

COVID-19 What do people hospitalised with COVID-19 think about their care? Results of a satisfaction survey during the first wave of COVID-19 in Liverpool

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ABSTRACT

Despite huge advances in vaccines, testing and treatments for COVID-19, there is negligible evidence on the perceptions of people hospitalised with COVID-19 about the care they received.

To address this, we developed a satisfaction survey for people with COVID-19 admitted to our hospital during the first COVID-19 wave in Liverpool. Of those invited, 98/160 (61%) responded, of whom 94/98 (96%) completed the survey. Respondents rated overall care highly (mean 4.7/5) and 89/94 (95%) reported that they would recommend the hospital to friends and/or family. Most respondents felt safe on the ward (94%), with privacy maintained (93%) and pain well managed

(90%). Fewer than two-thirds (63%) of respondents considered themselves adequately consulted regarding medications and side effects. Sleep and food/drink quality were also highlighted as areas for improvement.

To overcome the issues raised, we generated a 'COVID-19 practice pointers' poster within an integrated educational bundle on COVID-19 wards.

The impact of the bundle on perceptions of people hospitalised with COVID-19 will be evaluated in people hospitalised with COVID-19 in Liverpool in 2021. Whether hospitalised for COVID-19 or other conditions, our survey results are a timely reminder of the importance of involving patients in shaping the care that they receive.

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Introduction

Approximately 15% of people with COVID-19, the disease caused by SARS-CoV-2, require hospital care.¹ In the UK, more than 408,000 people with COVID-19 have been hospitalised.²

Despite huge advances in the understanding of COVID-19,³ the perspectives of people hospitalised with COVID-19 have received scant attention.⁴ This is concerning given limited NHS capacity, restrictions on hospital visiting and associated in-hospital morbidity and mortality.

We conducted a quality improvement project (QIP) involving a satisfaction survey of people hospitalised with COVID-19 in Liverpool. Here, we describe the implementation methods used so that they could be replicated by other units or hospitals, review the survey responses, and recommend interventions to enhance patient-centred care.

Methods

Design

A cross-sectional survey.

Inclusion criteria

People admitted to Liverpool University Hospitals NHS Foundation Trust (LUHFT) with virologically confirmed and/or clinically suspected COVID-19 (eg consistent radiological findings) were eligible to participate. Virological confirmation was by PCR on upper (eg nasopharyngeal swab) and/or lower (eg sputum) respiratory tract samples.

Exclusion criteria

People with COVID-19 who were receiving non-invasive or mechanical ventilation at the time of enrolment, lacked capacity, or did not give verbal consent to participate were excluded.

Survey

A pre-existing satisfaction survey was combined with a 'friends and family' question to form an adapted COVID-19 patient satisfaction survey (Fig 1). The survey questions covered topics including safety, privacy, medications (including analgesia), sleep and communication. There were also free-text questions about positive experiences and areas for improvement.

The survey was reviewed by the 'patient and family experience' and 'communications' departments at LUHFT, and certified as learning disability friendly. A patient survey app facilitated tablet-based data collection, favoured for infection prevention

and control (IPC), but a paper survey was offered as an alternative. A standard operating procedure (SOP) was created that gave implementation details in keeping with infection prevention principles (see supplementary material S1).

Recruitment

Recruitment was intended to be systematic with surveys conducted pre-discharge. However, due to heavy clinical commitments and rapid turnover, some participants completed surveys post-discharge. Potential participants were approached by trained students and doctors pre-discharge or contacted by letter or telephone post-discharge. Families, carers and ward staff were permitted to assist completion where required, including by phone or video call.

Approvals

The QIP was first reviewed by the infectious diseases multidisciplinary team and subsequently approved by the local clinical effectiveness department.

