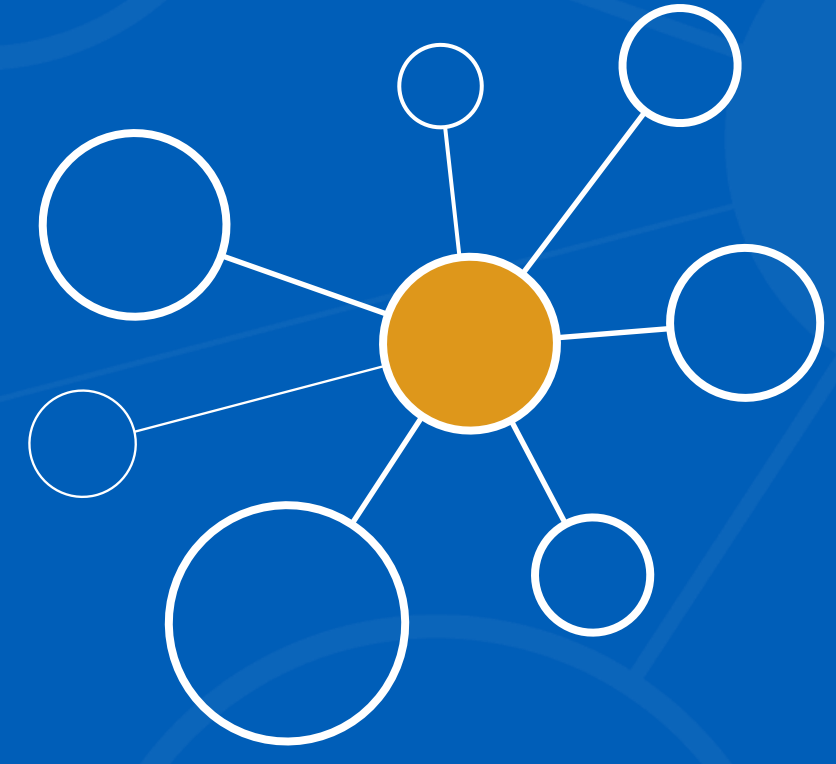


QI 2025-06 Improving Ergonomic Practice in Endoscopy

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Gloucestershire Safety and Quality Improvement Academy 2025

Improving Ergonomic Practice in Endoscopy

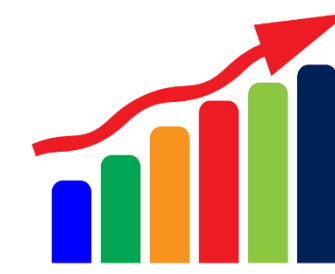
Amber Prisk - Consultant Practitioner / Lead Clinical Endoscopist
Julian Layhe – Clinical Endoscopist

