

Case Study

Project team:

Dr Damien Carson, Dr Kieran Morris and Mrs Shirley Murray on behalf of the Northern Ireland Regional Transfusion Committee

An audit into the regional appropriateness of blood transfusion

Aims and objectives:

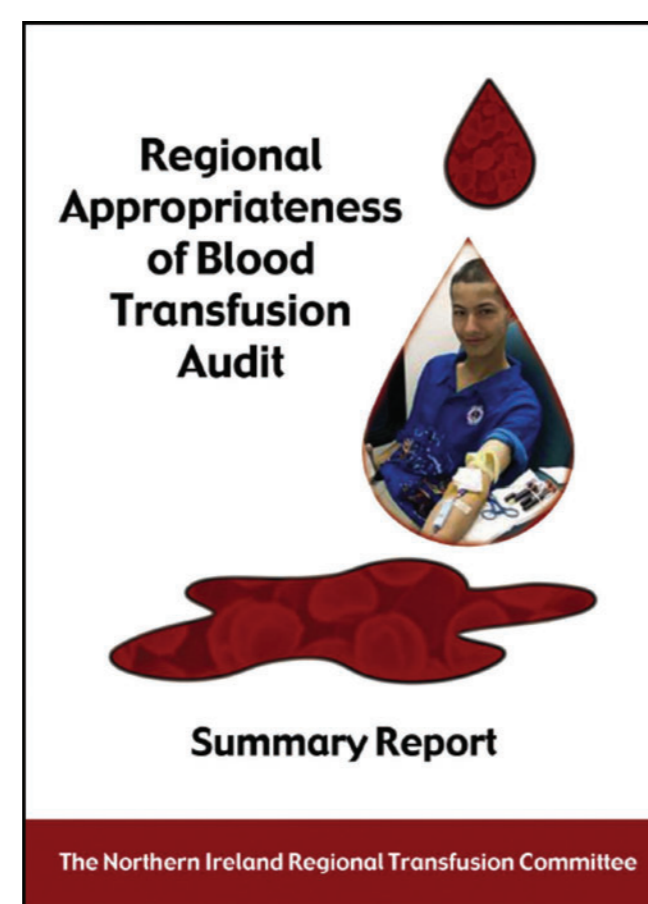
The key objectives of this audit were to examine when a blood transfusion was given to a patient – that this decision to transfuse was appropriate and also to ensure that overtransfusion (*giving too much blood to the patient*) was minimal.

Summary of methodology:

In 2004 Northern Ireland had the lowest transfusion index (*units of blood transfused per 1,000 of the population*) of UK countries suggesting good practice already existed from this simple benchmarking exercise. However a pilot study in one hospital identified significant improvements were possible which generated interest to carry out a similar project regionally. A successful application for regional funding was made to primarily cover data collection. A regional multidisciplinary Lead Audit Group was formed and an external expert from outside the region was co-opted. The group agreed innovative consensus standards after reviewing a wide range of relevant national guidelines. All hospitals transfusing over 1,000 units of blood were included in the audit. An audit proforma was developed and piloted several times until complete. A data collector training day was organised to instruct and calibrate the data collectors and allow queries about the audit proforma. An instruction guide was also circulated in advance of the audit commencing. After collection, data was coded at local level for confidentiality and returned centrally for input and analysis.

Outcomes:

Laboratory analysis was used to streamline 2,853 separate transfusion episodes to ascertain suitability of inclusion. Of these some 1,215 individual patients had their casenotes retrieved and reviewed in depth. Key findings were a 19% inappropriate transfusion rate and a 29% overtransfusion rate with deficiencies in practice noted across all grades of doctors, across all specialities in all the hospitals audited. The audit findings led to 6 key recommendations and an action plan with dedicated responsibilities and accountability to key groups involved in all areas of blood transfusion control.