Period of implementation

15 March – 15 June 2020.

Analysis

Anonymised responses were transcribed to a password-protected server. Quantitative analyses summarised mean feedback scores and qualitative analysis categorised free-text responses in each domain of care identified by respondents, including safety,

Ward _____ Hospital _____ Hospital Number _____

Please circle the response you agree with

	No	Yes
1 Did you find someone to talk to about your worries and fears?		
2 Did you feel safe on the ward?		
3 Were you given enough privacy when discussing your condition or treatment?		
4 Were you involved as much as you wanted to be in decisions about your care?		
5 Have your medications and possible side effects been discussed with you?		
6 Was your pain managed effectively?		
7 Was the environment calm and quiet enough for you to be able to sleep?		
8 Have you been kept informed of your discharge plans?		

9. Are you likely to recommend our Hospital to friends and family if they need similar care or treatment? No Yes

10. On scale of 1 (lowest) to 5 (highest) how would you rate the quality of the care you received?

1 2 3 4 5

If there is anything else you would like to tell us about your experiences in the hospital, please do so here.

Was there anything particularly good about your hospital care?

Was there anything that could be improved?

Any other comments?

Thank you very much for your help. We wish you all the best.

Fig 1. COVID-19 satisfaction survey.

Table 1. Sociodemographic and clinical details of people hospitalised with COVID-19

Variables	Participants (%)
<i>Basic sociodemographic data</i>	
Male	49 (52)
Median age (interquartile range)	59 (46–71)
Ex- or current smoker	31 (33)
<i>Risk factors for severe COVID-19</i>	
Age ≥ 60 years	46 (49)
Obesity (body mass index ≥ 30 kg/m ² , n=84)	32 (38)
Black, Asian and minority ethnic (BAME)	10 (11)
One or more comorbidities	73 (78)

Weight, height and body mass index were not documented for 10 respondents. Comorbidities include chronic lung disease, hypertension, diabetes mellitus, obesity (body mass index ≥ 30 kg/m²), chronic kidney disease, vasculopathy (including cardiovascular disease, cerebrovascular disease and peripheral vascular disease), immunosuppressive therapy, HIV and previous venous thromboembolism. Full sociodemographic and clinical details can be found in supplementary material S2.

wellbeing, food/drink, personal hygiene and communication. This was an opportunistic QIP and no specific sample size was required.

Results

A total of 98/160 (61%) responses were received, of which 72/98 (77%) were completed post-discharge. The sociodemographic and clinical characteristics of 94/98 (96%) of respondents who provided complete survey responses are shown in Table 1.

COVID-19 was confirmed in 87/94 (93%) by positive viral PCR and the remainder met clinical criteria for suspected COVID-19. Median respondent age was 59 years and 49/94 (52%) were male. One-third (31/94, 33%) were ex-smokers or smokers. Over one-third (32/84, 38%) of participants were obese and 10/94 (11%) were black, Asian and minority ethnic (BAME). Most participants (73/94, 78%) had one or more comorbidities, with chronic lung disease (38%), hypertension (31%), diabetes (19%) and vasculopathy (16%) predominating.

The average rating of the quality of care received was 4.7/5 and the majority of respondents (89/94, 95%) reported that

they would recommend LUHFT to their friends or family (Fig 2). More than 4 in 5 respondents reported that they felt safe during their stay, they were kept informed of discharge plans, they were involved in decision making relating to their care, their privacy was maintained and their pain was managed appropriately. Being able to share worries and fears (78%), sleep quality (77%) and information about medications and side effects (63%) received lower satisfaction scores (Fig 2).

Free-text responses suggested that medical and nursing care was highly praised, whereas quality of food and drink, and sleep environment were areas for improvement (Table 2). Bilateral communication issues were raised, with one hearing-impaired respondent reporting struggles to communicate when face masks were worn. Other respondents mentioned inadequate or inappropriately timed communication relating to their care (Table 2).

