Central Manchester University Hospitals NHS
NHS Foundation Trust

Safety Case for Royal Manchester Children's Hospital (RMCH) as part of

Central Manchester University Hospitals NHS Foundation Trust

'The whole me': improving the safety and quality of care for the child with medical complexity

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Executive Summary

The aim of this project has been to ensure a safer experience for children with complex needs whilst they are inpatients at Royal Manchester Children's Hospital (RMCH). It was initiated following several high level incidents involving children with complex needs; these incidents particularly related to delayed recognition of deterioration. It was clear that this type of incident was commoner in this particular group of children After initial analysis, we defined the group that we were to focus on as, 'children with medical complexity', admitted non-electively under general paediatrics; respiratory; ear, nose and throat (ENT); gastroenterology, cardiology or neurology, who have been cared for by 3 or more specialists within the last year.

Using the safer clinical systems approach we analysed the pathway in hospital for these children and looked at where the hazards and risks lay. We chose interventions and measures that would help us to identify improvements, and increase safety. We subdivided the work in to a number of projects covering the areas where risks were identified

The **ward round** project was carried out with the general paediatric team. The key standards developed were effective communication between medics and nurses as part of the ward round process and communication with families. Issues were also discovered with identification of the lead consultant and families knowledge of this person or name. Temporary white boards by each bed with the child's name, lead consultant and nurse looking after them were introduced and permanent versions will be rolled out across the hospital. Improvements were seen over the project and when last measured, both standards were at 100%.

Over the course of the project the **lead consultant** policy was re-launched and standards for all children were introduced. By the end of the project, 100% of children surveyed were seen by their lead team daily and by a consultant at least twice a week. However, only 85% were seen by a consultant within 24 hours of admission. We introduced a sticker for completion by the lead team listing other professionals already involved in the child's care, which were not well completed. We are now looking at electronic solutions for informing consultants that their patients are in hospital when under the care of a different team.

The **handover** project was undertaken within tertiary medical handover. Interventions included venue change and improvement, education to juniors on the importance of timely attendance and human factors with communication. Over the time of the project, timely attendance has improved and handovers completed within 30 minutes increased from 35% to 80%. A poster campaign informing nursing staff of the timing of handover led to a significant decrease in bleeps and distractions. This will require continued monitoring to ensure improvements are maintained. We are presently working with the associate clinical head of RMCH to encourage consultant attendance to support this and provide feedback and support to trainees.

Speech and Language therapy assessment was identified as an issue with many children waiting for assessment much longer than the target of 48 hours; with measured increase to length of stay. With implementation of electronic referral and a temporary increase in staffing from project funds, all patients were seen within the target time. This supported a a successful business case for permanent increased staff numbers.

Following collection and analysis of **patient and family feedback**, we introduced a nursing care co-ordinator and play specialist to educate and support nursing staff in the care of children with complex needs. We are looking at securing charity funding to continue these roles. They helped with a drive to encourage children to bring 'all about me' documentation in to hospital to support their care and supported families and children throughout admission. We also introduced a patient observation flag to identify these children as at increased risk. The aim is to use this flag in every nursing handover to ensure children with complex needs are highlighted and are routinely assessed as part of the nursing handover and 'core huddle'.

Over the course of the project there was a significant decrease in admissions of this group of children to Paediatric Intensive care and their length of stay there. There has also been an improved safety culture throughout RMCH, as demonstrated by increased incident reporting, with a reduction in high level incidents. The project has helped us to look more proactively for hazards and risk and to implement interventions to target these. It is vital that we continue to maintain these changes and to look for other areas of risk. We also intend to look at other pathways of patient care at RMCH and Trust wide where the Safer Clinical Systems approach can be applied.

Introduction

This safety case will give an over view of the safer clinical systems, Health Foundation Project within the Royal Manchester Children's Hospital that aimed to reduce risk and remove hazards from the pathway of the child with medical complexity. The main aims of the safety case are to present the analysis and diagnostics that were undertaken and to highlight the key areas of risk that were identified. The safety case will describe the assurance that the project team had that the systems that were in place were safe and will discuss the interventions that were taken to add additional assurance into the system and the changes to the safety of the system because of these. The project has endeavoured to reduce the risks in the pathway and the updated safety case will explore these changes, ensuring that the risks that are in the system are both identified and addressed.

Background

The main drive behind the project has been to ensure a safer experience for children with complex needs and their families and carers. It was envisaged that any changes made would provide transferable benefits in the long term to all patient groups and across the organisation and this has proven true with a number of the interventions being able to be replicated across the trust. The main focus of the project was to look at safer handover of the child with complex illness; in this group, impaired communication is frequent and there is a high readmission rate to this tertiary centre. The project soon uncovered that the specific task of handover was not the only aspect of the children's journey that was creating risk, but other tasks that impacted on the handover had to be addressed too; such as the ward round and the tasks that were not completed within the day shift; the referral process to other specialists and the support available for the children, carers and the nursing teams in caring for these children and their more complicated pathways within the hospital.

In 2011, an inpatient point prevalence survey was completed in Royal Manchester Children's Hospital (RMCH) which identified greater than 6 diagnoses in 9% of all admissions. The problems with care quality in this group are reflected in high complaint rates; 75% of the total 203 complaints were from parents of children with complex needs. A length of stay review demonstrated that 16% of inpatients stay >5 days . In this time period, 2010/11, there were 34,689 admissions of which 16,000 day were day cases.

Another key driving force to undertaking the project was recognition that there were problems relating to the failure to recognise clinical deterioration, this had been a recurring theme in the mortality and high level incident reviews of the Royal Manchester Children's hospital (RMCH). A failure of clinical communication and leadership was a frequent key finding in incident investigations.

The initial objectives of the work were to aim for:

- Reliable, consistent, transparent handover

- Clear clinical leadership from beginning of every acute illness
- Improved discharge planning
- Written record of all clinicians involved including community paediatrician when applicable
- Reduced failure to recognise and respond to deterioration
- Decreased length of stay
- Decreased readmissions.

The project hypothesis was that improved handover within RMCH and across primary, secondary and tertiary care would decrease length of stay and admission and re- admission rates, and improve patient safety and patient and carer experience.

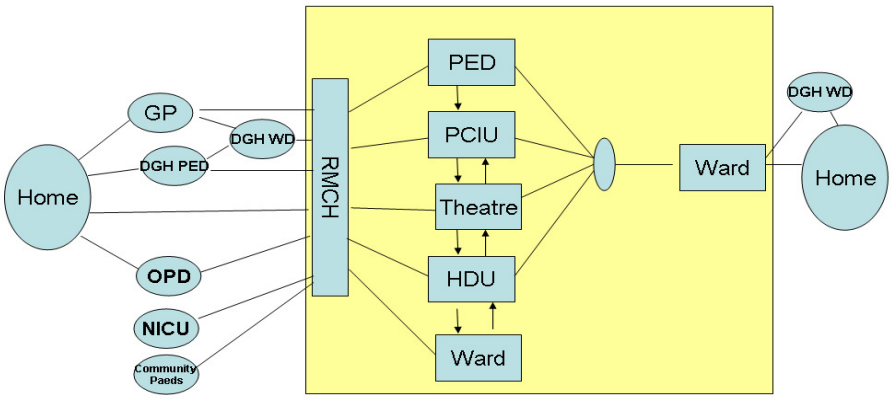
The question we wanted answering was what type of handover/ intervention would facilitate decreased length of stay and readmission and improve patient safety and experience?

Identifying the pathway

The first step was to review 15 sets of notes to begin the identification of the patient group that we would focus on for any intervention. Five sets of notes of 3 groups were analysed; those frequently readmitted, or the subject of high level investigations or that had an extended length of stay.

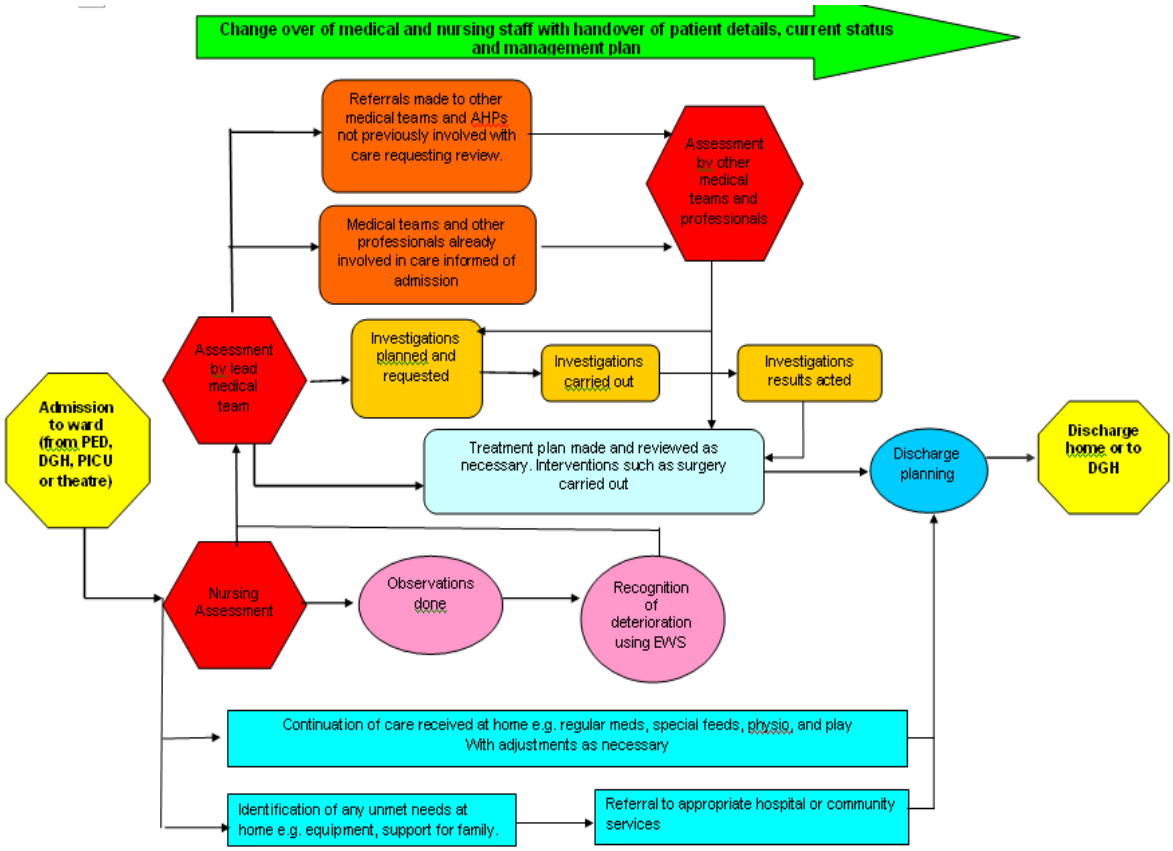
This review assisted in determining our high level process map. This pathway includes areas that link to outside agencies, community teams and multidisciplinary teams across the Trust. The geographical locations shown within the yellow box below are those areas that we are initially focussing.

High Level Process map



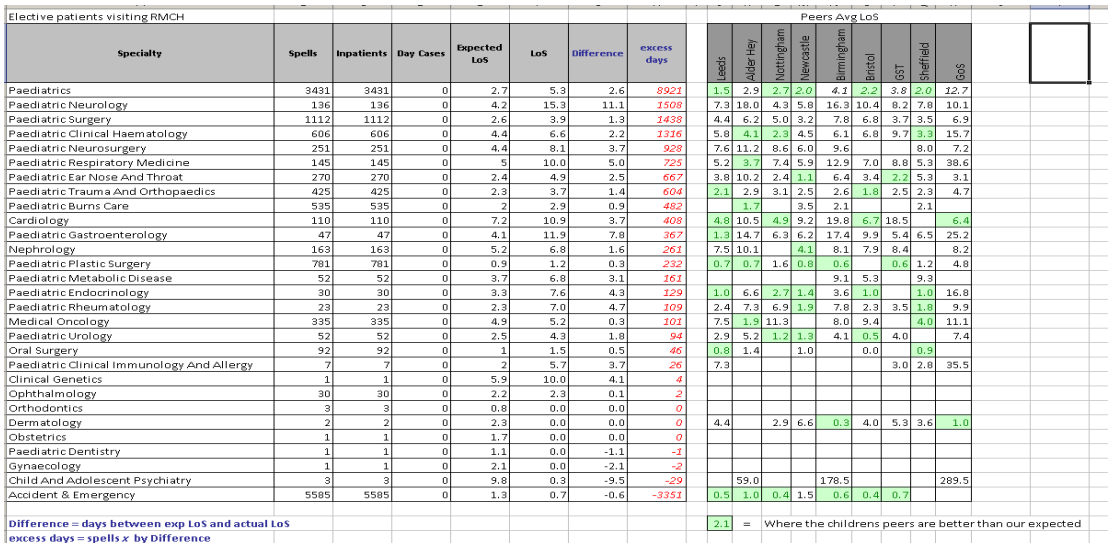
Following the progression of the project and a greater understanding of the detail and processes we were to focus on, the process map was redesigned

New High level process map- December 2012



The notes analysis was supported by a further review of inpatient data collected by our divisional information team; including specialty groups' length of stay and a comparison of the Dr Foster data. This analysis helped to ensure that the most appropriate patient group, who must be able to be identified on admission, was selected. From this analysis, summarised in the table below, the main groups of focus were respiratory medicine, ear, nose and throat, cardiology, gastroenterology and neurology, although general paediatrics was also included for inclusivity. Collectively these account for 75% of the spells in hospital with all of the chosen groups well above the average difference for expected length of stay

(LOS) and the actual LOS. (1.8). Overall, 41% of the excess days to expected LOS is also attributable to these groups.



Elective patients visiting RMCH

Specialty	Spells	Inpatients	Day Cases	Expected LoS	LoS	Difference	excess days	Peers Avg LoS: Leeds	Alder Hey	Nottingham	Newcastle	Birmingham	Bristol	GST	Sheffield	GoS
Paediatrics	3431	3431	0	2.7	5.3	2.6	8921	1.5	2.9	2.7	2.0	4.1	2.2	3.8	2.0	12.7
Paediatric Neurology	136	136	0	4.2	15.3	11.1	1508	7.3	18.0	4.3	5.8	16.3	10.4	8.2	7.8	10.1
Paediatric Surgery	1112	1112	0	2.6	3.9	1.3	1438	4.4	6.2	5.0	3.2	7.8	6.8	3.7	3.5	6.9
Paediatric Clinical Haematology	606	606	0	4.4	6.6	2.2	1316	5.8	4.1	2.3	4.5	6.1	6.8	9.7	3.3	15.7
Paediatric Neurosurgery	251	251	0	4.4	8.1	3.7	928	7.6	11.2	8.6	6.0	9.6			8.0	7.2
Paediatric Respiratory Medicine	145	145	0	5	10.0	5.0	725	5.2	3.7	7.4	5.9	12.9	7.0	8.8	5.3	38.6
Paediatric Ear Nose And Throat	270	270	0	2.4	4.9	2.5	667	3.8	10.2	2.4	1.1	6.4	3.4	2.2	5.3	3.1
Paediatric Trauma And Orthopaedics	425	425	0	2.3	3.7	1.4	604	2.1	2.9	3.1	2.5	2.6	1.8	2.5	2.3	4.7
Paediatric Burns Care	535	535	0	2	2.9	0.9	482		1.7		3.5	2.1			2.1	
Cardiology	110	110	0	7.2	10.9	3.7	408	4.8	10.5	4.9	9.2	19.8	6.7	18.5		6.4
Paediatric Gastroenterology	47	47	0	4.1	11.9	7.8	367	1.3	14.7	6.3	6.2	17.4	9.9	5.4	6.5	25.2
Nephrology	163	163	0	5.2	6.8	1.6	261	7.5	10.1		4.1	8.1	7.9	8.4		8.2
Paediatric Plastic Surgery	781	781	0	0.9	1.2	0.3	232	0.7	0.7	1.6	0.8	0.6		0.6	1.2	4.8
Paediatric Metabolic Disease	52	52	0	3.7	6.8	3.1	161					9.1	5.3		9.3	
Paediatric Endocrinology	30	30	0	3.3	7.6	4.3	129	1.0	6.6	2.7	1.4	3.6	1.0		1.0	16.8
Paediatric Rheumatology	23	23	0	2.3	7.0	4.7	109	2.4	7.3	6.9	1.9	7.8	2.3	3.5	1.8	9.9
Medical Oncology	335	335	0	4.9	5.2	0.3	101	7.5	1.9	11.3		8.0	9.4		4.0	11.1
Paediatric Urology	52	52	0	2.5	4.3	1.8	94	2.9	5.2	1.2	1.3	4.1	0.5	4.0		7.4
Oral Surgery	92	92	0	1	1.5	0.5	46	0.8	1.4		1.0		0.0		0.9	
Paediatric Clinical Immunology And Allergy	7	7	0	2	5.7	3.7	26	7.3						3.0	2.8	35.5
Clinical Genetics	1	1	0	5.9	10.0	4.1	4									
Ophthalmology	30	30	0	2.2	2.3	0.1	2									
Orthodontics	3	3	0	0.8	0.0	0.0	0									
Dermatology	2	2	0	2.3	0.0	0.0	0	4.4		2.9	6.6	0.3	4.0	5.3	3.6	1.0
Obstetrics	1	1	0	1.7	0.0	0.0	0									
Paediatric Dentistry	1	1	0	1.1	0.0	-1.1	-1									
Gynaecology	1	1	0	2.1	0.0	-2.1	-2									
Child And Adolescent Psychiatry	3	3	0	9.8	0.3	-9.5	-29		59.0			178.5				289.5
Accident & Emergency	5585	5585	0	1.3	0.7	-0.6	-3351	0.5	1.0	0.4	1.5	0.6	0.4	0.7		

Difference = days between exp LoS and actual LoS
excess days = spells x by Difference

2.1 = Where the childrens peers are better than our expected

Data from October 2011/12

The complex child group was therefore defined as: children admitted non- electively under general paediatrics; respiratory; ear, nose and throat (ENT); gastroenterology, cardiology and neurology, who have been cared for by 3 or more specialists within the last year.

The numbers in this group are displayed

RMCH Elective and Non-Elective average LoS

Admissions during 2011/12 for children that have visited the hospital (IP or OP) under the care of at least 2 other specialties since Apr09

	ELEC					NELE				
	Admits	Avg LoS	Max LoS	Avg excluding longest 10%	Median	Admits	Avg LoS	Max LoS	Avg excluding longest 10%	Median
251 - Paediatric Gastroenterology	**97**	3.2	36	1.73	1	**43**	7.0	34	4.9	5
258 - Paediatric Respiratory	**80**	5.9	17	4.8	7	**115**	10.5	98	7.4	7
321 - Paediatric Cardiology	**11**	14.3	90	4.4	2	**34**	8.9	49	5.4	4
421 - Paediatric Neurology	**33**	3.4	27	1.9	1	**94**	11.6	216	5	3
215 - Paediatric ENT	**315**	2.0	140	1.1	1	**41**	12.8	142	5.1	3
420 - Paediatrics	**203**	3.7	23	2.2	1	**1019**	7.3	248	3.4	2

Data from October 2011/12

The children with medical complexity appeared to have a less safe journey through the hospital demonstrated by incidents, complaints and anecdotal discussions surrounding this; it was our intention to identify, explore and understand these risks to determine the interventions to reduce the hazards and make the journey safer.

Analysis

Further analysis of the patient group began, to identify what the issues, challenges and areas of risk were. It was identified that they were a number of teams handing over a number of times; this was not always effective and often did not capture the changes in patient condition or plans of care.

Our first technique supported by the Safer Clinical System (SCS) process was the high level process map. The development of this high level plan was undertaken with the

multidisciplinary team and included significant debate surrounding the journey. Once agreement was met we created the above diagram to inform the further discussions. As the processes map covers a potentially diverse journey that can cover many areas we agreed to undertake two swim lane mapping activities to ensure we gain good insight into the patient's journey. This analysis of two representative children was undertaken (see appendix 1 for patient A, example swim lane map). This multidisciplinary review aimed to identify the key issues and risks throughout the Child's pathway. The teams involved in the analyses were from a variety of clinical teams across the site, with relevant and vast experience in clinical work, risk management and improvement processes. The individuals within the groups included consultants, senior and junior nurses and allied health professionals that worked in the areas that often care for the children with complex medical needs. The groups also included members of the clinical effectiveness teams and project manager.

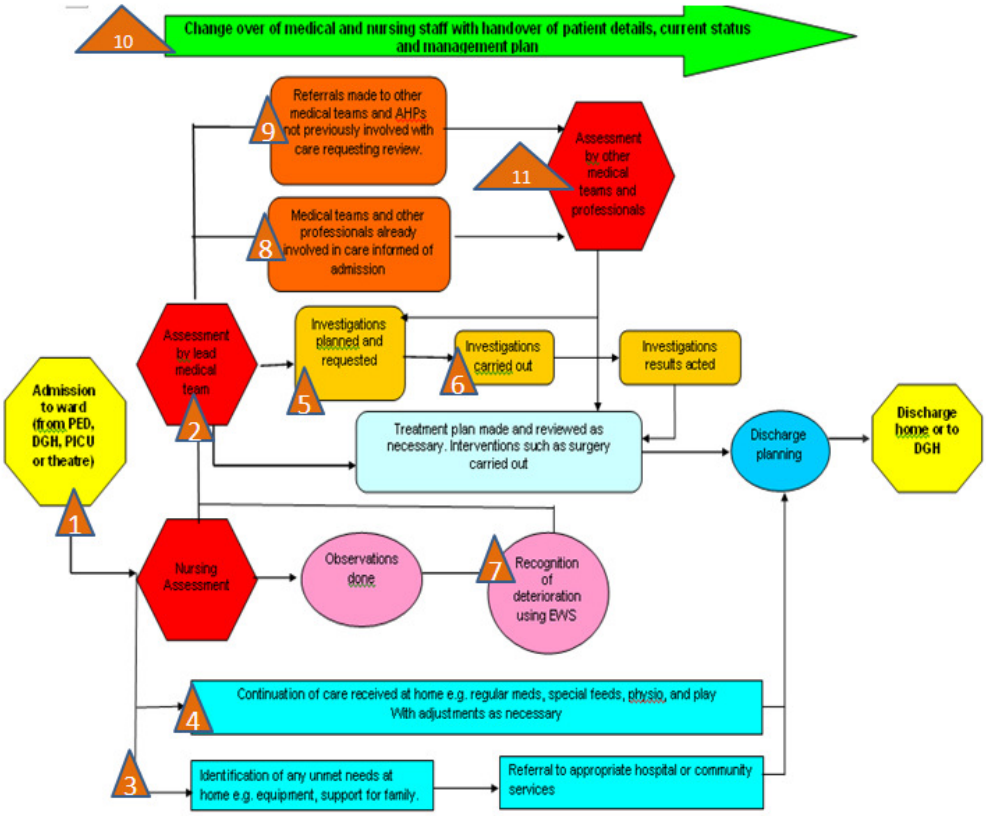
The two cases reviewed were both typical of the patient group and the issues identified supported much of the anecdotal discussions that had occurred previously (See appendix 2 for key issues).

