member, trust D). One service-line lead felt that the board was there *'for support and for major decisions that impact on another service outside of my control'* (Manager, trust E).

Some stressed that there is a balance for service lines between freedom and accountability. *'It's about trying to find a balance between giving people freedom to make a change and also realising they are doing that within a framework – it can't always be them [making the decisions] when it's interesting and right and someone else when it's difficult.'* (Board member, trust D). Many service-line leads agreed that greater decision rights were necessarily combined with clear accountability.

Making investment and disinvestment decisions

Many talked about using service-line data to decide which services to invest or disinvest in. *'It's moving away from the "bad old days", where things got fudged and sorted out eventually – now moving to a much more commercial environment.'* (Senior clinician, trust A). SLR is intended to enable a more accurate and transparent understanding of how much different services cost. One service-line lead described this as helping to *'level the playing field'* for services across a trust, ensuring that the full costs of patient care in a particular service are recognised (Clinician, trust C).

One potential implication of devolved control is that service lines could have the ability to retain and reinvest any surplus they make. This is often framed as the ultimate realisation of SLM. Trusts varied in their implementation of this model, with three trusts already using it in some form and others debating and developing their approach. None of the trusts had completely devolved budgetary control to the service-line level. In some trusts, service lines reporting a surplus are able to submit a business case to reinvest some of this surplus in specific service improvements. For example, a service in trust A received funding for an additional four nurses on this basis. One manager in trust B reported having the confidence to develop a business case for a new day care service because of data showing that similar services for other patient groups had proved financially viable.

In trust D, new surgical theatres have been built and intensive-care bed numbers increased in high-performing areas, while some specialties are exploring new business opportunities, for example, in the overseas private market. However, these decisions are made at an executive level in the organisation, and can arguably be attributed to the development of new service-line reporting systems rather than service-line management per se.

Implementing SLM can also create a clearer understanding of which services are making a loss in their current form or under existing contractual arrangements. This does not necessarily imply that loss-making or unprofitable services should be disinvested in. *'It's [about] considering what you do with those [services] that are loss-making. You maybe recognise that it's essential to your portfolio and has to be kept, or that it's very expensive but also very high quality.'* (Senior clinician, trust F). In such cases, SLM can provide the data to renegotiate a new funding settlement with commissioners.

Some staff at service-line level chose to describe SLM not as a means to make rational investment decisions, but as a way to protect and argue the case for their own service. *'Information is power. If they're going to cut their service, and they're fighting their corner, then they've got that information.'* (Senior clinician, trust F).

Understanding cost drivers and addressing clinical variations

Some trusts have found that implementing the SLM approach can support managers and clinicians in developing a better understanding of what costs a service faces and how these could be minimised. *'You can start looking at why the service costs what it costs: Have we got the most cost-effective treatment for X? Do you really need to do this test every X weeks? And do you really need to do this number of scans?'* (Senior clinician, trust F).

A team in trust A found that a major part of the costs related to a particular procedure were driven by the use of highly expensive consumables – in some cases the cost of these alone exceeded the value of the tariff price. By identifying these cost drivers, the team has now succeeded in reducing expenditure on consumables.

Some clinical staff were concerned that SLM was being used purely as a means for reducing costs, for example by making services responsible for managing down their costs (but not for spending any profit). A clinical service director in one trust told us that they saw this as getting the downsides of SLM without the upsides; being expected to manage their own cost pressures but not getting any additional income from their activity.

In several trusts, clinical teams have used finance and activity data to explore and address clinical variations. A number of teams focused on costs related to tests and diagnostics. In trust E, sharing pathology and radiology data with service lines led to changes in clinical practice across the trust. Each division was shown data on their use of tests, including which tests they used most frequently, which they spent most money on, and where tests may be being used inappropriately, including extreme cases where patients were being subject to a large number of unnecessary tests. This led to a significant reduction in the use of tests believed to be unnecessary or of limited value.

In some cases, conversations about variation were being translated into improvements in the cost-effectiveness of clinical practice at the individual level.

We discovered in endocrinology that one consultant was doing masses more tests – they were costing ten-fold what others were doing. When we sat down with her to go through the cost data, she had thought that one particular test was very expensive (which it wasn't), which was why she'd been ordering so many of the others.

