

Impact of telephone triage on access to primary care for people living with multiple long-term health conditions: rapid evaluation

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Disclosure of interests

Full disclosure of interests: Completed ICMJE forms for all authors, including all related interests, are available in the toolkit on the NIHR Journals Library report publication page at <https://doi.org/10.3310/UCCE5549>.

Primary conflicts of interest: none.

Published June 2022

DOI: [10.3310/UCCE5549](https://doi.org/10.3310/UCCE5549)

Scientific summary

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Health and Social Care Delivery Research 2022; Vol. 10: No. 18

DOI: [10.3310/UCCE5549](https://doi.org/10.3310/UCCE5549)

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Introduction

Telephone triage is a service innovation in which every patient asking to see a general practitioner (GP) or other primary care professional calls the general practice and usually speaks to a receptionist first, who records a few details. The patient is then telephoned back by the GP/primary care professional. At the end of this return telephone call, either the issue is resolved or a face-to-face appointment is arranged.

Before the COVID-19 pandemic, telephone triage was designed and used in the UK as a tool for managing demand and to help GPs organise their workload. Evaluations have found that the introduction of telephone triage meant that patients saw or spoke to an appropriate primary care professional more quickly, but there was no evidence that it leads to reduced GP workload or cost savings. It also found evidence of a strong variation in the impact of the introduction of telephone triage between practices.

At the start of 2020, only a minority of general practices had implemented the telephone triage approach. However, during the first quarter of 2020, at the start of the pandemic, much of primary care moved to a remote (almost entirely telephone) triage and consultation approach to reduce practice footfall and minimise the risk of COVID-19 contact for patients. The implementation of telephone triage during the pandemic was different from earlier approaches, with rapid roll-out and often a blurring of the lines between triage and consultation.

Designing and delivering equitable health care for people living with multiple long-term health conditions was a priority for the NHS pre pandemic and remains so, particularly as COVID-19 has had a differentially large impact on this group. Addressing health inequalities in general, and in access to primary care specifically, are also core NHS priorities.

Robust quantitative evaluation of the effect of the introduction of technologies, such as telephone triage, on the nature and extent of health inequalities is challenging. High-quality data identifying particular patient groups are often unavailable. Testing whether or not an innovation works in a specific smaller group within the population (e.g. people with multiple long-term health conditions) makes little sense unless the innovation has an overall impact on the outcomes of interest. In addition, a large sample size is required for an adequately powered inequalities evaluation.

A recent systematic review (Parker RF, Figures EL, Paddison CA, Matheson JI, Blane DN, Ford JA. Inequalities in general practice remote consultations: a systematic review. *BJGP Open* 2021;5:BJGPO.2021.0040) that explored the (pre-COVID-19) impact of both telephone triage and remote primary care consultations on health inequalities found that the evidence was limited. The review recommended that use of remote consultation should be treated with caution until the inequalities impact on clinical outcomes and quality of care is known.

To address this need to understand the inequalities impact of introducing telephone triage, in the context of the rapid roll-out of this approach during 2020, we explored the impact of introducing telephone triage on inequalities in primary care access for people living with multiple long-term health conditions. Understanding the impact of service innovations for people with multiple long-term health conditions is a focus of the Birmingham, RAND and Cambridge Rapid Evaluation Centre (BRACE).

We answered the following three evaluation questions (EQs):

- EQ1 – Considering people living with multiple long-term health conditions only, does a telephone triage approach affect how quickly people can see or speak to an appropriate primary care professional?
- EQ2 – What is the size of that effect relative to the effect on people contacting a general practice who do not have multiple long-term health conditions?
- EQ3 – Are there any subgroups of the population with multiple long-term health conditions who are particularly affected (either positively or negatively) in terms of how quickly they see or speak to an appropriate primary care professional, both generally and when a telephone triage approach is used?

In addition, we explored experiences of making appointments with primary care during the COVID-19 pandemic in 2020 for people with multiple long-term health conditions. During the pandemic, all general practices were implementing a telephone triage approach.

Methods

We used data from the GP Patient Survey (GPPS) pre COVID-19, between 2011 and 2017, to explore the inequalities impact of introducing telephone triage in 154 general practices in England on the time taken to see or speak to a GP for people with multiple long-term health conditions. In addition, we used data from Understanding Society (USoc), a household panel survey that collected information about health service utilisation and long-term health conditions during 2020.

We defined multimorbidity using the responses to survey questions asking respondents to identify their long-term health conditions. Respondents reporting more than one health condition were considered to be living with multimorbidity. In analyses, we considered people with zero, one, two, three or four or more conditions separately to explore differences associated with the increasing burden of long-term health conditions.