Following the swim lane map, we highlighted the key issues and were able to then undertake the "create and detect model". This helped refine the key issues and processes that were not delivering as they should be. This assisted in targeting the area where many issues arose- initially this was the ward round.

Create and Detect Table

	Home	GP	DGH	Neo Natal	Community Paeds	Out Patients	A&E PED	Ward	SALT	Theatre	PHDU	ITU
Home							Patient has language issues	Patient has language issues				
GP												
DGH							Great History!	Great History!				
Neo Natal												
Community Paeds												
Out Patients												
A&E PED							No Handover Standard Oral Meds Omitted	No EWS sticker Prescription chart not commenced				
Ward			Informing Delay at Discharge					Barium, u/sound & MRI extended times to request. 1 month for consultant ENT review/Time & Date of reviews not documented/ Debate concerning use of EWS. Appropriateness of referral to Physio. Funding of equipment unclear (Mickey buttons). No single point of clinical responsibility/Person. Family not aware of transfer	Delayed referral			
SALT								5 day delay to attend				
Theatre										No Handover Standard		
PHDU											No Handover Standard	
ITU								Delayed discharge to ward				No Handover Standard

The create and detect was exceedingly helpful at pinpointing the issues and when following a further look at the high level process map with this detail, we can clearly identify the hazards. (See below)



Hazards included:

1 and 2: Incorrect identification of the lead consultant.

3: Failure or delay in identification of unmet needs leading to delayed discharge.

4: Failure to identify pre-existing care needs for the children so that these can be continued in hospital.

5 and 6: Difficulties in allocating responsibilities in carrying out/ acting on investigations and communication across the ward teams.

7: Failure of recognition of deteriorating clinical condition using early warning score. (This was being covered in another project so was not dealt with in this project).

8: Failure by lead team to inform consultants already involved in care of patients admission.

9 and 11 Delay in referral and assessment when other specialist opinions required and lack of ownership.

10: Details of patient's condition and plan not adequately handed over.

From this, it was a direct step to complete the Failure Measures, Effects Analysis (FMEA) report. All the initial risks that had been identified in the "create and detect chart" and initial case reviews were assessed and graded, with controls discussed and agreed across the group. To ensure that this was agreeable to all team members this was discussed at two multidisciplinary meetings and emailed on more than one occasion across the membership of the children with medical complexity group: the response was excellent and the process ensured comments and scoring was agreed. This FMEA allowed identification of the processes that are in place presently and how effective they are at reducing and mitigating

any risk. This allowed us to immediately identify areas that were perhaps not as robust as required and introduced ideas for the interventions within the project which were further discussed and either kept and developed, or postponed for a later date, if still required. See appendix 3 for the FMEA.

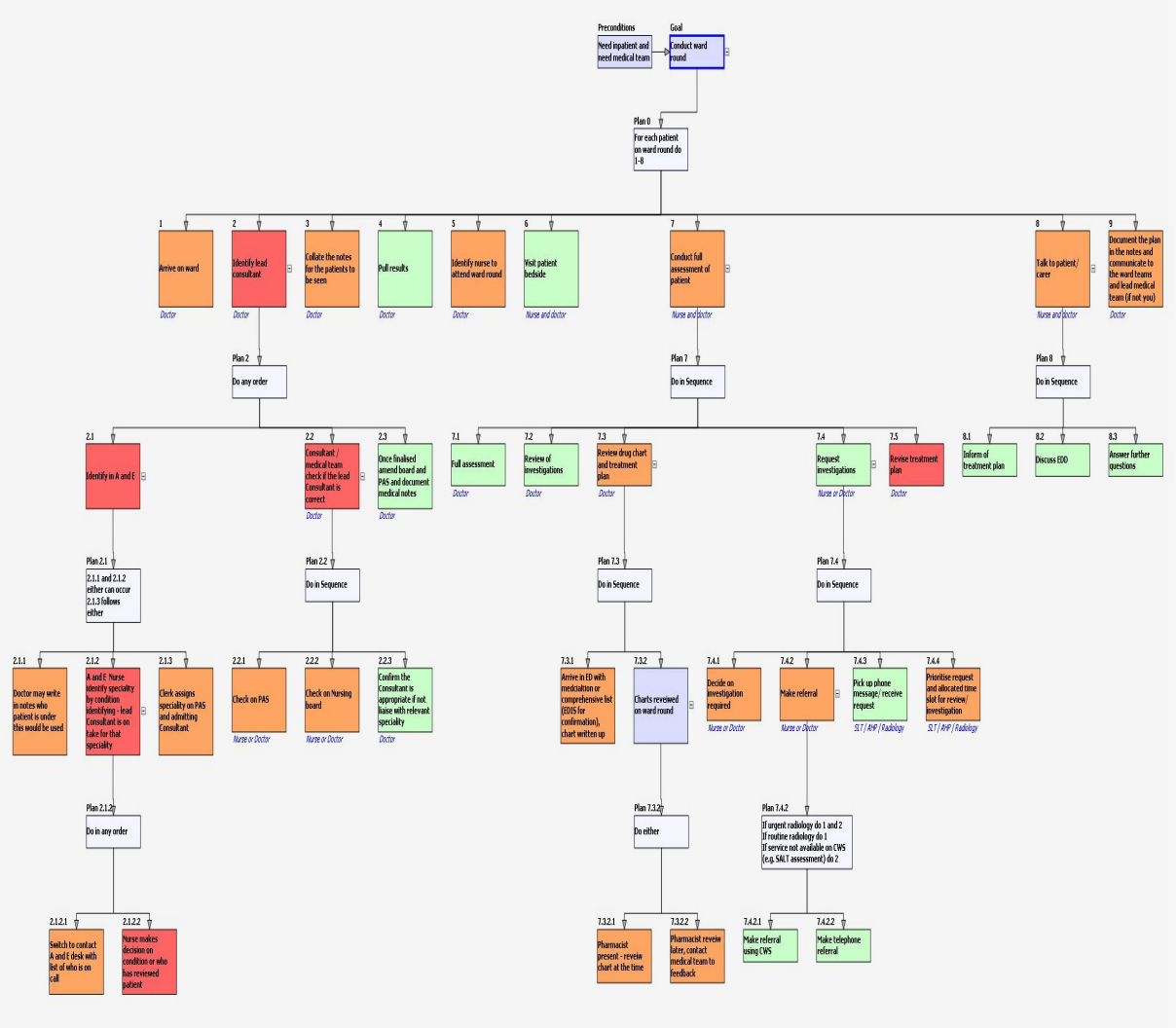
From the FMEA, the key areas that required further exploration were identified, thus two groups commenced the Hierarchical Task Analysis (HTA). The risks that were first discussed in the FMEA were not always picked up or included in the HTA, which was interesting, but these did not come through as risks that required interventions at this time as other issues were more of a concern.

The first meeting regarding the HTA was with a Consultant Paediatrician, Ward manager and a Speech and language therapist and manager. This first HTA focused on the key issue requiring review; the ward round and requests for investigations. As can be seen in the HTA analysis, this holds a significant risk. The creation of the HTA flow chart was interesting and enlightening and enabled us to view the journeys and understand the potential sticking points. The more thorough review of the risks within the HTA risk assessment tool increased the number of risks, not initially highlighted from the FMEA, this gave more detail and understanding to the processes that we needed to explore. We analysed each of the tasks within the process with a discussion around what occurs now, what the performance influencing factors were and how the risks within that task were presently mitigated. This allowed us to identify which sections of the journey we needed to focus our interventions on and introduced us to the concept of the performance influencing factors (see appendix 4).
The second meeting was with a senior registrar and ward manger and this explored in more detail the ward round process- again identifying issues and potential solutions that needed to be agreed with a wider group.

We had two further HTA meetings to review handover which included a Consultant, registrar and nurse. The HTA assisted in clarifying areas of concern and assisted the teams to focus on the main areas for improvement.

The following was the full HTA process for Ward rounds:

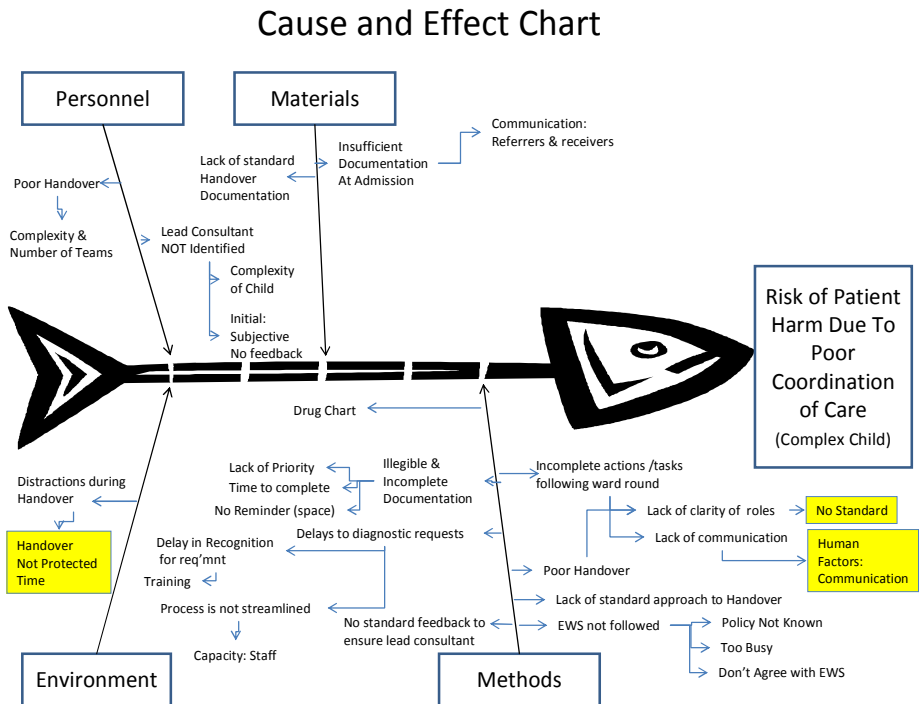
Ward round hierarchical task analysis



Exploring the risks that were highlighted from the HTA was essential to assist in the diagnostics of the pathway, the full detail of the risks, hazards and mitigation is on page 13 and the full table see appendix 4.

The discussion around the Performance Influencing Factors (PIF) was also interesting, giving us more insight into the key reasons behind the problems. Each of the risks was explored utilising the HTA software, the key PIFs that were identified then have a set of questions attached. The additional questions enabled us to drill down further into the issues and help bottom out the problems and causes of such problems (see appendix 5). These PIFs were considered when designing our interventions and continue to be referred to in the continued work.

Following the HTA, a cause and effect fish was constructed to explore the detail further, before designing any interventions. This process allowed us to ask the question – “why” and to really focus on the root causes of the issues.



Involving patients, families and carers and engaging staff

There had been a number of patient and carer focus groups, videos and interviews since 2003 within RMCH to gain opinions and experiences of patients, carers and families. An experienced group of clinicians reviewed all these retrospective valuable pieces of information and analysed them, drawing key themes. This analysis highlighted a number of factors from suboptimal communication to the carers and within the teams, to a perception that there was a lack of staff to care for their child with their complex needs. Once the information was analysed and discussed in a smaller group, it was agreed that a large multidisciplinary workshop for staff would be vital to gain more engagement in relation to the problems, as well to identify potential solutions. This workshop was organised by the patient experience team and 80 staff attended to discuss the themes further and to give an idea of what they felt were the problems, causes and potential solutions. This workshop was excellent and created discussion and awareness of the issues and helped identify a step forward.

Workshop exploring the feedback from relatives and carers

To ensure we had a quantitative measure of any changes that we were to make following this workshop and to enable review of any changes to the quality of the patient experience, we utilised the PRIMO approach for the relatives and carers. The questions were drawn from the themes pulled from the historical interviews, video sessions and other feedback from families. The patient experience team agreed to ask the PRIMO questions to 20 relatives and carers of complex children to ensure adequate compliance. Unfortunately this PRIMO did not give the answers that were expected and they in fact suggested that everything was perfect- which was not what had been identified before. It was felt that the questions should be asked by someone not working from within the trust thus a patient governor kindly agreed

to ask new and more open questions to the families. This identified a far more accurate and representative view point and assisted in supporting one of the work streams. These interviews will be repeated further into the project as a measure of change.

Ensuring safety in the present system

There are many policies and procedures already in place that manage the risk that we have encountered and these will be discussed in further detail. Some of these practices are presently not mitigating these risks to the degree that is required, hence the need for further interventions. Following below are some of the safety projects already occurring in the trust which will enhance the SCS project.

Improving Quality Programme

Within the Trust, the Improving Quality Team (IQP) links closely to all ward teams. To support continuous assessment of activities such as medication rounds and observation rounds to ensure the best possible practice is achieved and time is managed appropriately. Initial work started with the IQP team reviewing the ward rounds, however despite there being some crossover of work, it was agreed to keep this work separate for the present time. This ward round work was number 5 and 6 in the listed hazards.

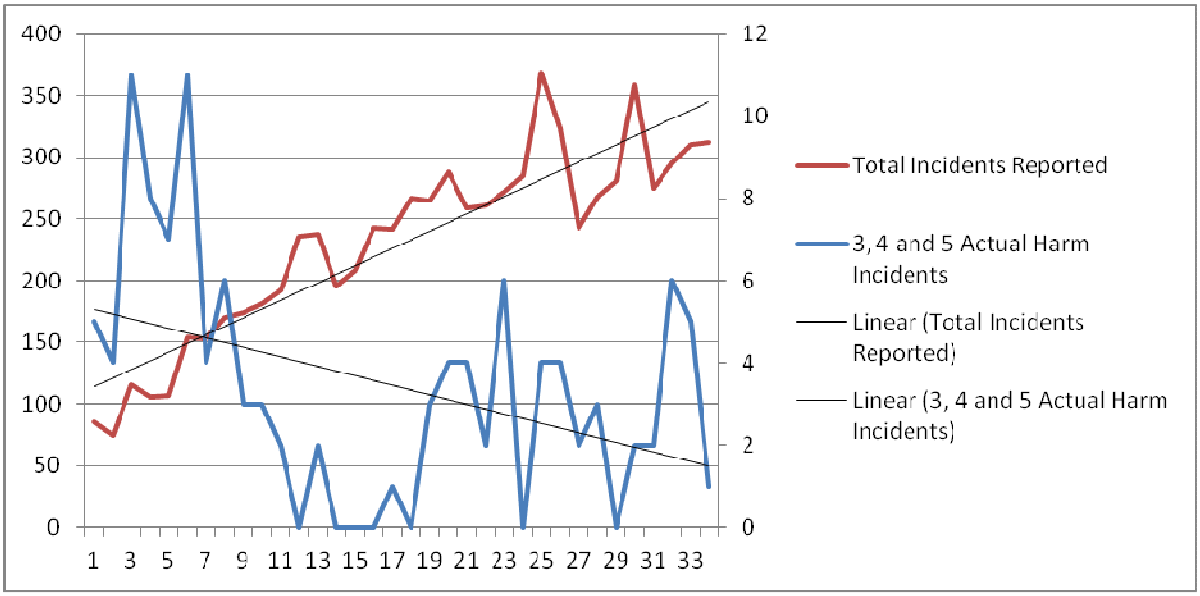
Acute Care

The recognition and response to acutely ill patients is also an on-going piece of work across the Trust and more recently across RMCH. This is hazard number 7 and relates to the lack of recognition and response to the deteriorating patient. This has included acute care training, analysis of all emergency calls and high level incidents from the individual teams supported by a core multidisciplinary team. This transformation of the acute care pathway includes the implementation of an electronic observation, capturing and alerting system that has been introduced into 4 wards with the Children's hospital whilst we have been undertaken the project. Once the system was being utilised in the wards, it quickly became apparent that the process around the children's Early Warning Score (EWS) which is the basis for the electronic system, did not have a robust response process in place; so work has commenced to alter the EWS and following that, the continuation of the implementation of the system. This implementation should occur within the next 3 months and may impact on some of the measures that we are utilising and will be noted.

Incident reporting

All the hazards throughout the hospital stay should be picked up and reported as required. The reporting of incidents within the organisation is undertaken exceptionally well. All levels of staff are encouraged and supported in recording incidents which are fully reviewed, actions taken and fed back to the teams to ensure the understanding of what change has taken place to resolve any issues highlighted. Over the last 2 years there has been a steady and significant rise in the recording of incidents and gladly this is matched with a reduction of harm to our patients. This trend has continued and strengthened since the beginning of this project.

The following graph represents all incidents recorded within RMCH including the higher level 3,4,5 excluding the lowest level 1 and 2.



Data 01/10/10 to 01/07/13

Early in the project, the MapSaf and Safety Culture Index were completed. The results have been fed back to the local group, the ward teams and the executive board of the Trust to ensure understanding from the senior management structure of staff attitude and concerns and to assist in the progress of the projects. (See appendix 6 for the MapSaf results).

Ensuring safety in the pathway

To ensure that there was safety in the pathway presently, a review of all the relevant processes was undertaken. The following safety aspects to the project are split into claim, argument and evidence to enable full overview of each issue raised.

Claim 1
The correct and most appropriate lead consultant is identified and documented accurately for each child.

Argument
Within RMCH there is a clear lead consultant policy which strives to ensure a child has one clear lead consultant throughout their stay, although there may be a handover of care which should be a clear and distinct process. It became apparent that this policy did not always have consistent compliance and not all teams were clear on the lead team thus the communication pathways were not as robust as required. This risk could mean that the children may not have all issues addressed in a timely or holistic manner. Without the lead consultant overseeing and coordinating the care of an individual child, it may not have been always managed in the most effective way and there have been times when the deterioration of a child went undetected or a delay in treatment occurred as a response to deterioration wasn't identified as quickly as appropriate. By ensuring the identification, communication and coordination of the lead consultant occurs each time, the care of the children should be better managed, streamlined and all areas of concern managed in a more timely and effective manner. The above has been supported process by part of the "ward round project" (with the use of the white boards, clearly displaying the lead consultants name to be checked on the ward round for accuracy- the ward clerk will be informed of any changes to amend all

records accordingly), the “stickers project” (the documentation of all the teams involved and if they have been informed, see below) and all of the above will be supported by the new post namely the care coordinator (the “carers project”).

Evidence
The lack of identified lead clinician had been recorded anecdotally for some time; this was exacerbated by the diverse and numerous specialities working within RMCH. This had also been recognised as a key theme from incidents and highlighted through complaints as well as identified within the safer clinical systems analysis as a key risk to be addressed.

Claim 2
All consultants involved in the child’s care are informed of their admission and review as appropriate. The documentation of the different specialty teams involved in care is always consistent, complete and easy to identify. There will always be communication back to the lead clinical teams after review by the specialty teams.

Argument
Since awareness was raised at the beginning of the project, the “child with medical complexity group” created a sticker for completion on admission, in part to identify all the consultants already involved in the patients care and to ensure that they are informed of the child’s stay in hospital. The aim of the sticker is that it facilitates safe and complete communication between clinical teams and more effective scheduling of intervention and care that will benefit the child. The sticker was piloted and rolled out across RMCH being championed and encouraged by the care coordinator. This will be the “sticker project”, with the aim of an improved method of recording and documenting and better communication as a result.

Evidence
Anecdotal evidence highlighted this as an issue supported by the poor documentation audits that have been undertaken in the Trust. The initial swim lane map and FMEA also raises this risk and a solution and improvement is required.

Claim 3
Communication surrounding ward rounds is complete, efficient and effective with clarity around roles and responsibilities for completing tasks and investigations. The ward team and family understand the plan of care and can support the pathway.

Argument
Following the development of ward round standards; key aspects were agreed for implementation by the ward team, this included the improvement to communication to the nursing teams throughout the ward round. This would ensure nurses are informed about updates in condition and are made aware of plans following the ward round, as presently this is not at the level that would be expected. It is highlighted from the swim lane analysis and HTA, that there are incomplete actions following ward rounds and from observations it is clear nurses are not always informed of plans. Thus by standardising this communication and handing over clearly to the nurses, we will be able to improve this and reduce risk to the patient and potential delay of acquiring investigations or results, thus in turn reducing LOS.

Evidence
This was clear from the swim lane map, the FMEA, particularly the “create and detect” and the detailed HTA. This was also supported by anecdotal evidence and themes of High level investigations. To address this, the project on “ward rounds” will focus on this.

Claim 4
There is a safe handover, which ensures effective method of transferring vital information from team to team.

Argument
The handover process was not timely, effective nor was there assurance that all required information was passed on in a clear or memorable way. There was no set area that was conducive to delivering information and the distractions and interruptions were significant. Although the initial recognition was that this was causing a risk in the patient's journey, it was not until the observation of handover by the project team commenced, that the significance of this risk became apparent and the true picture was identified. As much of the human factors of handover are quite difficult to measure, the quantitative nature of time taken for handover and numbers of distractions were felt would assist in the identification of any changes that were to be made to improve safe communication.

It was believed that if there was a standard medical handover: training for medics in human factors; accountability and leadership; a more conducive area for handover and an increased understanding of the importance of medical handover across the disciplines, this would ensure an effective transfer of information.

Evidence
The analysis undertaken supported these issues that were already highlighted from anecdotal evidence. Observations had been undertaken on the medical handover to review the processes and identify areas that would reduce the risk.