Background

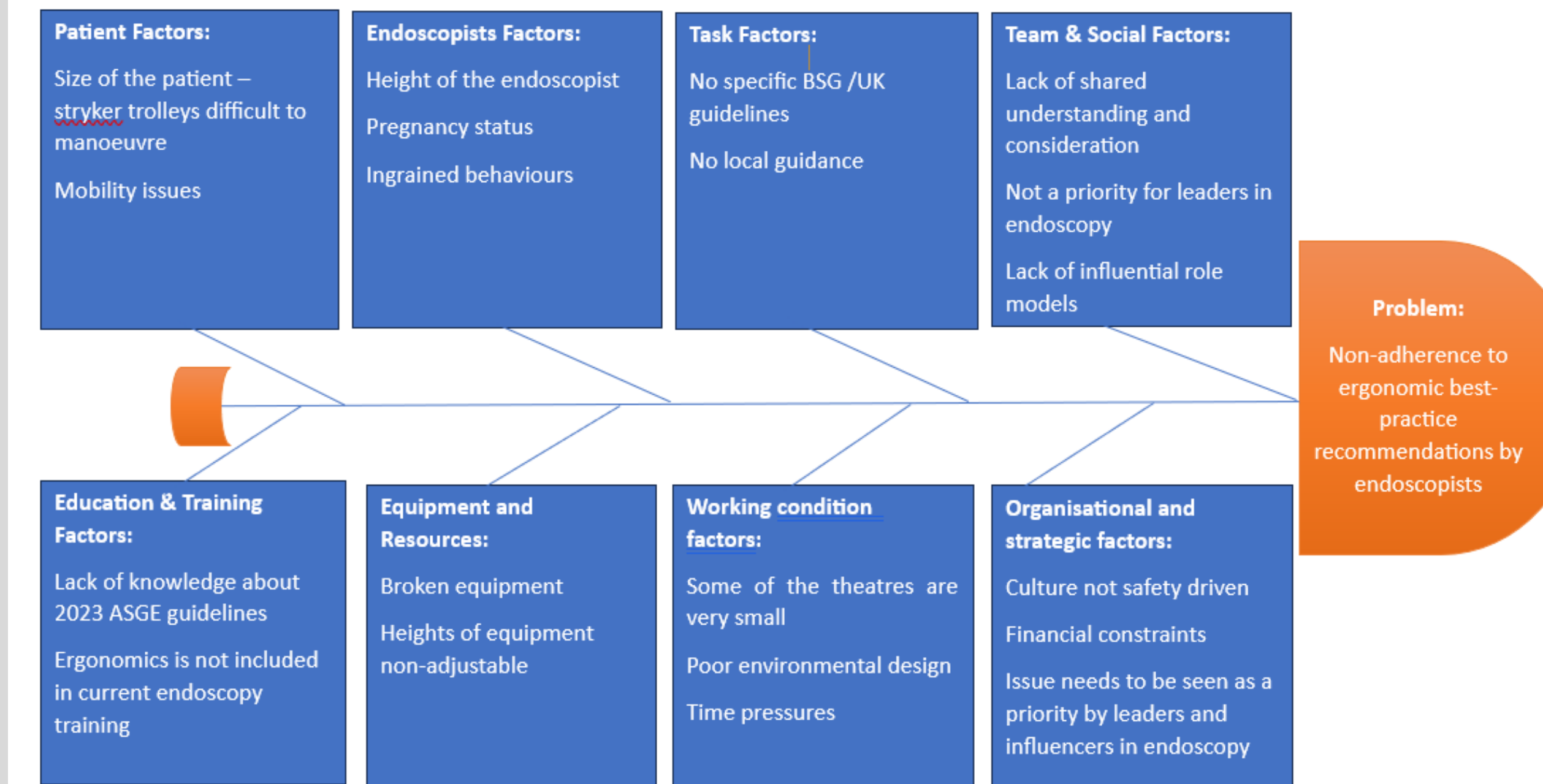
Performing endoscopy is a physically demanding and repetitive task, and endoscopists are prone to developing musculoskeletal endoscopy-related injuries (ERI's) (Young et al, 2017). ERI's can shorten endoscopists' careers, reduce personnel available for healthcare delivery, and thereby negatively impact patient care. Research evidence shows that adherence to best-practice recommendations regarding ergonomics in endoscopy can help to significantly reduce the risk of ERI's (Walsh et al 2021).

SMART Aim

To increase the overall compliance rate with best practice recommendations from 64% to over 85% within 6 months