(Senior clinician, trust F)

One team in trust A found significant variation in terms of whether clinicians saw patients for a particular surgical procedure as inpatients or as day cases. Much of this variation was accounted for by a single 'outlier' clinician whose practice differed markedly from the norm. The team succeeded in reducing this variation, with costs falling as a result.

Service-line leads in trust E examined variation in length of stay between different patient cohorts and used this to identify areas where there may be scope for improvement. Through this process, a reduction in length of stay of over 10 per cent across the division has been achieved.

Limited overall impact

Adopting the SLM approach has led to tangible service changes in some trusts, in terms of both the services provided and the way these are delivered. Typically these were the trusts who had been working with SLR and SLM approaches the longest. However, in other trusts, examples of concrete impacts are few, or limited to small-scale changes, with little evidence yet that data from SLR is being used systematically to inform concrete changes to services. In some trusts, the size of the impacts reported vary markedly between service lines, with staff most often commenting that this was down to the presence or lack of clinical champions of SLM leading the service lines.

SLM could potentially deliver direct benefits for patients if used to support pathway redesign. Our research identified a few examples of this happening in practice, although this was far from widespread. Where it has been implemented successfully, the SLM approach has been used to support some improvements in quality and productivity of care. In many trusts, however, tangible changes achieved to date have been modest and these are difficult to attribute to SLM. There are also drawbacks associated with SLM:

- disillusionment among clinicians unwilling to trust the data generated and being held to account without corresponding autonomy
- the need to develop leadership and management programmes for clinicians, which may reduce their clinical output
- putting in place data reporting systems and training staff to use them effectively.

These points underline the importance of getting implementation right – the subject of the next section of this report.

Lessons and tips for developing service-line management

A number of common themes were evident in trusts' experiences of implementing SLM: the role of the board, clinical engagement, issues with data and resources. Using these themes, this section offers a set of lessons and tips for those developing and implementing SLM.

Summary of lessons and tips

The role of the board

- Executive support is critical
- Be prepared to cede some forms of control and power
- Redefine the executive role in a devolved world

Clinical engagement

- Develop reports with clinicians instead of for them
- Provide support and training for clinical leaders and their teams
- Expectations and goals must be realistic and shared
- Recognise that the speed and level of engagement will vary

Data

- Identify, collate and evaluate existing data sources in the trust
- Data will always be disputed: do not let this discourage you
- Permit variability in the implementation of SLR: one size does not fit all
- Match the reporting style and level of detail to the audience
- Consider how SLR fits with patient-level costing

Resources

- SLM requires time and energy
- Make the most of financial and informatics expertise
- Minimise the effect of staffing changes

The role of the board

Executive support is critical

Clear and consistent support for SLM at the executive level is crucial. One chief executive put it this way: *'...the "thinking" of the executive and directorate layers are either the barriers or the enablers, depending on what they're like'*. In particular, boards play a vital role in enabling real devolution of decision-making and in committing to invest in the resources required to support SLR and SLM. One clinical lead described it as: *'...having the whole machinery of the trust behind you to make sure you can get their help and make the data more accessible'*.

Having board-level champions of SLM was cited as a key driver to the successful roll out of SLM by respondents in four trusts, with the arrival or departure of particular individuals having a strong influence on the prominence of and commitment to SLM across the organisation. Champions were usually medical directors, finance directors or the chief executive. However, while it can be helpful for an individual board member to champion SLM, it can risk alienating others. In one trust, the medical director had been very enthusiastic and talked about SLM at every divisional board meeting; something the clinical director saw as a key enabler. In another trust, however, there was a finance director who was very committed to SLM, but it was felt to be their *'baby'* and not something many others in the trust were talking or thinking about. Appointing an executive champion at board level can help to keep SLM on the trust agenda but it should not become the sole responsibility of one person to avoid losing momentum when staff leave or change roles.

Be prepared to cede some forms of control and power

Several trusts raised the problem of executives failing to relinquish control over decisions and budgets. This was sometimes couched in terms of trust; for example, one manager described how the arrival of a new *'less trusting'* director of finance had meant the SLM model was essentially abandoned. *'It's about getting the confidence of the executive [to demonstrate that they were capable of managing their own finances] because ultimately they will have to bail [us] out if they're not.'*

An executive team member in another site put it more bluntly still: *'...the executive team are all control freaks'*, and acknowledged that they personally struggled on a daily basis to restrain themselves from jumping in to try to sort out service problems.

