

Sustainability in British Skin Surgery – A Medical Student’s Perspective

REFLECTION

AUTHOR

Rafsan Chowdhury
University of Aberdeen

Mr Roshan Vijayan
Consultant Plastic Surgeon
East & North Herts NHS Trust

Address for Correspondence:

Rafsan Chowdhury
University of Aberdeen
School of Medicine
Medical Sciences and Nutrition

Email: rafsanchowdhury37@gmail.com

No conflicts of interest to declare.

Accepted for publication: 16.05.2023

BACKGROUND

As discussions surrounding climate change and the environment are brought into the limelight, a greater drive behind reducing the carbon footprint of healthcare has been founded. The NHS accounts for 25% of public sector carbon dioxide emissions, and therefore the pressure to reduce the environmental impact of healthcare and implement more sustainable methods is increasing. Due to the diversity of specialities and fields within healthcare, it is beneficial that specialists come together to discuss methods to reduce the environmental impact of healthcare and develop adaptable frameworks that can be applied to tackle this major issue.¹

Sustainability can have varying definitions, depending on the issue in consideration. At a basic level, sustainability can be defined as “the ability to be maintained at a certain rate or level”, and in the setting of healthcare, this can apply to various domains. For instance, healthcare could be made more sustainable by considering the emotional and physical burden of current practice methods on providers, identifying the impact of this on service provision, and resultantly looking for methods to reduce burnout among staff members. Sustainability, however, does present with broader connotations of environmental health, and with increasing healthcare waste over the Covid-19 pandemic, the importance of this is ever more prominent.

Dermatology and Plastic Surgery as specialities are tight-knit communities with a wealth of valuable practitioners who deliver excellent care. The sharing of ideas and knowledge between centres and the organisation of regular conferences and scientific meetings allows this community to grow. Nonetheless, over the course of the pandemic, there has been a drive towards online forms of communication, and perhaps this could be implemented to a greater extent within scientific meetings to assist in reducing the overall carbon footprint of travel. Whilst in-person events generally produce greater satisfaction, opening parts of the event onto an online platform can widen the reach of such events and make it more accessible to medical students, for whom travel and accommodation to attend could be financially burdening. In addition, waste is generated from in-person conferences, and therefore being more mindful of the sourcing of materials can be of significant benefit. For instance, using

bsdj.org.uk

materials for stands from recycled materials can be a simple step with a significant effect, and potentially donating these materials after use rather than disposal can also support the local community.

At a management level, striving to adapt the way surgical equipment and medical treatment is utilised can help make British skin surgery more sustainable. Operating theatres are resource-intensive settings where the degree of waste is visibly alarming, with large bags being filled for individual patients. Part of this waste is attributed to the use of prepacked surgical instruments, which are often single-use. With some of these packs containing multiple instruments that may never be used in the procedure, the volume of waste increases and becomes more damaging to the environment. Moreover, these instruments tend to be either made from cheaper, non-recycled materials or made of surgical-grade stainless steel, which has sterilisation emissions. According to recent studies, surgical instruments are a key driver in surgical environmental emissions, attributing to 65% of the global warming potential of surgery as a field.² Therefore, fostering discussions between Specialists and equipment manufacturers to re-evaluate the current equipment packing situation and further tailoring the equipment packs to the needs of the procedure in question could provide environmental benefits and surgical satisfaction.

Even the simplest of measures can significantly impact making British skin surgery more sustainable. Skin biology is an incredibly fascinating area with multiple facets of pathology, including oncology, inflammatory diseases, infectious diseases and degenerative diseases.³ With skin cancers forming a large portion of dermatological management, patient education can play a vital role in achieving the concept of “green skin.” By enhancing patient education on preventative measures and promoting healthy lifestyle behaviours, the need for surgical intervention can be theoretically reduced, minimising the overall environmental impact. In addition to surgical management, topical management options are an area where sustainability could be considered further. The first area to consider is the efficacy of prescription sizes, as many topical applications come in various sizes. In cases of patients requiring more chronic topical prescriptions, increasing the bottle size can reduce the overall plastic consumed. Furthermore, considering more biodegradable or recycled materials for the packaging can also assist in delivering the bigger picture.

In current society, skincare is an ever-increasingly important aspect of our lives, and with the rise of social media, there is a strong desire to achieve the “perfect beauty standard”. This standard is difficult to define, although it has led to a surge in cosmetic surgeries and cosmetic beauty line sales. According to the British Beauty Council, in 2018, the industry in the UK was worth £28.4 billion and has been on the rise since. With a rise in “skincare influencers” who develop an appreciation of products through personal use and reading, many products are purchased by consumers, based on recommendations from influencers who have very limited knowledge of skin biology. As a result, vast quantities of waste have been generated, with 120 billion units of packaging being sent to landfill in 2018.⁴ Part of the battle against skincare and dermato-

logical waste could be addressed by involving dermatologists and plastic surgeons in the decision-making, since they are often more qualified to address the nuances of skin biology and influence the societal perception of beauty. A greater drive towards sustainable packaging could also be incorporated and aid in reducing the sheer volume of waste generated by this industry.

Ultimately, environmentally sustainable medicine is a minefield which requires more discussion between practitioners, manufacturers, and society to achieve more environmentally beneficial changes to the way healthcare is delivered. Skin surgery is a highly specialised field with a huge demand, and therefore by enhancing patient education, as well as forms of research and audits on the sustainability of current practice, we can aim to achieve “Sustainable Skin”.



The **British Student Doctor** is an open access journal, which means that all content is available without charge to the user or their institution. You are allowed to read, download, copy, distribute, print, search, or link to the full texts of the articles in this journal without asking prior permission from either the publisher or the author.

bsdj.org.uk



/thebsdj



@thebsdj



@thebsdj

Journal DOI

10.18573/issn.2514-3174

Issue DOI

10.18573/bsdj.v7i1



The **British Student Doctor** is published by **The Foundation for Medical Publishing**, a charitable incorporated organisation registered in England and Wales (Charity No. 1189006), and a subsidiary of **The Academy of Medical Educators**.

This journal is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License. The copyright of all articles belongs to **The Foundation for Medical Publishing**, and a citation should be made when any article is quoted, used or referred to in another work.



Cardiff University Press

Gwasg Prifysgol Caerdydd

The **British Student Doctor** is an imprint of Cardiff University Press, an innovative open-access publisher of academic research, where 'open-access' means free for both readers and writers.

cardiffuniversitypress.org