Sustainability in Quality Improvement Education: Project Brief

About the Project

The Centre for Sustainable Healthcare (CSH) has developed the Sustainability in Quality Improvement (QI) Education project to equip health professionals to innovate for a more environmentally, socially and financially sustainable health service. The project's primary aim is to integrate sustainability into current QI teaching in order to improve the knowledge and skills required for sustainable healthcare. The Sustainability in Quality Improvement (SusQI) framework is an approach to improving healthcare holistically and offers a practical way to create incremental change towards a more ethical, sustainable healthcare system. The project is funded and supported by Health Education England, The Health Foundation and Kings College London.

Background

Despite growing awareness and concern about the climate and ecological emergency, as well as Government and NHS commitments on carbon reduction, there remains a gap in knowledge and skills for sustainable healthcare among health professionals. Integrating sustainability into quality improvement offers a practical way to fill this gap: addressing environmental and ethical challenges in healthcare while providing a fresh motivation for staff to engage in QI and directing teams towards the highest value improvements.

The NHS Long Term Plan includes carbon reduction commitments and, following work by CSH, sustainable healthcare is included in the latest GMC outcomes for medical graduates[i] and in the Academy of Medical Royal Colleges QI curriculum[ii]. Furthermore, the latest NMC Standards of Proficiency for Midwives[iii] now include sustainable healthcare outcomes under Domain 5. However, these requirements have yet to be translated into widespread practice: NHS sustainability efforts continue to take place separately from clinical innovation, and there is a lack of knowledge and skills among clinical staff to be able to contribute.

Project goals

The project aims to facilitate the integration of sustainability into health professions education on QI, using the 'SusQI' framework.

- Goal 1: Demonstrate the inclusion of sustainable healthcare principles within undergraduate and postgraduate health professions education on QI. Setting up a pilot in at least one of each, undergraduate medical education, postgraduate medical education and one undergraduate/postgraduate nursing and AHP education.
- Goal 2: Evaluate the impact of this inclusion on learning, including engagement with QI.
- Goal 3: Accelerate the national adoption of successful approaches by UK universities, Foundation Schools and other providers of QI education.

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Taking part in the project

CSH can offer the following for pilot sites taking part in the project:

- Review of current QI teaching and material to identify opportunities for the integration of sustainability.
- Deliver SusQI training to faculty and students.
- Provide SusQI resources and tools (You can find our SusQI framework resources here. Please note, these are currently being updated and will be relaunched in September 2020).
- Provide ongoing support and direct links with our CSH QI Education Fellow for both faculty and students.

Criteria for selection of pilot sites:

- Integration of the SusQI framework into existing or planned QI teaching.
- Agree to evaluation (e.g. share anonymised data, covered by multi-site ethics approval. Please see evaluation section below for more information).
- Named person within the institution to act as a main point of contact (plus sign-off by the course lead, if different).
- Intention to continue teaching beyond the pilot if successful (e.g. evidenced by arranging faculty development and involving staff in co-delivering SusQI teaching).
- Strategic value to the project (e.g. opportunity to trial the approach with a learners from a different professional group / stage of training or using a different teaching format).

Example of CSH SusQI education training offer

CSH can offer the following training in collaboration with educators from pilot sites:

Introductory material

Provide an overview of sustainable healthcare that aims to meet the needs of patients and populations today and in the future. Introduce the relationship of sustainability as a domain of quality in healthcare. Give an overview of the impact of climate change on global health and explore how building Sustainability in Quality Improvement (SusQI) can drive incremental change towards a more sustainable and ethical healthcare system.

Pre-reading excerise

This would focus on a case study of introducing sustainable healthcare through SusQI. CSH will collaborate with pilot sites regarding pre-reading materials and exercises to ensure this links with current course content.

Interactive webinar

CSH can facilitate the webinar session with support and collaboration from local educators. This session would include an overview of the pre-reading exercise, the principles of sustainable healthcare, SusQI, studying the system and measuring social and environmental impacts. To make the session interactive, breakout sessions can be included to allow students to work together on exercises, such as studying the system and measuring environmental and social impacts. (approx. 2-3 pilot site facilitators would be needed to help facilitate the breakout rooms.)

SusQI clinic sessions

It may be possible for our CSH QI Education Fellow to provide ongoing support for students and faculty by setting up regular remote clinic sessions. These sessions can offer students support on integrating the SusQI framework into individual QI projects and at the various stages of the QI process.

Evaluation

In collaboration with CSH, the Medical Education Research Unit (MERU) at Imperial College London has been invited to conduct the evaluation of the SusQI education project at participating pilots sites.

The main part of this evaluation will involve the retrospective and prospective analysis of the processes and outputs of normal educational activities (coursework and course evaluation data) in order to evaluate the impacts of introducing SusQI education. In addition to this, a survey will be distributed to participants via Qualtrics. Participants who complete the survey will have the opportunity to indicate if they wish to be invited to take part in a focus group or interview.

Participants invited to the survey, focus groups and interviews will include:

- Healthcare students and trainees who have participated in SusQI education
- Faculty, clinicians, administrators and educationalists who have been involved in developing, delivering, facilitating and assessing SusQI education
- Clinical supervisors who have been involved in supervising SusQI projects in the clinical workplace.