Executives need to feel confident in ceding power and control to clinical teams. In our research, one trust chose to set up a system of accreditation, with increased autonomy for service lines as they progressed up levels demonstrating their management capability. Others were beginning to use informal processes to ascertain when service lines were ready to accept more control from executives. Bringing clinical leaders and executives together within divisions to discuss and devise solutions may help to overcome concerns without creating additional reporting structures.

Redefine the executive role in a devolved world

In an organisation where many powers have been fully devolved to clinical teams, the function of executives needs to be redefined. Interviewees in three of the trusts mentioned the ways in which they felt the role of the executive had to change in the context of fully developed SLM structures, and the challenges associated with this. One board member described the changes for her team as follows: *'It takes their role away from performance management and more into... enabling them [service-line leads] to do those things themselves. It is a fundamental change and can be quite difficult to balance.'*

Two other trusts emphasised the cross-service co-ordination role for boards in relation to SLM. For example, in trust A, an interviewee stressed the importance of helping services to work together across the organisation to avoid silo thinking. In trust B, interviewees gave the example of thinking through the implications for all service lines if one service line were to close down. Respondents also described the need for the executive team to referee 'squabbles' between service lines, or to play the role of 'bad cop' where managers risked damaging relations with consultants by pursuing some particular 'battle' (Board member, trust D).

In several trusts, respondents stressed that an organisation needed to embed the SLM approach as a way of working rather than as a finite project, and the direction set by the board would determine whether or not this happened. As one board member in trust D underlined: '[We] *have to set the direction and the behaviour and make sure people are signed up to the philosophy.*' Board members at two trusts also highlighted their shared responsibility to communicate the vision for SLR and SLM implementation, outline strategic goals across the trust and establish realistic expectations on the levels of autonomy and devolution possible within the organisation.

Clinical engagement

Develop reports with clinicians instead of for them

Producing reports in collaboration with clinicians has several benefits. First, clinicians are responsible for making decisions about the care patients receive and the majority of costs incurred by a division/department. This means they are well placed to determine relevant clinical indicators (such as prescribing data) and assist finance staff with effective and efficient ways to collect and display this information that will resonate with their team.

Data quality was a genuine concern among the majority of interviewees, and several felt that clinicians had a responsibility to review and correct inaccurate information. Closer involvement in the development of SLR enables doctors to see whether the figures differ from what they see in everyday practice and work with coders and other support staff to rectify errors. This also creates a positive feedback loop where the more robust the data become, the more clinicians want to use them.

Finally, increased clinical engagement and ownership of data can make it easier to reach consensus within teams when tough choices have to be made. In trust B, one service line in deficit found that having the right information helped them reach a collective decision to reduce capacity and close a service.

Provide support and training for clinical leaders and their teams

Enabling clinicians to take on leadership and management roles within the trust requires a process of support and training throughout their careers. In one trust with an established culture of clinical leadership, a senior clinician explained that they had developed a management training programme to prepare doctors before taking on managerial roles and later added a mentorship scheme for new managers. According to a consultant in trust A, this process '*transformed our ability to manage our clinical service*' and increased cohesiveness, as the '*people managing the service understand the money behind it*'.

Providing mentors or champions for SLM at consultant level across an organisation was suggested by interviewees at six of the trusts. Such people can help clinicians to understand the benefits and drawbacks of SLM and support clinical managers to make decisions or address issues with colleagues when necessary.

A board member from trust A noted that clinicians needed to maintain a level of clinical commitment in order to retain influence and credibility with colleagues, but accepted this was a difficult balance to strike. In trust E, new clinical directors tried to squeeze in management responsibilities on top of full-time clinical work, but eventually compromised on a 50:50 split. Another trust chose to create three-year roles combining clinical and managerial responsibilities, with a job description and required skill set, which increased the proportion of younger doctors applying for these leadership roles.

Supporting clinicians and their teams to develop the ability to understand complex financial concepts was seen as important. Participants from two of the trusts recommended that individuals with responsibility for budgets and activity reports should receive specific training, and trust E had already established a programme. The finance director of one trust suggested that training was best delivered on an ad hoc basis when clinical staff became engaged in finances. However, a senior clinician at trust G felt that such organic approaches to learning made for very slow implementation and recommended a more formal training approach *'to bring new people up to speed quickly'*.

