

APPENDIX

Appendix 1: Targeted sample

For executing a maximum variation sampling, diverse characteristics that would possibly influence participants' statements during the semi-structured interviews were identified by literature research and team discussion: function in the hospital, age and gender. In addition, to gain meaningful and specific insights, we decided to include members of the staff council and of the 'Netzwerk Nachhaltigkeit' (sustainability network). The 'Netzwerk Nachhaltigkeit' is a staff initiative at the studied hospital to improve ecological sustainability, founded in 2020.

Although there are more clinical than administrative employees at the studied hospital, we nevertheless decided in advance to interview approximately equal numbers from these two groups. The reason for this is that, according to the literature research, administrative employees can have a particular influence on climate change mitigation at the hospital. As for the age of the participants, we wanted to cover a broad spectrum. Regarding gender, we wanted about an equal distribution.

Appendix 2: Final interview guide

The interviews were conducted in German. Quotations given in this article have been translated into English.

Part A: Introduction

- Welcome and introduction
- Mention of the topic
 - Climate change mitigation at this hospital
- Explanation of the objectives
 - To examine the sense of responsibility to reduce GHG emissions in hospitals
 - To examine stakeholders' perceptions of GHG emissions
 - To collect suggestions for practical and accepted climate change mitigation measures
 - To examine barriers and enabler from various perspectives
- Clarification of terms
 - Climate change mitigation measures: All measures that lead to mitigation of human-caused GHG emissions¹, e.g., carbon dioxide or methane.
- Information on ethical aspects
 - Reference to the information letter. Do you have any questions in this regard? Is there something that remains unclear?
 - Participation is voluntary. No disadvantages will arise.
 - Consent can be withdrawn at any time (also during the interview) without giving reasons and without disadvantages. In the case of withdrawal from the study, data material already obtained will be destroyed or, in the case of consent, evaluated.
 - The interview will be recorded in order not to disturb the interview process and to enable an optimal evaluation.
 - All confidential information is subject to medical confidentiality and the provisions of the General Data Protection Regulation (DSGVO) and the State Data Protection Act.
- Notes on the interview procedure
 - Duration approx. 30-45 minutes
 - Guide contains topics to be covered in the interview, but also leaves space for unforeseen content; Mainly open questions
 - The interview is no knowledge test. There is no "right" and "wrong", but it is about examining perceptions.

Part B: Attitude towards climate change mitigation

Information	My study is about climate change mitigation at this hospital.
Questions	1. What did you think when you first heard about this study? 2. Does the topic of climate change mitigation concern you in your private life?

Part C: Perception of the health sector's / a hospital's GHG emissions

Information	The health sector is the sum of facilities and assets related to health promotion, maintenance, and restoration (adapted from ²).
Question	3. How large do you estimate the health sector's share of total German greenhouse gas emissions to be?
Information	Since this number is important for climate change mitigation in the health sector, I would like to briefly touch on it here. The health sector accounts for approx. 5-7% of total German GHG emissions ^{3,4} .
Question	4. I am interested in your assessment of the following question: which sources contribute strongly to a hospital's greenhouse gas emissions, e.g. this hospital?
Information	The English National Health Service systematically records its own GHG emissions. However, this is data related to the entire healthcare system, not hospitals specifically. These 5 cards show major emission sources of the English 'National Health Service'. Together, these account for 60% of emissions ⁵ : <ul style="list-style-type: none"> • Energy (heating fuel and electricity) (16%) • Medical instruments and equipment incl. generation, packaging and transport (13%) • Pharmaceuticals including production, packaging, and transportation (12%) • Patient and staff mobility (11%) • Food (6%)
Question	5. Does anything surprise you? <ul style="list-style-type: none"> • If so: <ol style="list-style-type: none"> i. What does surprise you? ii. Why does it surprise you?

