

## Background

Conditions affecting the musculoskeletal system (MSK) are common in all branches of medicine in primary and secondary care, with MSK conditions accounting for up to 30% of GP consultations in England. Education in this speciality is therefore fundamental for all doctors.

The medical student experience of clinical placements is closely linked with the quality of teaching, varied educational opportunities and sense of belonging within the team. Surgical rotations, such as Trauma and Orthopaedics (T&O), have a stereotype for being challenging which hampers the acquisition of knowledge.

At our hospital, fourth year medical students rotate through the T&O department for six weeks. Student satisfaction is reported in end of term **Student Evaluation Questionnaires (SEQ)**. Between 2015-19 student satisfaction of the T&O rotation was persistently low.

Our project aimed to improve the quality of educational experiences and overall student satisfaction through a multifaceted quality improvement (QI) approach, led by *clinical teaching fellows* (CTFs).

## Methods - Driver diagram

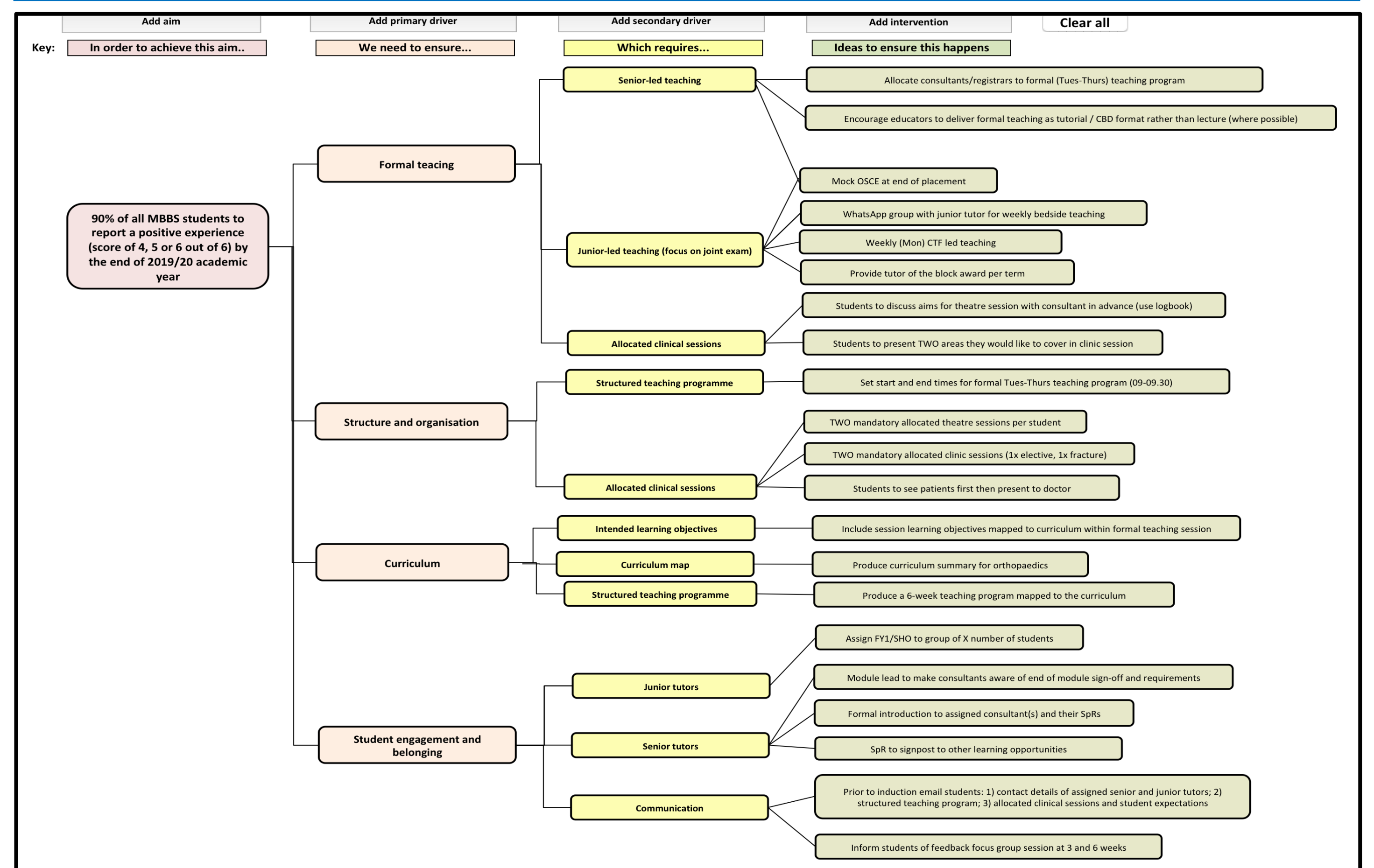


Figure 4: QI driver diagram outlining strategies to improve educational experience

Description	Student Satisfaction %
Consistently below the expected standard. Requires significant improvement.	0 - <40%
Provides some quality experiences, but overall below the expected standard	40 - <75%*
Provides high quality educational experiences over time with action plans for minor problems	75 - 100%*

Figure 1: Student satisfaction scoring categories used in the SEQ

Academic year	2015-16			2016-17			2017-18			2018-19		
	1	2	3	1	2	3	1	2	3	1	2	3
Student satisfaction %	50	29	40	60	41	8	62	70	56	38	57	45

Figure 2: Student satisfaction scores from SEQ for the T&O rotation before the QI project

Movement - Orthopaedics & Trauma placement			
	Royal Free (n=12)	UCLH (n=21)	Whittington (n=15)
Overall satisfaction	8%	90%	93%

Figure 3: Student satisfaction of the T&O rotation across hospital sites in 2016-17

## Aims

The aim of the QI project was:

- To improve medical student satisfaction in the T&O rotation at the Royal Free site to **above 75% by the summer term of 2020\***.