Overall, the respondents felt that the most important skills clinical leaders needed to have were an understanding of their clinical area; familiarity with data collection and analysis; and the ability to represent their service while seeing beyond their own speciality. Trusts undertaking SLM need to consider which approach to training and support fits their organisational culture and the rate of progress they wish to achieve.

Expectations and goals must be realistic and shared

Each of the trusts taking part in our research recounted their approach to SLM in their own way. One trust focused on patient-level costing and used this as a stepping stone to SLM, whereas another built upon a long history of clinical leadership to develop new structures, reporting procedures and management processes.

Regardless of the method, organisations should try to create a narrative around SLM that outlines what needs to change and why, the objectives of the trust and what to expect in respect of devolution and the use of incentives. Informing and engaging clinicians in this process is particularly important as they will be taking on leadership roles. A senior clinician in trust C warned: *'...it is hard to keep extended groups of people interested in the process unless they can see what the outcomes will be'*.

Unrealistic expectations can cause disillusion among staff and undermine future attempts to embed SLM within an organisation. In some of the trusts interviewed, clinicians were initially keen to be involved in SLM, but several years into implementation many were disappointed that problems had persisted around accessing data, achieving autonomy or retaining profits.

As divisions and service lines will differ widely in the pace and nature of their implementation of SLM, it may be unrealistic to try to set goals across the organisation. Instead, executives should work with clinical directors and leads to translate organisational objectives into meaningful targets for their teams, taking account of the feasibility of granting decision rights or retaining profits, and communicate these targets widely.

Recognise that the speed and level of engagement will vary

Organisations need to be aware of the effect that underlying organisational culture or service differences can have on the implementation of SLM. For example, a division with a history of funding via block budgets may face challenges that are not present in a speciality where payment by tariff has existed for years.

One chief executive explained that they could have predicted in advance which services would take up the opportunity to use SLR and SLM based on their previous capacity to *'make change, make a case or take people with them'*. Another chief executive felt that their success was the result of a model of clinical leadership started 20 years ago and a culture where managers and clinicians had always worked together closely.

Individual engagement will also vary, and organisations should expect some clinicians to be unreceptive to SLM. Individuals at six of the trusts had encountered clinicians who were apathetic or even resistant to SLM. A medical director explained that *'...some clinicians do not think in a commercial way and do not want these responsibilities'*. One interviewee also highlighted the emerging prospect of a younger generation of clinicians more receptive to SLM who saw management as an integral part of their job.

Data

Identify, collate and evaluate existing data sources in the trust

It is important to establish the financial, operational and clinical performance information already collected within a trust. The data available can differ greatly between clinical areas so it may be more appropriate to do this within divisions or at service-line level. Trusts who used SLM in an integrated way as part of their whole performance management system incorporated rich data on quality and outcomes, alongside data on volumes and income.

Trusts gathered information on clinical activity, finances and human resources from a variety of different sources. Several interviewees relayed their frustration with reporting systems that were unable to *'talk to each other'* and the additional time needed to collate and interpret this data. In trust D the informatics team were collating information from five different sources in order to produce their reports.

Others questioned the credibility of the data they were able to access, and clinicians in particular were sceptical of the quality and relevance of the clinical measures chosen. Developing a clear understanding of the information sources available and the implications for staff in terms of time and resources in data collection and collation, will help clinical teams, managers and support staff make decisions about the information needed, the level of detail required, how this will be collected and analysed, the frequency of collection and who needs to see it.

Data will always be disputed: do not let this discourage you

Distrust of the data was an overriding theme mentioned by interviewees across all the trusts, as one interviewee summed up: *'...be prepared for a fight about the data'*. One clinician pointed out that half the tests reported under their name were incorrect and bills intended for their department had been erroneously sent to accident and emergency. Another discovered that all the activity within a service had been miscoded after cross-checking income against patient-level data.

A clinician in trust F felt that their clinical indicators were not meaningful and gave the example where low reported rates of hand-washing by junior doctors was the result of staff failing to wash their hands while being observed by a nurse, rather than a lack of compliance. One service-line manager described the problems as: *'...we don't always know how the data was collected... how accurate it is or how to run the report, and issues can arise about getting hold of data'*.

