Quality Improvement in Core Medical Training

Learning to Make a Difference to Handover Dr Ruth Cordiner Chief Resident, Glasgow Royal Infirmary 2016-2018

Dr Louise McKenna Core Medical Trainee

Dr Kirsty Crowe Core Medical Trainee

Dr Mark White Core Medical Trainee

Dr Daniel Lynagh Core Medical Trainee

Topics

The Chief Resident Role in Glasgow Royal Infirmary

Why QI? Development of a Quality Improvement Forum

Quality Improvement &

Learning to Make a Difference Model

Real Life Quality Improvement in GRI Bringing Change to Hospital Handover

Discussion Forum



The Chief Resident Role

Dr Ruth Cordiner

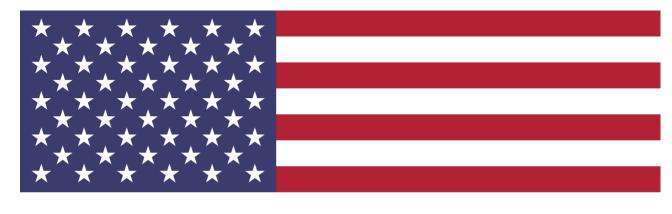
Chief Resident Glasgow Royal Infirmary & Specialty Registrar Diabetes and Endocrinology



What is a Chief Resident?

The US Model

- USA has utilised residency programmes for >100 years
- Nominated by other residents
- Multiple roles
 - Rota
 - Teaching
 - Educational Programme
 - Management Meetings
 - Advocate for doctors
 - Connection to senior doctors



The UK Model

- Developed by The Royal College of Physicians following a highlight in the Future Hospital Commission Report
- "Senior doctors in training working to build a stronger leadership, management and quality improvement skills"
- Development of "The Clinical Leader"
 - Support aspiring clinical leaders to skills for future consultant post
 - Raise the profile to develop future senior leaders: medical directors, chief executives
- First pilot schemes seen in the UK from 2016

Results from UK Initial Pilot

Positive overall influence

Significant contribution to service improvement, education provision and junior doctor engagement

Implementation of locally tailored activities

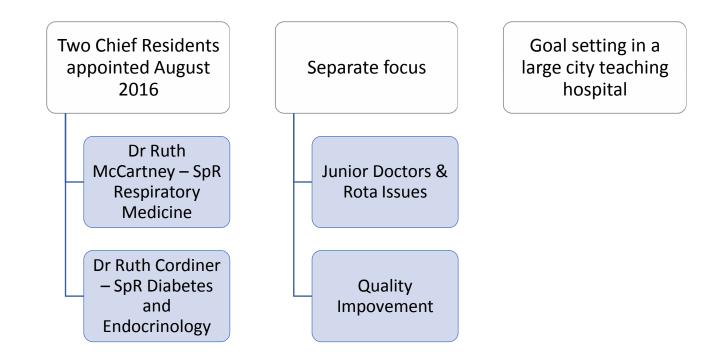
Personal leadership development

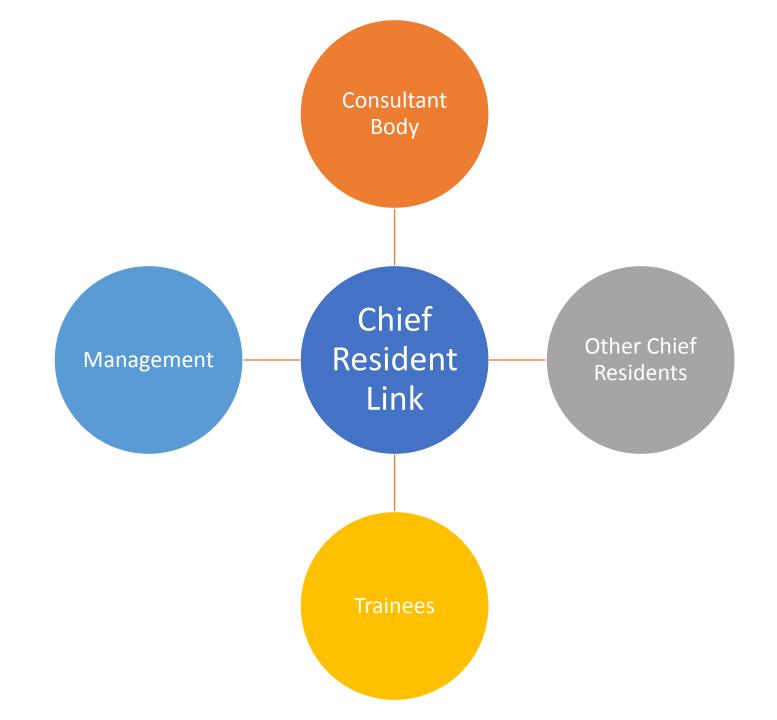
Direct exposure to senior management

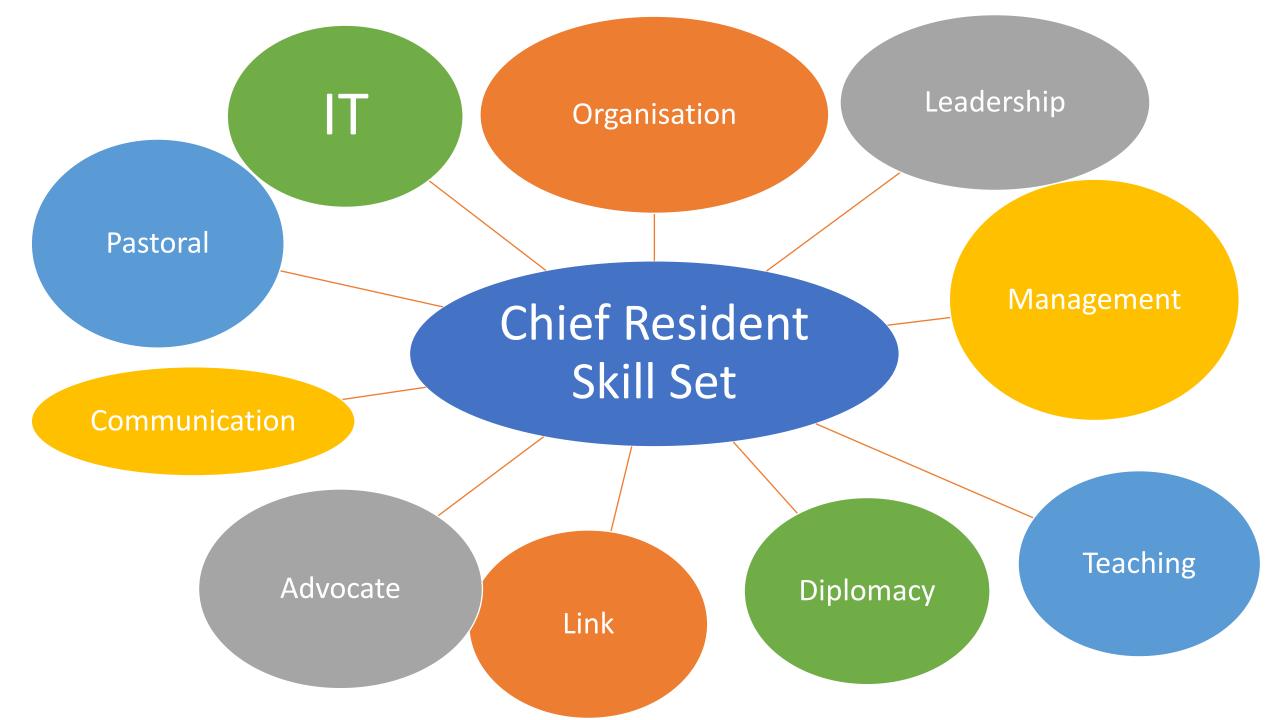
Enhanced medical engagement – "bridging role"

Development of a QI culture

The Chief Resident in GRI









Learn to not take things personally	Understanding all aspects of an issue	Identifying goals	Liaise with other CR – past and present
Prioritise your areas of need	Understand and stick to your job description	You cannot always please everyone	Pick your battles
	You cant' do everything	Learn to delegate	

"Advice from Chief Residents"

Barriers in Implementation

Split-site working

Established University Teaching Program

Training program commitments

Junior doctor's rotas

Protection of the role

Spare time!