To answer the EQs, we carried out a series of five linked analyses:

- analysis 1 – a descriptive analysis of the characteristics of GPPS and USoc survey respondents with multiple long-term health conditions
- analysis 2 – a descriptive analysis of primary care access (whether or not people needed access to care; whether or not they decided to try to access care if they had a health-care need; whether or not they were able to access care; and, if they were able to, whether this access was face to face or remote) between April and November 2020, using USoc
- analysis 3 – an inequalities analysis of introducing telephone triage for people with multimorbidity, exploring the impact on the time taken to see or speak to a GP (pre COVID-19), using GPPS
- analysis 4 – an analysis of the inequalities in access to primary care for people with multiple long-term health conditions between April and November 2020, using USoc
- analysis 5 – an analysis both before and during the COVID-19 pandemic, using both GPPS and USoc, exploring whether or not there is any variation in primary care access among people with multimorbidity by age, sex, ethnicity, household income/deprivation, employment, rurality, or whether or not someone was shielding (USoc only).

Analyses 1, 2 and 4 provide preliminary results describing the characteristics of survey respondents and related analyses of primary care access. Analysis 3 directly answers EQ1 and EQ2 and analysis 5 answers EQ3.

We carried out a series of supplementary analyses exploring alternative measures of primary care access (GPPS) and additionally considering NHS 111 and access to prescription medication (USoc).

We discussed the design of the research and early findings with a patient and public involvement (PPI) panel, which made several recommendations, including specifically considering patients with hearing problems.

Results

In analysis 1, we used data from two nationally representative surveys (GPPS and USoc) and found that people living with multimorbidity are older, live in more deprived areas, are less likely to be employed and are more likely to have been shielding during 2020.

In analysis 2, we explored the impact of COVID-19 on primary care access. At the start of the pandemic, we found that people were less likely to try to see their GP if they had a problem requiring medical attention; however, by September 2020, > 90% of people with a problem did try to contact a GP. Of the people who did try to access primary care, > 90% were able to make an appointment; this was the case at any time between April and November 2020. In April 2020, only 20% of all appointments were face-to-face, but this had increased to around 40% by November 2020.

In analysis 3, we explored the impact of general practices switching to a telephone triage approach in an analysis of GPPS data from 2011 to 2017, before COVID-19. We found that, although there are differences in the time taken to see or speak to an appropriate primary care professional for people with multimorbidity and people without, both before and after the introduction of telephone triage, these differences are small compared with the overall improvement for all patients when a general practice switches to a telephone triage approach.

In analysis 4, we found that, during the COVID-19 pandemic, people living with multimorbidity were more likely to have a problem that meant they needed to see a GP than people with no long-term health conditions or a single health condition. However, we found no evidence that there was a difference in whether someone with or without multimorbidity tried to access a GP if they did have a problem; whether or not they were able to make an appointment; or whether the appointment was face to face, over the telephone or online.

In analysis 5, we found little evidence across most measures of access to primary care, both before and during the COVID-19 pandemic, that particular groups of people living with multimorbidity had better or worse experiences of primary care access when considering age, sex, ethnicity, deprivation, rurality, employment or shielding status. This does not mean that disparities do not exist. For example, in the overall population during 2020, people living in low-income households reported greater need for health care. However, we found that these disparities had a similar impact on people living with multiple long-term health conditions and those without.

There was one exception to this: we did find variation in the relationship between multimorbidity and time taken to see or speak to a GP or other appropriate primary care professional when looking at age. This was particularly the case for people aged ≥ 85 years, who were able to see or speak to a GP more quickly with increasing numbers of long-term health conditions.

Discussion

Results in context

This evaluation builds on and extends previous work that considered inequalities in telephone triage or other forms of remote access to primary care for people with multiple long-term health conditions. Our results highlight that, although people with multimorbidity have a greater need for primary care,

introducing telephone triage has a large impact on all patients, with no differential impact for patients with different numbers of long-term health conditions attending the same general practice.

Rapid qualitative research conducted during the COVID-19 pandemic found that patients appreciated the convenience of speaking to a health professional by telephone, and quicker and more efficient access to a health professional. This is consistent with the large main impact of a change to a telephone triage approach, where overall people reported they could see or speak to a health professional more quickly. The findings are also consistent with reflections from the BRACE PPI panel; all PPI panel members observed considerable changes in primary care access during the COVID-19 pandemic.

We found little evidence that telephone triage introduces inequalities between patient groups regarding access to health care. For multimorbidity, this is consistent with previous work, which found that primary care is good at meeting the needs of patients with multiple health conditions. Previous evaluations similarly found inconsistent or no evidence that introducing telephone triage increased inequalities. One previous piece of research did find heterogeneity in the impact of starting a telephone triage approach; however, this variation was between general practices, rather than between patient groups within practices.

