**Nursing and climate change literature review**

**Introduction**

We as student nurses focused our findings on the role of a nurse and its contribution to climate change and sustainability. The following articles provide an insight of various organisations that are playing a key role in climate change in relation to nursing. Furthermore, we collaborated and deliberated over our findings and provided recommendations to future nurses and registered nurses in healthcare, in relation to creating more sustainable and climate change friendly practise.

**Recommendations for Student and Registered Nurses:**

• **Nursing students should advocate for climate change and sustainable healthcare to be included within the curriculum**

**• Students and Nurses should be mindful of using single use items within practice and ensure to dispose of waste correctly**

**• Assessing the impact of climate change more clearly within the role**

**• Students and Nurses are accountable for assessing climate change within their role**

**• Nurses should incorporate and advocate for positive attitudes and awareness into their personal teams and colleagues with regards to climate change issues within their practice**

**• Nurses already maintain a responsibility to stay up to date with research and educate others to provide evidence-based practice, this should include climate and sustainability**

**• Nurses should actively participate in conversations with patients regarding being proactive in their own care and health such as healthy eating, being active which in turn will positively impact climate change**

**Nursing and climate change: An emerging connection**.

Abstract

Awareness of the importance of climate change to public health has been growing. Calls for health professionals, including nurses, to take action to prepare for, and mitigate, climate change have been coming from a number of credible sources. This paper will assist nurses to recognise the health consequences of climate change, to generate and disseminate knowledge about these health consequences, to be active in mitigating emissions locally and within their organisations and to advocate and have input into policy processes. It is valuable for nurses to understand the health co-benefits of emission mitigation and the current health costs of fossil fuels. As advocates for evidence-based public health initiatives, nurses have a role to play in communicating to the public and to policy makers accurate information, including about the health costs of fossil fuel policies and the affordability of renewable energy technologies.

*Collegian. 2015/22/1 Adlong W, Dietsch E.*

*Accessed 2nd May 2023*

*https://pubmed.ncbi.nlm.nih.gov/26285405/*

**Climate change and human health: the role of nurses in confronting the issue.**

Abstract

Climate change will impact human health in various ways as the ecology of our planet changes. Environmental changes such as increased heat waves, sea-level rise, and increased drought around the globe will aggravate already-existing health problems, increase the onset of new health problems, and, in some cases, cause premature death. Catastrophic events associated with these environmental changes, such as floods, and increases in hospital and routine clinic visits will have nurses on the front lines tending to those in need. Climate change needs to be reframed as a public health issue, and the importance of nurses to be educated and engaged cannot be overstated. Nurses can be instrumental in communications with patients and families, working with their hospitals and health systems to reduce emissions and influencing the adoption of strategies to better prepare our health care facilities and our communities for the health impacts of climate change.

Sayre L, Rhazi N, Carpenter H, Hughes NL. Nurs Adm Q. 2010/10/1

Accessed – 2nd May 2023

**“Why nurses are vital to the NHS’ net zero goal: International Nurses Day”.**

I was born 10 weeks premature and owe my life to the amazing midwives, nurses, doctors, and other NHS staff working in neonatal intensive care many years ago. I’ve always wanted to be able to give back and it is an absolute privilege to be a nurse. I’ve worked in acute settings, most recently in a busy endoscopy department at Oxford University Hospitals NHS Foundation Trust.

International Nurses Day is an opportunity to reflect on what being a nurse means to us, and what we contribute to society. For me being a nurse means being able to put my values into practical action to provide care with compassion, knowledge and skill ensuring patients and their families feel safe, heard, and involved.

In addition, for me being a nurse also means calling out the causes of inequality and doing what I can to tackle the reasons why they exist. Climate change mitigation is central to both of these pillars of nursing because the drivers of climate change are also the drivers of ill health and health inequalities. The combustion of fossil fuels is the primary contributor to deaths in the UK from air pollution, and this disproportionately affecting our most vulnerable communities.

Many years ago, Mary Seacole skilfully understood the natural world using plants and herbs as part of her nursing care, and our profession has always understood the importance of the environment on our health. Similarly, today, we can see the health impacts of climate change and identify the need to protect our planet and to protect the health of our patients.

In October 2020, the NHS became the world’s first health service to commit to reaching carbon net zero. We will reach net zero emissions for the care we provide by 2040, and across our entire scope, provided and procured, by 2045.

The evidence is clear that climate change poses a major threat to our health as well as our planet. The environment is changing, that change is accelerating, and this has direct and immediate consequences for our health. We all have a role to protect our patients, colleagues, communities, and the NHS

Nursing, midwifery and care staff are leading transformational change across health and care, and have a unique role to play in supporting the NHS’ net zero goal. As clinicians and patient advocates they are already making changes to tackle climate change at the source to improve the quality of the care we provide today, and for future generations.

Nurses are the largest single group of staff in the NHS, and as the most trusted profession in the UK we must use our voice and support a greener NHS. Nurses are leading transformational change across health and care as leaders, innovators, and advocates. We prove every day that we are adept at identifying issues and creating solutions. We can provide care that is both high quality and low carbon and contribute massively to reducing the NHS carbon footprint.