Boosting morale & generating volunteers

GRI Quality Improvement Forum

Curriculum requirement from Foundation Training

Implement Change on a Bigger Scale

Teamwork Towards Goals

Core Medical Trainees

- Personal experience in QI role
- Working towards achievement of CMT competencies
- Preparation for Senior Registrar role
- Support from Training Program Director, QI Leads
- Link with multiple doctor tiers to identify and implement areas of change
- Important role in medical receiving department
- Rotations within GRI for 1 year

Create a supportive culture for change in GRI

Setting-Up a Quality Improvement Forum

Identify Time

- Difficult!
- Meetings Friday 4PM
- Initial meeting combined with CMT TPD meeting August 2017

Meeting Space

Invites to Forum

Supportive Consultant Colleagues

- Dr Brian Neilly Clinical Director for Medicine
- Dr James Boyle CMT TPD North Sector
- Dr Malcolm Daniel Health Foundation Quality Improvement Fellow
- Dr Brian Choo-Kang eHealth Lead
- Medical Specialty Department Leads

Setting Up a Quality Improvement Forum

Communication

- Email
- Slack-App
- Word-of-Mouth
- Consultant Specialty Meetings

Slack-App

- Communication "app"
- Allows group forum and subdivision into teams for tasks
- File sharing
- Goal setting
- Variable experience

%1



%3

api # bugs # cats

features

general

mobile

ui

Acme Sites

★ STARRED



github BOT 2:50 PM

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questions in advance, please let me know!

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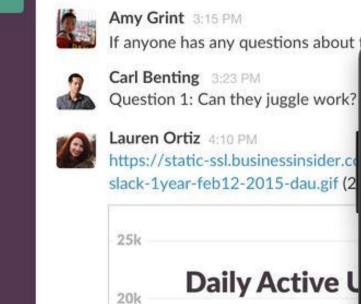
- Amy Grint 3:15 PM
- If anyone has any questions about t



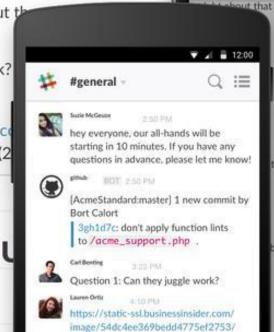
CHANNELS # billing # engineering

web Create a channel...

DIRECT MESSAGES



15k



slack-1year-feb12-2015-dau.gif

Daily Active User Growth

Q Search

hey everyone, our all-hands will be starting in 10 minutes. If you have an

5 Your Files 📚 All Files Starred Items A Team Directory 🔆 Settings 🔀 Switch Teams

QE

the

Identifying Areas for Change

Areas identified from Junior Doctor's Issues

Regional Clinical Governance

Patient Safety Issues

National Training Survey

GMC Visit

Deanery Visit

Challenges in Forum Setup



Dr Daniel Lynagh, Core Medical Trainee 2

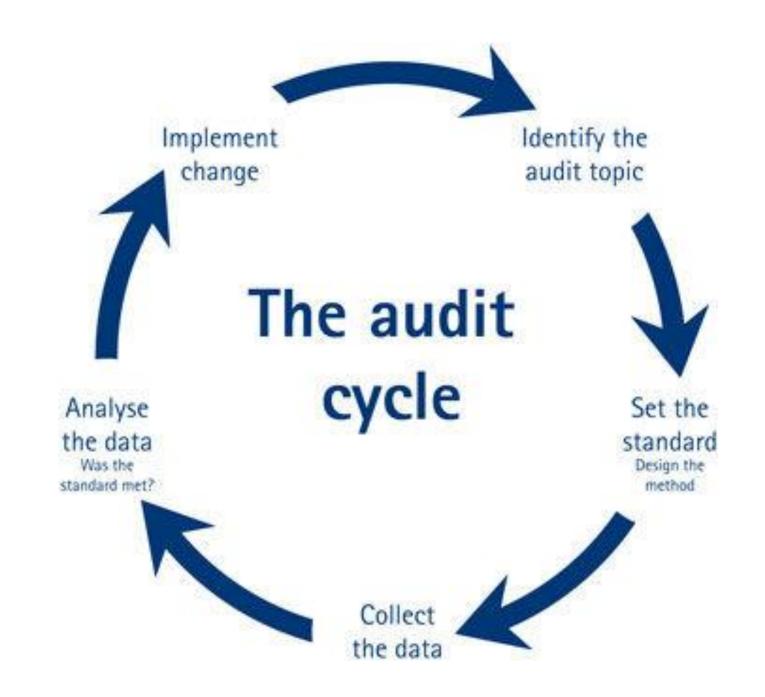
Quality Improvement & Learning to Make a Difference Model

What is LTMD?

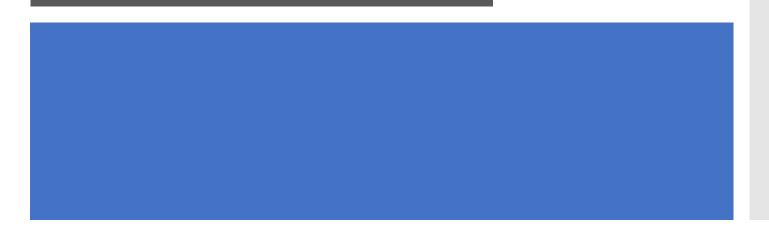
Royal College of Physicians/JRCPTB initiative

- Aim:
 - "to support the learning and development of new and relevant skills in quality improvement methodology by trainees to enable them to deliver effective QI projects at the frontline"
- Provision of resources, packs and training to support trainees in carrying out effective quality improvement

Audit



Barriers to effective audit



- Purpose
- Perception
- Time
- Organisational inertia
- Lack of support
- Cultural factors

Quality Improvement

- Definition from "Learning to Make a Difference"
 - "better patient experience and outcomes achieved through changing provider behaviour and organisation through using a systematic change method and strategies"

So, What's Different?

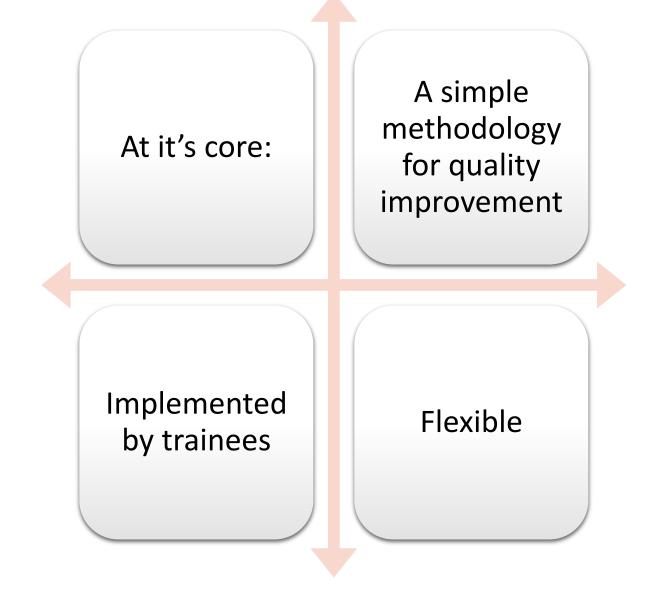
Data as a resource

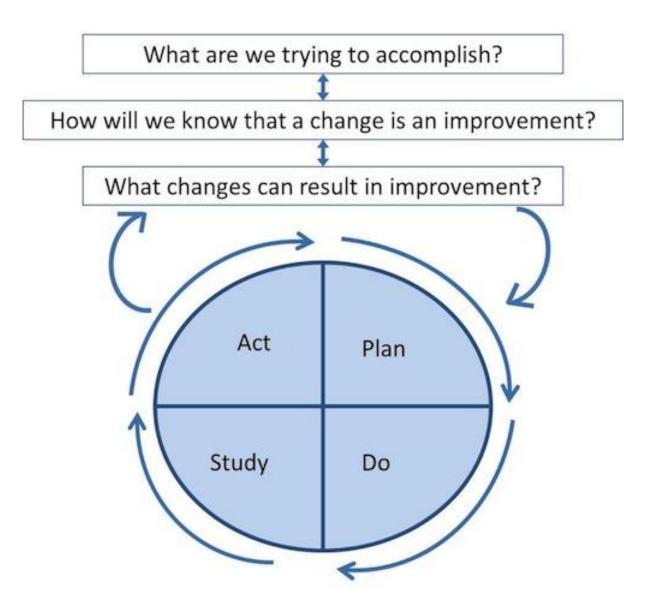
Focus on small changes

Dynamic

Engagement

Visible results





• Three core questions

- What are we trying to accomplish?
- How will we know that a change is an improvement?
- What changes can we make that will result in an improvement?

