Trial and Tribulations of a Quality Improvement Project (QIP)

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Why are Quality Improvement Projects useful for junior doctors?

The concept of quality improvement is a key focus point throughout foundation training in the UK. Quality Improvement aims to bring about "measurable improvement by applying specific methods within a healthcare setting".[1] Quality Improvement Projects focus not only on outcomes of a project, but also on "changing provider behaviour"[2] and encouraging the integration of QI into everyone's working life within healthcare.[3]

Getting involved in a Quality Improvement Project (QIP) is beneficial for junior doctors in several ways. Being involved in progressive change in one's environment fosters a culture of embracing and creating positive change for both staff and patients. This is particularly important for junior doctors, who are often the most aware of areas for improvement on the wards. It teaches skills in leadership, negotiation and compromise within different teams. It gives a greater awareness of the wider organisational structures within the NHS and how to make use of this structure to be successful. This article outlines the challenges in planning and implementation from both the process of Quality Improvement Project and the outcomes.

Using unavoidable food waste on the wards

In Hull and East Yorkshire Hospitals NHS Trust (HEY), patients are served three hot meals a day. These meals are ordered for the patients on each ward the day before they are served, and brought to the ward each morning. As a junior doctor on the ward, I noticed that food which was not served to the patients and therefore not eaten by the patients would be thrown in the dustbin following each meal.

Ordering food for the following day for hospital in-patients is a challenge. Hospital wards have a fast turn-over; patients may be booked for theatre and therefore be 'nil-by-mouth' (NBM) at short notice. Many patients may have had procedures or medications causing nausea; for many simply the stress of the unfamiliar hospital environment results in them eating less. For these many reasons, despite food being offered and encouraged, there is still unavoidable food waste.

I could not see any reason why surplus food not eaten by patients could not be given to staff on the ward.

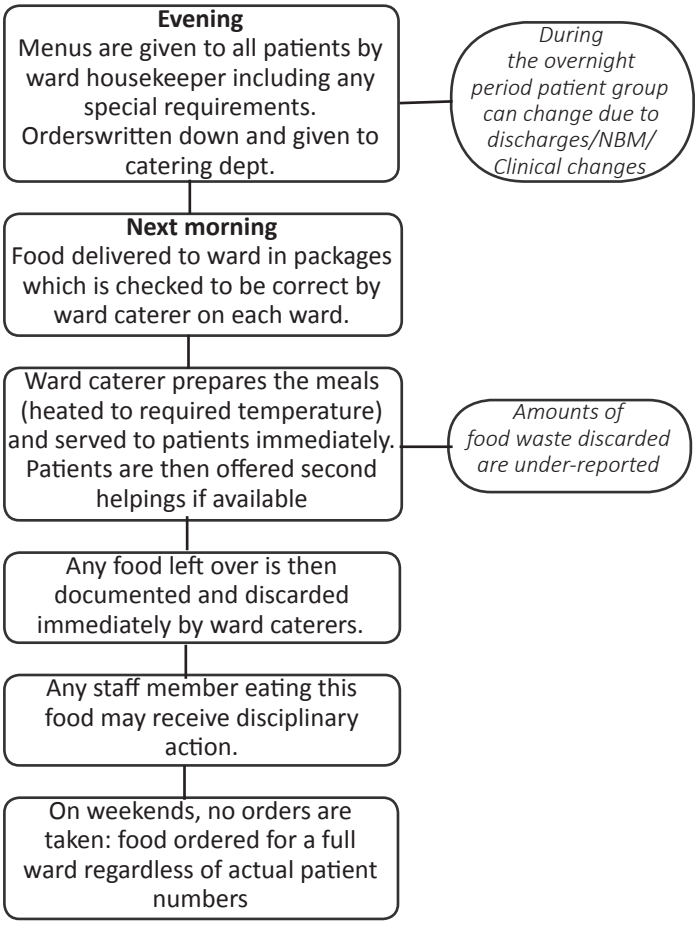
I investigated using the Quality Improvement Project process to allow for staff to be able to eat surplus food if they wished to. I subsequently pitched this proposal at the Junior Doctors Together (JDT) Forum[4]