Guidelines for Red Cell Transfusion (Adults)

Wall Chart

- Always diagnose the cause of anaemia
- Treat reversible causes of anaemia

Stable Patients	Transfusion Threshold
< 65 years old with no cardiovascular or cerebrovascular problems.	Usually only consider transfusion when Hb < 7g/dl
> 65 years old with no cardiovascular or cerebrovascular problems.	Usually only consider transfusion when Hb < 8g/dl
Known cardiovascular or cerebrovascular history (previous myocardial infarction, angina, hypertension, heart failure, peripheral vascular disease pulmonary oedema).	Usually only consider transfusion when Hb < 9g/dl

Patients with symptoms due to anaemia Unstable patients bleeding heavily Impaired marrow function	Transfusion Threshold
Symptoms (dyspnoea, angina, palpitations, tachycardia, orthostatic hypotension, syncope) likely to be due to the anaemia.	Consider transfusion when Hb < 10g/dl
<i>Note - Tiredness alone is not an appropriate symptom for transfusion</i>	
Documented/obvious evidence of ongoing significant bleeding at time of transfusion causing symptoms as above or bleeding more than 500ml per hour and not stopping.	Consider transfusion when Hb < 10g/dl
Current or recent (within 3 months) marrow failure or chemotherapy or radiotherapy.	Consider transfusion when Hb < 10g/dl

Patients should only be transfused to a target of 2.0g/dl haemoglobin in excess of the chosen threshold for transfusion above. Consider patient's estimated blood volume and any ongoing bleeding.

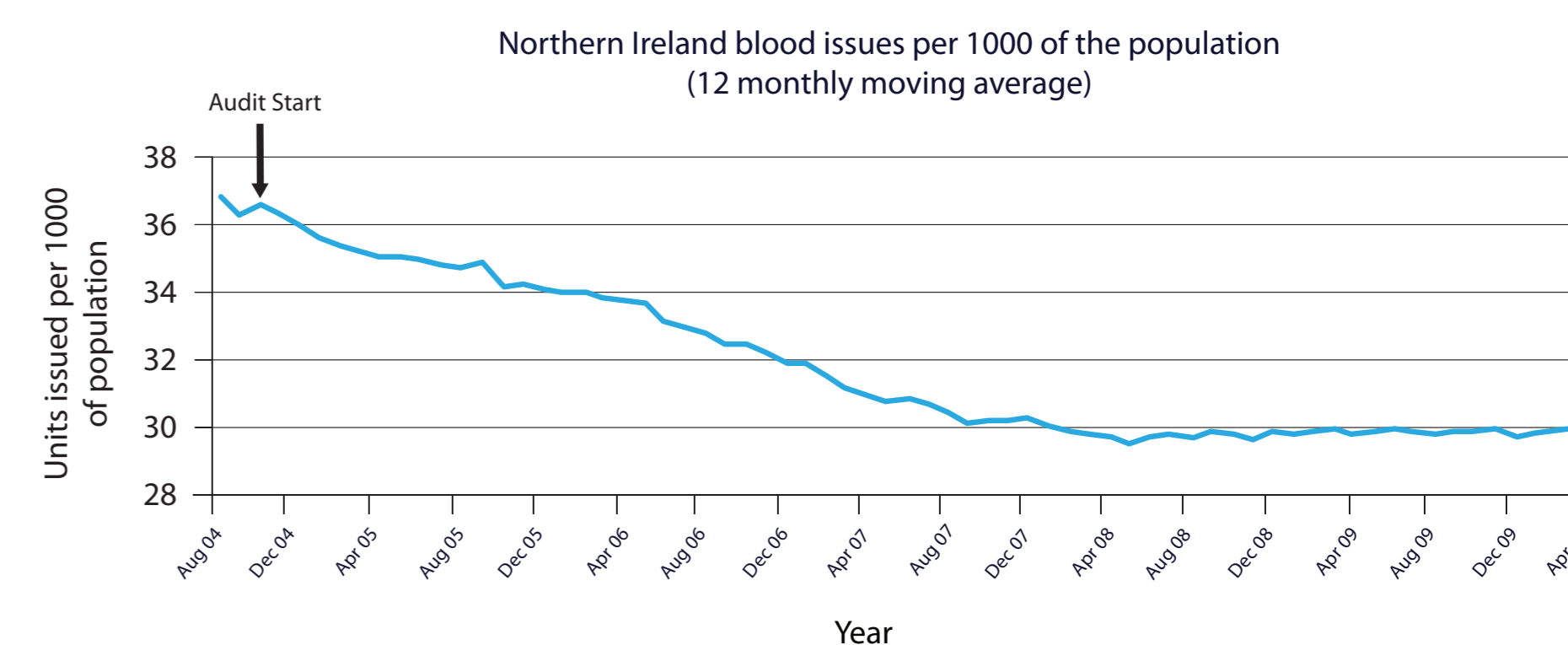


Current Regional Transfusion Guidelines

Based on the consensus standards developed in 2004/5 for the Regional Audit

Implementation of action plan:

The audit was published as a short concise report and widely circulated. The recommendations and action plan were actively implemented over the following four years. The subsequent improvement in practice was both progressive and sustained as demonstrated by reaudits of practice and continuous monitoring of regional blood use as demonstrated by the following graph:



This progressive improvement in practice was further evidenced as a definitive clinical improvement by a recent regional audit of transfusion which showed marked improvement in the 2 key indicators of inappropriate transfusion (*reduced from 19% to 6.7%*) and overtransfusion (*reduced from 29% to 16%*). The Northern Ireland transfusion index is currently approximately 14% below the European average and Northern Ireland is now regarded as one of the most restrictive transfusion regions across all of Europe.

The reduction in unnecessary blood use has been highly beneficial for

- Patient safety – with transfusion now only given when indicated
- Facilitating a better balance of demand to the supply of available blood
- Allowing significant financial savings across the region following decreased collection, processing and use of blood. The monetary value of the blood saved annually is some 40 times that of the **total** investment in the original audit project

In summary, Northern Ireland in 2004 started as the most restrictive transfusion region within the UK. However, this simple benchmarking exercise was an incomplete marker of local quality and control. The more detailed regional audit clearly identified that clinical practice in blood transfusion across Northern Ireland could be greatly improved and its findings generated a comprehensive set of recommendations and inclusive action plan. The subsequent implementation of this regional action plan has improved the management of transfusion at many different key levels of influence and control and has been central to the progressive and sustained improvement of transfusion practice that has taken place.

Project team:

Liz Farnworth, Clinical Audit Co-ordinator
Clinical Audit Co-ordinator – produced original report

Margaret Hughes, Public/Patient Governor

Adjustments and interpretation of report into lay format/newsletter/
discussion with patients

Andrea Arkwright, Head of Engagement
Discussions between Lay Governor, audit dept and GPs

Patient and public involvement in audit – clinical audit newsletter

Introduction:

Wrightington, Wigan and Leigh NHS Foundation Trust (WWL) is a major acute trust serving the people of Wigan and Leigh. The Trust has a strong reputation for engagement with patients and public. It wanted to develop patient and public involvement in clinical audit further.

Background:

Often, feedback to patients and public is generated mainly by media reports and this is often only published when adverse events occur. WWL decided there were better ways to communicate with patients. It decided to invite patient representatives, along with the Head of Engagement for the Trust, onto the Clinical Audit Chairs Committee.

Aims & Objectives:

WWL's aims were to ensure that the public are kept informed of quality initiatives within the Trust in an easy to understand way.

- Patient Governor involvement in interpreting information would ensure it was communicated in terms that are easy to understand
- Formulate a quarterly lay news sheet to communicate clinical audit results and subsequently report necessary actions to improve services for any audits that did not produce good results.

Approach:

The first stage was to engage with patients and public on what service procedures they would like the Trust to audit. The second stage was to produce the results of these topics in a condensed and easy to understand format.

Guidance:

Discussion took place between Public Governor, Head of Engagement and Clinical Audit Manager to decide the best way forward with this project i.e. type of feedback, content of the report, format of delivering the information in an effective way so that it is easily interpreted and accessible by members of the public.

Milestones:

- Quarterly report submitted to Trust Audit Committee, formulated by Audit Manager
- Report approved by Quality Improvement Committee – agreed it should be interpreted into lay terms
- Regular contact with stakeholders ensured interpretation of the original report was redesigned into a format that is easy to understand

Quality control measures:

Final drafts of the report discussed with the communications department and discussions around where and how we would display the newsletters for maximum effect.

Timeframe:

June 2010 – May 2011

Challenges:

Time constraints due to lack of staff. Patient Governor undergoing surgical procedure – needed time to recuperate before using computer and contact with staff.