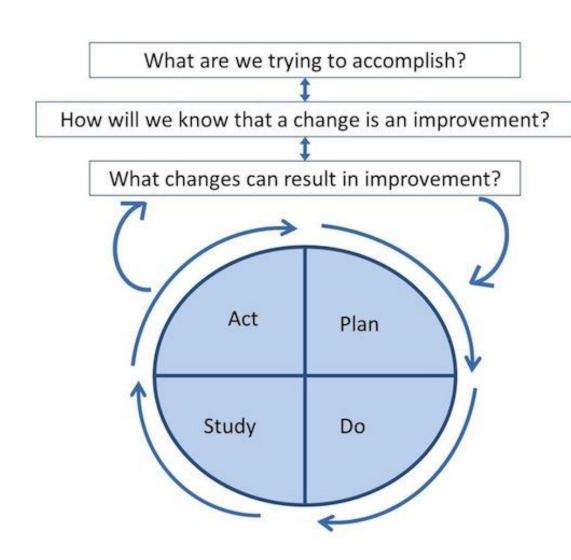
• Three core questions

- What are we trying to accomplish?
 - SMART goals
 - Specific Measurable Attainable Relevant Timely
- How will we know that a change is an improvement?
- What changes can we make that will result in an improvement?

- Three core questions
- What are we trying to accomplish?
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• Three core questions

- What are we trying to accomplish?
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Plan, Do, Study, Act

<u>Plan</u>

- Largely covered by the three questions!
- <u>Do</u>
 - Make your changes
 - Record findings in a run chart
 - Document problems/unexpected findings
- <u>Study</u>
 - Comparing outcomes to predictions
 - What have we learned?
- <u>Act</u>
 - Plan for the next intervention/cycle
 - Refine changes until ready for wider implementation

Learning to make a difference

Developing knowledge and skills

Empowers junior doctors to effect real change

Improve care and outcomes

Realistic time scale

Clinical leadership and team work

Lifelong learning

Transferrable skills

Job satisfaction

Improving handover in Medical Receiving

Dr Kirsty Crowe (CMT2) Dr Daniel Lynagh (CMT2) Dr Louise McKenna (CMT2)

Overview

Strengths of a CMT-led Quality Improvement project

The Problem

Our proposed solutions

QI – practicalities (and realities)

Benefits of the CMT QI Forum

Mobilisation of trainees

Group of trainees with similar goals

Motivation to keep going

Access to senior support

The Problem.

Education for Scotland

Scottish Training Survey 2017: NHS Greater Glasgow and Clyde

Green	Performing well for this indicator
Lime	Performing above average for this indicator
White	Performing is about average for this indicator
Pink	Performing below average for this indicator
Red	Performing poorly in this indicator
Grey	N<5
▲	Significant improvement in mean score since previous year
•	Significant deterioration in mean score since previous year
-	No significant change in mean score

Post Specialty	Site	Response Count	Clinical Supervision	Educational Environment	Handover	Induction	Teaching	Team Culture	Workload	Benchmark
Academic	Queen Elizabeth University Hospital	1								other
Academic	Queen Elizabeth University Hospital	2								other
Academic	University of Glasgow	1								other
Academic	University of Glasgow	1								other
Acute Internal Medicine	Glasgow Royal Infirmary	6								Core - Medical
Acute Internal Medicine	Glasgow Royal Infirmary	6								Foundation - Medical
Acute Internal Medicine	Glasgow Royal Infirmary	4								Higher - Medical
Acute Internal Medicine	Glasgow Royal Infirmary	15	-	-	-		-	•	-	Higher - Medical
Acute Internal Medicine	Inverclyde Royal Hospital	9								Foundation - Medical
Acute Internal Medicine	Queen Elizabeth University Hospital	11	—	_	-	-		_		Core - Medical
Acute Internal Medicine	Queen Elizabeth University Hospital	6	▼	_	_	-	-	_	-	Foundation - Medical

13 doctors. One room/corridor...



The Solution(s)

- CMTs natural leader for change
- Trainee opinions gathered from questionnaires
- Interventions
 - Location change
 - Formalise CMT leadership
 - Standardised proforma

Selection of questionnaire feedback

Did you receive handover induction before working in AAU?

	Number	Percentage
Yes	4	15.4%
No	22	84.6%

"There was no induction at all."

Do you feel the current handover location is adequate?

	Number	Percentage
Yes	18	69.2%
No	8	30.8%

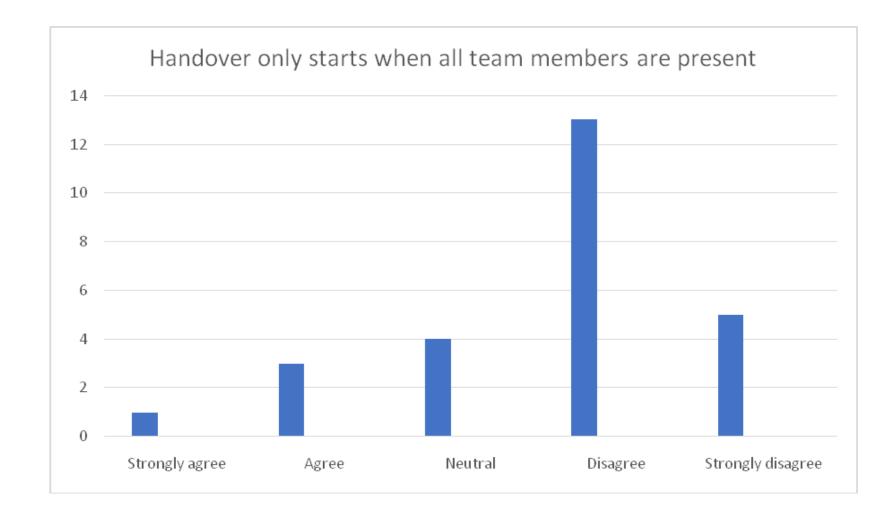
Is time allocated to handover adequate?

	Number	Percentage
Yes	21	80.8%
No	5	19.2%

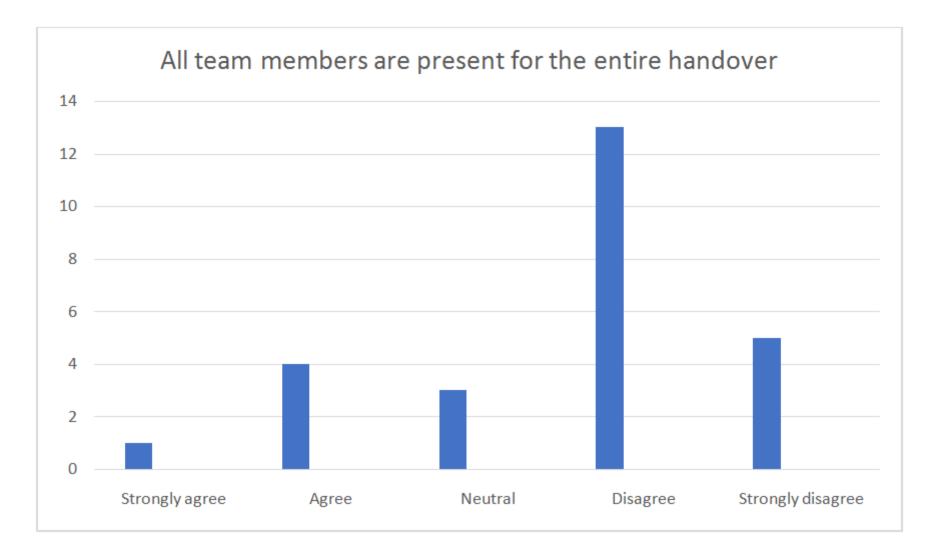
"When handover is more formal as it should be it requires more time (~30mins)"

"Handover time to be accounted for the rota shift times so that there is sufficient overlap between the day and night team for effective handover to take place."