The time lag between data collection and viewing was seen as another obstacle by respondents at four trusts. In trust D, one manager resorted to using data collected via their own internal system, as these data were timely and more accurate.

In the majority of trusts, however, the quality and reliability of data had increased over time and clinician buy-in had also improved. Agreeing a rapid procedure to correct erroneous information in advance can help to accelerate this process. As a manager from trust A advised: *'Don't wait for the perfect solution... give them whatever you've got and work together on improving it.'*

One particular challenge, which all trusts had faced or continued to work on, was the accurate apportionment of overheads to service lines. Since these costs can represent significant proportions of any service line's overall costs, careful discussion and refinement over time of how overheads are apportioned is crucial to the overall accuracy and usefulness of SLR profitability information.

Permit variability in the implementation of SLR: one size does not fit all

The time required, value of information obtained and ease of data collection will all differ between service lines in accordance with both external and clinical factors. Services funded by block contracts rather than payment by results do not have access to the same level of detailed financial information on the cost of their services and may find it much more challenging to link income, costs and activity. As a manager in trust B explained: *'...[with] services based on block contracts... you have to divvy up and make do'*. Specialties funded in this way may also have a different way of working, only reviewing detailed data when income and expenditure fail to match up. *'When you have a budget and it's working, people don't need to be that involved.'* (Manager, trust B). Introducing SLR often requires common IT systems and data sources across the trust but it may be more valuable to devolve responsibility for determining the level of reporting to the divisional/departmental level. However, trust boards should retain a high-level overview of SLM progress across the whole organisation to facilitate strategic planning.

Match the reporting style and level of detail to the audience

SLR can generate a considerable amount of information, some of which is very detailed. Data need to be filtered to ensure that people see what they need to know; presented in a format they understand and feel able to ask for more, or less, detail.

At board level, it can be much more difficult to present information from across the trust when progress is variable. In our research, trust B continued to present information on finances, outcomes and safety separately to the board due to issues reconciling data, although they were in the process of moving to integrated reports.

How boards choose to use data is as important as what they are able to view. A senior executive at trust C explained: *'...the board want higher level data to make strategic decisions, whereas detailed data (every penny spent and on what) helps bring clinicians on board'*. In trust A, the board used data to review overall performance within the trust, taking into account interdependencies between clinical areas and other factors that could affect performance, such as tariff. Clinical divisions were asked to develop their own strategies, which were reported quarterly, enabling the board to review how individual strategies fitted within the wider trust strategic plan.

At the divisional or service-line level, more detail is needed. Several clinicians also felt that data needed to be presented in a more engaging format; for example, in trust D, where they moved from presenting financial information in tables to a monthly graphic showing income and expenditure in each cost area. Clinicians at trust A requested that expenditure and variances were split so they could *'see data which they [could] do something about'*. Graphic representations of data seemed to be particularly powerful for managers and clinicians; for example, interviewees in two trusts talked animatedly about the usefulness of using *'bubble charts'* and *'waterfalls'*.

Respondents from trusts using automated systems such as QlikView, Cerner or Business Objects reported benefits such as access to real-time data, the single view or page showing activity and financial information, a facility to create tailored reports, graphs and diagrams and the ability to look at data at team or consultant level. Interviewees from trusts not yet using these systems, however, questioned their usability.

Consider how SLR fits with patient-level costing

In some trusts, we were told that work was under way to develop patient-level costing. Whereas some saw this work as part of SLM's broader purpose to make detailed information on activity more available, one finance director argued that the two approaches are fundamentally different and would naturally lead to different totals: '*...they won't quite meet in the middle*' (Board member, trust F). SLR is a system of monthly reporting that combines data generated at staff or service-line level with a top-down apportionment of other costs, whereas patient-level costing builds a picture of activity from the bottom up, enabling clinical teams to see the full costs and overheads associated with an individual patient journey.

Patient-level information and costing systems are being rolled out across the NHS and they can provide a much more granular level of data, comparing differences in treatments and their costs between patients or evaluating the performance of consultants. This type of information can supplement SLR data and assist clinical teams and managers in taking strategic decisions about their service. In trust D, the cardiology department used patient-level data to understand '*what was coming through the doors*' and trust E were able to determine whether patient readmissions were related to a prior episode of care. However, the amount of information needed for patient-level costing can be prohibitive and allocating costs and overheads effectively can prove challenging. One department in trust C struggled to match patient encounters occurring under different services to a single episode of care. As trusts develop their approaches to data and reporting, it is important that they consider how patient-level information and costing systems data fits with SLR, and where additional detail is necessary.