Focussing on the tertiary medical handover, three issues were identified within the HTA and observations; the culture was not intrinsically one that identified handover as a process with the importance that it required thus the handover meeting often overran by more than10 minutes and people were not attending on time. There were often a number of distractions occurring from bleeps and phone calls, people wandering in late and there was no clear leader.

The venue was not conducive to the role of the handover- with poor planning for seating, not enough computers for updating handover documents and no shredder for disposing of confidential documentation. Finally there was no training or feedback to the medical staff undertaking handover so they were not clear on process, human factors involved or clear understanding of accountably. The work to address the issues was within the "handover project"

Claim 5
Timely requesting and obtaining diagnostic tests delivers an improved patient experience, reduced LOS and increased patient safety.

Argument
This delay specifically within SALT (speech and language therapy), was explored within an HTA, with the issues starting from when the decision was made that a SALT review was required and how this was prioritised by the SALT team as there was no standardised referral process. Timely response was also affected by numbers of staff working within the department. A detailed audit was undertaken to gain accurate data on the problem and the impact this has had. This will be the basis of the "SALT project"

Evidence
The team was not aware of the above delays resulting in any patient harm as urgent investigations were still occurring but such delays on more routine investigations were extending patient stays in hospital and there are risks associated with this such as increased risk of infection. It was agreed that a slicker and speedier service would greatly benefit the children, particularly the complex children.

Specifically there was investigation within the SALT team with acceptable time to review from acute referral set at 48 hours (by their code of practice). This was not achieved in many cases and when analysed it did have a negative effecting length of stay for these patients and the quality of their stay as it often prevented from eating and drinking whilst awaiting review.

Claim 6
All ward staff are competent and confident in caring for the child with medical complexity.

Argument
A workshop was undertaken within the Trust with clinical staff to share patient and parent experiences and identifying ways to improve communication and process when caring for the complex children. The workshop, subsequent questionnaires and interviews with families, carers and staff suggested that there was not the experience of staff or coordination of care across RMCH, to manage all the complex children and to support their families in day-to-day care. This lack of coordination and training surrounding this patient group appeared to result in mistrust within the families and carers and could be suggested as impacting on confidence and competence of ward teams which has the potential to increase risk to the patients.

The interviews and workshops clearly suggested more coordination and training was required to support the complex children across RMCH. It was also felt that a care coordinator and a play specialist with experience with complex children, would be vital within this support to educate staff in caring for these children, accessing services and working with carers. Therefore within the "carer project", a care coordinator was put in place for the complex children with additional support from the part time play specialist.

Within this claim, it was also felt that not being able to quickly and effectively identify these children was reducing early recognition of where they were to placed and what support was identified, to ensure needs were met. Therefore creating a flag on the electronic bed management system was deemed a useful tool to identify these children as they arrive in hospital or as the move to different wards and departments. This will also be supported by the care coordinator.

Evidence
Much of the literature around the complex child management supports such roles as the care coordinator to enable a safer and increased quality experience in hospital; this clearly was supported within the workshops and from the interviews that were carried out. "Flagging" the children on the electronic bed management system that is used for all nursing handovers and data that can be pulled a report daily, will ensure that the children are highlighted and recognised as "at risk".

Claim 7
The effective use of the Early Warning score (EWS) process in the hospital would ensure the recognition, timely response and referral to the appropriate personnel for the deteriorating child.

Argument
One of the largest risks to this patient group was the delayed or inadequate response to the acutely ill patient that had been highlighted. This was mitigated by the use of the Early Warning system that was partially in place within the children's hospital. A plethora of literature supports the use of early warning systems within hospital environments to ensure that any deteriorating patient has timely response by the right experienced clinician.

Evidence
HLIs within RMCH have highlighted failure to recognise clinical deterioration in the child with complex medical needs as a recurring theme. EWS within acute Trusts are known to improve the recognition of acute illness. Despite a long term project to use an EWS in all admitted children, recent Trust audits demonstrated only partial compliance.

Significant work is occurring to ensure that the EWS process is improved and fully implemented. Alteration to the EWS, education, audits and feedback are occurring presently and the imminent implementation of the electronic observation and alerting system will improve this greatly. Along with the electronic system, the mandatory attendance of nurses on the Acute Illness management (AIM) course (to ensure that on each shift one nurse has had training in recognition and response to acute deteriorating patient), will ensure that this patient group is safer.

Hazards, risks and mitigation in the pathway

The FMEA identified many of the hazards and risks within the journey of the child with medical complexity, however the HTA explored in more detail each aspect of the journey, which in turn allowed us to review the performance influencing factors and identify interventions. The detail of the HTA analyses is within appendix 4, this describes the full and detailed discussion/ risks and mitigations that we had and that we also required for the pathway. In summary the key risks and mitigations raised are as follows:

1) The first HTA for the ward round, looked right from the front door of the Paediatric Emergency Department (PED) and how the lead consultant was identified and documented at that point. The risk (as described within the HTA), is that there may be an error or failure to recognise the correct consultant or even document it incorrectly. There were a number of factors within this process that we reviewed and meetings were arranged within PED to discuss the process in detail. Although there were some challenges that were discussed, it appeared that changes to process were occurring that were outside of our remit, including the increasing of the ward clerks hours, thus this aspect of the pathway was not felt to be a significant risk at this time and as a team, we agreed we could mitigate the risk by having a back- up within the ward in case there was any error within the department. The implementation of the white board at every bed with the lead consultant documented on it, aims to ensure that the consultant undertaking the ward round confirms or otherwise, that they are the lead. Following the ward round, the ward clerk will be informed of any changes to ensure the name is correct in other ward documentation, enabling the alteration of records and Patient Administration System (PAS) as required.

2) The next significant hazard identified was the lack of communication between the medical and nursing teams before, during or following the ward round. This seemingly poor communication meant that the nurse looking after the patient was unaware of the update in the patient's condition and also unaware of test results and which investigations were outstanding. The agreement was that the nurses will either be released to attend the full ward round or will meet the medical teams pre and post ward round to gain an update into the patients progress and plans, it was felt that this mitigates the associated risks.

3) One hazard identified during the HTA meeting was in regards to reviewing of charts, drug kardex etc during the ward round. However when we commenced the observations of the ward round and had meetings with the consultants we found that was already occurring in the vast majority of ward rounds observed. Once the other ward round actions have been implemented, this will be revisited to ensure that this is the case.

4) The delay in investigations was next identified as a hazard and after data gathering and discussions with the laboratories, radiography and the therapists, it was agreed that for this group of children the largest hazard was the delayed review by the SALT team. The risks

were clearly identified starting with: who identifies the need for referral; how to refer to the team; the prioritising of the cases and finally to the resources required to manage the workload. Some of these risks were quickly and easily mitigated, with the introduction of an electronic referral system and an increase in staff numbers. However the fact that the staffing numbers made a significant and vital improvement, of course, requires long term investment, thus a business case has been created and funding agreed to permanently secure the additional numbers of staff.

5) The second HTA reviewing the handover, started with the timely attendance of staff. Two hazards seemed to link this and highlighted the issues, one being the lack of importance associated with handover and secondly the venue. The venue was again a quick and easy fix, relocating, and creating a more conducive environment with equipment and a more suitable layout for the different teams to handover. The increasing of the importance has included the marketing and education to not only those receiving the handover, but the wider clinical teams.

6) The administration of handover, which includes the covering of an absent medical team member, again was highlighted on the HTA, but on discussion with the team and through the observations, does not seem to be a significant risk, the medical teams cross cover and support each other on the very rare occasion that someone is absent.

7) A significant hazard was the amount of distractions that the handover experienced with up to 10 bleeps occurring in the time that the handover was going on. This was again for a couple of reasons, one being the length of time that handover occurred (it often ran over the set 30 minutes) and the other that the ward teams did not appreciate when and what handover was. With a marketing campaign (see appendix 11) and education these hazards appear to have been reduced and to ensure sustainability the on-going review of measures and observations has been proposed.

8) The leadership in handover and other human factor issues were identified as a hazard and this was supported in the observations. To reduce this, training has been given to the medical staff and consultants will be attending the afternoon handover, giving training, feedback and support to the junior teams.

9) The content of handover was highlighted as a hazard within the HTA, but on observation this was not seen to be an issue, in fact the content, appeared succinct, clear and appropriate. This will be reviewed again when the other interventions are in place and within the consultant review at handover.

10)The overarching hazards that also came from the FMEA discussed the competence and confidence of the nursing teams and also the family and carers experience of this. The introduction of the care coordinator has been introduced to mitigate this risk, support the interventions as a whole and to improve the quality within the journey.

11) A hazard surrounding the communication with the community services in relation to the children with medical complexity was highlighted at the nurse's workshop and from the parents and carers questionnaires. The families felt that information wasn't being passed into the hospitals which produced a risk of incorrect treatment as well as unnecessary time wasting. By utilising a patient profile or all about me documentation which has information regarding the children that is held by the parents this risk can be mitigated. Information was sent to GPs, schools and into the community as well as informing the staff in the hospitals that this was occurring (see appendix 12) and this encourage the bringing and reviewing of this hand held information.

Linking Hazards and risks to projects

The hazard is that most appropriate clinicians are not involved in a child's care or there is no clear lead clinician. Therefore the risk is that a complex child may then deteriorate unchecked.

1. Standards implemented for care of children to include review by lead consultant within 24hours of admission and review within 24 hours when referred to other teams.
2. On the ward round, the lead clinician to review the (new) white board with lead consultant name on- reviewed by ward clerk to ensure that PAS and medical notes are correct
3. Stickers to be completed on admission stating who is already involved in care and if required, when they have been informed

Evidence

- Analysis
- Incidents

The hazard is that effective communication was not always occurring across teams or to the family members. Thus the risk is that patients may not receiving timely investigations following a ward round.

1. Agreement for medics and nursing teams in ward 75, to meet at the PSAG board prior to the ward round to discuss the best way to undertake the ward round that day.
2. Communication white boards trialled at each bed area in the ward.

- Swimlane.
- Complaints/ Incident
- LOS

A hazard that was identified was poor medical handover to after-hours teams; effective communication was not occurring thus there is a risk in the loss of valuable information.

1. Standard to be implemented to instil appropriate culture of timeliness, leadership with a suitable venue / environment
2. Increased awareness/understanding of handover across RMCH to ensure the reduction of noise, distractions and unnecessary calls or bleeps and to limit the time of handover to improve concentration.
3. Training for staff in handover and human factors.
4. Venue improvements to ensure environment suitable and conducive to handover.
5. Senior attendance to ensure leadership and feedback for handover style.

- Incidents
- Analysis

The hazard that was identified was that referrals to SALT for the complex children could be delayed or inaccurately prioritised due to lack of information. There were inadequate resources within the team leading to delaying assessment and treatment.

1. Referral to SALT have been standardised on Clinical Work Station.
2. The standard will include the order of information, the time of referral and standard of information on referral.
3. Number of SALT hours available were increased to match demand. Funding is being sought for long term.

- Swimlane.
- Notes analysis
- HTA

The hazard that was recognised on the ward teams was that they did not have the skill, confidence of competence to support the children with medical complexity, their family and carers thus the risk in the care is not as is required and patient experience is poor.

The creation of a new post of a care coordinator supported by a play specialist has been implemented. This will train, support, liaise, coordinate the care of the children; empowering ward teams and families to ensure the children's pathways are safe, coordinated and efficient .

- Questionnaires
- PRIMO
- Focus group

Options Appraisal

An options appraisal was completed with a multidisciplinary team, ensuring that the clinicians and nursing staff that worked in the wards were present. Within this options appraisal we reviewed all proposed interventions and the impact on a number of factors from length of time, size of impact to cost. Interestingly we did not have any options that were not chosen at this time, although it did help us to identify priorities. On reflection, it appears we had removed the options that we did not deem appropriate before we attended the options appraisal session or as the project progressed (see appendix 7).

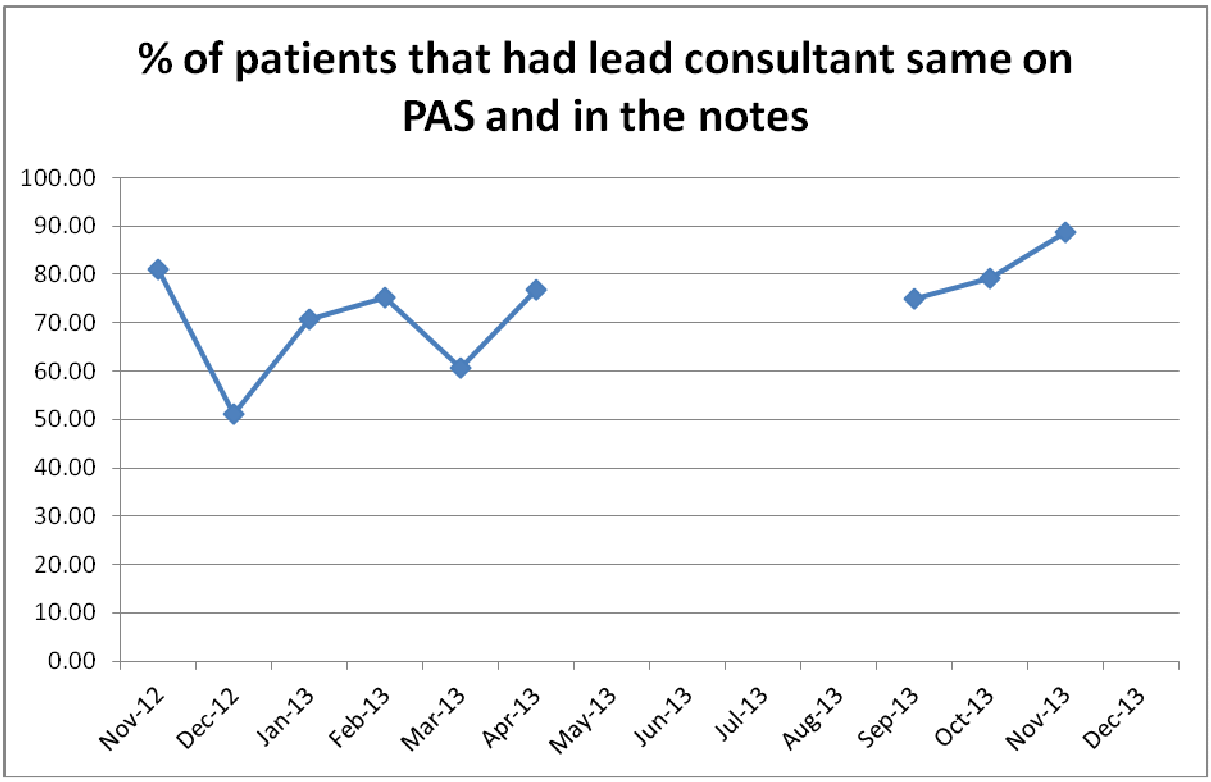
Results and discussion of measurements (including safety set), interventions and work still to do on projects

Project for ward rounds, standards of care and forms projects.

We linked hazards and risks with interventions and measures particularly the safety set

Hazard	Risk	Intervention	Safety set Measure of reliability
Lead team not correctly identified and timely review by senior clinician. Clinicians from other teams requested to give an opinion do not do so in a timely manner and when giving an opinion there is lack of clarity as to whom is responsible for arranging investigations, making changes to treatment etc.	The risk was that complex children may deteriorate because the most appropriate clinicians are not involved in their care. Also communication between disciplines is not effective.	Standards for care of children to include review by lead consultant within 24hours of admission and review within 24 hours when referred to other teams. Ward round standard that reviewing should check that lead consultant team was recorded correctly.	The percentage of children for whom the lead consultant is the same in the notes as on PAS .
Clinicians already involved in the child's care are not informed of admission.		Stickers completed on admission stating who is already involved in care and if required, when they have been inform.	Measurement of use and completion of sticker.
Poor communication between managing medical teams and nursing staff and families can cause risk to the patients, delay in carrying out investigations and implementing intervention and thus potential increased length of stay.		Standards for ward rounds disseminated and followed within relevant wards.	Percentage of patients seen on the ward round for whom there was communication with the nurse and communication with the family. (done alongside other measures of compliance with ward round standards).

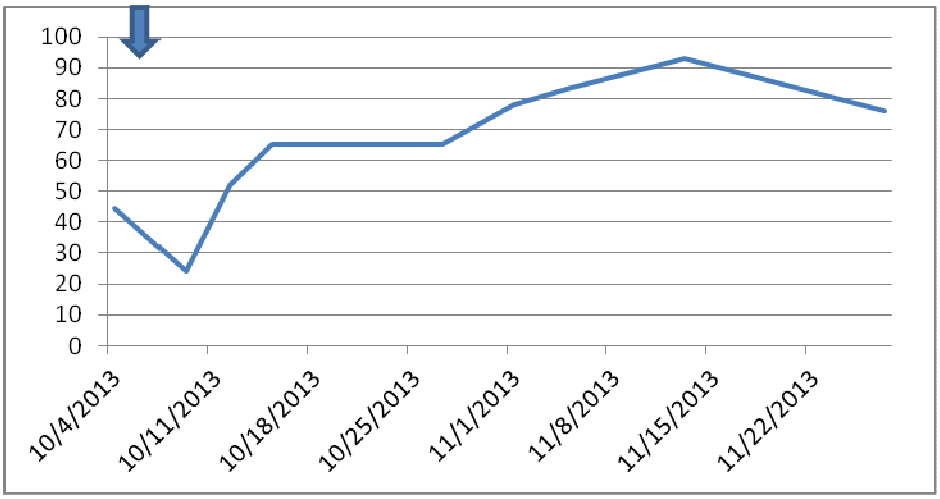
A) Percentage of children for whom lead consultant is the same in the notes as in PAS



The lead consultant is documented in a number of different locations: in PAS (Patient Administration system) on patient information boards and in the notes. Initially we decided to measure the percentage of patients with the same lead consultant on PAS as in the notes. As discussed above the entry of the lead consultant on PAS is generally done in PED (Paediatric Emergency department) by administrative or nursing staff. There is no mechanism for medical staff to check that this is correct: doctors will not check that it is correct on PAS as part of the ward round process. We therefore decided to trial a white board by each bed stating the child's name, lead consultant and the name of the nurse looking after them which is completed by the nurse at admission. The idea for this also came from a survey of patients and carers discussed below. The implementation of the white board at every bed with the lead consultant documented on it, aims to ensure that the consultant undertaking the ward round confirms or otherwise, that they are the lead. Following the ward round, the ward clerk will be informed of any changes to ensure the name is correct in other ward documentation, enabling the alteration of records and Patient Administration System (PAS) as required.

Temporary white boards were put up on one ward at the beginning of October. The chart below shows the percentage which had the same lead consultant as on PAS

Percentage of white boards with same lead consultant as PAS



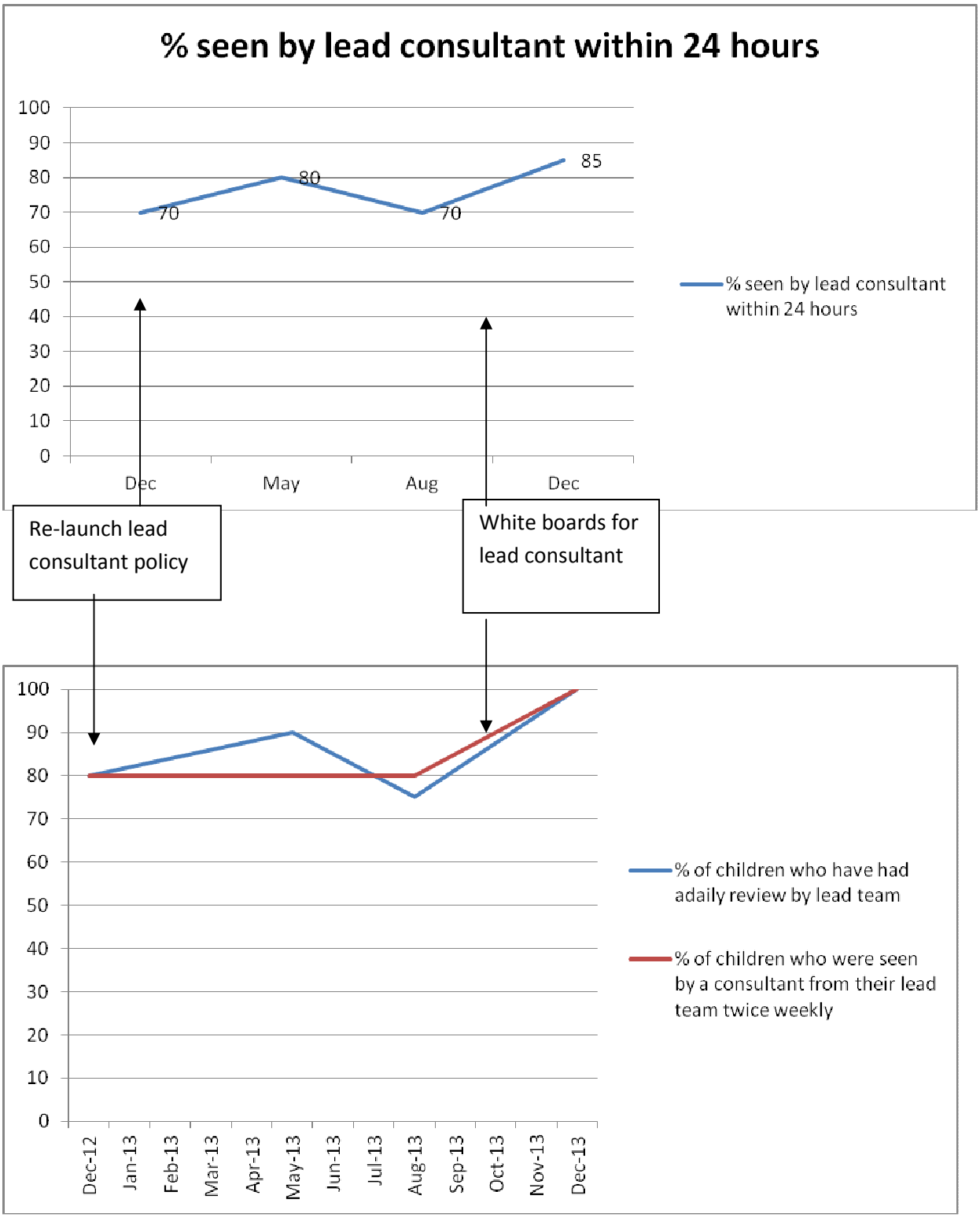
As with many new initiatives it took a few weeks for these to be completed well. However there has been increasing recognition of that these are helpful and we are therefore currently purchasing white boards for all wards.