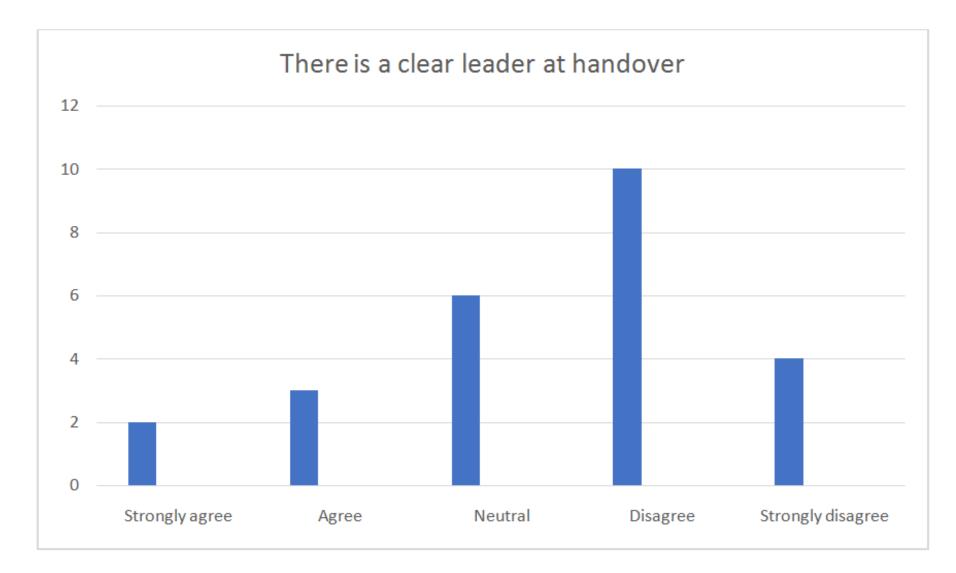
"Handover period might need to be longer for this to work."



"Sometimes inexperienced team members try to begin handover before all team members are present. I had to stop a day team FY2 handing over to the night FY1 because the night FY2 had not yet arrived (the day FY2 just wanted to go home)."



 "Feel shouldn't have to stay for whole handover as just worked a 12 hour shift and different people everyday anyway"



"The quality of handover seems to be dictated by the fact that the day time/night team want to get home and a lack of senior supervision leads to poor quality handovers of sick patients, patients not being handed over, and often no handover at all of patients still to be seen."



Trainee feedback

"Not sure if handover needed to move to tearoom- I think room handovers were in was fine."

"Better now the venue the tea room."

"Prefer the tea room."

"Tea room much better than cramped doctors room on 50."

"Big improvement to the old room."

Handover Attendance Post-Intervention (%)



Intervention 2 – proforma with CMT leader

GRI HANDOVER PROTOCOL

QUALITY IMPROVEMENT

Based on RCP handover recommendations

Note - The most senior doctor present should be leading the AMU handover

1 – INTRODUCTIONS / ABSENCES

- Are all team members present?
- Ensure everyone knows their role for the shift ahead.
- Ensure rota co-ordinators notified of unexpected absences

2 – WARD HANDOVER S (one at a time)

- DOME
 CARDIOLOGY
 RESPIRATORY
 GENERAL MEDICINE
- GASTROENTEROLGY

For each handover

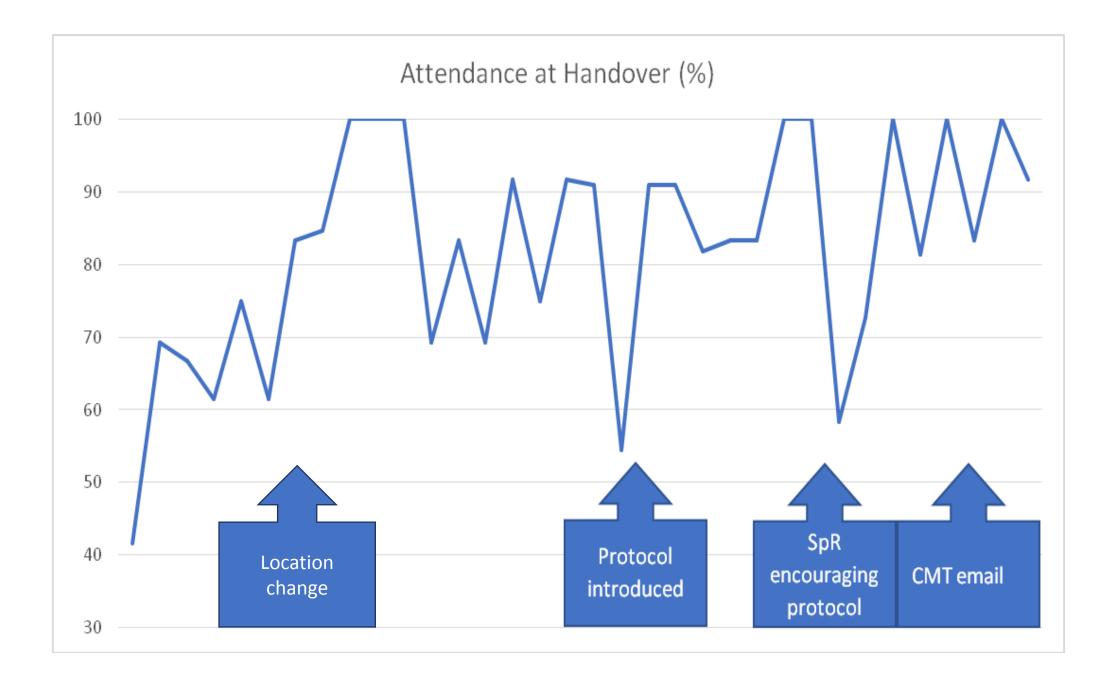
- Sick patients / "to be aware of"
- Outstanding tasks
- Patients to be seen
- Patients requiring senior review

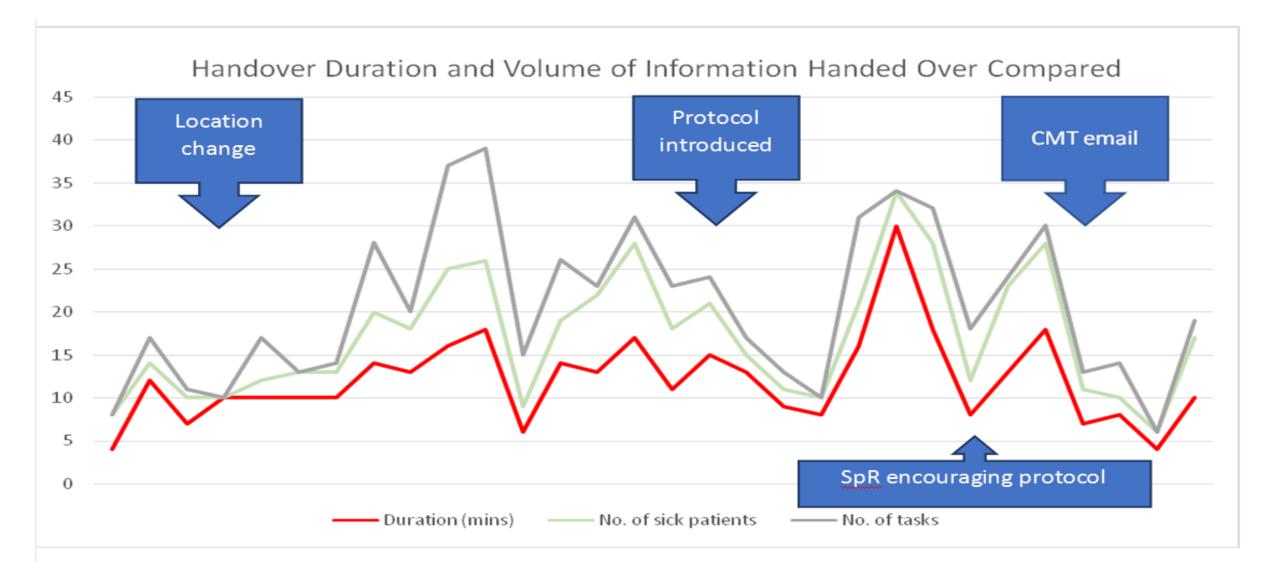
Ensure handing over patient NAME, CHI, and TREATMENT ESCALATION PLAN where possible

4 - DEATHS / EXPECTED DEATHS

Handover details of outstanding death certificates from previous shift, if any.