According to the scoring used in the SEQ this is described as 'providing high quality educational experiences over time with action plans for minor problems'.

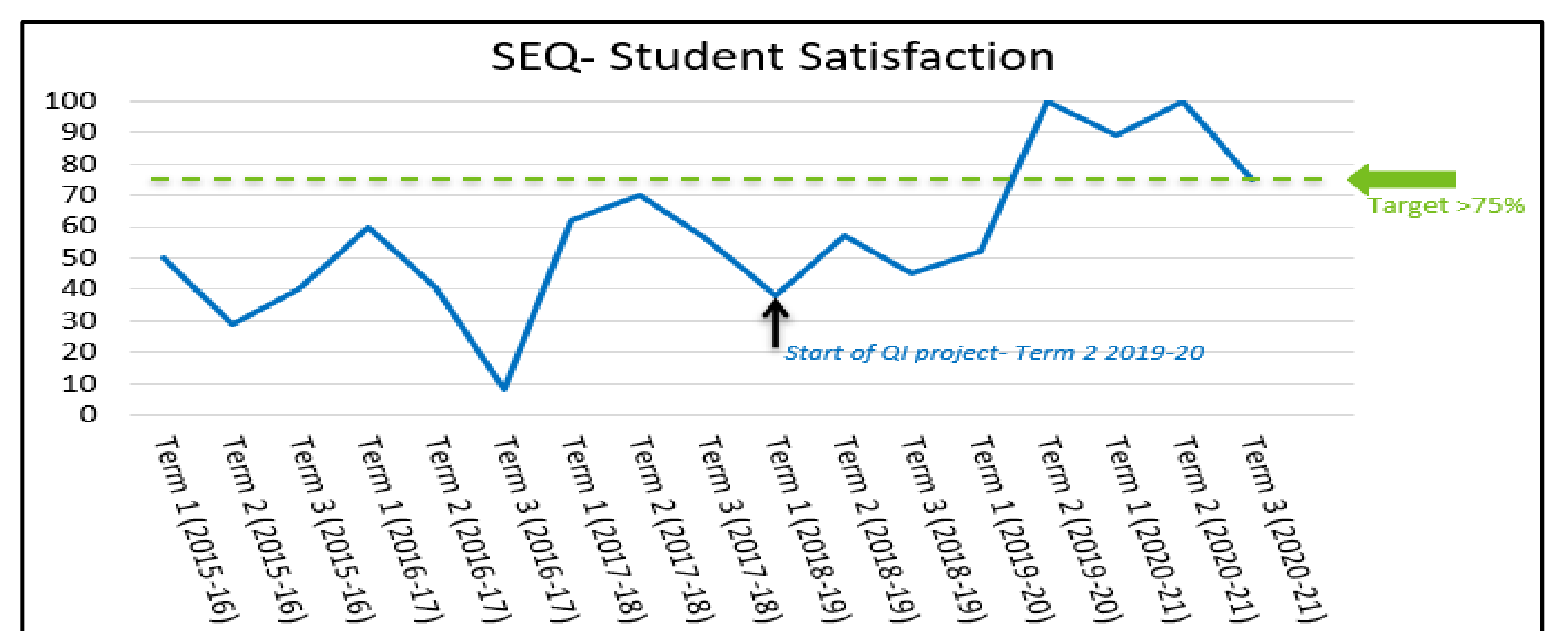
\*Extended to 2020-2021 academic year due to the COVID-19 pandemic

## Results

As a result of the implemented QI strategies:

- Student satisfaction within our T&O placement increased to 100% on implementation of majority of our changes (2019-20, term 2).
- High level of satisfaction maintained at 75% and more thereafter.
- Increased student participation in feedback.
- Most successful strategies included allocated clinic and theatre sessions, bedside teaching time, curriculum map, WhatsApp communication and a dedicated clinical teaching fellow in the T&O department.

Academic year	2016-17			2017-18			2018-19			2019-20			2020-21		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Student satisfaction %	60	41	8	62	70	56	38	57	45	52	100	COVID-19	89	100	75



Figures 5&6: Improved student satisfaction reported in SEQ since starting the QI project (Term 3, 2020 excluded due to COVID-19 lockdown)

## Methods

- Project group meeting February 2020 to review SEQ feedback from academic years 2015- 19.
- Creation of QI driver diagram detailing plan for improvement based on themes raised in the SEQ feedback. Themes included:
  - 1) formal teaching
  - 2) structure and organisation
  - 3) curriculum content and
  - 4) student engagement and belonging.
- Each theme subdivided into specific achievable strategies as described in the driver diagram (green boxes).
- CTF led team to implement strategies according to set deadlines.
- Impact of changes measured using subsequent SEQ.

## Discussion

### Conclusions

- Students enjoy and engage in T&O/surgical placements when provided with high quality educational experiences.
- Validates student feedback, questionnaires and QI as valuable tools to improve medical education.

### Limitations

- Incomplete picture: not all students complete SEQ and provide feedback
- COVID-19: unable to implement some strategies for improvement

### Recommendations

- Regular departmental review and involvement of the whole team in medical student education
- Clinicians dedicated to teaching such as CTFs are a key resource in improving the educational experiences of medical students