Time commitment

The majority of the evaluation involves analysis of pre-existing data, therefore this would not involve any time commitment for participants. Interviews and focus groups will take place at a time convienient for the participants.

- Survey: approx. 5 -15 minutes depending on how much information participants wish to provide.
- Interviews: approx. 30 minutes
- Focus groups: approx. 50 minutes.

Confidentiality and ethical considerations

We will not be seeking individual student consent for the evaluation of the output of normal teaching activities (coursework and course evaluation data) and will rely on the BERA guidelines for institional consent on behalf of contributors. The analysis will only gather data that has been anonymised locally. Survey data will be collected anonymously. We will also ensure data are fully anonymised and decontexualised prior to analysis of interviews and focus groups.

All data will be securely stored on the MERU sharepoint site in accordance to GDPR and local guidelines. Multi-site ethical approval will be in place prior to commencing any evalution activity.

All interviews and focus groups will be conducted by a researcher that is not from the participants' institution to minimise power imbalances: principally from MERU or from the Centre for Sustainable Healthcare.

Timeline

The project runs for two years from 1st September 2019 to 31st August 2021.

Primary contact for the project:

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Appendix

Sustainability in Quality Improvement – the SusQI framework

CSH has developed a "SusQI" framework for integrating sustainability into quality improvement methodology, summarised in the figure and table below, which are taken from one of two articles published in the *Future Healthcare Journal*[iv,v]. This provides a practical way of addressing environmental, financial and social concerns while improving patient care.

$$Value = \frac{Outcomes\ for\ patients\ and\ populations}{Environmental + social + financial\ impacts\ (the\ 'triple\ bottom\ line')}$$

Fig 3. Sustainable value in healthcare.

Table 2. Building sustainability into quality improvement ('SusQI'): intended benefits		
QI element	**Sustainability content**	**Intended benefits**
1 Setting goals	Sustainability as a domain of quality; relationship to other domains	New motivation to contribute to QI, energy for change
2 Studying the system	Understanding environmental and social resource use / impacts; carbon hotspots in the NHS; 'seven capitals' matrix	Highlights wastes and opportunities which are often overlooked; stimulates radical thinking
3 Designing the improvement effort	The Centre for Sustainable Healthcare principles of sustainable clinical practice (prevention, patient empowerment and self-care, lean systems, low carbon alternatives)[a] – drivers and process changes	Directs towards highest value improvements, future proofing
4 Measuring impact / return on investment	Triple bottom line / sustainable value equation; measuring carbon	Drives sustainable change; allows benefits to be communicated to broader audience, not exclusively regarding financial cost-benefit

[a]From Mortimer *et al*, 2010.[12] QI = quality improvement

CSH's experience is that SusQI offers a means of engaging staff, educators and students in healthcare improvement, acting as a catalyst for creativity, as illustrated in the following quotes:

"This framework has radically altered how I approach quality improvement, in how I deliver Quality Improvement to the students I teach, in my own practice and in how I appraise the work of others." Dr. Noreen Ryan, Domain Lead for Quality Healthcare, Imperial College London School of Medicine

"My students (working nurses) on the ICU nursing course are using the SusQI framework for their quality improvement project assignment. I'm marking essays now and adding in sustainability as a component of quality has enhanced the academic writing this year – it has also prompted the students to develop more interesting projects." Dr Heather Baid, University of Brighton

"What struck me most when I first learnt about susQI is how this is at the crux of all domains of quality in healthcare and why this isn't part of all QI!" Dr. Philippa Clery, Academic Foundation Doctor, Centre for Academic Child Health, Bristol

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"This SSC was a great addition to my medical course, it was a lot of work at times, but I felt like I have really made a difference, and due to the nature of my project I felt like I was acting as a professional in the NHS which was very exciting and rewarding."
"I think it will change the way I will practise medicine and will inform many decisions I make in the future."
Second year medical students, University of Bristol

REFERENCES

[i] General Medical Council, *Outcomes for graduates 2018*: GMC, 2018. Available at: https://www.gmc-uk.org/education/standards-guidance-and-curricula/standards-and-outcomes/outcomes-for-graduates

[ii] Training for better outcomes: Developing quality improvement into practice. Academy of Medical Royal Colleges (2019). Available at https://www.aomrc.org.uk/reports-guidance/developing-quality-improvement-into-practice/

[iii] Nursing and Midwifery Council, *Standards of Proficiency for Midwives* 2019: NMC, 2019. Available at https://www.nmc.org.uk/globalassets/sitedocuments/standards/standards-of-proficiency-for-midwives.pdf

[iv] Mortimer F, Isherwood J, Wilkinson A, Vaux E. Sustainability in quality improvement: redefining value. *Future Healthcare Journal*, 2018 Vol.5(2):88-93

[v] Mortimer F, Isherwood J, Pearce M, Kenward C, Vaux E. Sustainability in quality improvement: measuring impact. *Future Healthcare Journal*, 2018 Vol.5(2):94-97