5 - MAJOR INCIDENTS / CONCERNS FROM PREVIOUS SHIFT





QI Practicalities (& Realities)

• Differing trainee opinions

Communication issues

• Peer apathy

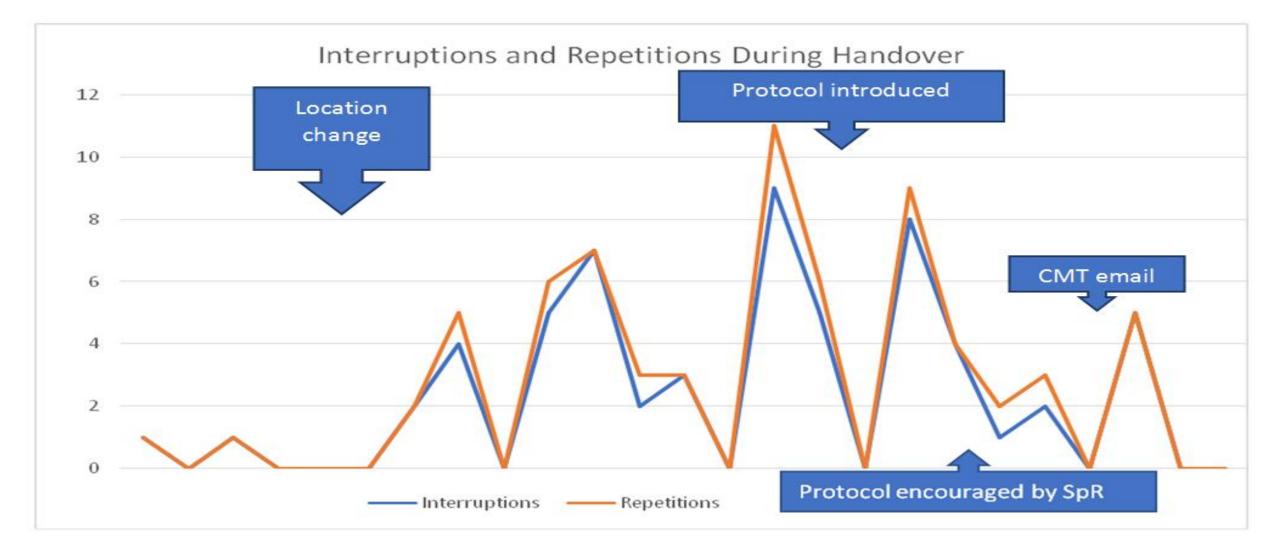
Rota gaps/shift patterns

• Assertive leadership

• Shop floor senior support

• Service provision pressures

• Measuring handover quality



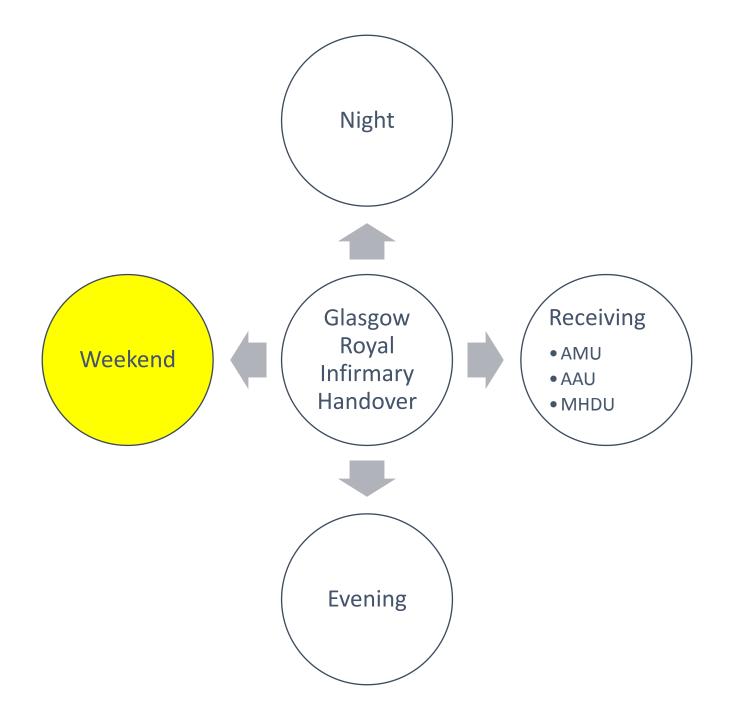
"The single biggest problem with communication is the illusion that it has taken place" – George Bernard Shaw Mark White and GRI QI team

Improving weekend handover

Handover

"Handover of care is one of the most perilous procedures in medicine, and when carried out improperly can be a major contributory factor to subsequent error and harm to patients."

Safe handover: safe patients' BMA



Weekend Handover

- Different team at the weekend
- May never have met patient
- May never worked in ward (or hospital)
- Key area of risk
- Unique handover needs

Weekend at Glasgow Royal Infirmary

"Downstream" wards

Junior doctor based with team led by ST3+

Total 6 junior doctors covering 18 wards*

FY2/CMT/GPST

Weekend at Glasgow Royal Infirmary

- Each ward had own method
- Written/typed
- Variable in content
- Variable in quality
- Variable in legibility
- Variable in location

weekend benderer electric aduren Pleese See before going home Beel Still weeky OZ T GRI FRI GXOPD Bed 6 Please Esculuto ABIOS of above. ON Over ABLOS WOB PRED TOL Reguments. Alcohal withdown - Still needing Diazogan. Please check if improves. Bed 10

Likely new its one in beds 4,8,12

		S	В	Α	R
Bed 5	NAME	Alcohol withdrawal		well on Friday but family suport on sat	H sat, doesn't really need review as a planned D/C but nurses may want him to be seen before going home
Bed 17	NAME	1) Alcohol withdrawal with DTs, 2) Fall with facial injuries including clinically fractured nose 3) probable soft tissue infection	alcohol excess	Improving on Friday but perhaps over sedated	reduce diazepam as per protocol if no longer needing extra. Assessment of capacity as he may regain capacity as DTs get better (not got capacity today)
Bed 12	NAME	Cellulitis	recent self d/c with cellulitis, sarcoid, previous Tb	improving on Friday with IV antibiotics	IVOST sat if well then home Sunday
		Lots of empty beds on Friday so new patients will need seen.			