We have also looked at whether review is occurring by lead consultant (or deputising consultant from the same team) within 24 hours of admission and then at least twice weekly. We have also measured how often patients are seen within 24 hours when referred to other specialists. These were more time consuming to measure and therefore have been done quarterly.

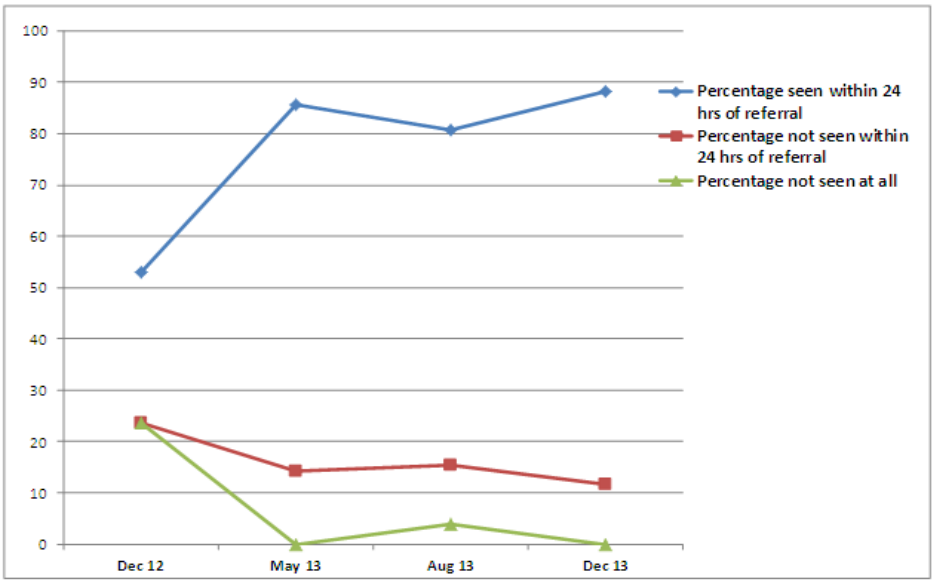
Percentages of children seen by lead consultant within 24 hours of admission, percentage who have a daily review by their lead team and are seen twice weekly by their lead consultant

These are all standards in the lead consultant policy. This has been in existence for some time, but was revised and re-launched at the end of 2012.

The charts show that by December 2013 all patients surveyed were having a daily review and were seen by a consultant twice weekly. However there were still 15% of patients not being seen by a consultant within 24 hours of admission.


% seen by lead consultant within 24 hours
100
90
80
70
60
50
40
30
20
10
0
70
80
70
85
Dec
May
Aug
Dec
% seen by lead consultant within 24 hours
Re-launch lead consultant policy
White boards for lead consultant
100
90
80
70
60
50
40
30
20
10
0
Dec-12
Jan-13
Feb-13
Mar-13
Apr-13
May-13
Jun-13
Jul-13
Aug-13
Sep-13
Oct-13
Nov-13
Dec-13
% of children who have had adaily review by lead team
% of children who were seen by a consultant from their lead team twice weekly

Percentage of children seen within 24 hours of referral to another speciality team

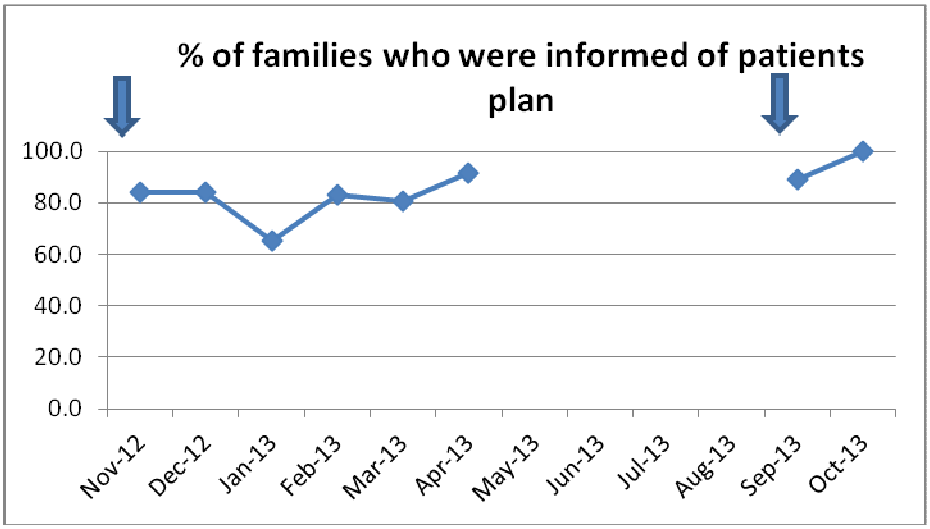


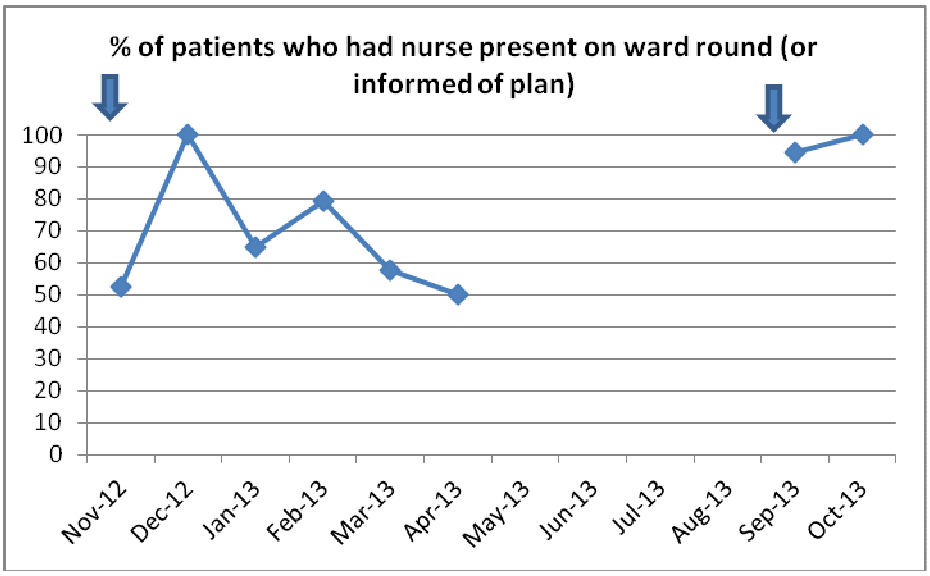
In Dec 2012 we launched a policy for the management of children with medical complexity (although this was seen as a policy which should apply to all children within the hospital). This stated that when the lead team referred a patient to another team they should be seen within 24 hours. At launch only just over 50% were seen within 24 hours and over 20% were discharged before being seen. There has been steady improvement in these figures which have been measured quarterly.

B) Use of stickers and their completion. We introduced a sticker to be completed at admission detailing the lead consultant and all the other consultants involved in care so that they were informed of the admission in a timely way. We decided that completion of this should be a safety set measure. However completion of the stickers was poor with only small number completed even when completion was supported by the care co-ordinator (by placing a sticker on the front of the notes or asking teams to fill them in). We therefore are looking into alternative ways such as electronic solutions to inform consultants that their patients are in hospital.

C) Percentage of patients seen on the ward round for whom there was communication with the nurse and communication with the family.

The work on ward rounds was done with the general paediatric team. During our ward round observations we monitored a large number of interventions and assessments that occurred during the ward round. Some essential steps in the ward round are already being done well (e.g. review of drug chart) as mentioned therefore this was not continuously measured. Our initial analysis suggested that whilst communication with nursing staff and family is essential and should occur this was not always happening. These were included in our ward round standards and have been measured for the safety set.





Interventions arrows:
1. Agree ward round standards and raise awareness
2. Whiteboards with patient name and lead consultant. Nursing and medical staff to meet at PSAG board at start of ward round.

There has been a good improvement in measures sine intervention 2: however we recognise that these have been put in fairly recently. Therefore, there will need to continue to be some monitoring to ensure that these improvements have been maintained.
We realised part way through the project that we had not sought the opinions of parents and carers on ward rounds. Two of our junior doctors conducted a survey to look at this. They found that they had a good understanding of their child's diagnosis and plan. However the majority said that although the doctors and nurses had introduced themselves they did not know the name of their lead consultant or the nurse looking after them, supporting the idea of the whiteboards by the bed.

One of the risks identified by HTA within the ward round has not been tackled by this project. That is roles and responsibilities around requesting investigations, actioning them and chasing results. This is because we felt it was something that would be very difficult to measure. The general paediatric team have recently identified this as continuing concern and will shortly be starting some work to look at this further.

Project for handover

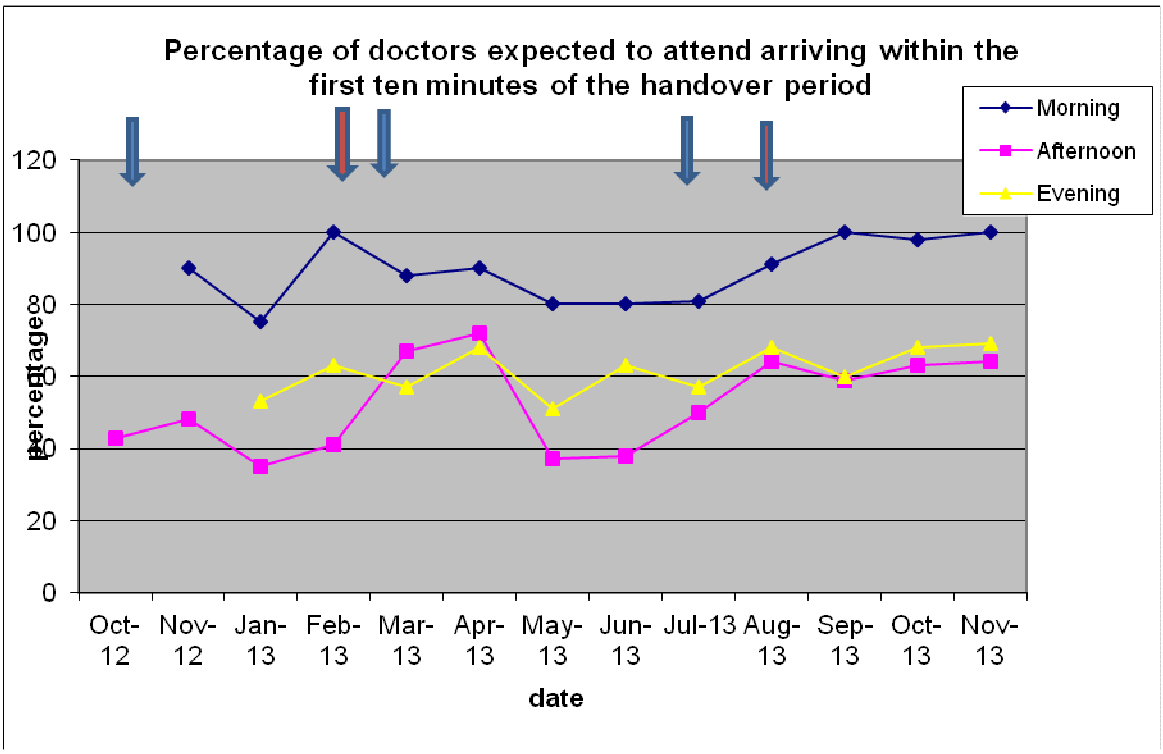
To enable thorough exploration of one of the seemingly "riskiest" handovers, the medical handover for the tertiary teams was focussed on. These handovers have a number of teams handing over and occur at 0830, 1630 and 2030.

Linking hazards, risks, interventions and measures within handover

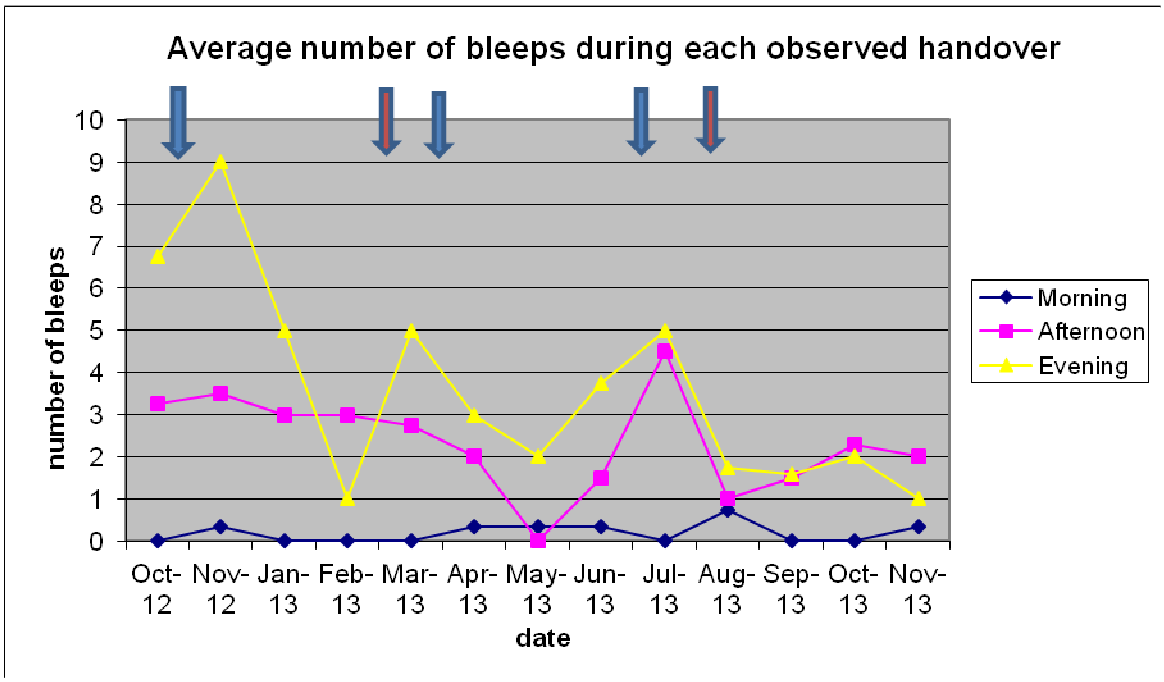
Hazard	Risk	Intervention	Safety set measure of reliability
Patient detail missed as environment and culture of handover not suitable	The risk that was identified was that information about the children was not always handed over from the outgoing to the incoming team	Standard to be implemented to instil appropriate culture of timeliness, leadership with a suitable venue / environment (For standard see appendix 8)	The percentage of doctors expected at handover arriving on time (defined as within the first ten minutes of the allocated 30 minute handover period.)
Numbers of distractions inhibiting the concentration of the team		Standard across Trust to ensure the reduction of noise, distractions and unnecessary calls or bleeps and to limit the time of handover to improve concentration	Number of non-urgent bleeps received during handover

For the safety set we measured:

A) The percentage of doctor expected at handover arriving on time (defined as within the first ten minutes of the allocated 30 minute handover period.)



B) Number of non-urgent bleeps received during handover



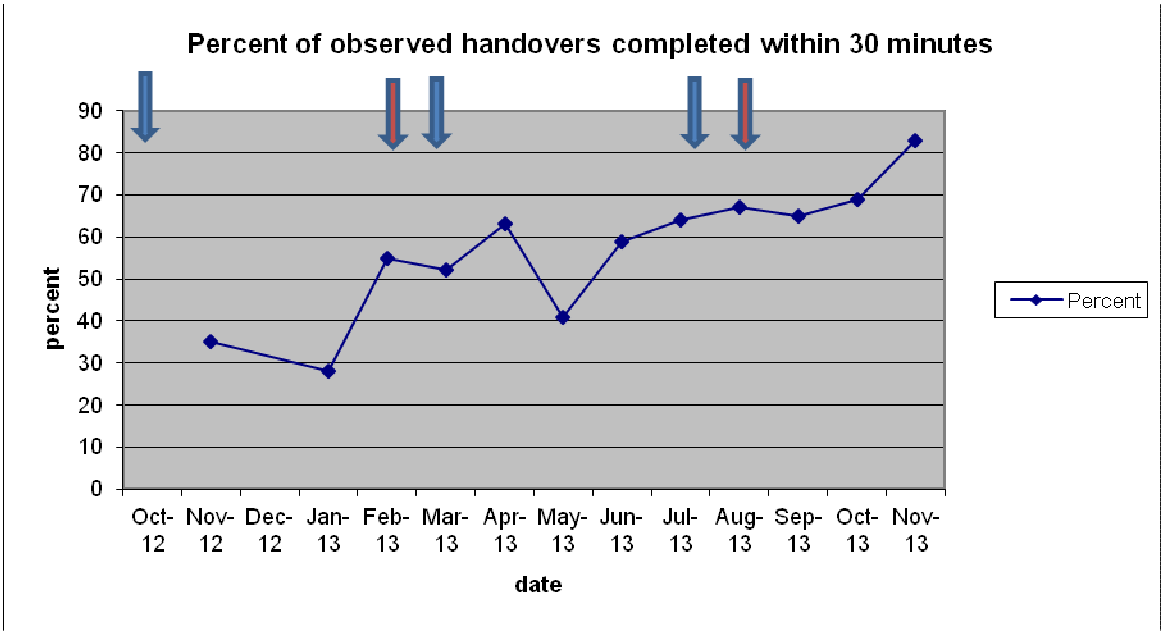
Arrows correspond to interventions:

Red arrows: Junior Doctor Education of importance and leadership and human factors

Blue arrows: 1) Set room with equipment and layout– PED room (table/comp/chairs)
2) Standard for handover written and disseminated
3) Nursing Awareness of handover times with poster by telephones (appendix 11)

There has been a steady improvement in timely attendance at handover although this is still not optimal for evening and afternoon handover. There has been restructuring of evening handover to allow surgeons to hand over to the medical team at specified times over the phone as attendance in person can be difficult: this will need to be monitored. Juniors have been asked to report any difficulties in being released from ward duties to attend afternoon handover, There are plans for consultant attendance at afternoon handover which should improve attendance and also enable training and feedback for junior staff on how they hand over.
A poster campaign to inform nurse of handover time has been successful at reducing non-urgent bleeps. Monitoring will need to continue to make sure this is maintained.

We also measured the percentage of handovers completed within 30 minutes. This has also gradually improved in line with timely attendance up to just above 80%. (Arrows as listed above)

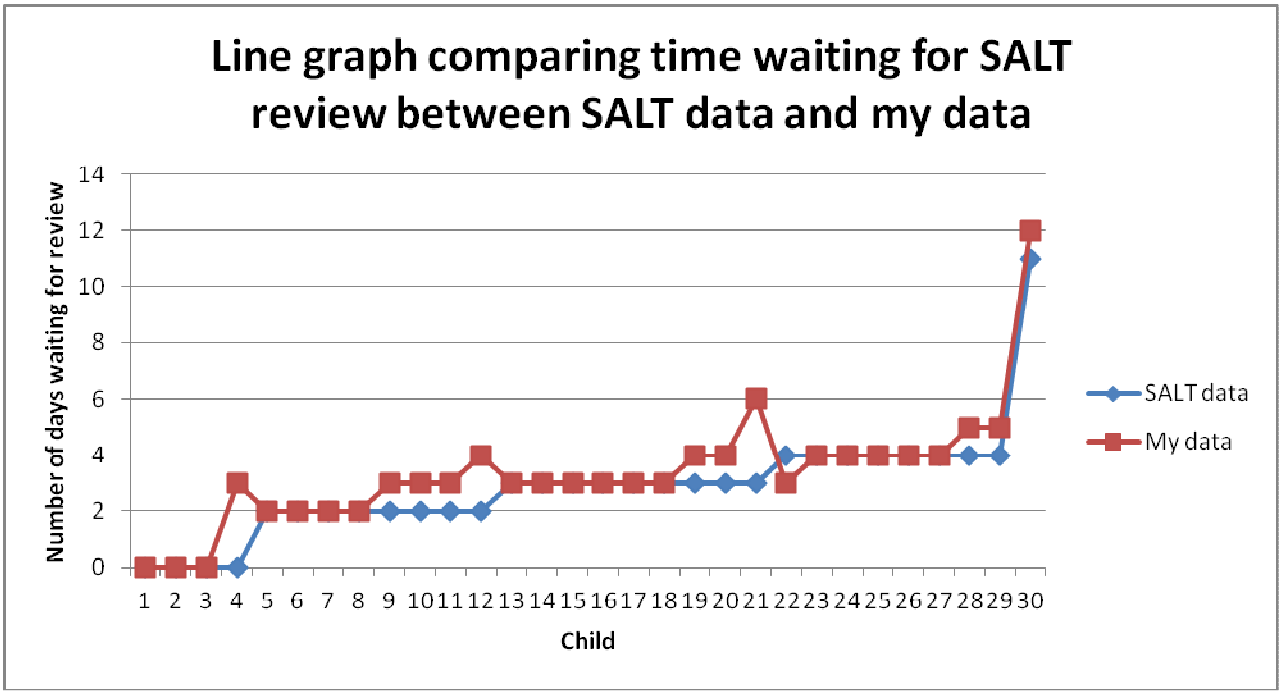


We also undertook questionnaires to gather qualitative data on handover, feedback methodology and effectiveness (see appendix 10).