Understanding the problem – fishbone analysis



Driver Diagram

Aim	Primary Drivers	Secondary Drivers	Change ideas
To increase the overall compliance rate with best practice recommendations from 64% to over 85% within 6 months	Staff	Education	Educational e-mail endorsing the ASGE best-practice guidelines and include a link to a 6 minute you-tube video Produce an educational poster to be put up in all theatres Educate nursing staff about how they can facilitate optimal ergonomic practice for endoscopists
		Awareness	Make endoscopists aware of the level of ERI's among our local team and encourage them to engage in improvement strategies
	Guidelines policies and procedures	ASGE guidance – endoscopy specific ergonomics guidance	To be promoted through sharing the ASGE guidance paper, inclusion in an educational poster as a reminder and through a short educational video (you-tube link)
		Health and Safety Team	Seek support to endorse QI efforts – validate the project
Communication	Online	Verbal	e-mail communication Face 2 face teaching sessions, present at team meeting, user group meetings and clinical governance
		Permanent poster	Educational poster for all theatres
		Equipment	Make budget holder aware of the need for broken equipment to be replaced Demonstrate how equipment can be optimally positioned Place tape lines on the floor to aid alignment
Environment	Work processes		Implement an ergonomics checklist to be carried out at the commencement of each list
		Organisational	Leadership and culture

The problem

The ERI rate among endoscopists at GRHNHSFT was found to be 48%. Local practice was observed and measured against four core best-practice recommendation relating to monitor height, equipment alignment, trolley height and endoscopist posture. This revealed that only 1/3 of endoscopists were adhering fully to all four best practice recommendations. The overall compliance rate for all observed elements among all endoscopists was found to be 64% which is sub-optimal and poses a significant risk to the health and wellbeing of our endoscopists.

Improvement team Stakeholders

Amber Prisk
Consultant Clinical Endoscopist

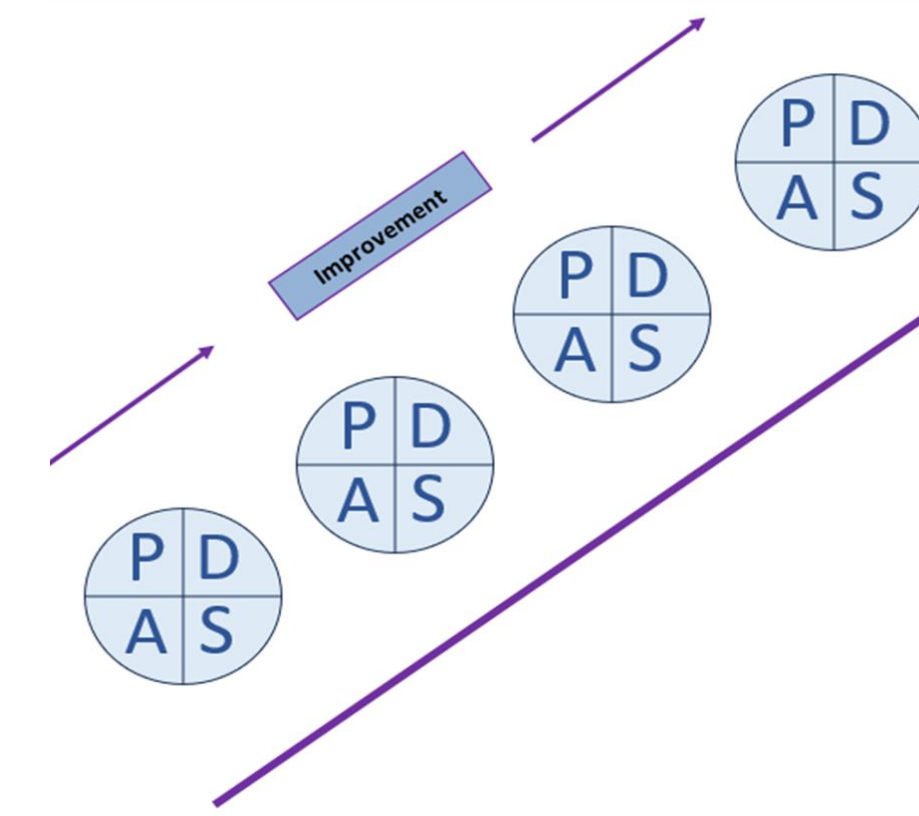
Julian Layhe
Clinical Endoscopist

Endoscopy Clinical Leads
Endoscopy Training Academy Director
General Manager
Endoscopy Nursing Team
Health and Safety Team
Endoscopy practice development nurse
Matron