Successes:

- Results communicated effectively to patients in hard copy and on the Trust website.
- Good relationships formed between patients, public and trust representatives
- Ensure feedback of future projects to GPs as well as patients

Conclusion:

- The overall achievement ensures that future issues of the lay audit newsletter will be communicated in a more effective and efficient manner
- Can rely on good communications between patient and public representatives and trust employees on future projects



Quotes:

“This is a great idea, A very good example of best practice, To put clinical audit into lay terms will enable patients and public to have a better understanding of clinical services and will help them to engage and to influence decision making in their Patient Practice Groups around commissioning.”

Ann Turner. Team Leader. Health & Care Together. Wigan Borough LINK.

“I think this is great, patients have choice and this will help them to make an informed choice. Well done WWL.”

Barbara Nettleton. Community Leader & Patient Royal Albert Edward Infirmary.

“I like that this is in language I can read. It will help people understand what goes on behind the scenes in hospital.”

Eileen Bradshaw. Patient Wrightington Hospital.

Project team:

Dr Aminda de Silva	Project Lead
Carol Thatcher	Practice Development Nurse
Joan Potterton	Assistant Chief Nurse
Joanne Middlemiss	Nutrition Support Dietician
Vivienne McGlashan	Clinical Audit Facilitator

Identifying patients at risk of malnutrition

Background:

Evidence-based standards: The National Institute for Health and Clinical Excellence (NICE) released guidance on nutritional support in adults in February 2006 which identified screening as a key clinical priority for implementation. Inadequate nutritional intake can undermine treatment and exacerbate a range of problems including poor wound healing, depression, poor renal function and immunity. Patients who receive good nutrition may have shorter hospital stays, fewer postoperative complications and reduced need for drugs and other interventions. Malnutrition doubles the risk of mortality in hospital patients and triples mortality in elderly patients in hospital and following discharge (NHS Institute for Innovation and Improvement, *High Impact Actions for Nurses and Midwives*, Nov 2009, pp27-8).

Trust concern: The Trust's multi-professional Nutrition Committee was established in 2000 to promote excellence in nutritional care. In June 2009 the new Clinical Lead for Nutrition and committee Chair requested a clinical survey of inpatients to baseline levels of nutritional risk. Dietitians and nurses screened inpatients on 9 wards using the Malnutrition Universal Screening Tool (MUST). Results showed that around 1/3 of inpatients were at risk of malnutrition with individual ward results varying from 11% (elective surgery) to 64% (gastroenterology).

The process: MUST requires registered nurses to assess the potential risk of malnutrition during admission by recording information on recent weight loss, body mass index (BMI), and likely or possible loss of appetite. Each answer has a score; a sum score of 2 or more prompts certain actions by the nurse – for example offering snacks, keeping a food diary for the patient, referring to the dietitians or starting food supplements. A MUST assessment must be carried out for every inpatient on admission as part of routine assessment, and should be repeated at least every 7 days during admission or more frequently if there is cause for concern.

Aims and objectives:

In order to speak with any authority on nutritional needs of the Trust's inpatients the Committee decided it would be necessary to do a full baseline audit of how well the new tool was being used.

There were two objectives:

- To carry out a baseline audit of the completion of the MUST assessment
- To compare numbers of 'at risk' patients against the results of the concurrent survey to assess whether current service level agreement meets the Trust's needs