Quality of data

SBAR

RCP handover toolkit

BMA safe handover: safe patients

Quality of data

6 point scale

Modified SBAR

Six point scale

Basic details- Full name CHI and location

Working Diagnosis (situation)

Background

Current Rx and progress (assessment)

Clear reason for review (recommendation)

Escalation plan/ ceiling of care

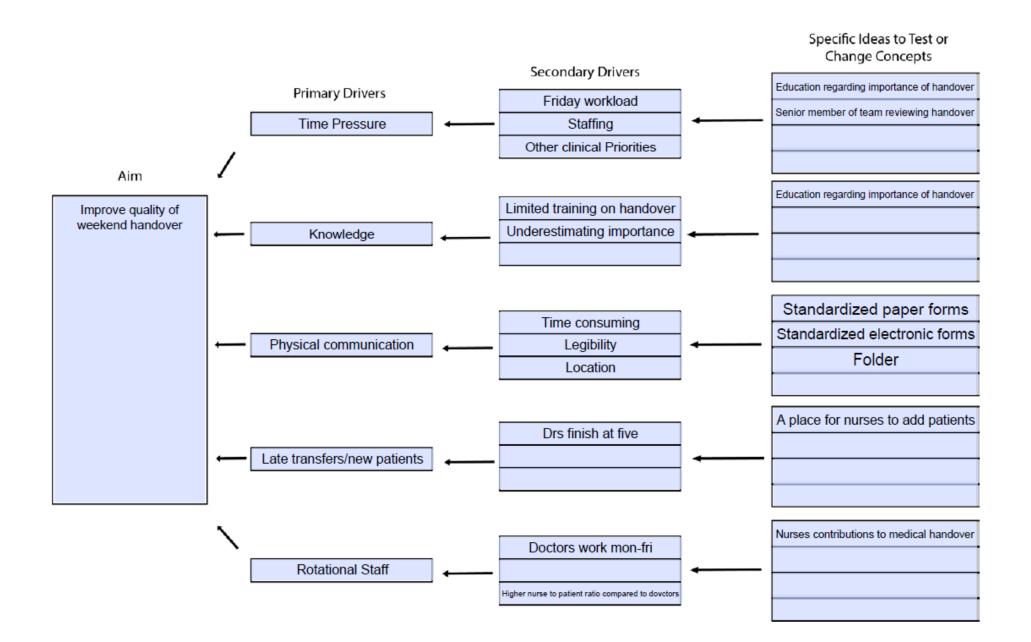
Aims

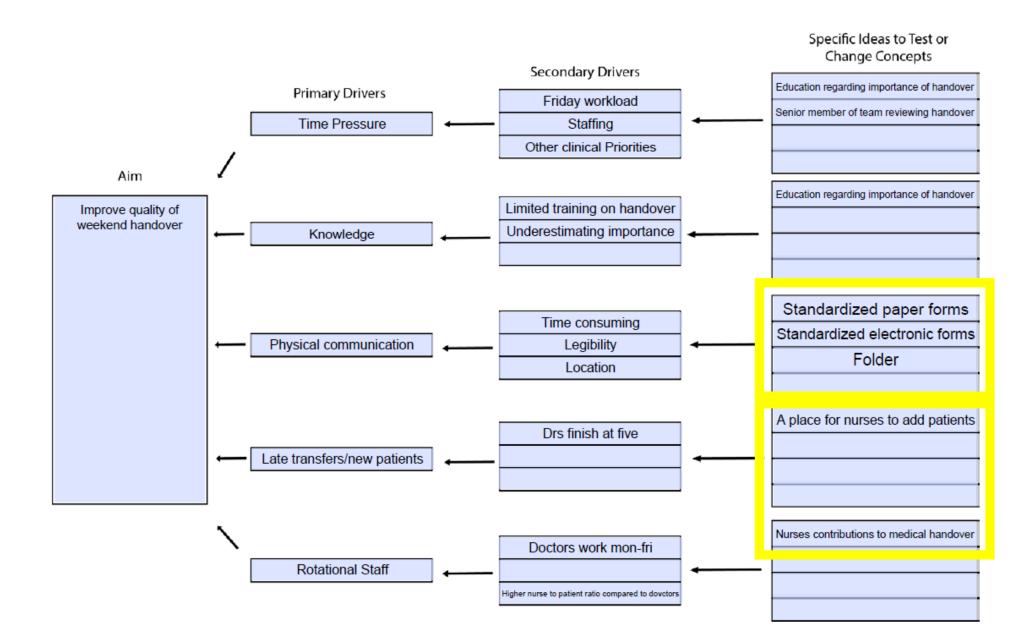
Standardise handover

Improve quality of handovers

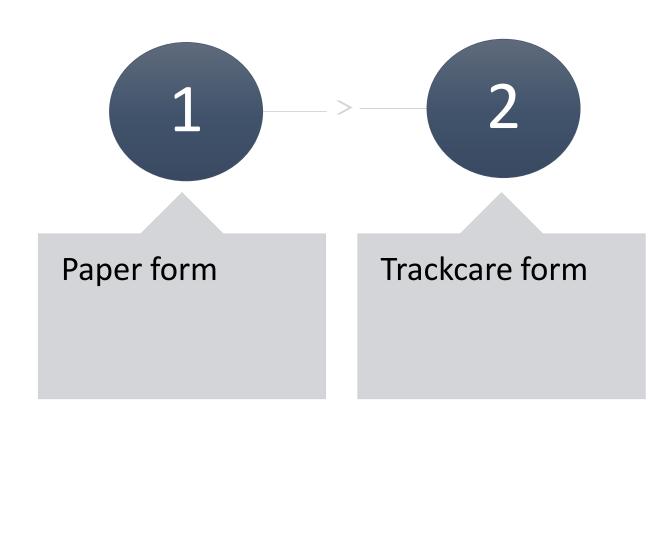
Methods

- Setting: Medical wards at large teaching hospital (Excluding Geriatrics)
- Outcome: Quality of handover based on 6 point scale
- Interventions: Plan do study act cycles
- Data collection: Weekly
- Analysis: Run chart





Interventions



Patient Details Name and CHI or Patient Sticker	Situation Current diagnosis/problems	Background Relevant Past Medical History	Assessment Current progress/status, treatments etc	Recommendation <i>Reason for review e.g.</i> <i>possible discharge, IV to</i> <i>oral switch</i>	Escalation Plan <i>Resus status, Ceiling of</i> <i>care e.g. HDU, ITU</i>

Weekend SHO Reviews Ward:_____ Date: _____

Request Item	Requested By	Start Date	Start Time	Priority	Specimen/s	Specimen Collection Time	Specimen Collection Date	Delete
Handover middle-tier	Dr Mark White1	23/04/2018	16:10	Routine				0
Questions								
Request Items	Question			TI	ne Answer to Q	uestion		
Handover middle-tier	Review or To Be Aware					٩,		
Handover middle-tier	Diagnosis/problem list/diffential o	diagnosis (include a	ny risks or warr	nings)		$\langle \rangle$		
Handover middle-tier	Reason for handover					٩		
Handover middle-tier	Outstanding issues					< >		
Handover middle-tier	Aims and limitations of treatment	t				\bigcirc		
User Mark White1 Password Update	•							

Handover middle-tier

Verified
North Handover
Routine
20/04/2018
16:57
Dr Mark White1
] 0,
GRI Ward 28 Rheumatology/
~
~

Scanned Documents Annotate Annotated images can be reviewed in the Clinical Record under Documents>Annotation images Images



Last Update User

: Mark White1 Audit Trail

Handover Information

Ū.

Review or To Be Aware Review Sat & Sun

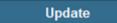
Diagnosis/problem list/diffential diagnosis (include any risks or warnings) **new** Friday PM 76 year old likely CAP but ddx PTE. CTPA outstanding. b/g