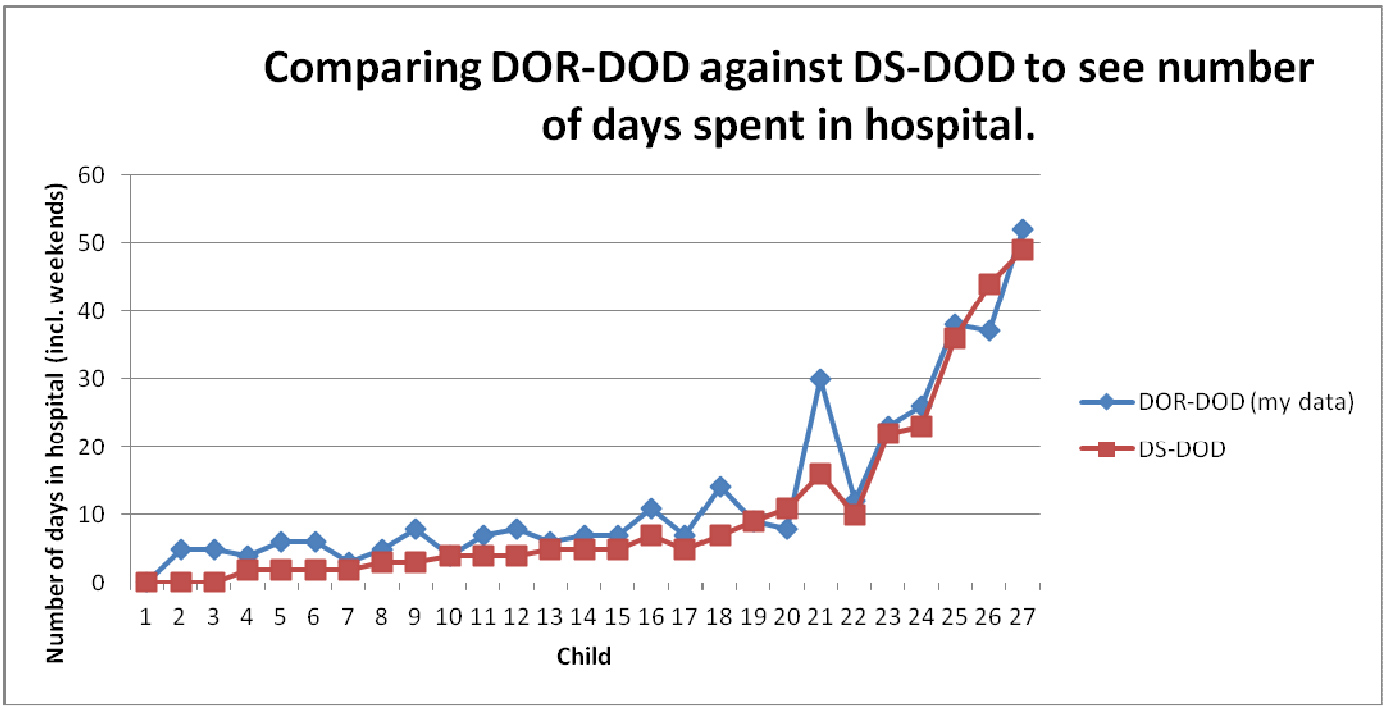
Project for SALT (Speech and Language Therapy Team)

Following the swim lane analysis and subsequent hierarchal task analysis (HTA), the referral to the SALT team and time to assessment was highlighted as a hazard. The associated delays were shown to cause an increased length of stay in addition to a delay in feeding. Megan Stewart a medical student working with our team conducted an initial study looking at 31 children seen by the SALT team from January to May 2012. At the time referrals were made by telephone with no single agreed standard of information which meant that referrals could be prioritised accurately due to lack of appropriate information. Megan identified that there was a delay between recognition of a referral being required and it being received by the SALT team. The team were also falling significantly short of their target of seeing all patients referred for a swallowing assessment within 48 hours because of staff shortages.

The graph below from Megan's project shows the number of days each child waited for a review. The blue points are the data from the SALT team (ie the time from when they received the referral to seeing the child) and the red points are the time from the decision to refer to being seen.



This graph below from Megan's project shows the length of inpatient stay in days (including weekends). We can see that the time between the date of referral request (documented in notes) to date of discharge against date seen by SALT to date of discharge closely followed each other. It showed that the time lag between the referral to SALT being suggested in the medical notes to SALT actually receiving the referral affected the length of inpatient stay. On average this represented an extra 3.23 days in hospital.



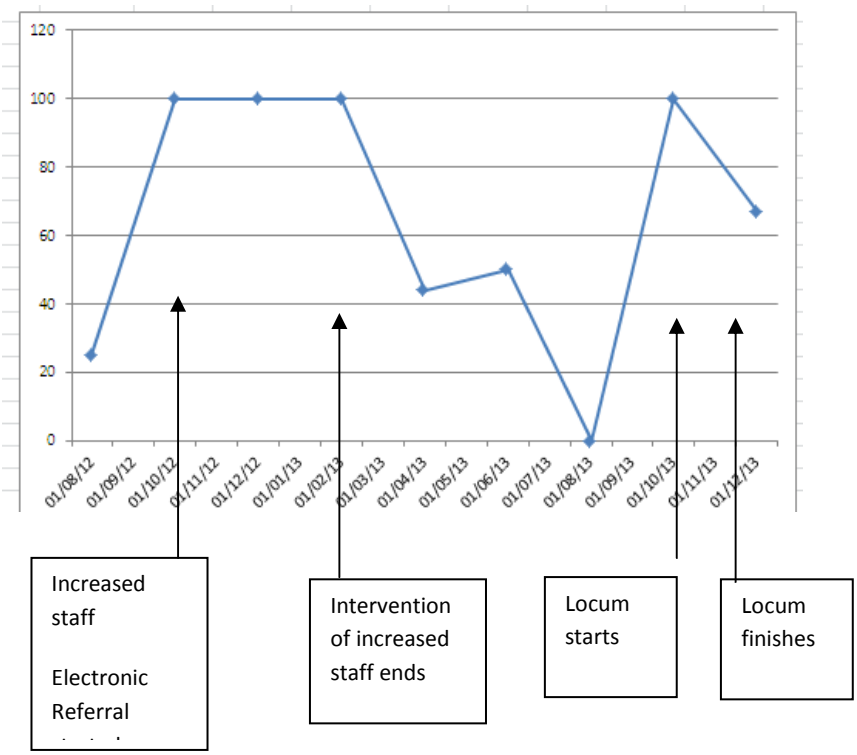
Therefore our interventions were introducing a standardised method of referral and increasing staffing to make sure that the SALT team could reach their target of seeing patients within 48 hours of referral

Hazard	Risk	Intervention	Safety set measure of reliability
Delay in referral due to more than one method of referral	The risk that was identified was that referrals for the complex children could be delayed, inaccurately prioritised due to lack of information and inadequate resources within the team leading to delaying assessment and treatment	Referral to SALT was standardised on Clinical Work Station	Percentage of children seen by SALT within 48 hours of decision by medical nursing team for need for review
Patient detail missed which could lead to inaccurate prioritisation of need for therapy.		The standard will include the order of information, the time of referral and standard of information on referral.	
Current SALT provision within RMCH may delay treatment following referral		Additional staff added into team, business case now accepted	Percentage of children seen by SALT within 48 hours their receipt of referral

Safety set measures

A) Percentage of children seen by SALT within 48 hours of decision by medical nursing team for need for review.
Unfortunately this information was not consistently obtained as it required retrospective notes based review.

B) Percentage of children seen by SALT within 48 hours of receipt of referral
This data was collated by the SALT team and is summarised in the chart below.

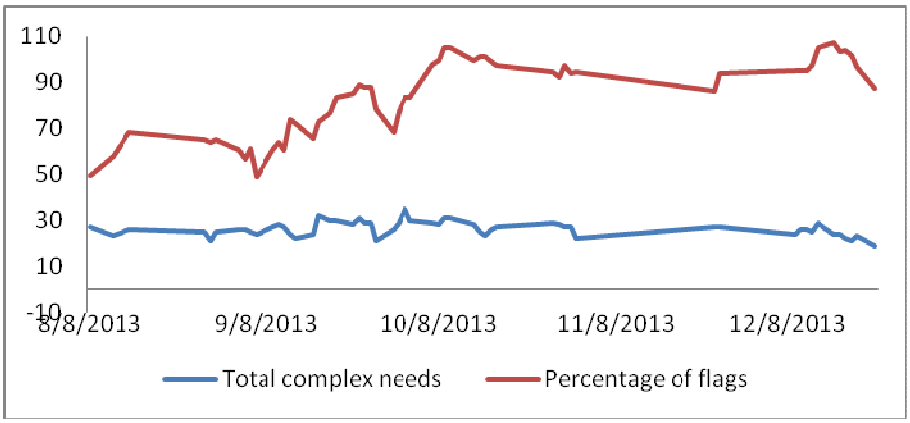


This clearly demonstrates that at times of adequate staffing all children could be seen within 48 hours. This lead to a business case for a permanent increase in staff. This has now been agreed and new staff will be in post shortly.

Parents and Carer project including Care Coordinator.

We introduced a flag (a jigsaw piece) to identify this group of patients on the 'bedman' system. The completion of this has gradually improved as shown in the chart below. The idea now is that identification of these children will be incorporated in to 'core huddles' and nursing handover.

Use of complex children jigsaw flags



The PRIMO questionaires to families identified that sometimes they lacked confidence in nursing competence or availability therefore feeling that they could not leave their child for any period. There were also conerns about the availability of play and communication with other professionals already involved. Workshops and questionaires to nursing staff showed that they recognised and shared these concerns. This led to the employment of a part time play specialist and nursing care co-ordinator. One of our trust board patient govenors is currently repeating the questionaire to familes of patients who have had recent input from the care co-ordinator and those who did not (possible due to her have a period off work.)
We expect this to show improved satisfaction for those who had input form the care co-ordinator. We now intend to look at applying for charity funds to continue this post and possibly also to fund 'parent friends' to sit with chidlren allowing families a break.

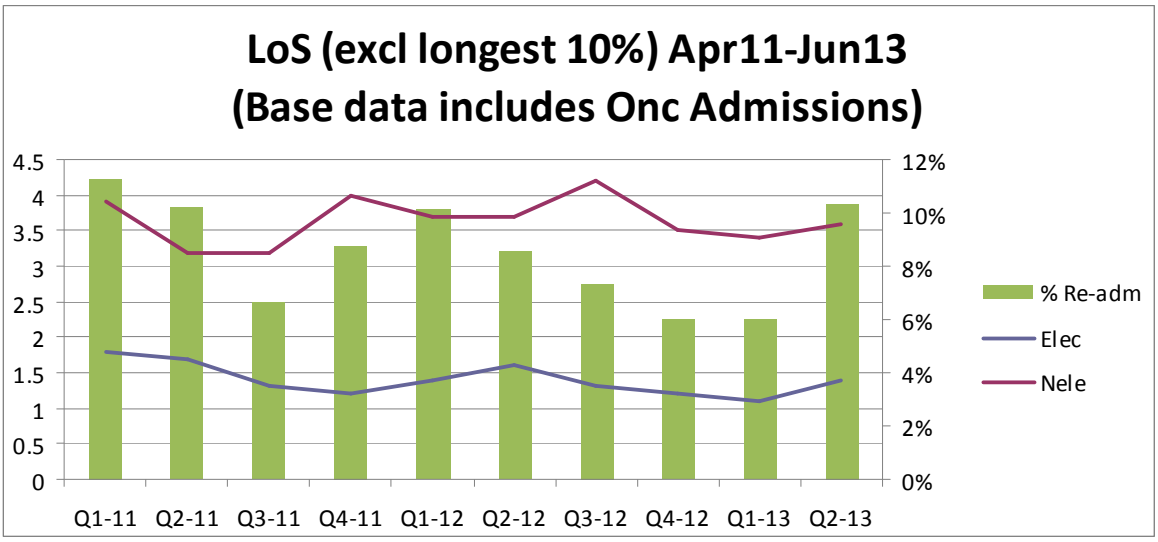
Additional measures

There were other aspects that were monitored and fed back to the teams to improve practice but were not as clearly defined or as easily measured to be counted. For example we watched the handovers to ensure they comply with the delivery of information. The standard sets out a method of delivery to ensure, priority of information, order and feedback within the handover process. Within this the use of SBAR and the reduction in unnecessary information being handed over was requested because we believe that more concise and relevant information will maintain concentration and retention of relevant information.
It was also deemed vital to understand what training was occurring around handover thus, we are looking at the proportion of medical staff that have received training on handover and feedback- appendix 10, this was repeated with the same medical staff at the end of the rotation.
Within the ward round we need to acknowledge that there was been a change in process which was that there is an additional consultant covering the ward in general paediatrics from February 2013. This would have been expected to improve the processes.

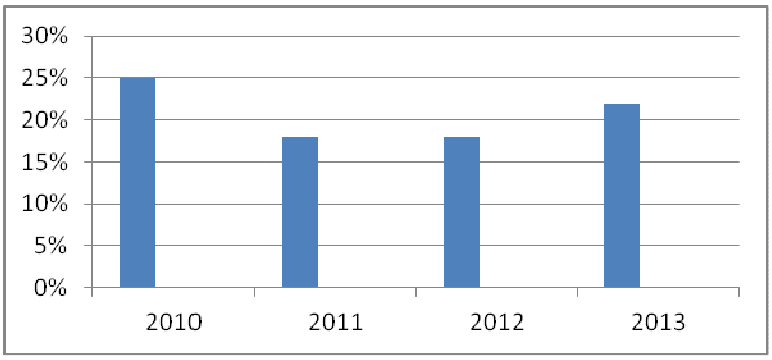
Outcome measures
See appendix 9 for full measurement plan

Outcome measures

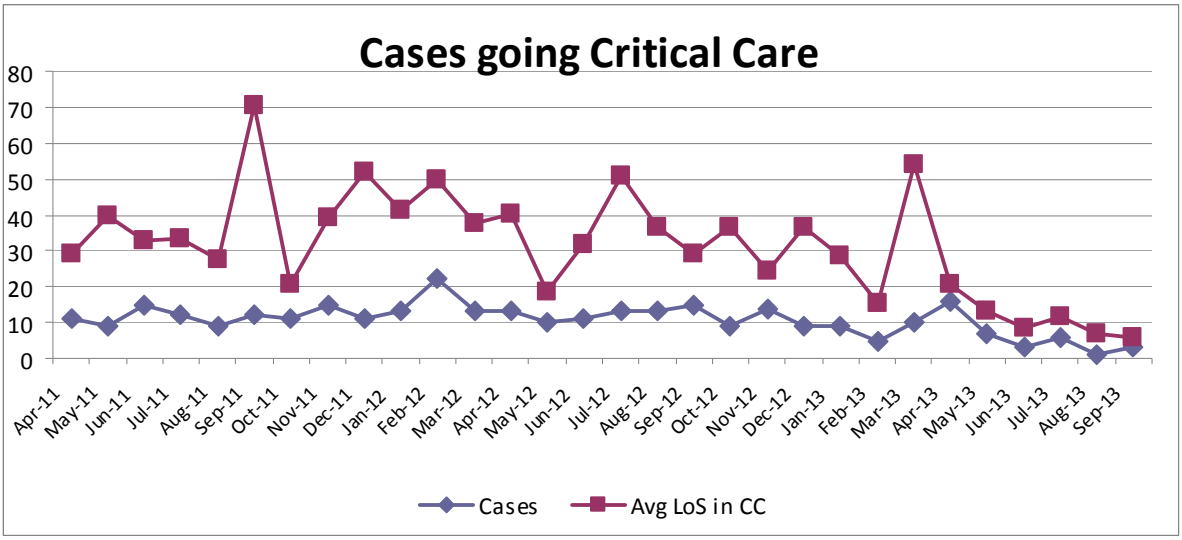
The length of stay was gathered over the course of the project for the children that were identifies as complex, under 3 or more specialties within 12 months. It is worth noting that the number of patients is small, thus any change is significant.



Percentage of the complex children readmitted from 2010
The numbers of complex children, identified as above, that had readmitted within 30 days had a 3 % reduction over the course of the project

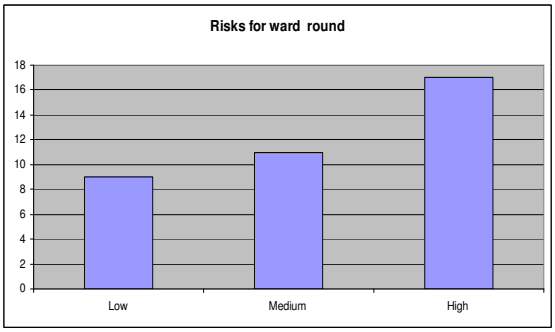


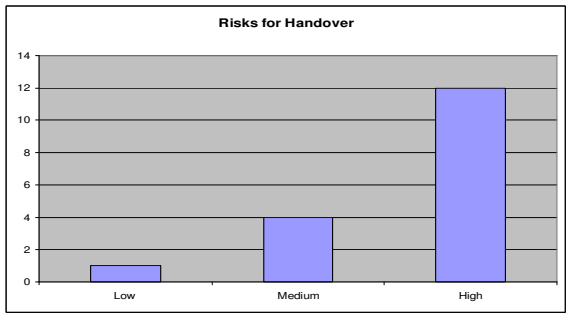
Complex Children being admitted to ICU/ HDU
The number of complex children admitted into the critical care area has also reduced significantly, as has the average length of stay for this group of children.



HTA analysis of risks

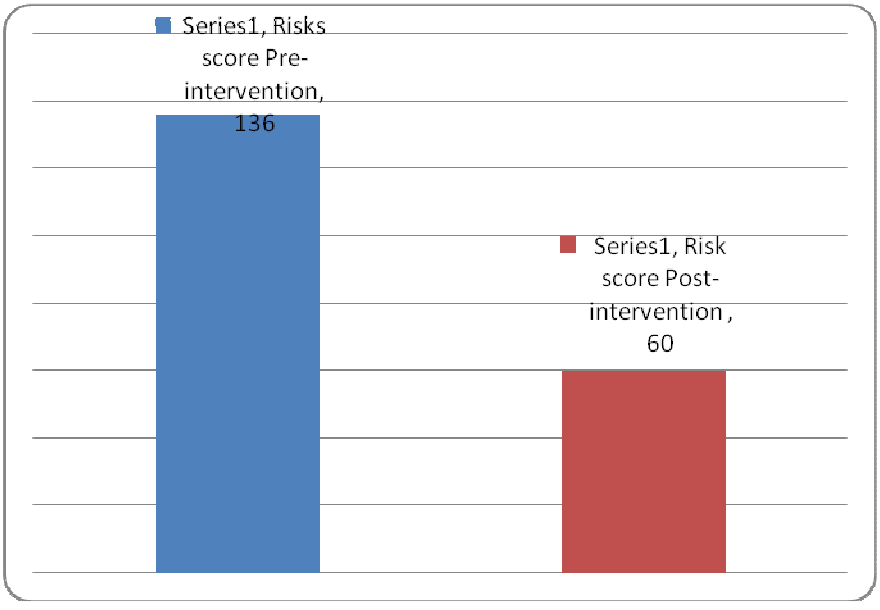
Interestingly by splitting the risks into low ≤ 7, medium 8- 12 and high >12, we can see that there were significant high risks to work on within the processes.



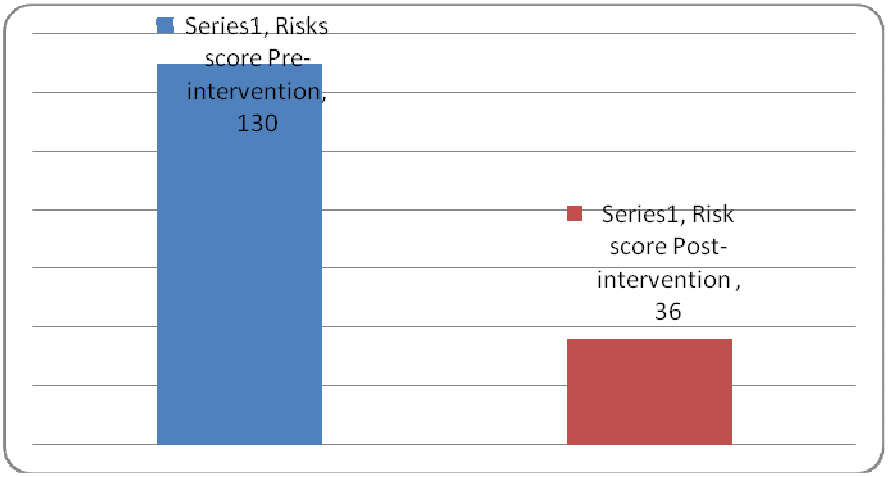


At a meeting with the clinical lead and project manager we have re-measured the risks following out interventions and have demonstrated a significant reduction in the risks, see below.

Ward Round



Handover



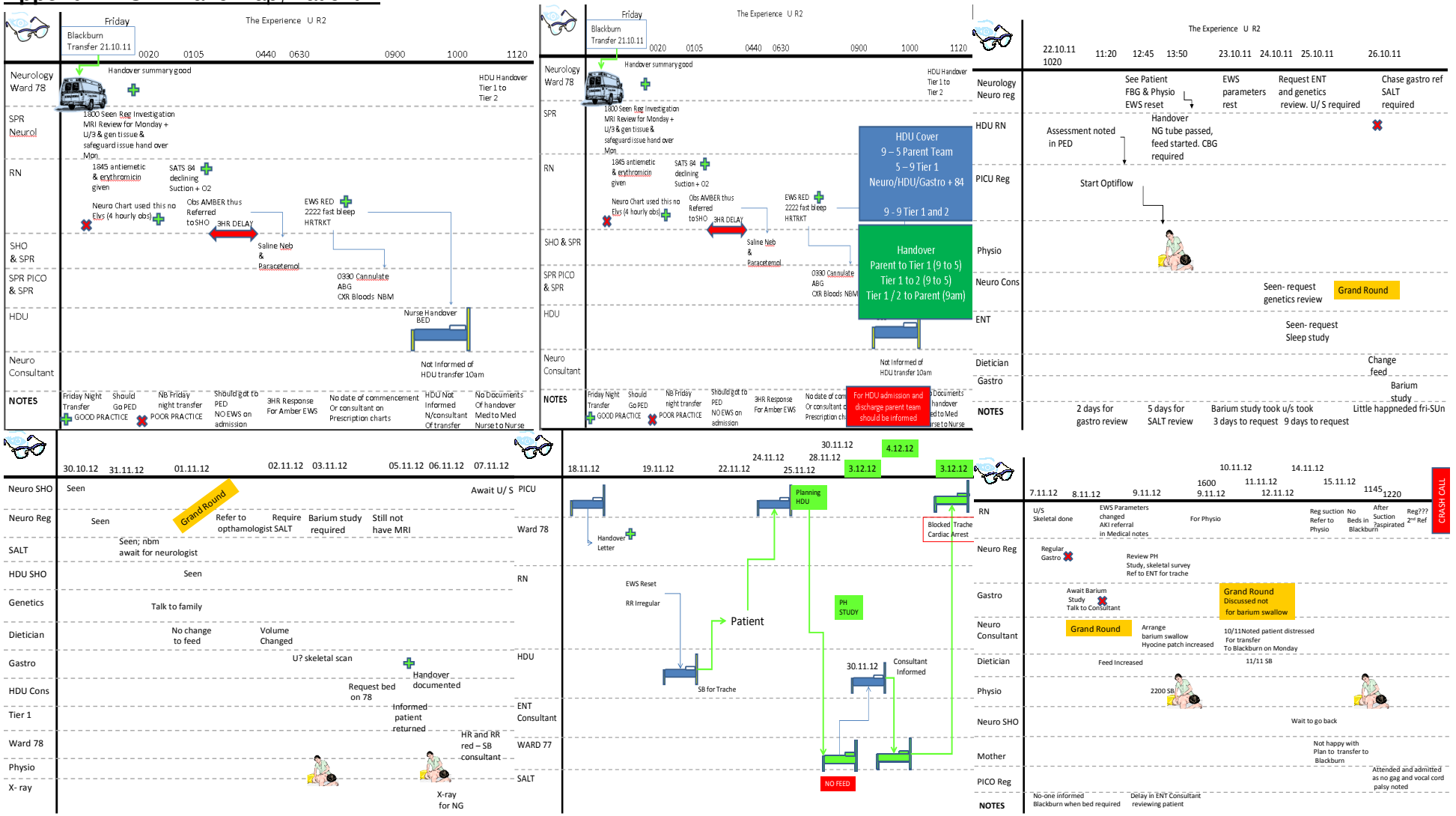
Conclusion

The Safer clinical systems projects has provided the tools to analyse risk and hazards in care of the child with complex illness that had been identified within RMCH from a variety of sources.