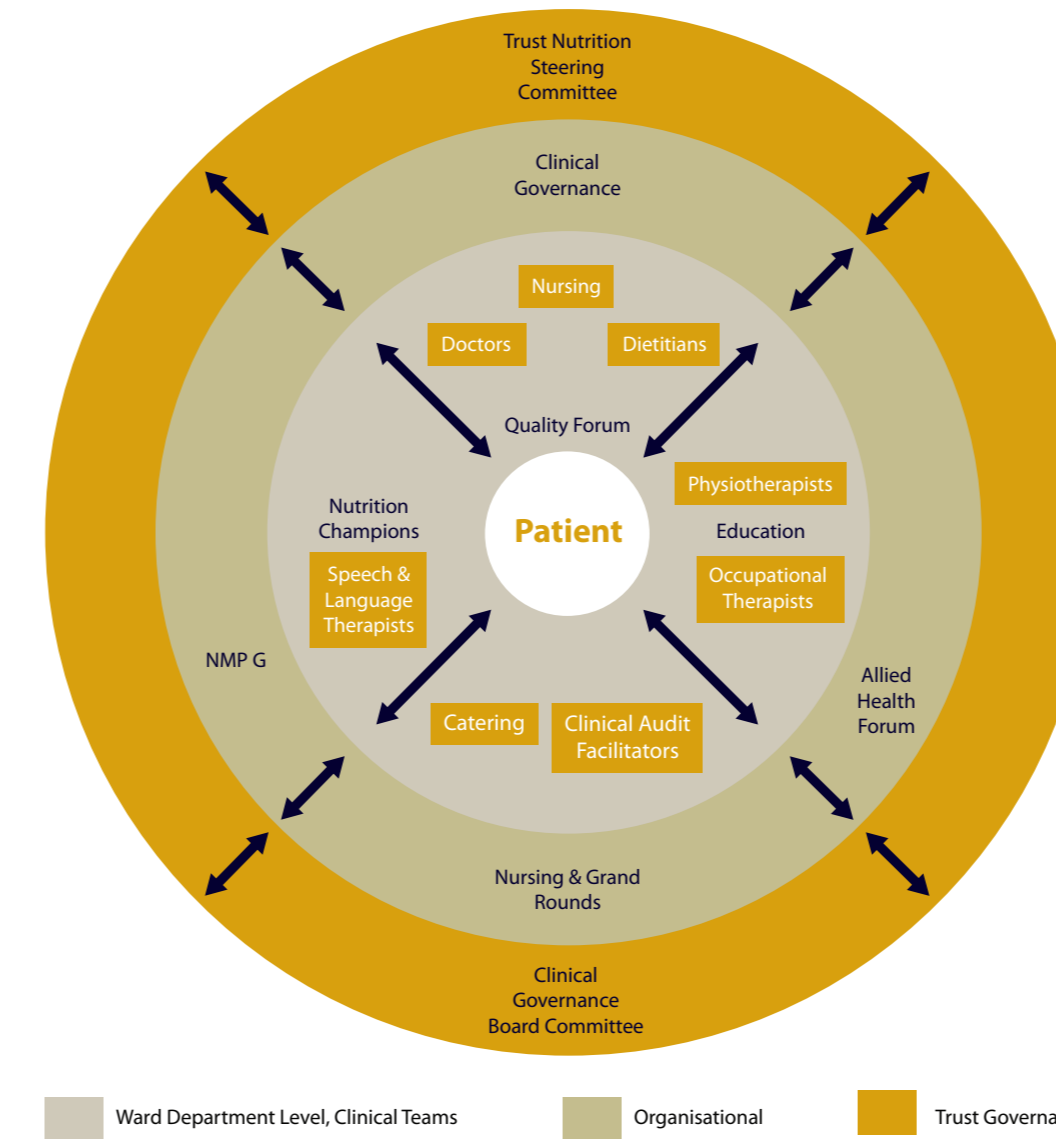
Standards measured against

- All inpatients must be screened for risk of malnutrition within 24 hours of admission
- All elements of screen must be completed and documented
- Patients identified as being 'at risk' (MUST score of 2 or more) should be referred to dietetics

Summary of methodology

Current inpatient notes were reviewed by teams of two (for data validation) using a specifically designed form. The findings were summarised and compared against the survey of actual levels of risk of malnutrition identified by the survey. A report was prepared on 1) completeness of MUST documentation and 2) relative levels of 'at risk' patients identified by MUST and the survey. Ward-level results were circulated to sisters and charge nurses for information.

The results were reviewed and an action plan developed by the Nutrition Committee. The agreed action plan was reported to the Clinical Governance Board Committee meeting.

