Green et al. Associations between self-reported healthcare disruption due to COVID-19 and avoidable hospital admission: evidence from seven linked longitudinal studies for England

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Contents

1. Infographic
2. Lay Summary:
    - Study Design
    - Findings
    - Impact
    - Future Work
    - Acknowledgement of Studies

HEALTHCARE DISRUPTION AND PREVENTABLE HOSPITALISATION DURING COVID 19

UK LLC

COVID-19 LONGITUDINAL HEALTH & WELLBEING
NATIONAL CORE STUDY

People who experienced disruption in accessing healthcare during COVID-19 were more likely to be hospitalised for potentially preventable reasons.

People experiencing healthcare disruption were

80%

more likely to be admitted to hospital for preventable conditions

due to inadequate local care, known as 'avoidable hospitalizations'.

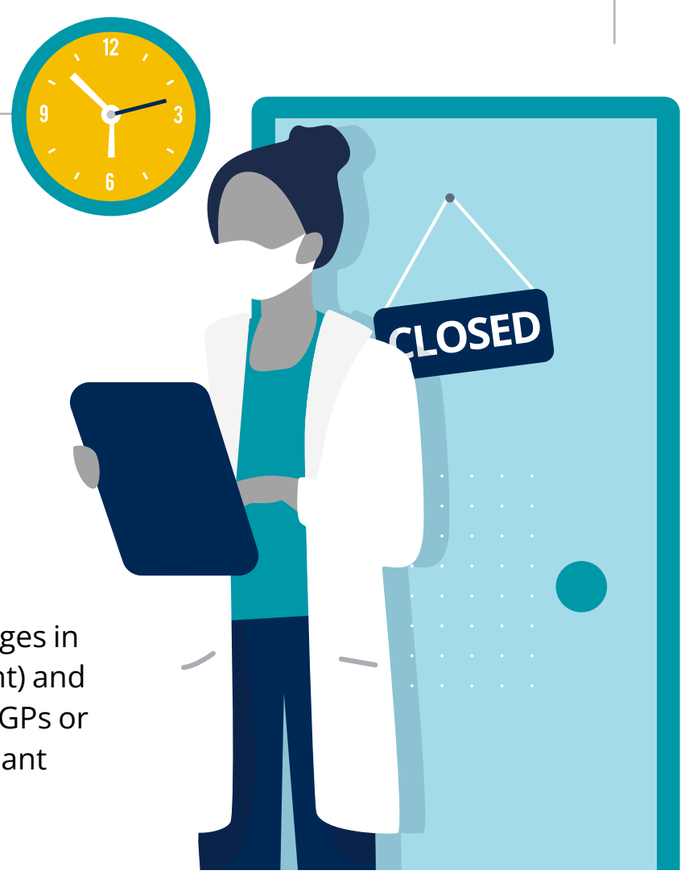
35%

faced healthcare access disruption during the pandemic.

1 in 4 experienced appointment troubles

Disrupted access to procedures and appointments was significant

Disrupted access to procedures (e.g., postponed or cancelled surgery, changes in treatments, delays in cancer treatment) and accessing appointments (e.g., visiting GPs or outpatient departments) were significant



1 in 5 experienced procedure disruptions

Methods: Survey data, linked to medical records, in 29,276 individuals followed over two and half years from the start of the COVID-19 pandemic.

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Study Design

Researchers used data for 29,276 people in England. This data was collected by seven UK longitudinal population studies that were linked with data from healthcare records from NHS England.

Researchers explored if people who reported that they experienced disruption to non-emergency healthcare access during the COVID-19 pandemic were more likely to have an emergency admission to hospital.
Researchers analysed all seven studies' data from a single application to the access the UK Longitudinal Linkage Collaboration (UK LLC) Trusted Research Environment. A Trusted Research Environment is a secure computer system where researchers can access and study data within a safe setting.

UK LLC hosts these de-identifiable data from longitudinal population studies and links these to study participant's healthcare records. De-identified data is data that has had

personally identifiable information such as name and date of birth removed or scrambled.

This study may be the first study to use longitudinal data to investigate the impacts of healthcare disruption on avoidable hospitalisations in a way that can be accurately measured.

Findings

Findings showed that 35% of people reported experiencing disrupted healthcare between March 2020 and August 2022. Specifically:

- 1 in 4 people experienced appointment troubles (e.g., seeing their GP or attending outpatients department)
- 1 in 5 people experienced procedure disruption (e.g., surgery, cancer treatment)
- 6% of people experienced disruption to their medications

The researchers found that people who experienced some form of disrupted access to healthcare were older, had poorer health and were more likely to live in the most deprived areas. People who had experienced disruption were:

- 80% more likely to have been admitted to hospital for preventable conditions, known as ‘avoidable hospitalisations’.
- 68% more likely to be admitted for an urgent preventable condition;

- 93% more likely to be admitted for a long-term preventable condition.

Researchers found that disruption to procedures such as postponed or cancelled surgery, changes to treatments offered or delays in cancer treatment were largely important. This was also the case with disruptions in accessing GP or outpatient appointments. Those who experienced disruption to accessing appointments had a 51% higher chance of a being admitted to hospital for any preventable condition.

There were no clear links with experiences of disruption to access of medications and avoidable hospitalisations.

Impact

The researchers can draw on different reasons why disruption to healthcare access was linked with preventable hospitalisations. For example, disruptions delaying care that is needed may lead to people requiring hospitalisation as diseases progress.

The researchers cannot yet draw conclusions on what could be done to prevent disruptions in the future. However, finding out the impact of disrupted access to procedures as being linked to preventable hospitalisations is essential.

While it's harder for health professionals to see people safely in-person to provide treatment and surgeries during a pandemic, consultations and access to healthcare professionals and medications can be done remotely. This could be done online, by telephone or to have medication delivered to your home.

This work highlights the importance of investing more into the health system to reverse the negative impacts of healthcare disruption, following the COVID-19 pandemic.

Work must be done to tackle the backlog of delayed or cancelled treatments and other healthcare.

Support needs to be provided to people who experienced disruption to accessing healthcare. Doing so will be cost-effective, as unplanned hospital admissions in England cost the NHS £13.7 billion each year with many of these potentially avoidable.

Future work

Further research should identify specific ways where healthcare disruption leads to a preventable hospitalisation so that methods can be found to reduce the effects of healthcare disruption.

Further research may identify:

- The reasons why disruption in accessing healthcare results in preventable hospital admissions
- The people, or groups of people, who experience preventable hospital admissions
- The long-term impacts of disrupted healthcare due to the COVID-19 pandemic
- Which parts of the NHS that demonstrated resilience during the COVID-19 pandemic, so that we can learn from to reduce preventable hospital admissions and long-term impacts.

Acknowledgement of Studies

Researchers analysed data from the following longitudinal population studies from within the UK Longitudinal Linkage Collaboration Trusted Research Environment.