Reason for handover Clinical concern

Outstanding issues chase CTPA if negative home

Aims and limitations of treatment currently for escalation

Mark White1



Ν	orth Medical	0									Timer Locasor			by
Epi	sode Tree	Results	Epis	ode Enq		Episode Enq Popup	Episode Ou	tcomes >	CS Review	Clinical Record	y Gene	eric letters	Ne	ew <u>R</u> equest
Cli	nician	ED Request Bed	ED S	Summaries To-	Do ,	Discharge Letters	ED Enquiry		Outstanding DS IP	<u>W</u> ards	Requ	iest List	то	CI List
Mo	vements	> HAN Worklists	> Inpa	tients WL		OP Consultant WL	IP Consulta	nt WL	Worklist By Pt	Outpatient Worklist	Spec	imens to be collec	ted , Ot	her MPI/MRT
> Oth	er	> Other Eng	My R	Recent Patients	•	Handover North	Handover S	outh						
	North All	North Medic	al											
] Nort	h Madiaal Hand	lawar Liat												
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Tim	n e			ne To	-			CHI	- otom					
Fro Locatio		Q. Default Paramet												
Care Provider Provide														
	d GRI Ward 28 Rheumatolo	g Q Order Category:		tient										
Adhoc	(no-preference) search	Description Preferences	E	Fi	nd									
Select	Icon Profile		СНІ	Surname I	Forename	▼ Ward	Bed	▲ Request Item	Complete Handover	Consultant 🔺	Processing Notes	Requesting Clinician	Request Status	▲ Start Date
	1 🕺 🔮 🗲 🖬	J 👪 🤷				GRI Ward 28 Rheumatology/General Medicine	Bed 1	Handover middle-tier	×	<u>Dr David</u> <u>McCarey</u>		Dr Mark White1	Verified	20/04/2018
	👔 🌋 😭 🕈 🛙	🚺 <u>گ</u> 😺 🗛 ا				GRI Ward 28 Rheumatology/General Medicine	Bed 7	<u>Handover</u> middle-tier	×	<u>Dr David</u> <u>McCarey</u>		Dr Mark White1	Verified	20/04/2018
	1 🕺 🕺 🛃 🖬	11 🕰 🖉				GRI Ward 28 Rheumatology/General Medicine	Bed 11	<u>Handover</u> middle-tier	×	<u>Dr David</u> <u>McCarey</u>		Dr Mark White1	Verified	20/04/2018
	👔 🌋 🔮 🗲 🛙) 🔣 🚺				GRI Ward 28 Rheumatology/General Medicine	Bed 10	Handover FY1 Results review		<u>Dr David</u> <u>McCarey</u>		Dr Renci Zeng	Executed	21/04/2018
	👔 🌋 🤮 🕈 🛙) 🐌 🚺				GRI Ward 28 Rheumatology/General Medicine	Bed 2	Handover FY1 Results review	M	<u>Dr David</u> <u>McCarey</u>		Dr Renci Zeng	Executed	21/04/2018
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	1 🕺 🕺 🕈 🖬	1 🐌 🚺				GRI Ward 28 Rheumatology/General Medicine	Bed 3	Handover FY1 Results review		<u>Dr David</u> <u>McCarey</u>		Dr Renci Zeng	Executed	22/04/2018
	🁔 🌋 🤮 💕 🛙	I 🐌 🧥 🚺				GRI Ward 28 Rheumatology/General Medicine	Bed 8	Handover FY1 Results review	×	<u>Dr David</u> <u>McCarey</u>		Dr Renci Zeng	Verified	22/04/2018

PDSA Cycles

- PDSA cycle 1- Introduction of standardised paper form on three wards
- PDSA cycle 2- Introduction of electronic handover system on three wards
- PDSA cycle 3- Expansion of electronic handover to seven wards
- PDSA cycle 4- Expansion of electronic handover to all non-receiving medical wards

Results

A total of 4 PDSA cycles were completed

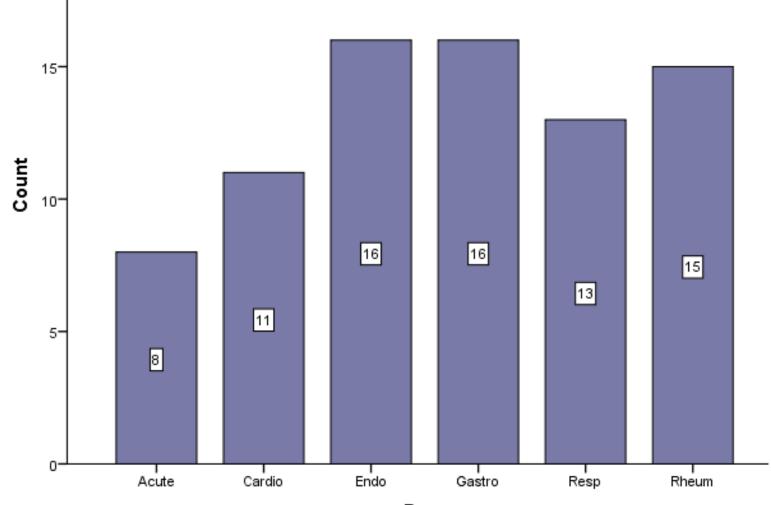
16 weeks data collection were performed

Total of 387 patients

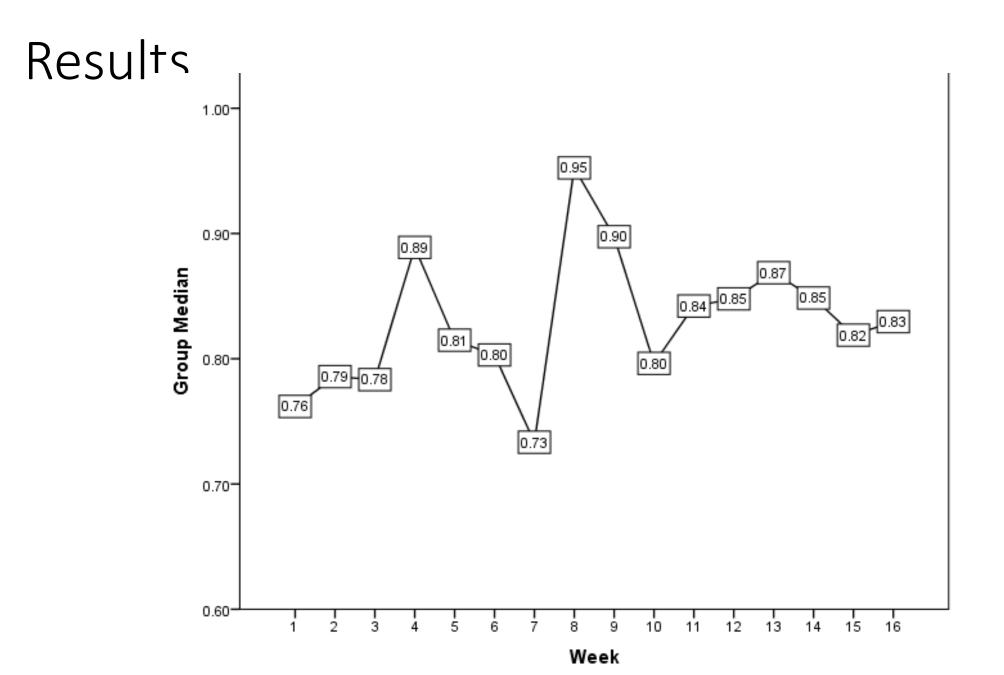
Results

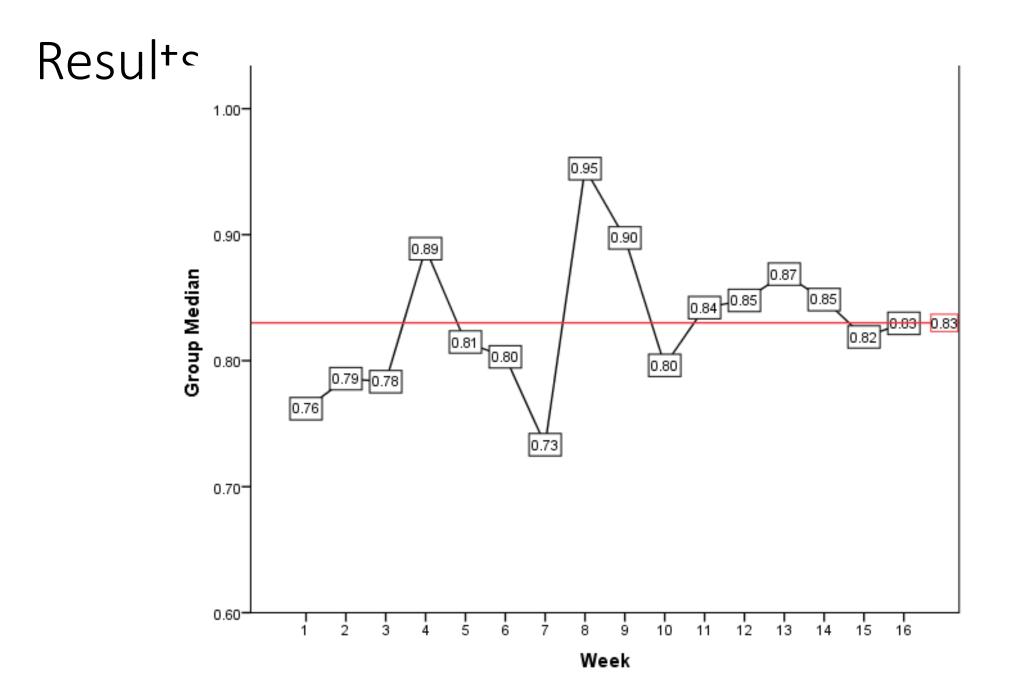
	No of Patients	Percent	No of Weeks
Baseline	28	7.2	3
Paper	48	12.4	4
Electronic in 3 wards	42	10.9	3
Electronic in 4 wards	190	49.1	5
Electronic in all	79	20.4	1
Total	387	100.0	16