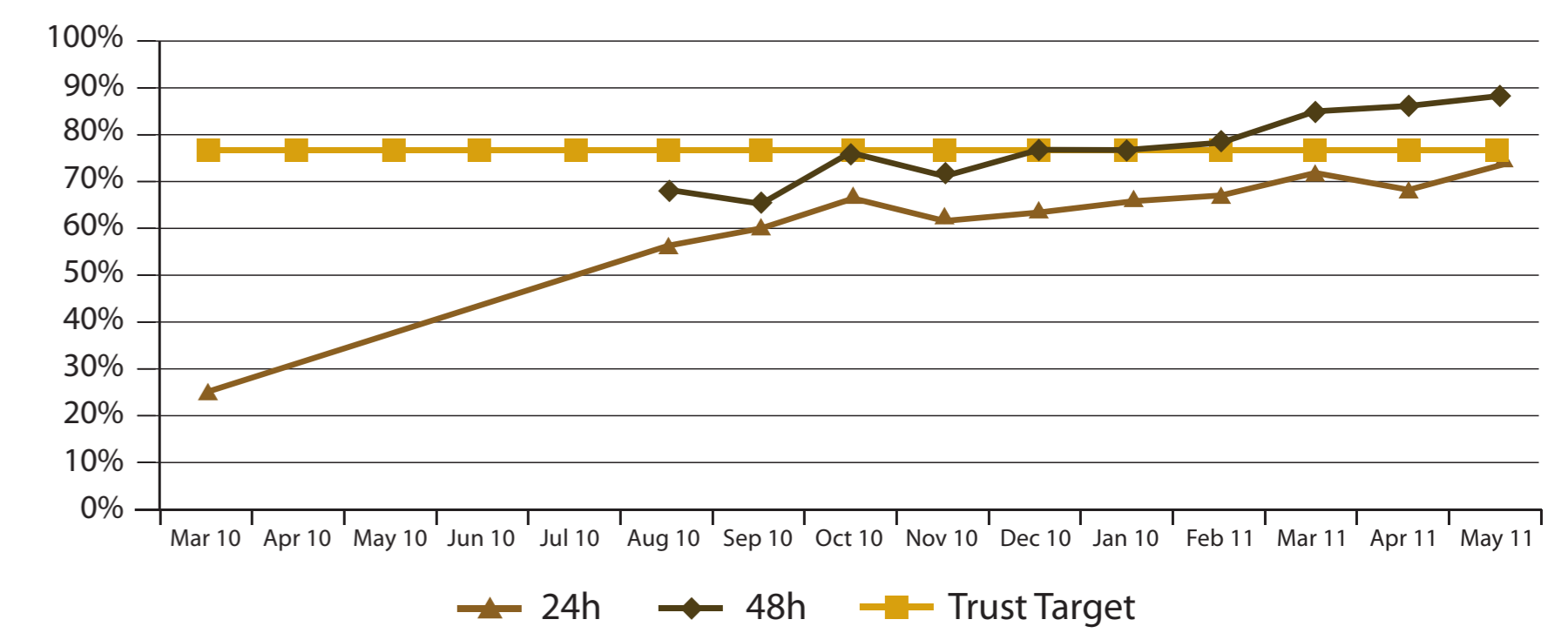


Main findings

- Only 24% of all in patients had a MUST carried out within 24 hours
- 2 out of 3 'at risk' inpatients have not been identified as being at risk. This amounts to just over 20% of the inpatient population at any time
- 6/13 wards who had identified at risk patients had not documented a referral to dietitians for any patients
- Results varied considerably by area. Elderly Care wards on average scored 10% higher than the average of all wards on completing the MUST and 5% higher on completing it within 24 hours. Surgical wards documented referrals to dietitians significantly better than medicine or elderly care



Percentage of patients screened with MUST tool



Outcomes

- Elderly Care has a multi-disciplinary team concentrating on nutritional support which was considered significant to this area's consistently good practice. This model has been rolled out to other areas
- A nutrition care bundle has been implemented to be used for patients identified as being at risk. This is a visual prompt for actions such as referral to dietitians
- A trust-wide multi-professional nutrition champion network has been established so every ward/department has a nutrition champion. The champions audit MUST and care bundle completion, meet regularly to review audit findings and share good practice
- Nutrition champions act as a focus for specialist teaching and link to the Nutrition Support Team. They have a webpage with training resources and advice
- The referral process to dietetics has been clarified. The service level agreement with Dietetics is under review due to the increase in referrals.

Summary of results following re-audit/evidence of sustained improvement

- Increased the percentage of inpatient screening using MUST within 24 hours of admission from 24% to 68% (March 2011) and 83% within 48 hours. We have set a target of 75% within 24 hours
- Standardised the care process for 'at risk' patients using a care bundle
- A care bundle is in place for 74% of patients identified as being at risk (March 2011), compared to 33% of the 'at risk' patients who had a care plan documented in March 2010
- Monthly monitoring allows quick response to problems as they occur. Ward-based champions enable local problem solving and the trust-wide forum facilitates escalation of problems and sharing of good practice