Part D: Sense of responsibility to reduce GHG emissions in the hospital

Questions	6. Have you ever encountered the issue of climate change mitigation in hospitals? 7. What role do you think hospitals should play in climate change mitigation? 8. Do you see hospitals as having a responsibility to work in a climate-friendly way?
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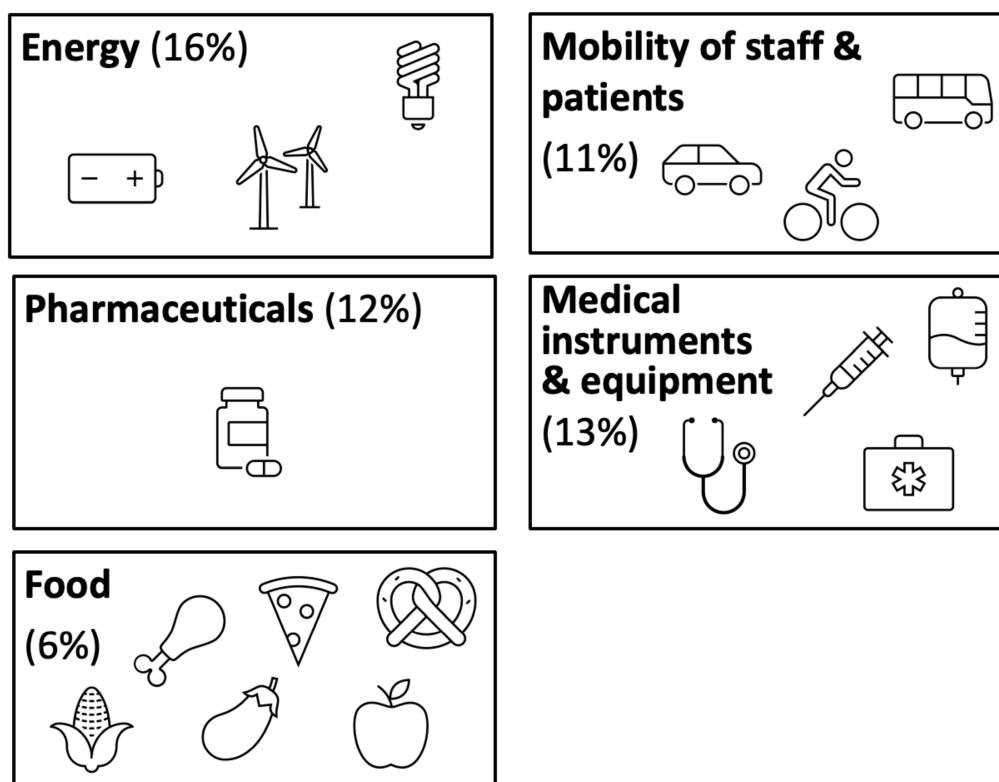
Part E: Mitigation measures – Barriers and enablers

Question	9. Which climate change mitigation measures can you imagine for the hospital you are affiliated with? 10. What would this measure look like?
Question: BARRIERS	11. What do you personally perceive as a barrier to the implementation of this measure? 12. What prevents/ would prevent you from implementing this measure?
Question: ENABLER	13. What does/ would support you in implementing this measure? 14. What enables/ would enable you to implement this measure?
Question	15. Do you see possible measures in the area of energy/ pharmaceuticals/ mobility/ food/ medical instruments and equipment?
Information: Exemplary measures	Energy: Presence detectors in operating rooms, so the ventilation is switched on or off as required. Pharmaceuticals: An interdisciplinary team of pharmacists, physicians and nurses regularly reviews patients' medications to avoid overmedication. Mobility: Follow-up consultations (e.g. results from blood sampling or radiological examination) take place as online consultations.

	Food: Introduction of one "Veggie Day" (meat-free day) per week for staff and patients
	Medical instruments and equipment: Usage of reusable instruments and equipment, such as tweezers, sewing kits, gowns or laryngeal masks
Question	16. Have you already had experience with such a measure? → Ask questions 8./9. and 10./11.

Part E: Closing and review

Question	17. Did anything catch your attention during the interview? 18. Are there aspects regarding climate change mitigation at this hospital that have not yet been addressed?
	<ul style="list-style-type: none"> • Thanks • Note on confidentiality and data protection

Appendix 3: Cards shown to participants on data on main sources of GHG emissions of the English 'National Health Service'⁵

Appendix 4: Characteristics of the sample

Category	Subcategory	n = 29	(%)
Function at the studied hospital (n = 29)	Administrative employees	12	41
	• Purchase	4	14
	• Infrastructure	4	14
	• Other	4	14
	Clinical employees	12	41
	• Nurse	6	21
• Medical doctor	5	17	
• Pharmacist	1	3	

	Patients	5	17
Age (n = 29)	25 – 35	3	10
	36 – 45	6	21
	46 – 55	10	34
	56 – 65	8	28
	66 – 75	2	7
Gender (n = 29)	Male	16	55
	Female	13	45
Other (n=29)	Member of staff council	4	14
	Member of the Netzwerk Nachhaltigkeit ¹	3	10

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¹ A staff initiative at the studied hospital to improve ecological sustainability. Founded in 2020.