Implementation - Aims

This Quality Improvement Project aimed to make better use of the food waste which occurs on all wards in the Trust on a daily basis. Instead of this excess patient food going to waste, I proposed that it is offered to ward staff. This will reduce organic waste and encourage staff to spend more time on the wards therefore improving communication within the multidisciplinary team. Importantly, it would also promote a culture of trust and good will towards Trust staff, making them feel valued within their role. I was disappointed to hear that ward staff feel a lack of trust is placed in them regarding patient catering, which is an issue I felt would be addressed in this Quality Improvement Project. This project ran alongside others which aimed to reduce the total amount of food waste created by each ward and to make better use of what is avoidable food waste. The amount of food wasted on each ward varies as it is difficult to predict the food requirements on busy, acute wards and therefore reducing the food provided at source could leave patients without a hot meal.

How is food ordered on the ward?

Process mapping a typical day on the ward:



Initial research:

Initial staff wards surveyed (30 responses) conducted over three wards including doctors, nurses, students, physiotherapists, ward clerks, ward hygienists and ward catering teams:

Table 1: Responses to initial ward survey (n=30)

*Collated responses to ward staff survey**	No.	%
Overall responses	**30**	
Are you involved in preparing or serving food?		
Yes	15	50%
No	15	50%
Is food often left over after all patients have been served?		
Yes	24	80%
Unsure	6	20%
How often is food left over in an average week?		
Unsure	6	20%
1-2 days/wk	2	7%
3-4 days/wk	4	13%
5-6 days/wk	4	13%
7 days/wk	14	47%
Would you eat unclaimed patient food if the option were available?		
Yes	22	73%
Maybe	4	13%
No	4	13%
Do you foresee any problems if this scheme were introduced?		
No	22	73%
Maybe	7	23%
Yes	1	3%
What benefits (if any) do you think this scheme would have?		
Less wasted food	18	60%
Better fed staff	9	30%
Increased staff morale	2	7%
More time on ward	4	13%
Saving money	5	17%

*Some survey questions and responses are presented in abbreviated form for ease of presentation and comprehensibility

Summary

- Overwhelmingly positive feedback. Staff keen to avoid food waste.
- Potential issues raised by one staff member: ensuring all patients fed first.
- Caterers: under-report the amount of food currently discarded to take pressure off housekeepers who must accurately estimate food requirements.

Table 2: Example of food wasted on one ward over three days. Full numbers collected daily by catering team.

Meal	Amount wasted: Day 1	Day 2	Day 3	Total wasted
Breakfast	4 slices toast	Nil	Nil	4 toast
Lunch	4 main meals	6 main meals	3 main meals	13 main meals
	6 sides	3 sides	1 side	10 sides
	2 hot puddings	2 hot puddings	4 hot puddings	8 hot puddings
Dinner	6 main meals	2 main meals	4 main meals	12 main meals
	8 sides	3 sides	2 sides	13 sides
	6 hot puddings	Nil	Nil	6 hot puddings
Total pts catered	28	28	28	84
Total pts eating	25	23	22	70

N.B: information taken from same ward on weekdays and one weekend day.

Caterers report that food is wasted every day on the wards.

Proposed Plan

Following discussions with catering management team and senior staff:

1. A one-week trial on a specific ward with close monitoring from catering department
2. Rules of engagement' document created to outline to ward staff the rules and expectations regarding the Quality Improvement Project during the one week.
3. A re-survey of ward and catering staff on the changes implemented in the week, any benefits and potential problems.
4. A debrief session with the staff to open up further discussion regarding the QUALITY IMPROVEMENT PROJECT trial period, creating a summary of feedback to be discussed with catering management and senior staff.

The trial may be extended to other wards only:

- if benefits are realised during the trial week
- catering department demonstrate feasibility of the project i.e. no extra resources to deliver
- unintended negative consequences do not result.