Resources

SLM requires time and energy

A number of sites mentioned the challenge of finding the time and staff resources to dedicate to implementing SLR and SLM; and sufficient '*time*' and '*energy*' were seen as key enablers of SLM.

Respondents from trust G cited '*time*' as the main hindrance to the roll out of SLM, and feared that time spent producing reports for SLR was time taken away from directly delivering services. It can be difficult for clinicians to find time for SLM when it is seen as an add-on, rather than integral to their job; one interviewee admitted staff sometimes have to produce reports in their spare time.

Other respondents stressed the need for a dedicated budget and project manager support for the programme; the absence of these factors in trust C was felt to be the reason why implementation was very slow. Setting up a programme with dedicated project management in place could provide a space where competing demands on time and energy can be assessed and resolved, and champions developed. As one clinician summarised: '*...[we need] all key people involved in the service to be committed to SLM*'.

Make the most of financial and informatics expertise

Well-resourced and suitably skilled finance and informatics departments are crucial. One trust believed that limited capacity in these departments had slowed down implementation, and staff in trusts C and E complained that a lack of appropriate skills and capacity meant that the data produced were not made meaningful for managers and clinicians. In trust B, clinicians were unable to view outcomes and quality data collected using paper questionnaires as they did not have capacity to collate and analyse them, saying that they needed help to *'establish links to the data'*. SLR and SLM seem to work best when finance and informatics teams have the capacity and skills to work closely with service-line leads to understand and support their information needs.

Minimise the effect of staffing changes

Interviewees from three of the sites independently mentioned the importance of consistency of staffing in enabling their SLM programmes to make progress. Staff turnover had contributed to a loss in understanding of finance systems by clinicians in trust E, and in a lack of champions of and experts in SLM to support other staff at trust D. In trust B, a board member outlined a series of workshops that had taken place several years earlier to introduce staff to SLM, but newer service-line staff were unaware that these had taken place and had little knowledge of the wider SLM programme within the trust. This example illustrates the need for continual dissemination from the board and communication within clinical divisions on both the purpose and progress of SLM implementation within the organisation. Conducting rolling training programmes, perhaps as part of the induction programme for new staff, may help to ensure that SLM does not lose momentum over time as staff leave or change roles.

Challenges and implications of the service-line management approach

Taken so far, SLM provides a way of managing hospital services that offers opportunities for improving efficiency and quality. However, there are ways in which the ultimate logic of SLM presents a number of inherent tensions and challenges, both for policy-makers and local leaders. In particular, we consider here:

- closing unprofitable service lines and implications for tariff
- SLM and whole health system efficiency
- managing clinicians' expectations
- reverting to central control in times of financial pressure.

Closing unprofitable service lines and implications for tariff

In every trust we spoke to, the SLM system highlights that some services are always cross-subsidised by others. Issues ranged from the realisation that service specialties were at a disadvantage as they could not directly generate income and were reliant on recharging other departments, to permanent problems with the profitability of certain essential services such as maternity.

The business model of an NHS hospital trust, even that of a foundation trust, is not that of a free agent in a free market. Trusts are not entirely free to withdraw services that their local community needs without the involvement of commissioners, regulators and other parts of the system. The latest failure regime plans under the Health and Social Care

Bill make provision for Monitor to ensure continuity of access to essential services for patients. Even without considering potential ramifications for the wider health economy, clinical interdependencies across service lines mean that it is rarely an appropriate decision to close a service that is making a loss.

The intended policy direction towards more local price setting may make it easier for trusts to use service-line data to negotiate more accurate local tariffs. One trust we spoke to had used data showing the costliness of a service to renegotiate an enhanced local tariff and another trust was aiming to do the same in the near future. The failure regime plans propose that Monitor will be able to provide a subsidy to unprofitable services where trusts can justify their higher costs locally.