PDSA Cycles

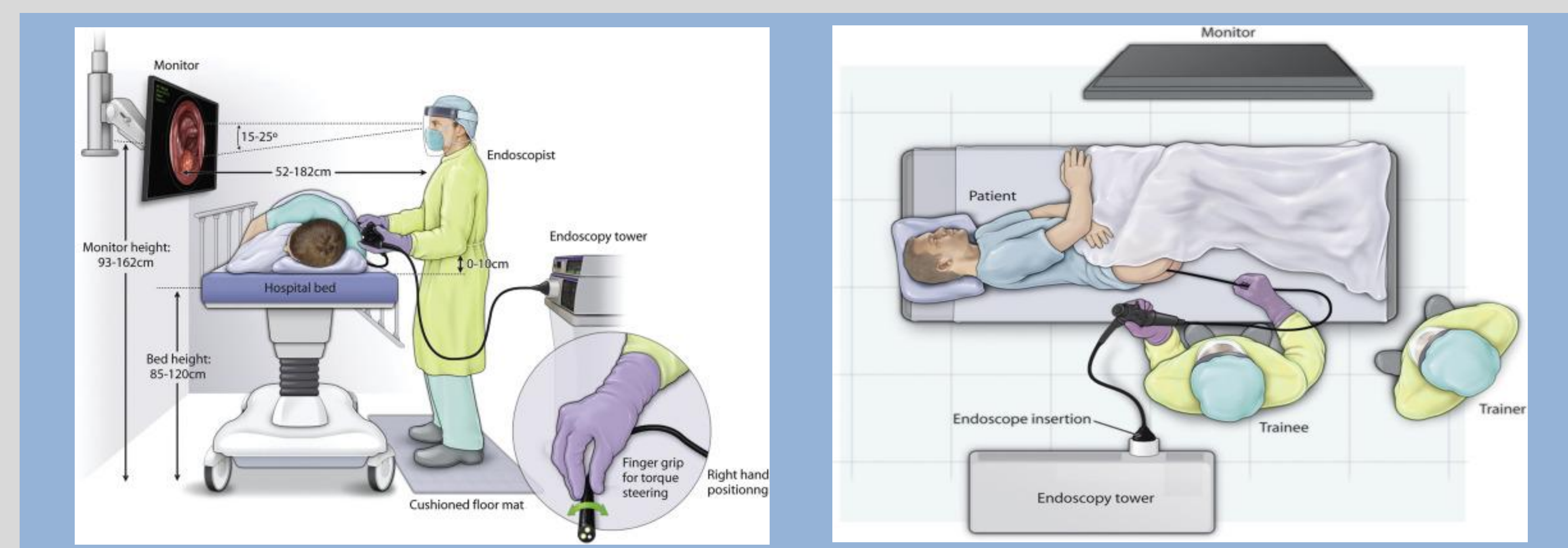
Cycle 1 (month 1):

- Educational intervention for Endoscopists
- Mircro-teach session for supporting nursing staff
- Educational poster placed in all theatres



Cycle 2 (month 2):

- Ergonomics checklist added to endoscopy list de-brief form
- Tape lines placed on theatre floors to aid alignment of equipment



Measures

Outcome:

- To reduce endoscopy –related injuries among endoscopists
- To increase the endoscopist compliance rates to best-practice recommendations