When a general practice switches to a telephone triage approach, this change has an impact on all patients in that practice. Overall, telephone triage has a large impact on patient access to a GP and, because telephone triage has been implemented in the same way for everyone in a practice (pre the COVID-19 pandemic) or nationally (during 2020), the impact on any inequalities between groups of patients within a practice is, perhaps unsurprisingly, small. For telephone triage, our analyses provide some evidence to support the suggestion that when a primary care service innovation is implemented for all patients, inequalities are more likely to arise because of variability in implementation between practices, rather than for groups of patients within the same practice. Hence, focusing on preventing inequalities is likely to be most important between general practices, rather than within them.

When considering the impact for subgroups of people living with multiple long-term health conditions, we saw differences based on age only. We found that people with multimorbidity aged ≥ 85 years were seen more quickly by their GP than those aged ≥ 85 years without multimorbidity. From a GP's perspective, an elderly patient with multiple health conditions may be a higher priority and so triaged more urgently. An older patient with multiple conditions may be a more frequent user of primary care and more familiar with systems for making appointments, and hence able to navigate access to care more rapidly than someone of the same age without multimorbidity.

Learning for rapid evaluation and recommendations for future research

Rapid quantitative evaluations are possible when data sets (and analysis frameworks) are already available, but there are still important unanswered policy questions. Existing data sets available from the UK Data Archive (Colchester, UK) are a valuable resource to consider, and the data resources (including USoc) are often responsive to policy and data needs, such as the COVID-19 waves in longitudinal studies. Future research projects should work out how to maximise the value of these resources.

Understanding the quantitative inequalities in the impact of innovations is a second area in which rapid evaluations can learn from this work. The strengths of our evaluation are that it was able to consider an innovation with a large overall impact (on patients' speed of access to a GP), the data available had a large sample size, and multimorbidity and other sociodemographic characteristics were measured. Consequently, it was possible to explore the EQs quantitatively and in detail. Understanding the inequalities impact of innovations is important and future evaluations should always consider whether or not quantitative inequalities impact analyses would be possible.

Further research should continue to focus on the rapid changes in primary care access during the COVID-19 pandemic.

This study did have limitations. Non-response is a key concern for all survey research, as the perspectives of people who did not respond to a request to take part in the study or return a survey may be systematically different from those who did. For both GPPS and USoc, the impact of non-response has been extensively evaluated, and survey weights and appropriate multivariable analyses have been used to mitigate the impact of non-response as much as possible.

Conclusions

At the time of writing (autumn 2021), there is ongoing policy debate about whether or not remote consultation and telephone triage in primary care should continue and, if so, what the most appropriate clinical form should be for this new way of working. Our evaluation provides quantitative evidence of the inequalities impact of general practices adopting a telephone triage approach.

This evaluation found that, within a general practice, patients with differing levels of health-care needs and numbers of long-term health conditions have equitable access to health care, with no evidence of a differential impact resulting from the roll-out of telephone triage. From previous evaluations, we know that there is a large variation in the impact of telephone triage between practices. Additional funding to support general practices struggling with high levels of demand and a lower per capita primary care workforce, for example in areas of high socioeconomic deprivation, would be one possible way of addressing these disparities. National models for the roll-out of general practice-level innovations would be another approach that may reduce heterogeneity in implementation between practices. These approaches would require further research and evaluation.

Funding

This project was funded by the National Institute for Health and Care Research (NIHR) Health and Social Care Delivery Research programme and will be published in full in *Health and Social Care Delivery Research*; Vol. 10, No. 18. See the NIHR Journals Library website for further project information.

Health and Social Care Delivery Research

ISSN 2755-0060 (Print)

ISSN 2755-0079 (Online)

Health and Social Care Delivery Research (HSDR) was launched in 2013 and is indexed by Europe PMC, DOAJ, INAHTA, Ulrichsweb and NCBI Bookshelf.

This journal is a member of and subscribes to the principles of the Committee on Publication Ethics (COPE) (www.publicationethics.org/).

Editorial contact: journals.library@nih.ac.uk

This journal was previously published as *Health Services and Delivery Research* (Volumes 1–9); ISSN 2050-4349 (print), ISSN 2050-4357 (online)

The full HSDR archive is freely available to view online at www.journalslibrary.nih.ac.uk/hedr. Print-on-demand copies can be purchased from the report pages of the NIHR Journals Library website: www.journalslibrary.nih.ac.uk

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The research reported in this issue of the journal was funded by the HSDR programme or one of its preceding programmes as project number NIHR134285. The contractual start date was in January 2021. The final report began editorial review in November 2021 and was accepted for publication in February 2022. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HSDR editors and production house have tried to ensure the accuracy of the authors' report and would like to thank the reviewers for their constructive comments on the final report document. However, they do not accept liability for damages or losses arising from material published in this report.

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