The issue of climate change can seem overwhelming, but nurses are already making tangible changes to tackle climate change whilst also improving care. From using low carbon travel in their work, to pioneering green operating theatres, to recognising the positive impact green spaces can have on people’s mental health.

The contribution nurses make to the NHS every day is beyond measure, and this International Nurses Day I am proud to say that we’re also making collective strides that will ensure we achieve our net zero ambition.

*https://www.england.nhs.uk/blog/why-nurses-are-vital-to-the-nhs-net-zero-goal-international-nurses-day-12-may-2022/*

*12 May 2022 Emma Pascale Blakey -NHS – blog*

**“Climate change ‘demands action’ from nursing profession, says WHO chief nurse”?**

Nurses across the world have an “essential” role in reducing and responding to the health consequences of climate change and must be given the right information, tools and leadership skills to do so, the world’s most senior nurse has urged.

Elizabeth Iro, chief nursing officer at the World Health Organization (WHO), used a keynote address at the Royal College of Nursing’s annual conference last week to place a stark lens on the issue of climate change and the impact it is having on world health.Nurses must know how to support and care for communities suffering from trauma as a result of catastrophic events brought about by climate change”Elizabeth Iro.

While countries began to emerge from the coronavirus pandemic, Ms Iro said the nursing profession continued to face global challenges as a result of climate change, humanitarian disasters, war and conflict.

“We know that the effects of climate change are happening now, and our efforts must be influential, far reaching and a priority,” she told members of the RCN in a video speech played at the conference in Glasgow.

“Climate change is a public health issue and the adverse health effects demands actions from the global nursing profession.

“We have an obligation to be educated and to be engaged and we are well positioned to expand our role.”

Nurses remained among the most trusted professional groups worldwide, noted Ms Iro, which meant nurses held the “power to affect change through strong communication and advocacy around climate change and planetary health”.

She flagged the “severe toll” climate change was having on patients and communities, including “increasing sickness and deaths from heat waves, air pollution, exacerbating asthma and other respiratory illness, [and] increasing diseases”.

“Critically, we are seeing an increase in mental health illnesses related to climate change as the consequences of loss of livelihoods, rising temperatures and trauma from extreme weather events,” added Ms Iro.

“Across the world nurses and midwives will be at the forefront of care provision and must know how to support and care for not only individuals, but for entire communities suffering from trauma as a result of catastrophic events brought about by climate change.”

Nurses have “essential roles in both reducing and responding to the health consequences of climate change”, urged Ms Iro.

“And we must ensure that we equip these nurses and midwives with the information, tools and leadership skills to develop and deliver the services that are needed.”

Also during her speech, Ms Iro highlighted other challenges facing the profession such as workforce, mental wellbeing and burnout, and recognised the “significant toll” the pandemic had taken on nurses.

“Reports of burnout, sickness, intention to leave and retirement are climbing, as are attacks, abuse and violence against nurses,” Ms Iro told the conference.

“The rates of mental health illness among health and care workers since the onset of the Covid-19 pandemic is significant and needs to be addressed urgently.”

*13 JUNE, 2022 BY MEGAN FORD*

*accessed 3rd May 2023*

[*https://www.nursingtimes.net/news/sustainability-and-environment/climate-change-*demands-action-from-nursing-profession-says-who-chief-nurse-13-06-2022/](https://www.nursingtimes.net/news/sustainability-and-environment/climate-change-demands-action-from-nursing-profession-says-who-chief-nurse-13-06-2022/)

 **“Tracking the impacts of climate change on human health via indicators: Lessons from the lancet countdown.”**

Abstract

Background: In the past decades, climate change has been impacting human lives and health via extreme weather and climate events and alterations in labour capacity, food security, and the prevalence and geographical distribution of infectious diseases across the globe. Climate change and health indicators (CCHIs) are workable tools designed to capture the complex set of interdependent interactions through which climate change is affecting human health. Since 2015, a novel sub-set of CCHIs, focusing on climate change impacts, exposures, and vulnerability indicators (CCIEVIs) has been developed, refined, and integrated by Working Group 1 of the “Lancet Countdown: Tracking Progress on Health and Climate Change”, an international collaboration across disciplines that include climate, geography, epidemiology, occupation health, and economics.

Discussion: This research in practice article is a reflective narrative documenting how we have developed CCIEVIs as a discrete set of quantifiable indicators that are updated annually to provide the most recent picture of climate change’s impacts on human health. In our experience, the main challenge was to define globally relevant indicators that also have local relevance and as such can support decision making across multiple spatial scales. We found a hazard, exposure, and vulnerability framework to be effective in this regard. We here describe how we used such a framework to define CCIEVIs based on both data availability and the indicators’ relevance to climate change and human health. We also report on how CCIEVIs have been improved and added to, detailing the underlying data and methods, and in doing so provide the defining quality criteria for Lancet Countdown CCIEVIs.

Conclusions: Our experience shows that CCIEVIs can effectively contribute to a world-wide monitoring system that aims to track, communicate, and harness evidence on climate-induced health impacts towards effective intervention strategies. An ongoing challenge is how to improve CCIEVIs so that the description of the linkages between climate change and human health can become more and more comprehensive.

