

Information for Improvement

Introduction

Information for improvement has been used as an overarching theme that is being addressed by the NAS support service. This is in part addressed by the performance dashboard and other components of the initial pilots. However, to supplement and underpin the service the team has been working in collaboration with the NAS Training Service on the concept of an 'information for improvement' syllabus articulating the topics that are being addressed.

At the same time, Jose Westgeest and Ian McIntyre from the MA have proposed a list of support requests from the Information Authority and these have been the basis of discussions between the MA and Leonie Mountney, Sherrin Moss, Lisa Franklin, Esther Ridsdale and others from the Information Authority on the basis of a protocol for IA support to Zero Star Trusts. It seems that the theme Information for Improvement covers these needs and it is proposed that a specification is developed to define the requirements and the syllabus to address the requirements.

This paper outlines the context and considerations to be made when determining the way ahead so as to inform discussions on the subject.

Content of Syllabus

Annexed to the report is a first draft of a general syllabus to cover the topic of information for improvement. The aim here is to start scoping the requirement and potential solution. Detailed content would need to be specified to meet a particular application.

The Requirement

We are faced with the challenge of bridging the following gap between what is required and what is currently available:

What is required:

- Skills in information management; focussed on information collection, collation, storage, analysis and presentation, (rather than IT and design of IT systems),
- Available for staff without an IT background,
- Information requirements and skills gaps need to be addressed efficiently eg without the need for significant effort translating theoretical or non-specific training to real issues.
- Real problems need to be addressed
- Need skills in managing information in a way that supports improvement ie translates to realising real benefits in service delivery, patient care and use of resources (etc.).

What is currently available (and gaps):

- Limited selection of general information training for staff, primarily in specialist subjects.
- Training mainly geared at staff with an IT background.
- Training mainly focused on single technical areas. Little support in addressing whole customer need eg where need draws on more than one technical and non-technical discipline.
- General information training geared at commercial applications and IT systems design.
- Focus (of what information for improvement work there is) is on identification & collection of KPIs - Left with a large gap to bridge in working out where best to focus resources for maximum effect. Gap in knowledge in managing information to support this need; collection, collation, analysis and doing this in a way that informs planning of what to do next.
- Little else available on 'information for improvement' agenda
- The MA provide help in addressing real problems, but the information requirement to enable these is large.

Approach

The skills requirement and gap will be very different for staff different groups and individuals. Means of addressing gaps may include:

- Training – a small part of the syllabus could be addressed by training
- Projects to address an information gap (which may develop skills in the process)
- Projects to address an informational gap purposely designed to also enhance skills (training and other support likely to be a component)

Off-the-shelf materials are only available for a small proportion of the topics. Where pre-existing materials are available, there is little that is directed at the target audience or that can be easily applied to the projects that need to be addressed.

To address the first bullet point need more context... Addressing the second point is cutting edge skills. Though it may be the eventual aim to make action-orientated training available, this requirement cannot at this point be adequately addressed by training. Indeed, to address either of the bullet points, the value can only be achieved if learnt in context. Max value is taught in context and underpins by principles of info for improvement. Principles outlined in annex.

Conclusion

The NAS Support Service Team will work with appropriate people in the MA to clarify the requirement and develop the syllabus to address the needs. An approach needs to be agreed for addressing the need, both for the short term, in the immediate pilot projects and for the longer term.

Esther Ridsdale, NAS Support Service Team, 11th February 2004

NHS IA National Analytical Service

NAS Support Service

Overview of Context & Approach

Introduction

Gathering management information can become an industry in itself. Much of the data collected is never used, while the data that is required never seems to be available. Further, when the relevant data is analysed, the results may leave people with no more informed about what actions will make a difference than they were before. Even when effective analysis is available, it may still not be acted upon effectively.

Information can be an expensive resource, but one that is critical to driving improvement. By ensuring that the collection and analysis of information is truly focused on specific improvement goals, we achieve better value for our investment in that information.

Developing People

Using quality tools and techniques to drive improvement in organisations is a skill that must be developed like any other skill, through knowledge and practice. Thus for example, no one could become an expert poker player simply by knowing the rules and mathematical probabilities of different card combinations. Similarly, people will not become adept at using information to drive improvement simply by knowing data collection and analysis methods.

This means that if we are to help the people in organisations learn to drive improvement, we need to offer a combination of off-job training and on-job coaching. This should be around real projects which both captures immediate improvements and develops staff to tackle future projects independently. Every improvement project will have its own issues, and may require different tools, so that an individual's skill will be developed over a series of projects. Forgetting new skills can also be an issue, so that once new skills have been learnt, they must be reinforced by on-going use working on improvement projects.

Data, Information, & the Improvement Methodology

Data on its own is meaningless, so it is the analysis and interpretation of that data that provides the information we need. Today the mass of data which is available can be overwhelming. It is essential that 'filtering' analysis such as SPC is used to identify significant trends requiring action.

The choice of data to collect must be informed by the purpose for which it will be used, and the type of analysis that is envisaged. In other words, data collection must be closely linked to the improvement methodology.

If our purpose is to improve patient satisfaction, then measures of patient satisfaction will be needed. However, the requirement for lower level data needed to investigate specific problems with patient satisfaction, may only be apparent when the problem appears. Hence the full set of data to be monitored will be developed over time and based on experience.

Data Analysis

Few people have the ability to analyse columns of numbers, and if they can, they will still have difficulty convincing others of their conclusions. As a result, many forms of analysis rely on providing visual methods of analysis such as charts and graphs. If these methods can be standardised, they provide a quality "language" which supports rapid analysis and decisions for action within organisations. Because these tools are easily understood by many people their use also supports consensus building and commitment to actions.

