## Better health leads to less carbon emissions

The healthcare industry contributes to carbon emissions and reducing its footprint has started to become a priority. Increasingly, people close to healthcare services are taking notice. Read the perspectives of Gary Cohen, Co-Founder and President of Health Care Without Harm and Charlotta Brask, Head of the sustainability department at Stockholm County Council.

There is growing consensus that climate change is not just an environmental crisis but also a public health crisis.<sup>1</sup> Climate change is affecting the health of people ranging from heatrelated illness to poor air quality to weather-related injury and rising food prices.<sup>2</sup> Data from the World Health Organization for example suggests that climate change causes an estimated 150,000 deaths every year.<sup>3</sup>

Interestingly, the healthcare system itself has a role to play when it comes to addressing climate change.

#### A bitter pill to swallow

It is an unfortunate truth, not to mention a bit of irony, that the healthcare industry – whose main purpose is to make people healthier – is a significant contributor to carbon emissions. In the US alone, hospitals, clinical services and pharmaceutical production accounts for over 9% of all greenhouse emissions, an increase of 28% over the last decade.<sup>4</sup>

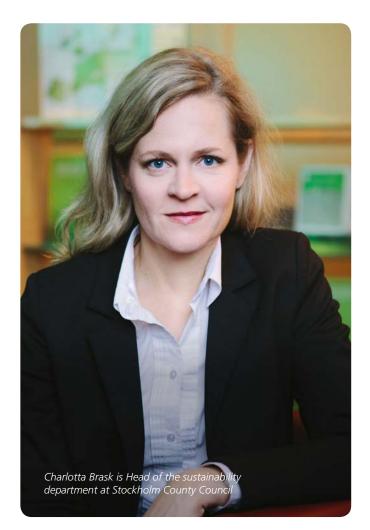
It is no surprise that reducing the carbon footprint of the healthcare industry has started to become a priority among decision makers along the care pathway, including governments, industry and healthcare providers. In the UK for example, the National Health Service (NHS) is required by law to reduce its carbon emissions by 80% in 2050 as compared to a 1990 baseline. The Sustainable Development Unit (SDU) of NHS monitors the progress by publishing a carbon footprint report every 2-3 years.<sup>5</sup>

One of the people who has had climate change and healthcare on his agenda for many years is Gary Cohen, Co-Founder and President of the organisation Health Care Without Harm, based in the US. For twenty years Health Care Without Harm has been building a social movement inside healthcare for improved planetary health. "The healthcare sector is in a unique position to reframe climate change to be a medical emergency and its solutions as the greatest public health opportunity of this century," says Gary. "We have a responsibility to expand our mission to healing communities and the planet."

As part of his work, Gary also founded the CleanMed conference which is a regular venue to bring stakeholders together to share the latest thinking and strategies for sustainable healthcare and speed up the learning across systems and countries.

### The age of transparency

Charlotta Brask is one of the people busy reducing the carbon emissions of healthcare. Charlotta attended the CleanMed Europe Conference in October 2016. She works as head of the sustainability department at Stockholm County Council which is responsible for all publicly-financed healthcare and public transport in Stockholm County, the most densely populated county of Sweden with more than two million inhabitants.



See for example: http://globalhealth.thelancet.com/2016/08/03/health-and-climate-road-opportunity
 Center for Climate Change and Health: A Physician's Guide to Climate Change, Health and Equity, September 2016. Available at:

- http://climatehealth.connect.org/resources/physicians-guide-climate-change-health-equity/
  World Health Organization. Preventing disease through health environments: towards an estimate of the environmental burden of disease: Available at:
- http://www.who.int/quantifying\_ehimpacts/publications/preventingdisease.pdf
- Eckelman et al. PloS one. 2016;11(6):e0157014.
  The Climate Change Act, 2008; NHS Sustainable Development Unit, 2016.

Charlotta's job is to continuously decrease the environmental impact of healthcare in the county. Her team's focus is on chemicals, energy use, transportation, and procurement of pharmaceuticals.

Stockholm County Council for example requires that suppliers of pharmaceuticals have procedures that ensure that their production is in compliance with national legislation concerning the environment, safety and health and monitor and control discharges and/or emissions to the ground, water and air from the production unit. In the future, she hopes that there will be an established model to evaluate environmental impact from the entire product, including the carbon footprint, in public procurement.

Gary is also convinced that more will be expected of suppliers of pharmaceutical products going forward.

"As we learn more and more about the overall carbon footprint of the supply chain, we can expect that health systems and ministries will begin to favour pharmaceuticals that are less toxic and have a lower carbon footprint, as well as have an overall more responsible environmental footprint," Gary says. "This is the age of transparency."

## Considering carbon emissions along the full care pathway

According to Charlotta, reducing the footprint of the healthcare industry is also about integrating environmental aspects in the therapeutic guidelines.

"I am particularly inspired by Sonia Roschnik, the former Head of Sustainable Development Unit at NHS, who emphasises that we need to get sustainability into the heart of the profession in healthcare," says Charlotta.

She notes that the most efficient healthcare is often the most environmentally friendly healthcare. "If the patient enters the healthcare system at the right time and place and get the proper care with a high level of patient security, it will result in the lowest environmental footprint because we save resources," says Charlotta.

This also goes for diabetes treatment. The diabetes carbon footprint is complex and driven by multiple factors that include blood sugar monitoring, care management, medication for additional comorbidities and hospital stays.

Improving treatment outcomes is a critical part of the conversation. Improving blood sugar control not only leads to better health and fewer diabetes-related complications for the patient, it also results in fewer carbon emissions. This correlation is due to a reduction in treatment requirements which in turn reduces carbon intensive resources, like ambulances and emergency room medical equipment.

## Addressing root causes

To Gary, it is not only about better and more efficient care. He believes there is a need to take it a step further.

"The industry needs to move beyond 'corporate social responsibility' and play their part in a world where climate change will impact the health of billions of people" "We need to get beyond a mechanistic sick care model and build integrated systems of care. Healthcare providers need to understand the social, environmental and psychological conditions under which people live and become sick in the first place," he argues.

He would also like to see the pharmaceutical industry take on a bigger role when it comes to preventing disease: "The industry needs to move beyond 'corporate social responsibility' and play their part in a world where climate change will impact the health of billions of people," he notes. "Multinational pharma companies will need to find a way to play a major role in addressing these new realities – there is no room to sit this crisis out."

# What is a patient carbon footprint?

While the product carbon footprint is the carbon footprint associated with a product's lifecycle, the patient carbon footprint is the carbon footprint associated with a patient's lifetime as seen from the healthcare system's point of view. The patient carbon footprint takes a holistic approach to the healthcare-related carbon emissions, which include the product carbon footprint, the product footprint related to additional medical devices (e.g. blood glucose monitoring), and the healthcare system itself (e.g. care management, other medication, and hospital admissions).



Patient Carbon Footprint



Product Carbon Footprint



Blood Glucose Monitoring



Care Management



Other Medication



Hospital