Current systems are considered safe, due to work undertaken already, particularly around recognition of acute illness. Within the analysis work including the HTA process; areas that been identified as higher risk and potential sources of error or delay, that then formed the main body of our projects which developed throughout the work.

The change in culture, process, ways of working and over- all recognition of safety has been tangible and the work will continue within all the areas that were highlighted and those that were peripheral yet touched by this process.

Appendix 1 Swim lane map; Patient A



Appendix 2

Patient A Date of admission 21/10/2011

	Key issues identified
1	21/10/2011 Friday night transfer No record of going through PED No EWS on admission
2	22/10/2011 3 hour response for amber EWS
3	22/10/2011 No date of commencement of prescription chart or recorded consultant
4	22/10/2011 Neuro consultant not informed of transfer to PHDU
5	22/10/2011 No documentation of medical or nursing handovers
6	22/10/2011 Delayed SALT referral
7	Took 2 days to be reviewed by Gastro Reg
8	SALT review took 5 days
9	Barium study took 3 days to request
10	Delayed ultrasound request ?25 days
11	Review of MRI scan took ?13 days
12	7/11/11 Planned for discharge to referring hospital After weekend. Referring ward not contacted
13	Hyocine Patches being used? frequency and dose
14	Took one month for ENT Consultant to review

15	18/11/11 Delayed discharge from PICU

Patient B

Date of admission 2/03/2011

	Issues
1	3/3/11 Patient NBM, crucial oral medication omitted whilst in PED
2	3/3/2011 Green EWS sticker not completed
3	3/3/2011 EWS policy not followed when BP triggered amber (no plan documented)
4	3/3/2011 Heated debate between consultant intensivist and consultant neurologist regarding EWS
5	3/3/2011 Concern that referral to an on call physio during the night was inappropriate
6	4/3/2011 Nursing time spent attempting to resolve issues regarding the funding of Micky buttons
7	4/3/2011 Seen by Neurology Registrar but no time documented. No guidance to nursing team regarding acceptable seizure activity
8	4/3/2011 CEPOD classifications not followed
9	5/03/2011 Seen by surgical registrar, time not documented
10	Consultant neurologist provided most of the care despite being a surgical admission.
11	Issues throughout are that medical entries and documentation entries are not followed

Appendix 3; FMEA

	DESCRIPTION OF RISK – describe the potential problem.	EXISTING CONTROLS – physical controls and/or systems currently in place to reduce the risk of adverse incidents?	RISK ASSESSMENT		RISK RATING (SxL)	RISK RANK	ADDITIONAL CONTROLS REQUIRED – What action needs to be taken to eliminate or reduce the risk so far as is reasonably practicable?	SUBSEQUENT RISK RATING IF ADDITIONAL CONTROLS ARE INSTITUTED			PERSON RESPONSIBLE	TIME SCALE	PROGRESS
			Severity (S)	Likelihood (L)				S	L	SxL			
1	Communication; Incomplete actions following handover / ward round	Ward round information documented is medical notes	**3**	**4**	**12**		To ensure actions documented and undertaken. The HTA analysis identified further work to be completed and this will make up part of the projects regarding roles and responsibilities and lead consultant identification	**3**	**2**	**6**	**MS/ YT**		
2	Medical handovers not always clarifying all tasks to be carried out or handing over all sick patients and minimum documentation of handover.	Handover undertaken amount medical teams, informal processes in place Handover for medics undertaken with aspects in medical notes	**3**	**4**	**12**		To review handovers taking place and HTA analysis identified further work to be completed regarding standards and reduction in distractions and this will make up part of the projects	3	2	6	BJ SI		

3	Illegible information and date and time not noted	Trust guidance already in place regarding documentation	**2**	**4**	**8**		To review documentation that is required to be completed and clear sanctions if information incomplete or not timed and dated. ALL doctors know they have to do this.	2	2	4	ID LR		
4	Lack of a standard approach (such as SBAR)	SBAR used for nursing handover	**2**	**4**	**8**		Review use of SBAR within the medical handover project	2	2	4	BJ SI		
5	Decision makers are not aware of patient's stay or there are issues of which clinician is leading care Children may not have all issues addressed in timely or safest manner	Discussions of care occur amongst team	**3**	**4**	**12**		From HTA it was indentified that there needs to be a review of processes of how the lead clinician is identified, informed and communicated. This will make up large aspect of one of the projects. Secondly a new form to improve identification and communication will be explored as another project within the plan	3	2	6	MS YT		
6	Bleep rotas for medical teams are not always available and clear thus tracking down	Local teams are aware of rotas and lists are present on wards	**2**	**4**	**8**		As before once clinicians have been identified and communicated this will improve. There is also a review	2	2	4	RY		

	the appropriate individual can be difficult						of the bleeps and rotas underway presently which will be complete by the end of this year						
7	Delays to diagnostic requests	Systems in place to ensure investigations are undertaken	**3**	**4**	**12**		HTA undertaken this is a further project which will identify method of identification, process of referral and priority of treatment	2	2	4	MG		
8	SALT time to review from acute referral 48 hours not achieved	Systems in place to ensure investigations are undertaken	**3**	**4**	**12**		HTA undertaken this is a further project which will identify method of identification, process of referral and priority of treatment	2	2	4	MG (stu) SI		
9	Insufficient patient history on admission identifying which patient teams are involved in care	Teams undertake full review and request full history on admission	**3**	**4**	**12**		New form implementation as part of one of the projects	3	2	6	ID LR		
11	Compliance with EWS not as it needs to be, resulting in patients not having timely review by correct personnel	EWS project group reviewing solutions. Audit complete and education and training underway	**4**	**4**	**16**		Patientrack to be implemented later this year	4	2	8	SI ACT		

Appendix 4

Ward round HTA

Preconditions

Need inpatient and need medical team

Human Factors Analysis of Current Situation

ID	Description	Warnings and Risks	Notes	Activity Type	Potential Human Error	Error Description	Consequences	Consequence Type	Risk Ranking Score	Existing Risk Control Measures / Recovery	Performance Influencing Factors	Risk Reduction Measures
Plan 0	For each patient on ward round do 1-8											
1	Arrive on ward								12			
2	Identify lead consultant		Needs to occur to ensure	Checking	CH1 Check	Not checked	no lead to make	Patient safety	36	Lead consultant is	Staffing	Standard for ward round

			communication		omitted		decision			identified in A and E		
Plan 2	Do any order											
2.1	Identify in A and E		Need to identify accurately lead team	Actions	ACT8 Wrong action on right object	Not identified accurately	The correct teams are not informed if changes to patient condition	Patient safety	36	Present system does identify team	Task-routine task	Discuss process with A and E and identify accurate solutions
Plan 2.1	2.1.1 and 2.1.2 either can occur 2.1.3 follows either											
2.1.1	Doctor may write in notes who patient is under this would be used		If Drs know the specialit y they would docume nt who the team	Information Entry	INFE3 Informatio n entry incomplete	Informatio n may not be known or documente d	The lead team is not identified accurately	Patient safety	24	When Drs know this information , they will complete this work	individual - skills and knowledge	Discuss process with A and E as part of project planning and identify accurate

			was									solutions
2.1.2	A and E Nurse identify speciality by condition identifying - lead Consultant is on take for that speciality		If not identified, the nurse will identify the specialit y by presenti ng condition	Diagnosis	DIAG1 Diagnosis not carried out	Incorrect assessme nt of who is specialist	The incorrect team is identified and may not attend.	Patient safety	36	Nurse can approximat e who the correct person is to attend The ward can follow this up the following day and amend	individual - skills and knowledge	Discuss process with A and E as part of project planning and identify accurate solutions Ensure ward follows up the following day
Plan 2.1.2	Do in any order											
2.1.2. 1	Switch to contact A and E desk with list of who is on call			Actions	ACT10 Action incomplete	the list is incorrect	The wrong name is identified for the team on	Patient safety	12	Switch receives list presently	Tasks- Routine task	Assess detail of process and refine
2.1.2. 2	Nurse makes decision on condition or who has			Diagnosis	DIAG3 Diagnosis incorrect	Incorrect assessme nt of who is	The incorrect team is identified	Patient safety	36	Nurse can approximat e who the correct	Individual - skills and knowledge	Discuss process with A and E as part of

	reviewed patient					specialist	and may not attend.			person is to attend The ward can follow this up the following day and amend		project planning and identify accurate solutions Ensure ward follows up the following day
2.1.3	Clerk assigns speciality on PAS and admitting Consultant			Actions	ACT7 Right action on wrong object	Allocated incorrectly	The wrong team called for the wrong patient	Patient safety	12	Assigned Consultant team reviews patient	Individual - skills and knowledge	Discuss process with A and E as part of project planning and identify accurate solutions Ensure ward follows up the following day
2.2	Consultant / medical team check if the lead Consultant is		Before ward round, Consultant	Situation Evaluation	SA1 SA omitted	Not always done	Patient under wrong team	Patient safety	36	Ward clerk, nurse of Consultant should	Team-Responsibility	Assign role to appropriate individual to ensure that

	correct		identifies their patients							check this		this is done
Plan 2.2	Do in Sequence											
2.2.1	Check on PAS			Actions	ACT9 Action omitted	Not always done	Patient under wrong team	Patient safety	18	Ward clerk, nurse of Consultant should check this	Team-Responsibility	Assign role to appropriate individual to ensure that this is done
2.2.2	Check on Nursing board			Actions	ACT9 Action omitted	Not always done	Patient under wrong team	Patient safety	12	Ward clerk, nurse of Consultant should check this	Team-Responsibility	Assign role to appropriate individual to ensure that this is done
2.2.3	Confirm the Consultant is appropriate if not liaise with relevant speciality			Actions	ACT9 Action omitted	Not always done	Parent team not aware of actions taken and holistic view not given	Patient safety	8	Consultant or lead clinician should liaise with the parent team	Team - verbal communication	Ensure standard is maintained that this occurs

2.3	Once finalised amend board and PAS and document medical notes								6			
3	Collate the notes for the patients to be seen			Information Retrieval	INFR3 Information retrieval incomplete	May not be able to find correct notes	Full history not present	Patient safety	12	Ward clerks will ensure notes present before the ward round and place in trolley and team members will ensure that if used, they are returned	Team	For standard for ward round, ward clerks must ensure notes are prepared beforehand. Preparing notes before ward rounds ensure all are present
			Filing notes is not always done		PL6 Roles and responsibilities not defined	Roles not defined in who should file into medial notes	Notes are mislaid and lost and information is not	patient safety		Nurse, ward clerk or medic presently will file if time	Team	To be discussed

						investigations and information	available for the ward round			available		
4	Pull results		Pulling investigations and results on CSW	Actions	ACT5 Action too fast/slow	May not be able to find all results and time delay in pulling information	Time wasted	Time wasted	8	PC used with CWS used to pal results	Organisational system	Review of COWS in the wards
5	Identify nurse to attend ward round			Actions	ACT9 Action omitted	Nurse does not attend	Information not passed either way nurse to Dr or Dr to nurse	Patient safety	24	Nurse attempts to attend	Staffing	Ward teams reviewing time of ward round to be set where possible To be discussed - communication book or method for ensuring all team is aware of actions

6	Visit patient bedside		Is patient present (or in scan/ investigation)	Actions	ACT10 Action incomplete	Patient not present	Patient not assessed	Patient safety	4	Ward rounds happen in the morning when patient is often available. If not present at time, medics would return	Organisational system	
7	Conduct full assessment of patient			Situation Evaluation	SA2 SA incorrect	Incomplete assessment made	Something is missed from the assessment - leading to delays or incorrect treatment - increased length of stay	patient safety	18			

Plan 7	Do in Sequence											
7.1	Full assessment			Actions	ACT10 Action incomplete	Full assessment not completed	Something is missed from the assessment - leading to delays or incorrect treatment - increased length of stay	patient safety	3	Team approach to ward round	Workload/ Staffing	Clear lead for each ward round required
7.2	Review of investigations			Actions	ACT10 Action incomplete	Results not immediately available - not filed, not sent back, not recorded	Investigations not reviewed in a timely manner	patient safety	8	All medics can access CWS. Results can be pursued with phone calls	Organisational system	
7.3	Review drug chart and treatment plan			Actions	ACT9 Action omitted	The drug chart is not reviewed on all ward	Drug chart may not be reviewed by the	patient safety	24	Pharmacist will review the charts	Team-responsibility	As part of the review of the ward round

						rounds	medical team			daily and may contact medics if issue		standards / pharmacists must contact the medical team if any issues - to be discussed
Plan 7.3	Do in Sequence											
7.3.1	Arrive in ED with medication or comprehensive list (EDIS for confirmation), chart written up		Need to ensure that ED medical staff can pull data from patient/ carer/ EDIS	Information Retrieval	INFR3 Information retrieval incomplete	Unable to pull all data	Wrong prescription is written	patient safety	12	Cares spoken to and drugs reviewed in ED		
7.3.2	Charts reviewed on ward round											
Plan 7.3.2	Do either											

7.3.2.1	Pharmacist present - review chart at the time			Checking	CH1 Check omitted	Pharmacist not present	Drugs prescribed incorrectly	patient safety	12	pharmacist aims to attend ward round	Team staffing	Ensure mitigation if not achieved
7.3.2.2	Pharmacist review later, contact medical team to feedback			Checking	CH5 Check too late/early	Information may not be signed off by medics in timely way	Drugs prescribed incorrectly	patient safety	16	When pharmacist attends patients contact medic to inform them of any change		Discuss with pharmacist change to take place
7.4	Request investigations			Information Communication	COM1 Information not communicated	SALT team (or other) not informed	Patient not receive investigation/ treatment	patient safety	6	Follow up review of the patient should capture this	Team-communication Environment staffing	Staffing levels to be revived in SALT Education for ward teams by SALT team on referral decisions and process Who attends

												on ward rounds under review For SAL review - could other do this Flow chart or identifying of how patients are prioritised
	Request investigations				COM4 Ambiguous/unclear information communicated	Received information not adequate	Priority may be incorrect	patient safety		Phone call referral used for SALT others use CWS with phone call follow up	Team-communications	CWS to be used for SALT and identification of how to prioritise
Plan 7.4	Do in Sequence											
7.4.1	Decide on investigation required			Actions	ACT9 Action omitted	Investigation not identified and/ or not	Investigation not performed	patient safety	16	Ward rounds undertaken,	workload-staffing Team load	Define when to refer (useful for swallow

						requested				experienced nurses supporting patient care	- supervision	assessment) Named person responsible for ordering investigation needs to be identified at time or agreement
7.4.2	Make referral			Actions	ACT9 Action omitted	Request for investigation either omitted or delayed	Investigation not performed in a timely manner	patient safety	16	Ward rounds undertaken, experienced nurses supporting patient care	workload-staffing Team load - supervision	Named person responsible for ordering investigation needs to be identified at time or agreement
Plan 7.4.2	If urgent radiology do 1 and 2 If routine radiology do 1 If service not available on											

	CWS (e.g. SALT assessment) do 2											
7.4.2.1	Make referral using CWS			Actions	ACT8 Wrong action on right object	incorrect or incomplete referral information	Wrong priority or delay in investigation	patient safety	3	CWS will not let you go on without completing, however free text is required	organisational-training technology and tools - electronic	Ongoing training in CWS
7.4.2.2	Make telephone referral			Actions	ACT8 Wrong action on right object	Full detail may not be given	Wrong priority or delay in investigation	patient safety	3	Phone call back to referrer may occur	organisational-training	Ongoing training
7.4.3	Pick up phone message/ receive request			Information Communication	COM4 Ambiguous/unclear information communicated	Clear information not given	Wrong priority or delay in investigation	patient safety	3	Phone call back to referrer may occur	Team - communications	Ongoing training
7.4.4	Prioritise request and allocated time			Planning	PL2 Inaccurate	wrong time allowed or priority	patient not investigated n a	patient safety	16	Phone call from medic if aware of	Team - communic	TO be discussed with

	slot for review/ investigation				plan	incorrect	timely manner			the delay	ations	radiology
7.5	Revise treatment plan			Planning	PL6 Roles and responsibilities not defined	Individuals not identified or who should do what	All actions not carried out in timely manner, patient care affected	patient safety	36	document in medical notes actions to be taken and nurse (if present) aware of plan	Team - communications	Standard to be written with identification of how roles are allocated to be agreed
8	Talk to patient/ carer			Information Communication	COM1 Information not communicated	Carer not present or not understanding language	Information not shared with carers	Communication	12	BIG WORD can be used and interpreters can be requested	working environment - patients	on going training big word, new referral process for interpreters
Plan 8	Do in Sequence											
8.1	Inform of treatment plan			Information Communication	COM1 Information not communic	Patient/ care not informed	Patient/ care not aware of treatment	Communication	3	All efforts are made to talk to relative /	Patient - language and communic	

					ated		plan			carer	ation	
8.2	Discuss EDD			Planning	PL2 Inaccurate plan	EDD not always calculated and nor always accurate	Financial penalty for the trust	Financial	3	All efforts are made to ensure this is performed. Senior nurse meeting analyses all incomplete EDD	individual-skills and knowledge	
8.3	Answer further questions			Information Communication	COM4 Ambiguous/unclear information communicated	ambiguous or unclear information given to Cares/ relative	Care/ relative does not understand the information		3	All efforts are made to ensure full understanding is given	Patient - language and communication	Workshop with clinical staff to look at improvements for communication with patients and carers
9	Document the plan in the notes and communicate			Information Communication	COM3 Incomplete information communic	Incomplete documentation	Detail of name/ GMC/ time and date	Patient safety	24	Standards are set for documentation Audits	Team-written communic	

	to the ward teams and lead medical team (if not you)				ated		not included in notes			and feedback are under way	ation	

Handover HTA analysis

Preconditions
Need a handing over team and receiving team

Human Factors Analysis of Current Situation												
ID	**Description**	**Warnings and Risks**	**Notes**	**Activity Type**	**Potential Human Error**	**Error Description**	**Consequences**	**Consequence Type**	**Risk Ranking Score**	**Existing Risk Control Measures / Recovery**	**Performance Influencing Factors**	**Risk Reduction Measures**
Plan	Do in											

0	Sequence											
1	Arrive at meeting place within allocated handover time		Potential for team to be delayed	Planning	PL4 Insufficient time allocated	Team members busy with other tasks thus late for handover	Full handover not given or all team members not received	Patient safety	12	Presently teams aware of meeting place and time to attend	working environment	Set standards on venue and ensure book time with all venues
Plan 1	Do in Sequence											
1.1	Designated areas for all meeting to be identified and known		Confirm present locations are known and available at required times	Planning	PL3 Insufficient resources allocated							
1.2	All teams arrive within allocated handover time		Teams may be caught up with other activities	Actions	ACT11 Action too early/late	Team may be caught up with other activities and may not arrive	Information not given to them or not received	Patient safety	24	Presently teams aware of meeting place and time to attend. No	working environment	Set standards on venue and ensure book time with all

						on time, no measure or this				log created of who attends		venues Create log for handover of who attends and what time
1.3	If team member does not arrive ensure process followed to ascertain whereabouts or cover In hours- own team would cross cover			Situation Evaluation	SA1 SA omitted	Team member is off sick or on study leave and information has not passed through	Team short of start member for shift	Patient safety	24	temporary processes to ensure cross cover	working environment	
Plan 1.3	Do in Sequence for out of											

	hours											
1.3.1	Contact clinical coordinator bleep 1545 - for update and to liaise with wards			Actions	ACT10 Action incomplete	if coordinator is very busy or she has heard nothing from staffing	she is unable to offer more information	patient safety	8	Clinical coordinator is 24/ 7	task	passing of information
1.3.2	Contact duty manager to find replacement and to contact consultant on call, for each speciality			Information Communication	COM1 Information not communicated	Duty manager does not inform all consultants and doesn't not have an up to date rota	Not all teams are aware of reduced numbers of Drs so increased support may not be given	patient safety	18	information on intranet regarding role	organisational systems	Review handbook and check training for DMs
1.3.3	In hours: Inform medical staffing to		As above									

	double check issue											
1.3.4	Agree cross cover from present team (e.g. surgery reg would cover peads)			Actions	ACT10 Action incomplete	The right team divides up the remaining work incorrectly	the workload is not fairly distributed	patient safety	8	Clinical coordinator and medics liaise to discuss workload and divide	working environment	
2	Ensure reduced disturbances - no distractions		bleep disturbing handover	Actions	ACT10 Action incomplete	bleeps going off may disturb handovers	handover is disturbed and concentration can be lost or bleeps may not be answered, patient may not be seen	patient safety	12	People will re- bleep the medics if required		Inform nurse teams of handover time and requirement only for urgent bleeps