BMC Public Health, 22(1). Available at: https://doi.org/10.1186/s12889-022-13055-6. (Accessed: 02/05/2023) Di Napoli, C. et al. (2022)

**“Finnish Nurses’ Perceptions of the Health Impacts of Climate Change and Their Preparation to Address Those Impacts.”**

Abstract

Climate change has a direct and indirect impact on human health that include health impacts from rising temperatures and poor air quality. This challenges the health sector in many ways. Nurses should be aware of these health effects and the patients who are particularly vulnerable to the health impacts caused by climate change. Climate change has a direct and indirect impact on human health that include health impacts from rising temperatures and poor air quality. This challenges the health sector in many ways. Nurses should be aware of these health effects and the patients who are particularly vulnerable to the health impacts caused by climate change. Nurses reported observing changes in health of their patient populations. The nurses attributed some changes in their patients' health to climate change. Interviewed nurses felt that climate change was not adequately addressed in their basic nursing education and in staff development. It is important to include climate change and its impact on human health in the nurses' curriculum and in continuing education for practicing nurses**.**

*Nursing Forum, 16 Dec. 2020, https://doi.org/10.1111/nuf.12540. Accessed 25 Mar. 2021. Iira, Tiitta, et al.*

**“Nurses’ perceptions of climate change: Protocol for a scoping review,”**

Abstract

**Background:**Climate change is a major threat to human health. Nurses are in contact with patients suffering from the effects of climate change in their daily work. Therefore, they need to be involved in combating it at both the individual and collective levels. However, there is still very little known about nurses' perception of climate change and their role toward it. A few recent studies have embarked on the process of examining the perceptions of these health professionals relative to climate change, but no exploratory review of the literature has been conducted on nurses' perception of this phenomenon.

**Objective:**The purpose of this protocol is to develop a research strategy for an exploratory review of the literature focused on identifying nurses' perceptions of climate change.

**Methods:**Firstly, with the help of a specialized librarian, we defined keywords and their combinations, using an iterative process, to develop a documentary search strategy. This strategy was tested in the following four bibliographic databases: MEDLINE (PubMed), CINAHL, Embase, and Web of Science. A search of the grey literature will also be conducted to supplement the results of the bibliographic database search. The next step will be for 2 members of the research team to carry out a 2-stage selection process using the web-based systematic review software Covidence. They will carry out this selection process independently, with the aim of identifying relevant studies that meet the inclusion criteria for our exploratory review. Finally, data on year of publication, authors, geographic area, article type, study objectives, methodology, and key findings will be extracted from selected articles for analysis. The data will be analyzed by the research team based on an in-depth examination of the findings and will be directed toward answering the research question and fulfilling the study's objective.

**Results:**The results will help in defining nurses' perceptions of climate change more clearly as well as the role they can play and what they need to be able to bring forward solutions to this phenomenon. The findings should also serve to guide the health sector and nursing faculty's interventions aimed at preparing health professionals to act on the potential threats associated with climate change.

**Conclusions:**The preliminary search suggests a possible gap between the importance of the nursing role in addressing the health impacts of climate change and the nurses' lack of knowledge and awareness on this matter. The results will allow for raising nurses' awareness of their role in the fight against climate change and the ways to address its health effects. This study will also open up new research perspectives on how to equip nurses to better integrate response to climate change issues into their professional practice.

*JMIR Research Protocols, 12. Available at:* [*https://doi.org/10.2196/42516*](https://doi.org/10.2196/42516)*. Diallo, T. et al. (2023)*

**“Current and future burdens of heat-related dementia hospital admissions in England,”**

Abstract:

Introduction: The impacts of a changing climate on current and future dementia burdens have not been widely explored.

Methods: Time-series negative binomial regression analysis was used to assess acute associations between daily ambient temperature and counts of emergency admissions for dementia in each Government region of England, adjusting for season and day-of-week. Using the latest climate and dementia projections data, we then estimate future heat-related dementia burdens under a high emission scenario (Representative Concentration Pathway (RCP8.5), where global greenhouse gas (GHG) emissions continue to rise, and a low emissions scenario (RCP2.6), where GHG emissions are sizeably reduced under a strong global mitigation policy.

Results: A raised risk associated with high temperatures was observed in all regions. Nationally, a 4.5% (95% Confidence interval (CI) 2.9%–6.1%) increase in risk of dementia admission was observed for every 1 °C increase in temperature above 17 °C associated with current climate. Under a high emissions scenario, heat-related admissions are projected to increase by almost 300% by 2040 compared to baseline levels.

Conclusions: People living with dementia should be considered a high-risk group during hot weather. Our results support arguments for more stringent climate change mitigation policies.

*Environment International, 159, p. 107027. (Online) Available at:* [*https://doi.org/10.1016/j.envint.2021.107027*](https://doi.org/10.1016/j.envint.2021.107027)*. (accessed: 02/05/2023) Gong, J., Part, C. and Hajat, S. (2022)*