There are wider implications here for the development of national tariffs. Time and again, the same services were offered as examples of unprofitable services (such as maternity). While there could be numerous local reasons why a given service line remains unprofitable, there comes a point where consistent unprofitability across trusts points to a poorly constructed tariff. Monitor, together with the NHS Commissioning Board and the Department of Health, should find ways to look at the collective evidence from trusts' service-line data for indications of clinical areas where national tariffs need further work.

SLM and whole health system efficiency

Undoubtedly, improving quality and efficiency, both within service lines and for hospitals as a whole, is important. However, some of the biggest quality and efficiency gains come outside the acute sector and come from shifting care out of hospitals and providing more preventative services. Well-managed hospital trusts with active concern for whole pathways of care and good relationships with commissioners and primary and community care providers can work collaboratively to develop services with improved outcomes as the ultimate goal, not activity and profitability growth. But hospital trusts that are more inward-looking, and use SLR and SLM to focus narrowly on their own services' profitability, risk failing to contribute to the broader initiatives across pathways that can be the route to real step changes in quality and efficiency.

One solution might be for SLR and ultimately even SLM approaches to be adapted for use along care pathways, across organisational boundaries, to support integrated care. Such initiatives would be challenging, both technically, given issues of different data sources and needs for data linkage, and managerially, given the need to ensure effective ways of working collaboratively along care pathways and to develop appropriate shared leadership structures. SLR and SLM are designed for use in hospitals, and so would need careful adaptation to be applied to other settings. However, organisations developing integrated services along care pathways should look to SLR-type approaches as a way of reporting and understanding their efficiency and quality.

Managing clinicians' expectations

Clinical interdependencies between service lines mean that it is not possible for SLM to operate as a theoretical 'ideal' model, with all service lines entirely independent of each other, all striving equally for profitability and all able to retain and reinvest their own surpluses. In reality, profit from successful service lines is often used to subsidise unprofitable services. However, in some trusts, there were examples where the SLM approach seems in some cases to have been mis-sold to clinicians as this simplistic ideal. This was certainly the experience of a clinical director at trust F, who said when they had had to give away the majority of their recent surplus:

...that hurt, because you think actually we could have invested that in the service, and what's the point of service-line reporting if you give away your surplus...? At the end of the day it could have been the other way around I suppose. But that was not the way service-line reporting was sold to us.

(Clinical director, trust F)

In trust D, the chief executive said they saw concern about devolving surpluses as a 'huge diversion' and not what was important about SLM and SLR, but further down the chain of command a service director disagreed, arguing that the fact that services were encouraged to generate income but could not then reinvest the income meant that SLM 'doesn't make sense to clinicians at all'.

Those championing the development of SLR and SLM need to be aware of this issue. SLR and SLM have a use and a value despite the subtleties of clinical interdependencies. A more nuanced approach to explaining this to staff could mitigate against unmet expectations later in the process.

Reverting to central control in times of financial pressure

Finally, a number of trusts cited financial pressures on the service as slowing down, or even reversing, the delegation of financial decisions under SLM: '*...it is difficult in this environment as costs are constrained and there isn't the potential to increase income*'... '*it's hard to do in the current economic climate where you feel like you need more control over all expenditure...* [there is] *a tension between devolving responsibility and controlling costs*' (Board member, trust C).

One service director described how initial visions for more devolved responsibility had foundered. '*They were very interested in going further than that about two years ago and then the NHS recession hit and now it's gone very, very tightly controlled again, which is frustrating.*' This manager went on to describe how the trust was taking a 'short-termist' attitude to finances, turning down what they felt were sound business cases from service managers, which would generate income in the medium term, if they required a service to carry a small deficit between years in the short term. A longer-term view of investment and savings is therefore needed.

A medical director from another site told us that they were struggling to protect the progress they had made on implementing SLM because of tight resources.

This [SLM] has worked beautifully in a growing health economy, but it's a bit different under pressure... I'm fighting tooth and nail to keep the delegated authority... and not to lose all the clinical buy-in... there's a real tendency under crisis in the NHS to go back to command and control.

(Medical director, trust F)

In two of the trusts, recruitment decisions had recently been recentralised and now have to be cleared at executive director level. A chief executive also highlighted the complexity of trying to allow divisions time to '*get back on their own feet at the right time*' when performance dipped. For SLM approaches to deliver real improvements over the next two years, it is clearly important for trust boards to focus on retaining devolved decision-making in spite of strong and understandable desires to return to greater central control.