Discussion

The COVID-19 pandemic has distorted the healthcare system and eroded processes aimed at improving patient care. Scant attention has been paid to patient involvement in shaping services and holistic healthcare provision, including suspension of routine patient feedback surveys and engagement activities.^{4,5,6}

To our knowledge, this is the first peer-reviewed report of the perceptions of people hospitalised with COVID-19 on the care they received in a UK hospital. The QIP methods we describe, including details of the SOP and survey itself, are low-cost, pragmatic and open access so that they can be replicated by other units or hospitals.

Our survey showed that people with COVID-19 rated the quality of care they received highly, particularly from medical and nursing staff. The majority of respondents reported that they would recommend LUHFT to friends and family. These results are in line with other settings⁷ and are encouraging, given COVID-19 pressures on the NHS. The results are also in keeping with previous evidence that positive patient experiences are strongly influenced by confidence in care providers.⁵ The key area for improvement recommended by respondents was communication, especially related to medications and their side effects.

Regular, open, bilateral communication about medications and side effects – including novel therapeutics being evaluated by ongoing randomised controlled trials – is highly relevant to all patients in hospital, especially underserved groups, and not only those with COVID-19. Importantly, the survey revealed that communication issues were further compounded by mask-wearing.

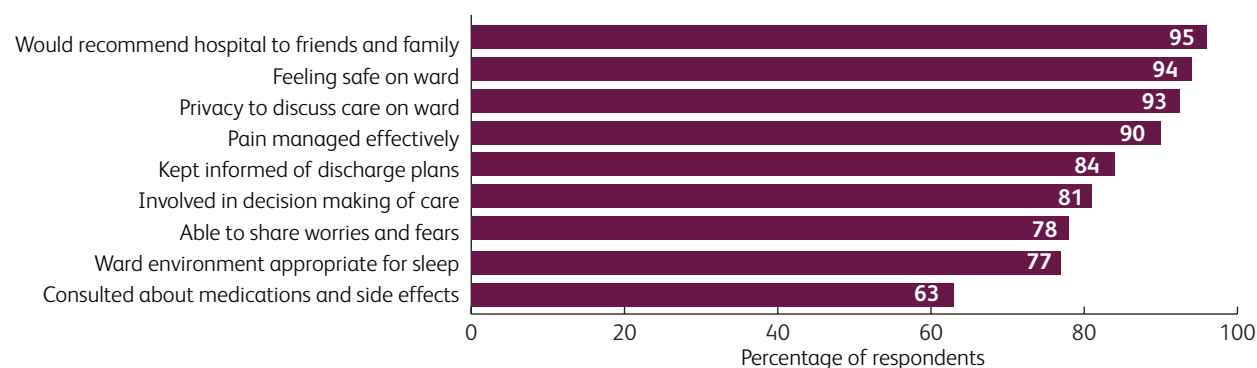


Fig 2. Quantitative feedback from people hospitalised with COVID-19 about their care (n=94).

Table 2. Free-text responses of people with COVID-19 (n=94) on aspects of care that were positive and those that could be improved

Category	Positive comments	Areas for improvement
Medical and nursing care	Kind, friendly, supportive and helpful. Honest and straightforward. Professional and knowledgeable. Reassuring. <i>'The ward team were there for me.'</i> <i>'I am convinced I would not have survived without the dedication of all the medical staff.'</i>	Long waits for pain relief. <i>'I felt like no staff had time for me.'</i>
Communication	<i>'Staff were always reassuring.'</i> <i>'It was evident that there was a clear pathway for my treatment.'</i>	<i>'Being referred to as a room/bed number is dehumanising.'</i> Diagnoses explained to patients at midnight. Communication difficulties for deaf patients due to face masks.
Patient safety	<i>'I was admitted quickly.'</i> <i>'I felt safe and comfortable while in hospital.'</i>	<i>'My belongings were lost and never replaced or found.'</i> Felt unsafe to eat or sleep, with one respondent describing <i>'chaos on the ward'</i> . Inadequate briefing and communication prior to discharge.
Sleep/wellbeing	Nil	<i>'Very difficult to sleep at night on the wards due to lots of noise.'</i> <i>'Noise coming from staff at their workstation overnight.'</i> <i>'The urine bucket wasn't removed.'</i> Shallow commode, poor access to toiletries and bin, cold rooms.
Food and drink	<i>'The cleanliness and food were good.'</i> <i>'Nurses were brilliant. Love them all, as were the cleaners and cooks.'</i>	<i>'Food delivered when I was asleep so was cold when I woke up.'</i> <i>'Never offered food or drink when admitted on ward in evening, until breakfast the next morning.'</i> Difficult to find personal preference within foods on offer.