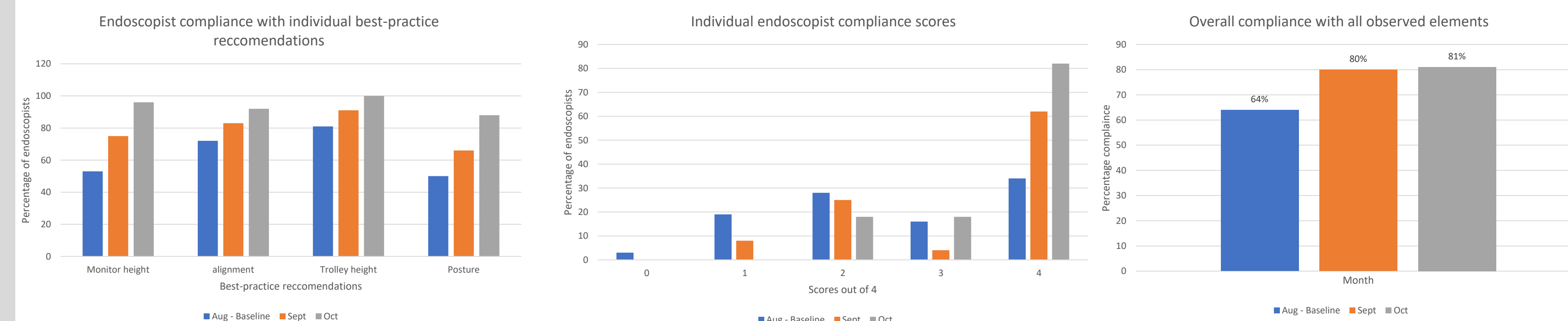
Process:

- Observation and evaluation of of monitor height, trolley height, equipment alignment and endoscopist posture
- Audit of whether the ergonomic checklist is being regularly completed

Balancing:

- Whether endoscopy list start or finish times are impacted by implementation of the ergonomic checklist
- Acceptability of the ergonomic checklist by endoscopists and the nursing team

Results and key findings



- Compliance percentages for the four individual best-practice recommendations all improved from the baseline figures, most notably in relation to endoscopists selecting the correct monitor height and in maintaining an optimal ergonomic posture
- Endoscopist overall compliance scores improved significantly with only 34% achieving a maximum score during the baseline observations in August and this improved to 82% by October
- The overall compliance rate for all observed elements among all endoscopists increased from 64% at baseline, to 80% after PDSA cycle 1, and subsequently to 81% after PDSA cycle 2
- At two months after implementing our change interventions we have not yet met our SMART aim of achieving 85% overall compliance. The results to date however are very positive and suggest we are on track to achieve our aim after 6 months.

Barriers and challenges

- Long-term sickness of QI team member
- Finding time to implement multiples changes interventions
- Ingrained practices among endoscopists
- Nursing staff forgetting to complete audit forms
- Nursing workload precluding more frequent observations
- Unanticipated additional training required to promote objective and consistent observations by nursing staff
- Lack of funding for replacement of broken equipment

Next steps

- Further observations to be undertaken to assess whether the observed improvements are sustained and whether further interventions are required
- Ensure that all new nursing staff receive the microteach session
- Consider developing an ergonomics in endoscopy e-learning module for all new endoscopists who join the Trust
- Assess whether endoscopy trainers include ergonomics during training lists
- Complete a risk assessment and utilise the health and safety team to encourage budget holders to prioritise replacement of broken and unsuitable equipment
- Spread awareness of our initiative via the south-west endoscopy training academy

References

- Pawa S, et al. (ASGE Standards of Practice Chair Committee Chair, 2020-2023) American Society for Gastrointestinal Endoscopy guideline on the role of ergonomics for prevention of endoscopy-related injury: summary and recommendations: Gastrointestinal Endoscopy. 2023 Oct;98(4):482-491.
- Walsh, CM et al. Core Curriculum for ergonomics in endoscopy. Gastrointestinal Endoscopy. 2021. 93(6): 1222-1227
- Young DE, Banfi T, Ciuti G, Arrizzo A, Dario P, Koulaouzidis A. Musculoskeletal injuries in gastrointestinal endoscopists: A systematic review. Expert Reviews in Gastrointestinal Endoscopy. 2017. 11(10) 939-947