Results and discussion

Table 3: Ward survey results following one-week trial on one ward (n=8)

Ward feedback: ward staff survey following trial (n=8) on one ward	
Did you have one or more portions of food during the trial?	8: yes
Do you feel this has reduced food waste?	8: yes
Any positive outcomes identified?	2 saved time getting food off the ward
	3 spent more time with ward staff during trial
Any negative outcomes identified?	None identified

The feedback following this small-scale trial (one ward) was overwhelmingly positive. No specific issues were identified by staff during or following the trial, with feedback focusing on the reduction of waste as the main benefit. I feel the key to success on this ward was effective engagement of ward staff with the trial. This stemmed from good communication and the trial's clear structure. This allowed staff to feel empowered to deliver their own change in the ward environment while working with the catering team. We created a ward culture supportive of change, a key factor identified in "Constructive comfort: accelerating change in the NHS"[5] as required for successful change within organisations.

Unfortunately, the larger-scale trial I planned was unable to go ahead. This limited the trial's results to one ward with a smaller patient number. The larger trial was unable to continue due to difficulties of engaging senior members of the team.

Change is facilitated by having an open mind to try new things. Unfortunately, there was a significant amount of resistance to the trial even in the early stages. There was concern from the catering team that this trial may reflect poorly on their current catering system and have unintended consequences for their services. This led to a less than optimal initial study of the trial's length, being only a week rather than a month long.

In contrast to the more successful ward, on the larger ward I feel the barriers to success were primarily "individual-related barriers".[6] I felt resistance from clinicians on the ward. I was unable to convince senior ward members to try the trial despite posters, emails, face-to-face conversation and explanation detailing the Quality Improvement Project's potential benefits. This is a barrier described in much of the literature, including a project on the WHO surgical checklist,[7] as a significant organisational barrier stemming from a "general resistance to the introduction of change...particularly from more senior members of staff"[8]. I found this resistance for change[9] to be combined with a hierarchical culture[10] in the ward, which intensified the negative impact of this resistance. I believe this could have been improved with more timely communication between senior staff, which was positive about the project, and the ward staff, some of whom felt excluded from the trial. This may have improved buy-in from these ward members, key to Quality Improvement Project success.

This was an ambitious and controversial Quality Improvement Project. Although the project did not go entirely as planned, I feel that as a junior doctor I have learned more from this process than from any other project I have undertaken, and will certainly take these skills on to my next project.

I have personally learned how multi-factorial organising any small-scale Quality Improvement Project can become. Forward-planning and communication is key as is having buy-in from senior Trust members is fantastic; however it is imperative that the gulf between non-clinical staff and clinical staff on the wards is overcome. I felt this disconnect really affected the subsequent attitude toward the Quality Improvement Project on the ward as being something imposed on them, rather than a change for them. The culture of each ward is different. Each Quality Improvement Project needs a tailored, hands-on approach for successful implementation. It may also require more than one attempt to implement. I have learned that to be successful, you need to be motivated and resilient; having this awareness means you can motivate others and positively impact future Quality Improvement Projects.

References

1. Quality improvement made simple: What everyone should know about health care quality improvement" August 2015, The Health Foundation http://reader.health.org.uk/QualityImprovementMadeSimple p5
2. Øvretveit J. Does improving quality save money? A review of the evidence of which improvements to quality reduce costs to health service providers. London: Health Foundation, 2009
3. Batalden PB, Davidoff F, What is "quality improvement" and how can it transform healthcare? *BMJ Quality & Safety* 2007;16: 2-3
4. The 'Junior Doctor's Together' forum is a monthly meeting at Hull Royal Infirmary run by junior doctors, attended by senior staff with the intention of supporting QIP and patient safety projects.
5. Allcock et al. 'Constructive comfort: accelerating change in the NHS', February 2015, The Health Foundation http://www.health.org.uk/publication/constructive-comfort-accelerating-change-nhs
6. "What's getting in the way? Barriers to improvement in the NHS" February 2015, The Health Foundation http://www.health.org.uk/publication/what%E2%80%99s-getting-way-barriers-improvement-nhs
7. Russ et al. 'A qualitative evaluation of the barriers and facilitators toward implementation of the WHO surgical safety checklist across hospitals in England' 2015, *Annals of Surgery*, 261(1): 81-91.
8. Ibid., n.83
9. Brewster et al. 'Factors affecting front line staff acceptance of telehealth technologies: a mixed-method systematic review' 2013, *Journal of Advanced Nursing*, 70(1): 21-33
10. Jones et al. "Building the foundations for improvement' February 2015, The Health Foundation Learning Report http://www.health.org.uk/publication/building-foundations-improvement