Text in italics reflects verbatim written respondent quotes. Text not in italics is amalgamated from multiple respondents' feedback.

Universal mask-wearing among healthcare workers has positive impacts on reducing nosocomial SARS-CoV-2 transmission in both staff and patients.⁸ However, there are negative effects of personal protective equipment (PPE), including depersonalisation and fear.⁹ Older patients in particular may experience heightened anxiety or low mood in COVID-19 wards due to isolation, suboptimal communication or direct COVID-19 neurological effects.¹⁰

Patients have been shown to perceive that doctors with face masks have a lower degree of empathy than those without.¹⁰ Moreover, people hospitalised with COVID-19, especially if hearing impaired, may have difficulties understanding healthcare workers and communicating their own needs. This should be taken into consideration and mask-windowing adaptations, increased speaking volume and visual aids should be used when needed. This is vitally important, especially for vulnerable patients, and pertinent given ongoing recruitment into studies trialling novel therapeutic agents.

Other key areas for improvement identified by respondents were poor food, drink and sleep quality – areas highly relevant to all hospitalised people, regardless of illness.

Respondents were generally complementary about domestic and cooking staff. However, locally, kitchen staff were also affected by

sickness and understaffing, and supply chain issues meant that, at some times, menu choice was more constricted than normal.

Overnight noise levels mean that poor sleep quality is a persistent issue in hospital. Being admitted with COVID-19 is stressful, especially given media coverage and hospital closure to visitors. Sleep is vital for good health and wellbeing, and good sleep quality can contribute to reducing anxiety.¹¹ Potential solutions to poor sleep quality identified include noise monitoring, staff reminders to reduce noise during 'protected sleeping time' and single-occupancy rooms. However, these solutions may be hard to achieve when hospitals are working at or over capacity.





In response to the feedback findings, we generated a poster of 'COVID-19 practice pointers' on COVID-19 wards (Fig 3). The posters, which are A2 size with an easy-to-read font size, have been placed in visible locations on COVID-19 wards during the second wave of COVID-19 in Liverpool. The poster can also be used as a hospital-wide screen saver to increase staff awareness.

The posters are part of an integrated bundle and complementary QIP for multidisciplinary teams caring for people with COVID-19. The complementary QIP has been to implement and assess feedback from the multidisciplinary team on use of a checklist based on the mnemonic 'OSCAR'. This includes key elements of

COVID-19

How can we improve the patient experience?

Between March and June 2020, 98 people with COVID-19 admitted to Liverpool University Hospitals NHS Foundation Trust completed a satisfaction survey. Respondents rated the care they had received highly (on average 4.7 out of 5 stars) and made suggestions of how their care could have been improved. We are grateful for their feedback, we created the 'Practice Pointers' below, which we hope will lead to improved patient care.