3	Senior medic leads discussion so all can hear		leadership in relation to time keeping, management of handover	Supervision	SUP2 Supervision inadequate	leadership not adequate	leadership not adequate thus timekeeping poor and handover not managed as efficiently as could be	patient safety	8	Teams are managing to handover	Environment	For consultant to attend August/ February to lead and encourage attendance. For registrars to then take on
4	Handover of information											
Plan 4	Do in Sequence											
4.1	Handover sick patients											
Plan 4.1	Do in Sequence											
4.1.1	Handover all red											

	patients and all acutely ill patients or those at risk of deteriorati on											
4.1.2	Ensure responsibl e consultant and ICU are aware of those scoring red and plan in place for all											
4.1.3												
4.2	Handover outstandin g tasks											
Plan 4.2	Do in Sequence											

4.2.1	handover of investigations and results outstanding											
4.2.2	Ensure plan known											
4.2.3												
4.3												
5	Documentation											

Appendix 5 Performance Influencing factors analysis for ward round

Preconditions

Need inpatient and need medical team

ID	Description	Activity Type	Potential Human Error	Consequences	PIF	PIF Assessment 1	Comments	SLI	Baseline HEP
2	Identify lead consultant	Checking	CH1 Check omitted	no lead to make decision					0.0093
Plan 2	Do any order								
2.1	Identify in A and E	Actions	ACT8 Wrong action on right object	The correct teams are not informed if changes to patient condition	4.1 The need to carry out the actions is not obvious 4.2 The likelihood of a previous misdiagnosis leading to an incorrect action is high 4.3 The barriers for preventing an incorrect action are not effective	25 (D) 75 (A) 100 (SA)		0.36	0.0085

					4.4 The formal or informal procedures for carrying out this task are poor	75 (A)			
					4.5 Time pressure is excessive	25 (D)			
					4.6 Distractions are excessive	50 (NAD)			
					4.7 Training and / or experience for the task is limited	100 (SA)			
2.2	Consultant / medical team check if the lead Consultant is correct	Situation Evaluation	SA1 SA omitted	Patient under wrong team				0.7	0.0008
					Requirement for Situation assessment	90			
					Ambiguity of information used to assess the situation	10			

					Confusability of the situation with another Time pressure Distractions Training	10 50 50 50			
Plan 2.2	Do in Sequence								
7	Conduct full assessment of patient	Situation Evaluation	SA2 SA incorrect	Something is missed from the assessment - leading to delays or incorrect treatment - increased length of stay					0.0192
7.4	Request investigations	Information Communication	COM1 Information not communicated	Patient not receive investigation/ treatment				0.28	0.0143

					8.1 The need to initiate communication is not obvious	25 (D)			
					8.2 Formal communication protocols, e.g. SBAR are not used	100 (SA)			
					8.3 There is little shared understanding or common mental model between the participants in the communication	75 (A)			
					8.4 The information being communicated is very complex	50 (NAD)			
					8.5 There is very little redundancy in the information being communicated or in the communication channels being used	75 (A)			
					8.6 Time pressure is excessive	75 (A)			

					8.7 Distractions are excessive 8.8 Training and / or experience for the communication is limited	100 (SA) 75 (A)			
7.4.4	Prioritise request and allocated time slot for review/ investigation	Selection	PL2 Inaccurate plan	patient not investigated in a timely manner	Existence of planning process Time to develop plan Planning of roles and responsibilities Usability of the plan	50 50 90 10		0.5	0.0032
7.5	Revise treatment plan	Planning	PL6 Roles and responsibilities not	All actions not carried out in timely manner, patient care				0.44	0.0049

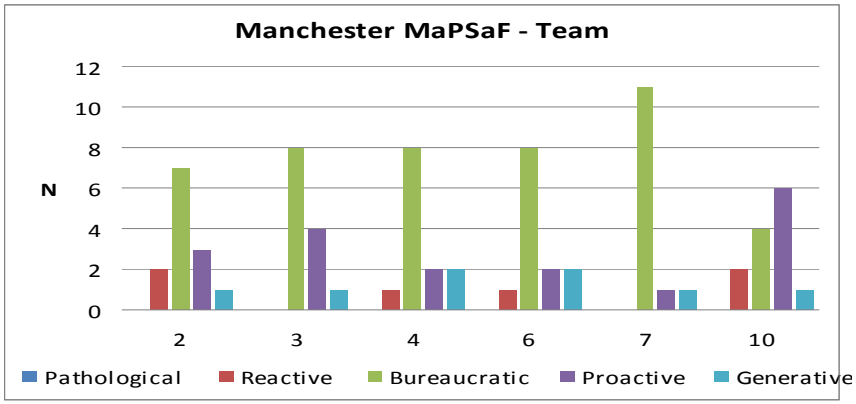
			defined	affected	1.1 No explicit planning process exists for this task 1.2 There is insufficient time to develop the plan 1.3 Roles and responsibilities for the task are not defined during planning 1.4 The plan is not delivered in a form that supports the correct performance of the task	25 (D) 25 (D) 100 (SA) 75 (A)			
8	Talk to patient/ carer	Information Communication	COM1 Information not communicated	Information not shared with carers				0.37	0.0076
					8.1 The need to initiate communication is not	1 (SD)			

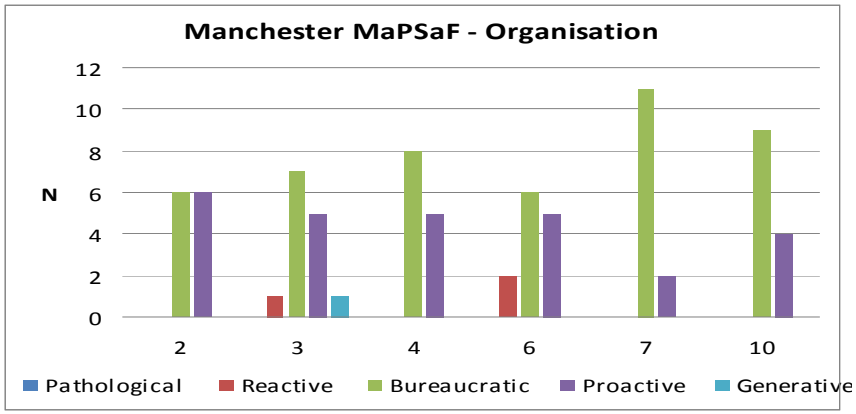
					obvious				
					8.2 Formal communication protocols, e.g. SBAR are not used	75 (A)			
					8.3 There is little shared understanding or common mental model between the participants in the communication	75 (A)			
					8.4 The information being communicated is very complex	100 (SA)			
					8.5 There is very little redundancy in the information being communicated or in the communication channels being used	75 (A)			
					8.6 Time pressure is excessive	75 (A)			
					8.7 Distractions are	75 (A)			

					excessive 8.8 Training and / or experience for the communication is limited	25 (D)				

Appendix 6 – MapSaf

13	MANCHESTER n = 13					
	Question	Pathological	Reactive	Bureaucratic	Proactive	Generative
	TEAM	A	B	C	D	E
2	Priority given to safety	0	2	7	3	1
3	Sytem errors and individual responsiblity	0	0	8	4	1
4	Recording incidents and best practice	0	1	8	2	2
6	Learning and effecting change	0	1	8	2	2
7	Communication about safety issues	0	0	11	1	1
10	Team working	0	2	4	6	1
	Question	Pathological	Reactive	Bureaucratic	Proactive	Generative
	ORGANISATION	A	B	C	D	E
2	Priority given to safety	0	0	6	6	0
3	Sytem errors and individual responsiblity	0	1	7	5	1
4	Recording incidents and best practice	0	0	8	5	0
6	Learning and effecting change	0	2	6	5	0
7	Communication about safety issues	0	0	11	2	0
10	Team working	0	0	9	4	0

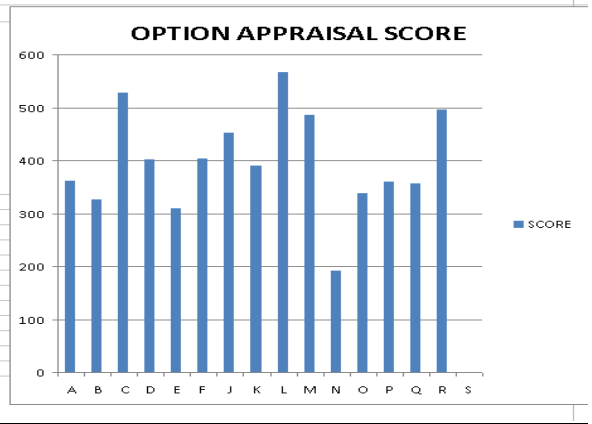




Appendix 7 – Options appraisal

		GROUP 1 Ward round						Group 2 - Form project										
		A	B	C	D	E	F	J	K	L	M	N	O	P	Q	R	S	
Project Want for our Pathway	**Weight**	WR; Identification of lead Consultant in A and E	WE; Identification of lead consultant at ward rounds	WR; Nursing attendance at ward round	WR; investigation delegation (R and R)	WR; Effective communication with families on ward r	Form; initial admission form	Form; Standardised daily paperwork	SALT; identification of need	SALT; improved referral process	SALT; prioritising of referral	SALT; Improved time to investigation from SALT	Handover; reduced interruptions	Handover; documentation	Handover; Structure and process	Patient, carer and family's; workshops on improving		**STANDARD AND MEASURE**
Safe handover of information	**10**	9 90	9 90	9 90	9 90	3 30	9 90	9 90	1 10	9 90	1 10	1 10	9 90	9 90	9 90	1 10	0	Ensure that information is passed effectively from clinician clinician
Patient safety	**10**	3 30	9 30	9 9	9 90	3 30	9 90	9 90	9 90	3 30	9 90	3 30	9 90	9 90	9 90	3 30	0	Reduce risk to patient
Reduced LOS	**8**	1 8	9 8	9 72	9 72	3 24	3 24	9 72	9 72	9 72	9 72	1 8	1 8	3 24	1 8	3 24	0	
Ease of implementation	**6**	1 6	1 6	9 54	1 6	1 6	3 18	3 18	9 54	9 54	9 54	1 6	1 6	3 18	1 6	9 54	0	Is the project easy to implement
Acceptable to staff	**10**	3 30	3 30	9 90	1 10	1 10	3 30	3 30	3 30	9 90	9 90	9 90	1 10	1 10	1 10	9 90	0	Will staf be able to do it
Sustainabiity	**6**	9 54	3 18	3 18	3 18	9 54	3 18	3 18	3 18	9 54	9 54	1 6	3 18	3 18	3 18	9 54	0	To become normal practice
Patient and parent satisfaction with care	**5**	3 15	3 15	1 5	1 5	9 45	1 5	1 5	1 5	1 5	1 5	1 5	1 5	1 5	1 5	9 45	0	
Feasibility	**10**	3 30	3 30	9 90	3 30	3 30	3 30	3 30	3 30	9 90	3 30	1 10	3 30	3 30	3 30	9 90	0	
Value for money	**3**	9 27	9 27	9 27	3 9	3 9	9 27	9 27	3 9	3 9	3 9	1 3	3 9	1 3	9 27	9 27	0	
Transferable	**8**	9 72	9 72	9 72	9 72	9 72	9 72	9 72	9 72	9 72	9 72	3 24	9 72	9 72	9 72	9 72	0	From area to area

		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		A	B	C	D	E	F	J	K	L	M	N	O	P	Q	R	S
SCORE		362	326	527	402	310	404	452	390	566	486	192	338	360	356	496	0
STANDARD & MEASURE																	
Number of Patients Impacted By Project	%	100%							100%	50%	50%	5%					
Cost to Implement £ks	**£K**	£0.5	£2.0	£2.0													
Stakeholder View 1: Neurology	**PNR**	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Stakeholder View 2: Gastro	**PNR**	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Stakeholder View 3: Ortho	**PNR**	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Stakeholder View 4: Gen paeds	**PNR**	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Stakeholder View 5: Exectutive lead	**PNR**	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Stakeholder View 6: Clinical lead	**PNR**	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Link to Trust Objectives																	
Time To Implement (MONTHS)	**MONTHS**	3	3	6	1	6	6	5	3	4	8	5	3	1	2	2	5
Difficulty to Implement	**H M L**	H	M	L	L	M	H	H	H	L	M	L	M	M	L	L	L
Estimate Start and Finish	**JAN - DEC**	jan to mar															



Appendix 8Standard for handover

Supporting safer patient care through improved and monitored handover between medical shifts.

Handover is recognised to be a crucial component of patient safety. Handover occurs in a number of different settings and situations (different team in same ward, different ward or care setting, acute care to community) .These standards are designed to specifically to support hand over at the change of a medical shift.

The standards are based on the RCP toolkit (2011), the Academy of Royal Medical Colleges documents of 2008 (A clinicians guide to record standards-parts 1 and 2), our own work on handover as part of the Safer Clinical Systems Health Foundation Project in RMCH and discussions with interested clinicians from across CMFT.

For every clinical team:

- Within directorates, a senior doctor should be designated to oversee medical handover processes.
- Attendees and times for handover are to be defined and incorporated into job plans and work practice (including overlapping medical shift times when practicable)
- Handover should occur in designated areas, appropriately equipped and accessible. These should be quiet areas, where patient confidentiality can be preserved
- Handover should start promptly with all attendees and have a designated start and finish time
- Consideration should be given to a "by the bed handover" for sick patients, ideally with senior staff presence
- Attendance at handover should be prioritised over routine tasks e.g. ward rounds, OPD, attendance in operating theatre for routine surgery
- Handover should only be interrupted by emergency calls
- Handover format should be defined, including the method of conveying information about the triaging of the sickest patients, and transfer of responsibility for these patients
- Handover communication should follow a set format, e.g. SBAR
- Handover documentation should have a set format, and be permanently recorded, either in the case notes or in a clearly understood format
- Handover processes, attendance, and unnecessary interruptions should be regularly audited as part of each division's Clinical Effectiveness process.
- Consultant presence at handover should be encouraged, for teaching, assessment and role modeling purposes
- Handover processes and documentation should be part of all induction.

Bronwyn Kerr on behalf of Clinical Effectiveness Team,

January 2013

Appendix 9

Measurement plan

Site: CMFT
Pathway focus: Care of the child with medical complexity
What are your measures of harm to the patient? *a. Distance between HLIs* *b. Distance between 2222 calls* *c. Unplanned admissions to PICU* What are your measures of patient experience? *d. Qualitative feedback- parent PRIMO type questionnaire* What will be your other outcome measures? *e. Length of stay* Are these true outcome measures or proxy measures. If proxy, what is the true outcome? *This is true outcome measure*
Why are the measures you have chosen the right ones for knowing whether you have made a difference? Are they important and relevant to the care and safety of patients? *HLIs demonstrate the that a patient has come to harm thus identifying the risk to the patient group, thus reduction in these will show our project has been successful* *2222 calls and unplanned admissions to ICU, are a measure of unrecognised deterioration or delay in decision for end of life care – by having more proactive consultant lead decision making and management this again would reduce* *Qualitative feedback will demonstrate narrative to support the reduction in risk and improved patient journey.* *LOS, by improving the journey and reducing risk throughout; the patient should have a slicker, more effective hospital stay with a shortened LOS*
What are your process measures? *Adherence to lead consultant policy* *Ward round processes- measure against standard*

Time from decision to refer to treatment for SALT assessments

Use of admission form- completion and number

Time to see specialist from decision and referral

Handover standards compliance

Reduction to distraction in handover

Reduction to bleeps overnight

What *evidence* or *argument* links your process measures to your outcome measures?

The detail for this is described within the safety case.

As the claims state the process measures are determined from the individual projects that have been identified from the diagnosis work. The HTA and FMEA identified the significant risks and the projects were created from these. Further analysis is underway to indentify exactly what the interventions will be and this will confirm the potential process measures that we have suggested are correct.

What are potential adverse effects of improving this pathway?

Need to ensure that decreasing length of stay does not lead to readmission

What are your balancing measures?

Frequency of admission/ readmission

Why have you chosen these measures?

As there may be a reduction in LOS, this could lead to the patients bouncing back to early- we will closely monitor this.

Are there any confounding factors that you need to measure? Please list them here.

Patientrack implementation – may affect the use of the EWS process which would hope to improve the care of al children within RMCH

Improving quality programme work is ongoing within the trust and we are closely observing this in tandem to our work

Do you need completely new measures, or can you use data already routinely collected, or do you need a combination of both?

Both

Lots of new measures have been identified already

Setting your data collection plan

For each of the measures above, what data will be collected? (E.g. notes retrieval retrospectively, clinical activity prospectively, other). Will you need specially designed forms? If yes, have the forms been piloted? *Data analysis teams are collating LOS* *2222 calls are collated by Acute care team* *HLIs are collated by risk team* *Qualitative feedback is collated by questionnaires- these have now been piloted with 5 families* *Excel databases have been created for the process measures and run charts are being created presently* *Point prevalence observation audits are being done and a form has been designed and tested*
When and how often will the data be collected? (E.g. every shift, every day, end of week, end of month, other). *Varying for each project* *Data – monthly or quarterly, others from shiftly -to spot check*
Who will you collect the data? Do staff need to be trained, and do they require protected time for data collection? *We have identified people within each project group to do this and have a support band 6 already underway. SI will ensure that this is supported throughout*

Measurement plan checklist

Check: Are your measures:	**Comment**
Robust? Are they subject to systematic or random variation?	*Yes robust* *Possibility of some variation to be aware of*
Valid? Do they really represent the thing you are trying to measure? Do they reflect safety improvement?	*yes*
Sensitive? Will they pick up small changes or just big ones?	*Outcome – for larger*

Check: Are your measures:	Comment
	Process- for smaller
Specific? Are they likely to be affected by things unrelated to the thing you really want to measure?	*Very possibly- we are aware of this already- see confounding section*
Feasible to collect without excessive burdens (on staff time, IT infrastructure, financial costs and so on)?	*Yes*
Sufficient in number? Have you chosen a realistic number of measures so that collection is manageable but will give a meaningful result?	*Yes*
Collectable? Do you have the right systems in place and the personnel available to collect data? If so, have these systems been tested?	*Yes*
Simple to use? Requiring minimal training and unlikely to irritate staff or distract them from their clinical work?	*Yes*
Fit with workflow? Do the measures interfere with workflow? To what extent might there be duplication of existing data collection?	*Yes*
Cost effective? Are the measures cheap enough to be used widely?	*Yes*
Sustainable? Can you carry on using them after the project has ended?	*Some that are appropriate – if required can be feedback into already used processes e.g. matrons ward round or clinical dashboards*
Appropriate to the public domain? Are there any specific privacy/ confidentiality/ information governance issues associated with using these measures and ensuring that data can be used in anonymised form by the Technical Provider and the Evaluation team?	All fine

AVOIDING UNINTENDED CONSEQUENCES

Check: could there be unwanted consequences of this measurement strategy?	*No*

What is the potential for gaming (manipulation of data to produce a favourable impression) associated with these measures? How will you guard against this risk?	*No*
In what ways might introducing this measure have unwanted impacts on the behaviour of staff (e.g. by encouraging them to improve on the thing being measured, to the neglect of other important things that are not being measured)? How will you guard against these risks?	*No*

DATA QUALITY ASSURANCE

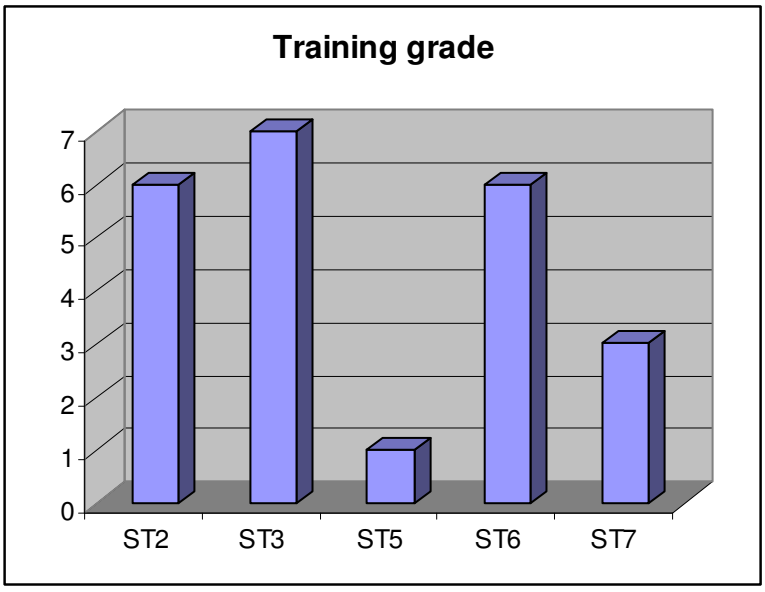
Check: can you assure data quality?	*Yes*
What quality assurance measures will be put in place?	*The data will be discussed and reviewed at each meeting (weekly)*
How will you prepare and check the data before submission to the Technical Support Team?	*As above*
What is the likelihood there could be missing data?	*As numbers could be small- this may impact. Also require all projects to start as planned*
How can you minimise the risk of missing data?	*Supportive project management*

Appendix 10

Analysis of handover questionnaire 2012

Total responses 23/38 = 60%

1. Training grade



2. Training programme

Established process of Handover yes 17/23 74% no 5/23 21%

Established system for generation of typed/written handover Yes 18/23 78% No 5/23 21%

Established structure for handover Yes 6/23 26% No 16/23 70%

3. Instruction in the training programme re handover

Verbal instructions 6/23 26%

On the job training 15/23 65%

4. Handover experience

Established times for handover 16/23 all services 70%

5/23 majority of services 21%

2/23 some services 8%

Established locations for handover 10/23 All services 43%

8/23 Majority 35%

3/23 some/few 12%

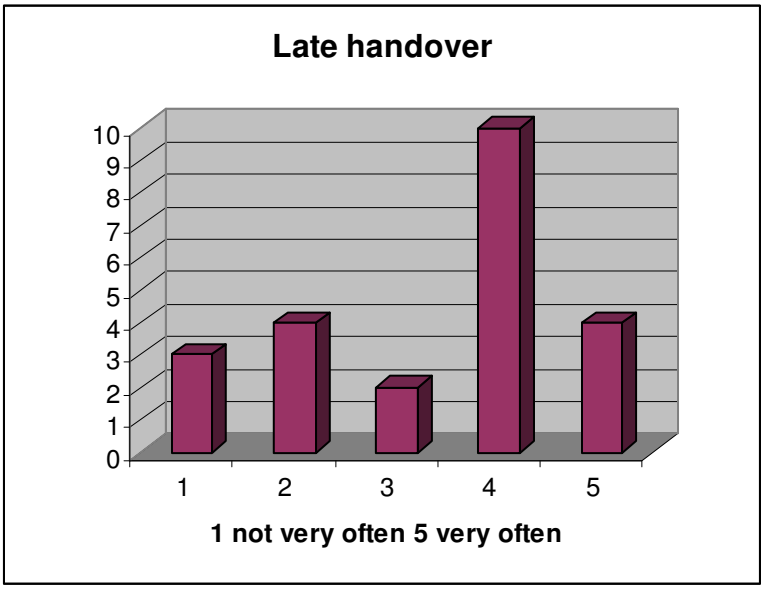
5. Feedback on quality of handover - 21/23 no feedback 91%

2/23 Yes 9%

6. Ways in which handover process could be improved

- Larger room with proper IT facilities and phone facilities
- Feedback
- Dedicated rooms with computers with facilities for high volume shredding
- Release doctors on call and start handover on time
- More phones, working printers, somehow fewer sheets
- Dedicated room that isn't in use during handover times
- Standard format for handovers i.e SBAR for all specialties
- Clear structure of handing over each case
- A proper venue, quiet, conducive environment
- A decent room with phone, computer, oncall rota and could leave things
- Reg to SHO feedback on presenting patients
- Isolated places for each tiers to sit, working printer
- More appropriate room with enough chairs and IT facilities.