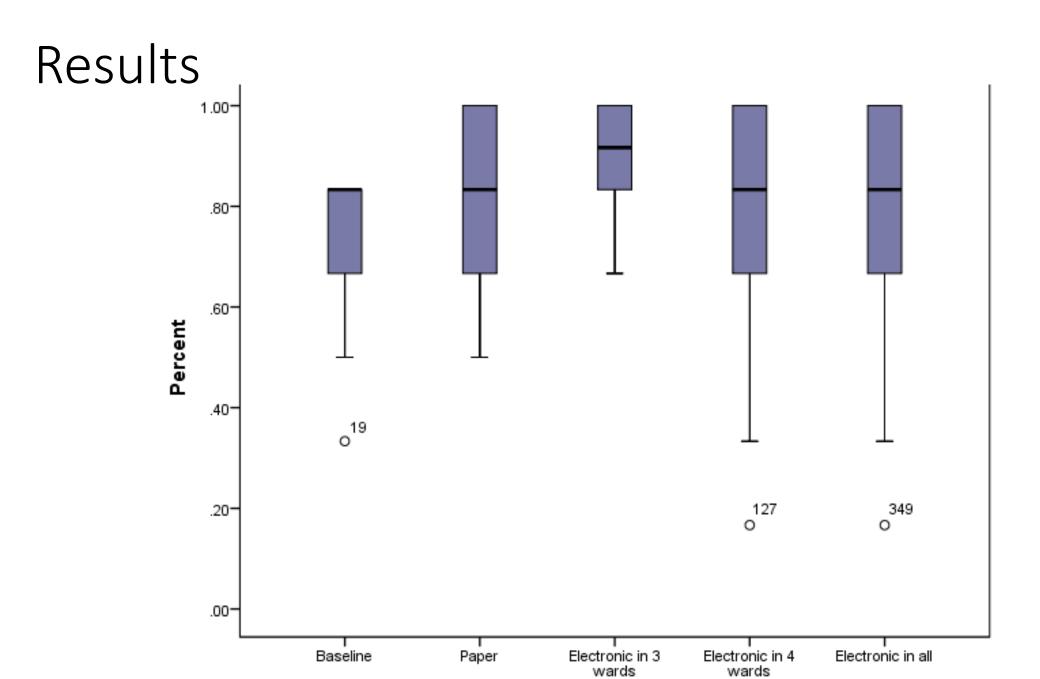
Week 16

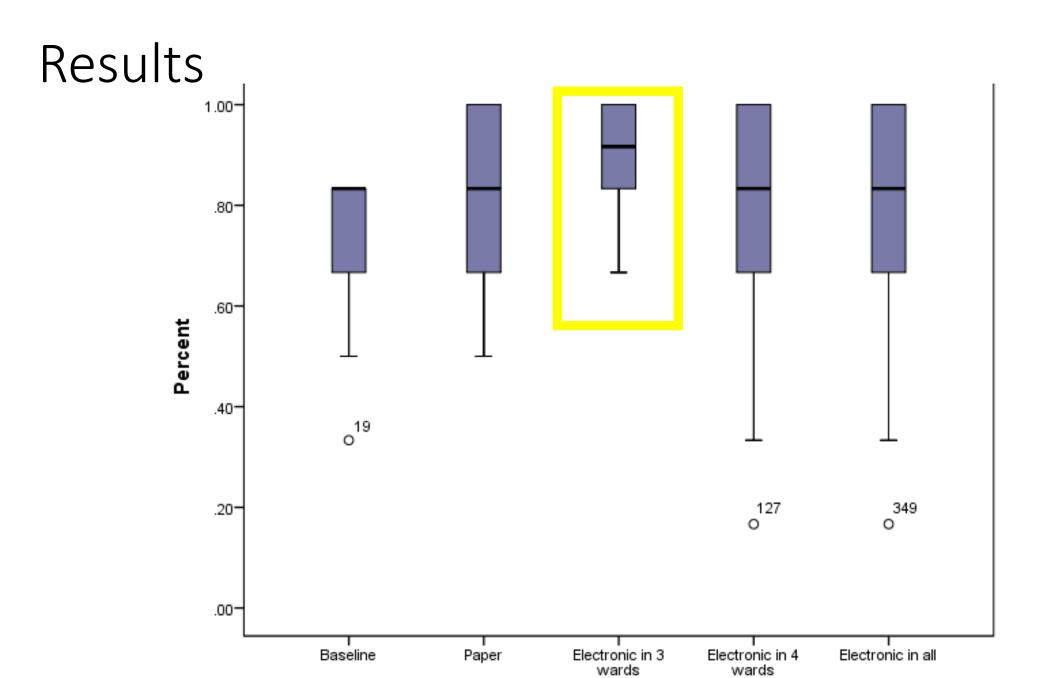


Dept









Conclusion

Standardized electronic handover system has been introduced effectively

Quality of information contained in handover is yet to show significant improvement



Problem – Content of SHO to SHO handover from weekday to weekend teams are variable and nonstandardised potentially leading to unnecessary patient reviews and poorer patient care at the weekend.

Aim - To improve the quality of handover content regarding patients for SHO review on downstream medical wards at the weekend

Outcomes- Adherence to quality standard (modified SBAR) for patient handover

- Our plan was just to focus on one department (3 wards)
- Main intervention was to introduce a paper form
- "Ideas for Future
- New patients to ward
- Patients reviewed overnight
- Physical or electronic location of handover sheet
- FY1 handover (bloods, fluids, prescribing)"

Sharing ideas (and data collection)

Senior involvement and leadership

Keen Consultants

Other work already that was already in the pipeline

Adoption across departments

Rolling out- key in identifying leads to train department members

Training on eHandover

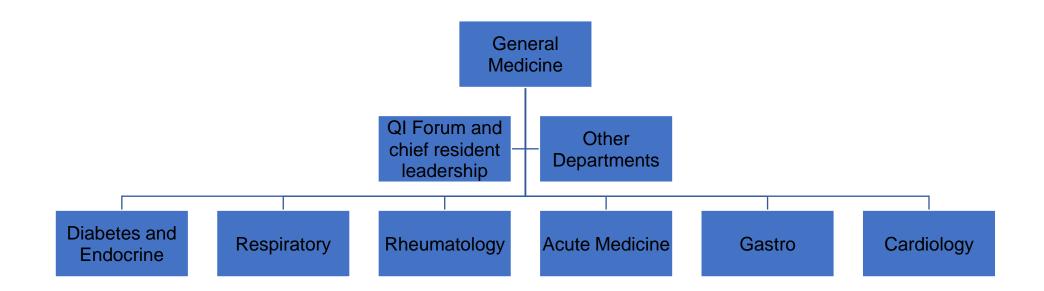
- Multiple grades of doctor and departments
- Different places and rota patterns
- Large unit
- CMT/FY2/GPST = 57
- FY1s= 48
- ST3+ = 20
- Over 100 doctors plus others

Training on eHandover

Initially through identifying individuals working on pilot wards

Week to week

Not sustainable to do when expanded to whole medical unit.



Training leads

Ensure all doctors in dept trained

Recommended to make a list and tick off

With QI forum

 Full adoption of standardised electronic system across whole medical department (18 wards)

Likely outcome without QI forum

 Paper forms may have been adopted over probably ~3 wards



QI Discussion Forum

Could introducing a QI forum help your hospital?