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|  **Name & email supervisor(s):**Dr Sara Shaw, Associate Professor Health & Social Policy – sara.shaw@phc.ox.ac.uk Dr Amy Booth, Rhodes Scholar and DPhil student - amy.booth@gtc.ox.ac.uk  |
| **Proposed length of internship and when it could take place:**8-12 weeks – any time July to December 2022 |
| **Host department:**Department of Primary Care Health Sciences, University of Oxford |
| **How will the internship be conducted:**[ ]  In person at the university[ ]  Virtual/ from home[ ]  Both are possible, depending on preference student |
| **Title internship project:**How can we develop more environmentally sustainable medical devices? A systematic review of the carbon footprint of medical devices |
| Healthcare contributes approximately 4-5% of greenhouse gas emissions globally. Medical devices account for between 6-18% of national healthcare emissions. Health professionals use a significant quantity of medical devices (e.g. syringes, intravenous lines, catheters) on a daily basis, often with little or no appreciation of their potential environmental impact. Some research has been done to determine the carbon footprint of individual medical devices in order to identify ways to reduce their impact. This research is often framed as a discussion on the environmental benefits of reusable medical devices versus the infection prevention advantage of single-use items. Further work is needed to understand how to develop more environmentally sustainable medical devices going forward. This project therefore asks: 1. What do we currently know about the carbon footprint of medical devices – which devices have been ‘carbon foot-printed’, how and why?
2. How is the tension between reusable and single-use medical devices currently addressed?
3. Where are the gaps in current evidence about environmentally sustainable medical devices, and how might these be addressed?

In addition to learning about the development of environmentally sustainable health care, the internship will provide opportunities to learn about conducting a systematic literature review, the relevance of carbon foot printing, extracting and critically analysing data and writing for an academic journal. No prior knowledge or experience of carbon footprint modelling is required - the internship will involve obtaining a basic understanding of the principles behind it, assessing quality of carbon footprint modelling, as well as exploring its application to healthcare.  |
| **Learning objectives:**1. To conduct (with support) a systematic review of relevant published literature about medical devices that have had their carbon footprint calculated
2. To develop an comparable table of medical device carbon footprints, with accompanying analysis of what has been achieved to date, how and why.
3. To work with supervisors to write up main findings for a journal paper, including setting out future research agenda for development of more environmentally sustainable medical devices.
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| **Any further information:**The internship aligns with an evolving research programme focused on environmental sustainability in health care, enabling opportunities for the intern to connect with other work in this growing field. |
| **How to apply:**Please apply via email to recruitment@phc.ox.ac.uk with the subject heading **‘Primary Care Medical Student Internship application’**, and attach the following documents:* CV
* Covering letter explaining how you meet the criteria for the post, and what you hope to gain from it.
* Supporting statement from personal tutor or equivalent

**Please state clearly which project you prefer and whether you are also interested in any of the others.** Please note: you will be paid one month after the completion of work (i.e. for work done in May, payment will be made at the end of June).Closing date for applications is midday on **3 May 2022** |