7. Late start of handover :



Reasons for late start.

- Late individuals

- Busy shift, Traffic

- Late wardrounds, outstanding jobs

- Late attenders

- Too many people from each team come to handover. Should be 1 dedicated person from each team

- Trying to finish jobs, patients in A&E, late clinics

- People finishing day jobs late

- Staff not turning in time

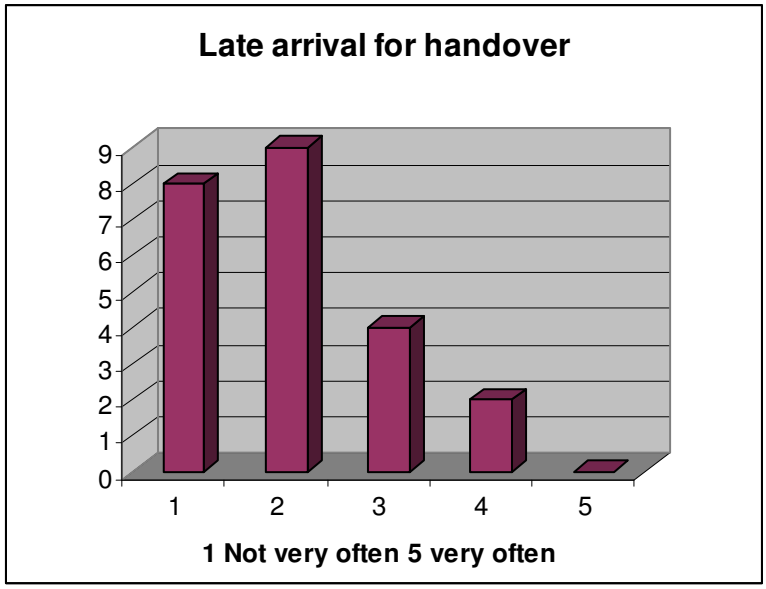
- Late ward round by some teams

- Late arrivals by teams

- Often in evening consultant ward rounds can go past the handover time

- tied up in daytime jobs, assuming other members have taken handover in morning

8. Why are you late for handover?



- Bleeps for non-urgent jobs, clinics, not able to get released from the department

- Finishing day jobs

- either in clinic or busy doing ward jobs

- Gastro pm ward round finishes after 430 pm

9. Would a consultant presence be helpful to support /guide handover?

YES 10/23 43%

- Shouldn't be necessary but may scare people to getting there in time

- Ensure management plan for complex patients is clear
- More likely to provide feedback
- Clear plan for complex patients
- Clear more definitive plans
- Guidance on managing workload if high

NO 13/23 57%

– Too many people. Separate handovers better

- Need autonomy for junior staff to manage handover with minimal interference

- Not practical in tertiary centres but useful in DGH

- Once it gets started there aren't any problems with the actual handover

- Would not know other specialty patients

- Just needs a plan and then implementing

- Too many subspecialties involved

- unnecessary

- Not practical

- Sprs know plenty about their patients and one consultant would not be able to oversee everything anyway.

10. Clinical coordinator to attend

YES 6/23 26%

- Ascertains team pressures and bed occupancy

- To be aware of operational issues
- Don't know but may be able to answer bleeps till handover finishes

NO 17/23 74%

- Too many people

- Other priorities

- Only interested in discharges and bed availabilities. Will prolong handover due to management issues.

- unnecessary

- Can't see the relevance

- To make aware of the admissions

11. Other comments

- The starting time is the main issue with handover in RMCH
- Room not available used for other purposes, handover in corridor
- Handover is in Chaos at the moment

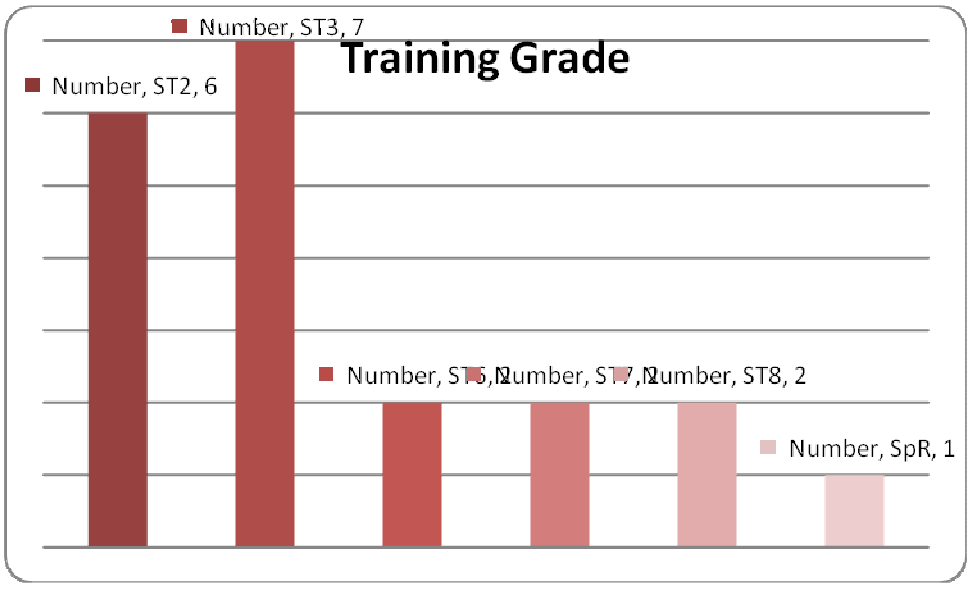
KEY POINTS

1. The training programme has established process and a system for generation of handover but majority feel that structure of handover is lacking.
2. Main types of instruction regarding handover during training are verbal instructions and on the job training.
3. There are established times and locations for handover in majority of services.
4. The feedback on the quality of handover is not provided in majority.
5. Late start of the handover is frequent occurrence. The common reasons are inability to finish day jobs, late clinics, late wardrounds, evening consultant wardrounds/grand rounds.
6. Consultant presence felt to be necessary (43%) in getting definite plans for complex patients or guiding work but majority felt it is not practical as too many specialties are involved.
7. Clinical coordinator presence was felt to be unnecessary by majority.
8. Main concerns were appropriate venue for handover with adequate facilities such as computers, printers, phones and chairs and late start of handover.

Analysis of handover questionnaire August 2013

Total responses 20/38 = 50%

1. Training grade



2. Training programme

Established process of Handover yes 18/20 90% no 2/20 10%

Established system for generation of typed/written handover Yes 17/20 85%

No 3/20 15%

Established structure for handover Yes 10/20 50% No 10/20 50%

3. Instruction in the training programme re handover

Verbal instructions 5/20 25%

On the job training 10/20 75%

4. Handover experience

Established times for handover 10/20 all services 50%

10/20 majority of services 50%

Established locations for handover 15/20 All services 75%

5/20 Majority 25%

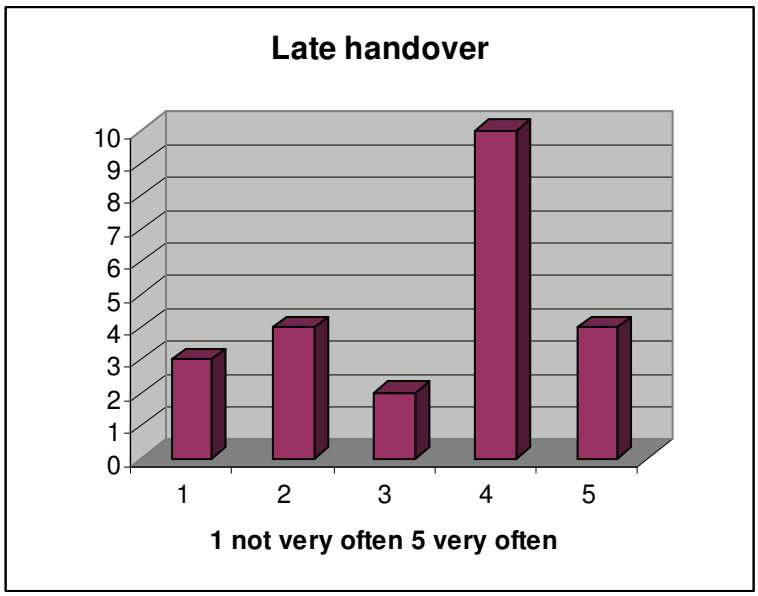
5. Feedback on quality of handover - 13/20 no feedback 65%

7/20 Yes 35%

6. Ways in which handover process could be improved

- Focused handover on patients who needs attention or may cause issues
- Improve recording and updating of the handover on the P drive
- Printer that works
- Bleep free, supervised, given feedback and efficient rota cover for all tiers.
- Unified handover for all specialties in a single document
- Attendance on behalf of surgical specialties especially neurosurgery.
- Bleep free, Handover from neurosurgeons especially when there are no SHO's during the day
- Handover from surgical specialties of unwell patients prior to the registrar leaving the hospital
- Better handover from surgical colleagues.
- Standardised handover from for every specialty, quieter area for handover i.e different sections for different handover.
- Clipboards to carry sheets, shorter handover sheets, don't need so many patients to handover
- Separate tables for different tiers, more space, bleep free time.
- Bleep free, to attend on tim

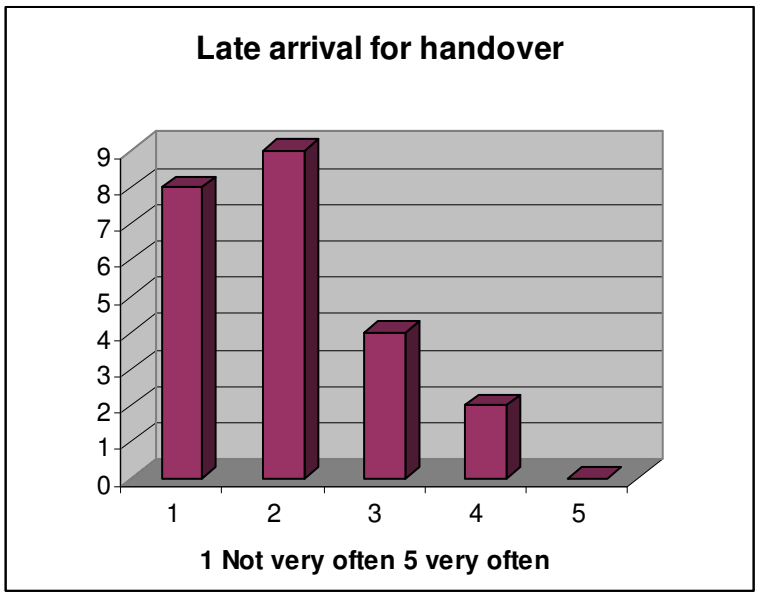
7. Late start of handover :

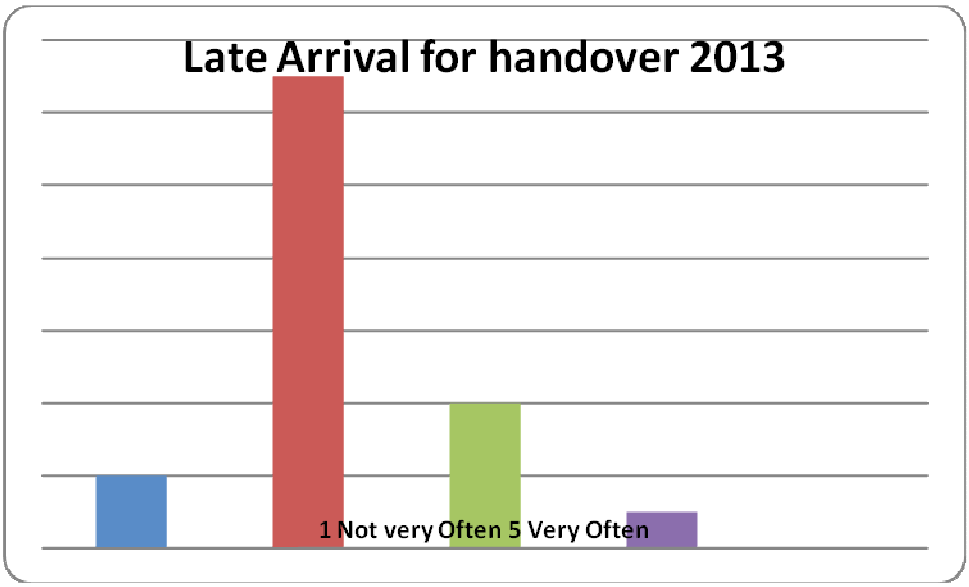


REASONS FOR LATE HANDOVER

- Busy Shift
- People arriving late
- Late arrival of the various teams
- Late consultant ward rounds in some specialties
- Staff busy with the clinical duties
- Late arrival of the doctors
- Day staff or night staff coming late- this is due to consultant ward rounds at 1630 or finishing the ward jobs.
- Delay in informing the patients attending A&E, which are then seen last minute in order for the day team to sort out.
- Workload, disturbance
- Day staff finishing jobs, seeing patients
- Receiving team turning late
- People not turning up on time
- Doctors covering haemonc during the day have to handover before receiving handover.
- Late ward rounds, elective patients arriving late on the dayunit.

8. Why are you late for handover?





- Busy Shift
- Pressure of clinical work. Clinics runs upto 5 pm but handover starts at 430.
- Late ward rounds, elective patients arriving late on the dayunit.
- Consultants asking for juniors to do ward rounds in the evening.

9. Would a consultant presence be helpful to support /guide handover?

YES 5/20 25%

- For support and guidance. Due to lot of rota gaps locums are common and sometimes no locums are arranged. This leads to confusion and hampers smooth handing over. The consultant can take charge and inform the relevant teams and escalate to the managerial level.
- Unless they know the patients and plans this won't help.
- More focussed, people less likely to turn up late. Less extra information.

NO 15/20 75%

- Many different specialties involved. This would work for general paediatric department.
- Unsure if this would make a huge difference
- Only if it was the consultant from the team involved
- Multiple inpatients teams

10. Clinical coordinator to attend

YES 8/20 40%

To find out plans about the patients and feedback to the nursing staff on wards in order to coordinate them better

- Formal awareness of the sick patients on the wards
- Potentially has an overview of the hospital and can provide good input. Needs Trialling

- To know which team has the most pressure

NO 12/20 60%

- Unsure whether this will make difference
- Even if they are informed of rota gaps they can't help in filtering bleeps.
- Often no issues for them

11. Other comments

- The biggest concern is the surgical handover as there is very little handover, poor handover or even no handover.

KEY POINTS AND ISSUES

1. The feedback on the quality of handover is not provided in majority. An informal feedback can be given by the registrar who is overseeing the handover. Both positive feedback and constructive comments to improve handover should be routinely done.

2. Late start of the handover has improved as seen by comparing the graphs but there is a lot of scope for improvement. By doing regular audit we have identified that the evening handover is a particular issue. The common reasons are inability to finish day jobs, late clinics, late wardrounds, evening consultant wardrounds/grand rounds. These issues could be tackled by better planning and organisation of jobs and consultant supervision.

   We can share this report with all the departments highlighting how this is adversely impacting on the patient care and safety. This will encourage consultants to release juniors on time for handover.

3. We have made some progress with bleep free handover by displaying the poster on the wards and also improved the layout of the handover room with separate tables for different tiers.
4. Majority felt that consultant presence to be unnecessary at the handover as it is not practical and too many specialties are involved.
5. Clinical coordinator presence was felt to be unnecessary by majority (60%).
6. Main concerns were late start of handover, bleep free handover and handover of the surgical patients.

Project for ward rounds, standards of care and stickers projects.

Hazard	Risk	Intervention	Safety set measure of reliability
Lead team not correctly identified and timely review by senior clinician. Clinicians from other teams requested to give an opinion do not do so in a timely manner and when giving an opinion there is lack of clarity as to whom is responsible for arranging investigations, making changes to treatment etc.	The risk was that complex children may deteriorate because the most appropriate clinicians are not involved in their care. Also communication between disciplines is not effective.	Standards for care of children to include review by lead consultant within 24hours of admission and review within 24 hours when referred to other teams. Ward round standard that reviewing should check that lead consultant team was recorded correctly.	The percentage of children for whom the lead consultant is the same in the notes as on PAS .
Clinicians already involved in the child's care are not informed of admission.		Stickers completed on admission stating who is already involved in care and if required, when they have been inform.	Measurement of use and completion of sticker.
Poor communication between managing medical teams and nursing staff and families can cause risk to the patients, delay in carrying out investigations and implementing intervention and thus potential increased length of stay.		Standards for ward rounds disseminated and followed within relevant wards.	Percentage of patients seen on the ward round for whom there was communication with the nurse and communication with the family. (done alongside other measures of compliance with ward round standards).

Project for handover

Hazard	Risk	Intervention	Safety set measure of reliability
Patient detail missed as environment and culture of handover not suitable	The risk that was identified was that information about the children was not always handed over from the outgoing to the incoming team	Standard to be implemented to instil appropriate culture of timeliness, leadership with a suitable venue / environment (For standard see appendix 8)	The percentage of doctors expected at handover arriving on time (defined as within the first ten minutes of the allocated 30 minute handover period.)
Numbers of distractions inhibiting the concentration of the team		Standard across Trust to ensure the reduction of noise, distractions and unnecessary calls or bleeps and to limit the time of handover to improve concentration	Number of non-urgent bleeps received during handover

Project for SALT

Hazard	Risk	Intervention	Safety set measure of reliability
Delay in referral due to more than one method of referral	The risk that was identified was that referrals for the complex children could be delayed, inaccurately prioritised due to lack of information and inadequate resources within the team leading to delaying assessment and treatment	Referral to SALT was standardised on Clinical Work Station	Percentage of children seen by SALT within 48 hours of decision by medical nursing team for need for review
Patient detail missed which could lead to inaccurate prioritisation of need for therapy.		The standard will include the order of information, the time of referral and standard of information on referral.	
Current SALT provision within RMCH may delay treatment following referral		Additional staff added into team, business case now accepted	Percentage of children seen by SALT within 48 hours their receipt of referral

Appendix 11

Central Manchester University Hospitals NHS
NHS Foundation Trust

"Nurses spread the word,
So medical handover can be heard.
No bleeps, no interruptions, no phones,
All except the crash bleep tones."

Mia Richardson age 11

To ensure a safe handover of patients please do not disturb medical staff at these times unless urgent:

Surgery	Tertiery	General Medical
8.00am - 8.30pm	8.30am - 9.00am	9.00am - 9.30am
4.30pm - 5.00pm	4.30pm - 5.00pm	5.00pm - 5.30pm
8.30pm - 9.00pm	8.30pm - 9.00pm	9.00pm - 9.30pm

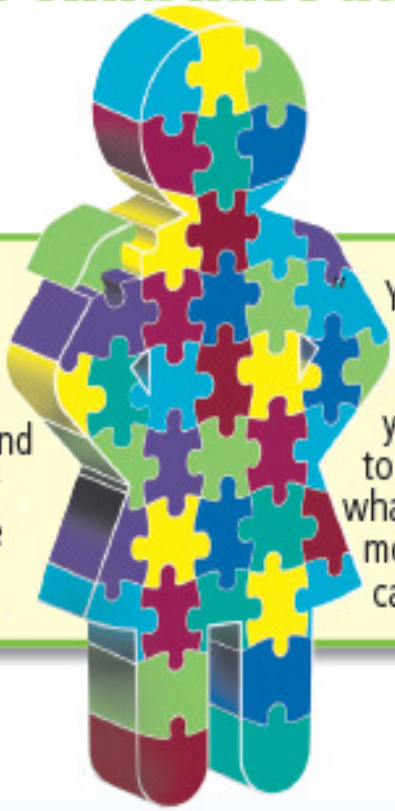
Royal Manchester Children's Hospital

THE WHOLE ME

Appendix 12

Central Manchester University Hospitals NHS
NHS Foundation Trust

Does your child have additional needs?



Staff at Royal Manchester Children's Hospital want to understand the needs of your child if they come to hospital.

You may have an 'all about me' or patient profile or other documentation, which include your child's likes, dislikes; how to communicate with them and what is important to them and more…which will help staff care for your child in hospital.

From Monday 6th January 2014 staff in the hospital will be encouraged to ask for this information.

Please make sure you bring in the information. If you haven't documented this presently, please complete the attached form and take that into hospital when you are next in.

Please take your document to hospital for appointments, admissions or if going to A&E.

Please share with hospital staff so we can care for your child as you would like.
Thank you from the staff at RMCH