<p>Communication</p>  <ul style="list-style-type: none"> • Clearly communicate to new patients their diagnosis of COVID-19. • Daily updates on ward rounds about test results including COVID-19 swabs. • Explain new medications and possible side effects (e.g. remdesivir, steroids, enoxaparin) and ask about need for pain relief. • The use of face masks can make communication difficult, especially for people who are hearing impaired. • Where needed use masks with window adaptations, increase speaking volume, and use visual aids. • Communicate sensitively about treatment escalation plans. 	<p>Family</p>  <ul style="list-style-type: none"> • Not having visitors in hospital can be extremely isolating for patients and difficult for their loved ones. • Try to facilitate phone or video calls wherever possible. • Ask for a nominated family member or next of kin and update them regularly. • Visitors may be permitted for those approaching end of life, and under certain circumstances for those experiencing distress due to dementia or a mental health issue - please see Trust intranet for the latest guidance.
<p>Food and sleep</p>  <ul style="list-style-type: none"> • Ensure meal times are protected. • Offer snacks and hot drinks in between meals. • Involve dietitians if you are concerned about poor nutrition. • To improve sleep, avoid all unnecessary night time disruptions. • Be aware of daytime noise levels on the ward, which some patients may find stressful. • Explain to patients as early as possible the day-to-day routine of ward activities that they can expect. • Consider morning dosing of enoxaparin to allow day-time Xa levels. 	<p>Additional information</p>  <ul style="list-style-type: none"> • Provide written information on admission and discharge - available from the Trust intranet or PHE website. • Discuss additional treatments available through clinical trials to allow patients to consider all of their options. • Advise patients of plans for follow up - in those with chest X-ray changes, a chest X-ray is recommended approximately three months following discharge.

This poster is an aide memoire for holistic care of people with COVID-19 admitted to our hospital. It is currently only for use on the wards on which the original COVID-19 patient satisfaction survey took place. For more information see Wu *et al*, BMJ, 2020: <https://www.bmj.com/content/370/bmj.m3496>

Fig 3. Pilot version of poster detailing holistic COVID-19 practice pointers.

COVID care: Oxygen, Steroids, Coagulation, Antibiotics/antivirals, and Research treatments. It is designed to improve documentation and prescribing, and prompts explanation of components of COVID-19 care to the patient. Overall, the bundle consists of COVID ward induction sessions including introduction of the OSCAR checklist, lanyards and posters with the checklist, the COVID-19 practice pointer poster and a patient information leaflet.

This QIP has several limitations. It was pragmatic, non-randomised and had multiple potential sources of bias. These included lack of sequential participant recruitment, ad hoc survey implementation, variable times of survey completion (eg pre- and post-discharge) and exclusion criteria that may have led to under-representation of underserved groups or those most severely affected by COVID-19. We overcame some of these issues by supporting participants to complete the survey and involving carers and/or family where possible. However, this may have led to further bias. Moreover, survey respondents' ability to recall their experiences when severely ill may have been impaired (even if they made a good recovery) and gratitude towards staff for care received may have influenced their response. We partially addressed these limitations by allowing sufficient time to complete the survey with appropriate support and clearly explaining that the aim of the survey was to elucidate both the successes and shortcomings of patient care in order to improve our service in the future. Our participants' social and clinical demographics appear similar to other published cohorts from the UK,¹² but it should be noted that, likely due to Liverpool's background ethnodemography, only 11% of participants were BAME in our cohort. Future analysis of COVID-19 feedback survey data will aim to evaluate equity of healthcare provision by comparing responses of BAME patients with other patient groups.

Conclusion

Our survey of people hospitalised with COVID-19 showed that care quality during admission was rated and recommended highly. However, the survey also revealed areas for improvement in holistic healthcare provision including communication, especially with relation to medications and discharge planning, and sleep and food quality. To improve care in 2021, we are implementing the 'COVID-19 practice pointers' poster within an integrated educational bundle on COVID-19 wards within LUHFT. We hope to be able to scale up this bundle for future evaluation of its impact on the care of people hospitalised with COVID-19 at LUHFT and, potentially, beyond. ■

Supplementary material

Additional supplementary material may be found in the online version of this article at www.rcpjournals.org/FHJ:

S1 – COVID-19 inpatient satisfaction survey SOP.

S2 – Full sociodemographic and clinical details of people hospitalised with COVID-19 (n=94).

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