Conclusion

The vast majority of our interviewees were convinced of the value and importance of SLR to the effective management of their trust. Gathering and analysing detailed information about the performance of services is an imperative for any well-managed hospital trust. As patient care becomes ever more complex and the focus on quality and efficiency grows, boards will need to ensure that they have the information they need to genuinely understand their activity and performance. Most of our interviewees stressed the value of the SLM approach in devolving responsibility for decision-making to levels appropriate to those decisions, and in engaging clinicians in management.

While all the trusts stressed these logical benefits of SLR and SLM, and many service-line staff were able to point to a range of specific recent service improvements, it was hard for trusts to demonstrate to us that SLR and SLM had directly improved quality and efficiency. Trusts fell into two distinct groups here: those who could not demonstrate impact because they were at an early stage in their implementation of SLR and SLM, and those for whom SLM had become so embedded in their day-to-day management style that it was hard to point to improvements that could be attributed to that specific element of their approach.

The SLM approach does raise some broader issues. It is an approach for hospitals, and as such is not directly designed to tackle the wider efficiency, productivity and quality opportunity of better integration across primary, community, secondary and social care. SLM is therefore a significant but limited driver of productivity and quality improvement. There may be opportunities in the longer term to develop approaches to reporting and management that adapt SLR and SLM methods to whole pathways of care or to integrated systems, but such innovations were certainly not yet being considered in the trusts we visited.

Finally, what is clear from our study is that implementing SLR and SLM well is challenging. It incorporates some of the most fundamental challenges in managing a modern health service: gathering and using data and information; engaging clinicians in management and leadership; and getting the right balance of devolved responsibilities. It works best when it is central to the overall management approach of the trust and part of its day-to-day way of working. Boards need to set a clear and honest vision for devolved decision-making and resist the temptation to claim back control under financial pressure. This puts at risk the potential for SLM to deliver the improvements in efficiency and productivity that are needed if providers are to deliver on quality, innovation, productivity and prevention (QIPP).

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About the authors

Catherine Foot is a Senior Fellow, Health Policy at The King's Fund. She is currently managing a programme of work on quality and outcomes, looking at issues such as the measurement and reporting of quality and outcomes information. Catherine's background is in cancer policy. Prior to joining The King's Fund, she was Head of Policy at Cancer Research UK, where she worked on cancer services reform, public health, health inequalities and medical science policy. She has also worked in the Department of Health, in both the analysis and cancer policy teams, and has a Masters in Public Policy.

Lara Sonola is a Researcher, Health Policy at The King's Fund. Lara joined the Fund in July 2009 to work on The Point of Care programme while completing her Masters. She is currently working in a number of health policy areas, including research investigating the implementation of health and wellbeing boards across England and a review of intermediate care.

Prior to this role, she worked in the Faculty of Medicine at Imperial College London during the establishment of the UK's first academic health science centre (AHSC). She also managed scientific projects at the Food Standards Agency.

Lara holds a degree in biomedical science from King's College London and MSc in public health (health services research) from the London School of Hygiene and Tropical Medicine.

Jo Maybin is a Fellow in Health Policy at The King's Fund. She joined the Fund in 2006 and conducts research and analysis on contemporary NHS policy developments, in particular around governance issues. In 2010 she co-edited a major review of NHS performance under the last Labour government and in 2011 led an analysis of the impact of the government's reform programme on accountability in the NHS.

She is also working part-time on a PhD that explores how national policy-makers in health use knowledge in their work. Jo previously worked as a social affairs analyst in BBC News. She has a degree in social and political sciences from Cambridge, and an MSc in political theory from the London School of Economics.

Chris Naylor is a Fellow, Health Policy at The King's Fund. Chris joined the Fund in 2007 and conducts research and policy analysis on a range of topics. He leads the Fund's research on mental health and also works on other policy issues including clinical commissioning, health system reform, and the development of integrated care. He has an interest in the environmental sustainability of health and social care and is leading a review on this subject to be published in spring 2012.

Chris previously worked in research teams at the Sainsbury Centre for Mental Health and the Institute of Psychiatry and has an MSc in public health from the London School of Hygiene and Tropical Medicine.

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The King's Fund
11-13 Cavendish Square
London W1G 0AN
Tel 020 7307 2400

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