

Peer Consultation Networks: Bridging Healthcare Efficiency and Carbon Emission Reductions

Introduction

As the climate crisis intensifies, affecting both human health and natural ecosystems, every sector, including healthcare, is increasingly scrutinized for its carbon footprint. Healthcare itself is both a casualty and a contributor to this existential challenge. Accounting for 4.6% of global greenhouse gas emissions—a figure that increases to 5% in Canada and 8.5% in the United States—the healthcare sector has a larger footprint than the entire aviation industry.^{1,2} A significant proportion of these emissions arise from patient and healthcare provider travel for face-to-face consultations. While there are numerous proposed solutions, such as the transition to renewable energy sources and waste management strategies, telehealth initiatives that minimize patient travel are immediately available options that can reduce carbon emissions. This paper delves into how Virtual Hallway, a peer-to-peer provider consultation network, not only streamlines healthcare services but also substantially lowers the associated carbon emissions.

Carbon Emissions and Inefficiencies in Healthcare: A Focus on Specialist Care

As the healthcare sector strives to improve public health, it simultaneously contributes to an environmental crisis that undermines that very goal. Between 2010 and 2018, U.S. healthcare emissions rose 6%, the highest among industrialized nations. This pollution burden isn't benign: it was responsible for an estimated 388,000 disability-adjusted life years (DALYs) lost in 2018 in the U.S., a portion of which was due to healthcare's contributions to climate change.³

Transportation associated with healthcare is a notable contributor to these emissions. Over 7% of healthcare-related emissions come from patient travel to and from appointments.⁴ This issue is exacerbated when we consider the case of specialist healthcare. Specialists are often concentrated in larger urban centers, necessitating longer travel distances for patients who reside in rural or remote areas. The regionalization of healthcare services in many jurisdictions has further concentrated specialists in urban hubs, making patient-initiated travel the default mechanism for accessing specialized care. In effect, healthcare's carbon footprint is inflated by systemic design choices that make longer journeys for specialized consultations inevitable for those residing outside urban centers.⁵

4.6%

Of global greenhouse emissions are due to healthcare.

The healthcare sector has a larger carbon footprint than the entire aviation industry.

Telehealth offers a potential solution to mitigate this dilemma. The COVID-19 pandemic fast-tracked the adoption of telehealth, showing promising reductions in transportation-associated GHG emissions. For example, one large U.S. regional health system documented a dramatic reduction in such emissions during the pandemic, mainly due to the increased use of telehealth services.⁶ Moreover, these savings in emissions far outweighed the relatively minor increases in emissions related to the technology required for telehealth.

The situation presents an urgent question: How can healthcare fulfill its mission of healing while also reducing its environmental and social toll? This paper proposes Virtual Hallway as an innovative approach to streamline healthcare delivery while significantly lessening its negative impact on the environment.

Virtual Hallway Consultations—A Holistic, Eco-Friendly, and Efficient Approach

Virtual Hallway is an online platform designed to facilitate efficient phone consultations between primary care providers and specialists. Initially created to enhance healthcare efficiency and reduce wait times, the platform has been recognized to offer significant environmental benefits by drastically reducing the need for in-person visits and associated travel. By doing so, Virtual Hallway not only democratizes access to specialized medical care, particularly for patients in rural or remote areas, but also serves as an eco-friendly solution that lowers healthcare's overall carbon footprint. With features that streamline documentation and align with existing billing codes, Virtual Hallway offers a comprehensive, efficient, and sustainable approach to modern healthcare.

Streamlining Healthcare with Immediate Consultations

One of the primary goals of Virtual Hallway is to accelerate the healthcare delivery process. Traditional routes to specialist consultations often involve lengthy wait times, sometimes stretching into several months or even years. This delay can exacerbate medical conditions, leading to more complicated and lengthy treatments down the line. Virtual Hallway addresses this issue head-on by allowing primary care providers to connect instantly with specialists, facilitating quicker diagnoses and treatment plans. The results of over 600 provider surveys indicates that 84% of the consultations completed through the platform avoided the need for an in-person specialist referral. In addition, 98% of primary care providers indicated that these consultations increased their comfort in providing care the patients within their own community. The result is not just a more efficient system but likely a more effective one, as quicker interventions can prevent the escalation of medical conditions.

84% of phone consults avoid the need for an in-person referral

98% of providers find that VH enhances patient care and boosts their capacity to manage care

Environmental Stewardship through Reduced Travel

While Virtual Hallway was initially conceived as a tool for healthcare efficiency, it has also proven to be an eco-friendly alternative to traditional healthcare delivery models. By minimizing the need for in-person consultations, the platform dramatically reduces the number of trips patients and healthcare providers must take. Carbon emission savings have been shown to be directly proportional to the travel distance savings.⁷ This is particularly significant for patients residing in rural or remote areas, who would otherwise need to travel long distances to urban centers where specialists are primarily located. The reduction in travel correlates directly with lower carbon emissions, aligning healthcare with broader environmental sustainability goals.

Unintended yet Significant Environmental Benefits

The environmental impact of Virtual Hallway is not just theoretical; it is supported by tangible data. As evidenced in some healthcare systems during the COVID-19 pandemic, the large-scale adoption of telehealth services led to a marked decrease in transportation-associated greenhouse gas emissions. Virtual Hallway takes this a step further by focusing on immediate consultations, thereby having the potential to reduce emissions even more efficiently. Moreover, these environmental gains are achieved without any significant increase in emissions from the technological infrastructure required for the telehealth consultations, rendering Virtual Hallway a truly sustainable solution.

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