Developing a Structured Approach to Improvement

Acquisition of information is only one step in the process of Continual Improvement, and it cannot be treated in isolation without danger of sub-optimising the improvement activity. When we teach the tools and techniques for data analysis, it should be within the context of the organization's plans to drive the improvement activity.

It will also be important for staff to understand that management is serious, and to understand the context within which they will use their new skills and the level of support they can expect. Following the adage "what gets measured gets managed", performance in the improvement activity needs to be made visible and reported in a way to help higher levels of management oversee, guide and support the work. This is an additional requirement to be addressed in the improvement approach.

Piloting Continual Improvement Programmes within Trusts

One of the key strategies in Continual Improvement is to pilot new approaches, and learn from these pilot studies, so that full implementation can proceed more effectively and at lower cost.

The NAS Support Service pilot initiative of ten week programmes to help trusts implement Continual Improvement is based on the principles outlined in this paper. The pilot service offers an integrated approach to training and coaching based on real project data, and the basic steps of an improvement project. It allows key members of each trust to gain experience of the approach, understand how the approach may be implemented within their organisation, and to provide their informed support for the programme. It is proposed that the principles used in this initiative are also applied in other developments to embed the skills in information for improvement into the ways of working in the NHS.

Information for Improvement - Draft Syllabus

Target audience:

Range of roles involved in obtaining and/or utilising information with the aim of measuring, managing and improving performance, including:

- IT staff
- Performance management staff
- Other staff involved in management and development of services full time or as a part time component of their role or for a specific one off initiative

Draft Syllabus:

- Analysis & statistics for improvement
 - Identifying significant trends, Spotting 'signals' from 'noise'
 - Statistical Process Control
 - Avoiding formats that hide significant trends
 - Use of analytical tools
- Presentation of information
 - Different types of charts & graphs
 - Presenting information to ensure clear and accurate communication
- Collecting, collating & manipulating data (also aimed at improving the cost-effectiveness of data collection)
 - Extracting data from IT systems
 - Collating & preparing information ready for analysis
 - Storage and maintenance of information (eg using simple databases and database administration)
 - Understanding and working round the limitations of data
- Tools & techniques for using information to improve
 - 7 Management & Planning Tools, including
 - Process Mapping
- Strategies for improving data quality
- Understanding the different dimensions of performance of a process & designing measures
 - Understanding the dimensions of quality
 - Understanding & measuring capacity, demand, flow & waste
- Running Information projects; An approach, including a process, with tools and techniques for each of a selection of commonly encountered types of project (based on principles of whole systems thinking and process improvement)
 - Basic: A simple framework for tackling a project eg to gather (collect, store & submit) a set of mandated KPIs, to improve and streamline existing methods for collecting a set of performance information
 - More Advanced: eg Application of principles & practice of requirements analysis and requirements management. Or Tackling a project to review and address the information requirements of a care pathway

High level Topics for Information For Improvement.

These are the areas that could fall within the scope of the NAS Support Service pilots, though the scope will be narrower for the first round of pilots. Discussions are needed to agree the list and scope of content and develop the means for making the content available for other organisations.

1. Performance management

- Performance measurement systems; principles & features of effective performance measurement as an aid to effective performance management, principles of performance management, the Balanced Scorecard.
- Approaches for constructing a performance measurement system
- Performance management processes; eg Review process (for reviewing performance measures, initiating & following up on action)

2. Commissioning

At one end of the spectrum, could start with:

- Approach to gain an information framework for commissioning. This could include;
- Measuring and modelling capacity and demand
- Information collection
- Mapping
- Review process & approach for improving the information framework (iterative)
- Modelling tools - at the far end of the spectrum.

3. Clinical Governance

- Principles and features of effective measurement system as an aid to effective performance management (as above configured to Clinical Governance)
- Use of tools; eg The Clinical Governance Assessment Tool (CGAT) to manage Clinical Governance processes

4. Information to support care pathways

- Understanding information requirements; including process mapping techniques. Advanced skills include 'requirements analysis' techniques
- Approaches for addressing information requirements; Suggest approach based on process improvement methodology. Advanced skills could build on 'requirements management' principles and practice.

Would need to be careful of how far down the spectrum it is appropriate to go. The design of information systems could be seen as the far end of the spectrum, but would probably be more advanced than appropriate for this remit and much of this design is now to be carried out by the LSPs implementing the NPfIT. However, skills in information systems development will help the Trust address a range of information issues not met by computer systems and also enable Trusts to be able to have a better grasp on what is and is not going to be provided by different computer systems and to address the requirements for information viewed more broadly (than those requirements addressed completely by IT systems). It will also help address information requirements where information from a variety of different IT systems and other sources are involved.

5. "Use of information" - To address the topic as covered in the section of the CHI review going by the same name. Would need to unpick what is contained in this.

6. Modernisation (NSF implementation).

Underpinning Skills

The following skills are thought to be necessary to underpin specific skills in using information for improvement. These could be acquired by staff by a huge variety of different routes and different career paths. If they are not present or staff have significant gaps in knowledge, it is proposed that it would be sensible to supplement these skills in the support provided.

- Basic IT
- Analysis skills. Ranging from general analytical skills to basic business analysis. Overlaps IT in, for example, use of spreadsheets.
 - Flowcharting / mapping is also a useful underpinning skill.
- Project Management.
 - Skills in managing cross-functional and team projects would be very useful and often lacking. This could be addressed by support in use of general methodical approaches (eg PDSA) drawing on systems thinking principles/approaches, but would need to be configured to the particular situations that the client group need to address.