Dentistry in the United Kingdom (UK) has been thrown into turmoil by coronavirus disease 2019 (COVID-19), which was labelled as a global pandemic by the World Health Organisation. Guidance from the Chief Dental Officer and NHS England halted all routine and non-urgent dental activity in March 2020, with the risk of transmission to patients and staff particularly through aerosol generating procedures (AGPs). Dentists and other oral health workers as part of the frontline healthcare workforce are at extreme risk of COVID-19, with a close working environment and high transmission risk. This understandably poses a great level of stress and anxiety to all members of the dental team. Additionally, for many in primary and private care, there have been huge financial ramifications and careers have been impacted for those in training. Further hazards for healthcare workers during this pandemic have been suggested including long working hours, psychological distress, fatigue, occupational burnout and stigma. The wellbeing of healthcare workers has also been affected due to the increasing infection rate among fellow healthcare colleagues.

The whole dental team should be included in wellbeing support and services throughout pandemics, including when normal activity resumes.

The sudden shift in the profession, lockdown and personal life ramifications from COVID-19 has had a huge impact on the dental workforce on many levels. As the pandemic continues to ravage across the globe, we must look at ways of maintaining patient care and the wellbeing of staff. It becomes prudent to reflect on experiences to date and lessons learnt, which is illustrated through this study investigating the effect on the wellbeing of the dental team in a single unit hospital setting.

Materials and methods
Fourteen focus groups were held including multiple grades on a voluntary basis, with a discussion schedule including suitable prompts. Responses were transcribed, maintaining anonymity throughout, and thematic analysis was performed on the verbatim transcript to identify common themes and direct quotes.

Results
Key themes that were highlighted included anxiety, safety concerns, teamwork, family and redeployment. The themes of anxiety and safety were further explored, identifying participant discussion of feeling isolated, confusion, and specific concerns about PPE and transport to work.

Conclusion
This study identifies reasons to establish support networks for the dental workforce across the UK, highlighting the true adaptability of the dental team and the ability to break barriers to aid in combating a global pandemic.
Aim
This paper aims to illustrate the effects of COVID-19 on the wellbeing of the dental team in a single unit hospital setting.

Objectives
The objectives of this study were:
• To understand the impact of the COVID-19 pandemic on the wellbeing of the dental workforce at the Royal National ENT and Eastman Dental Hospitals
• To identify the common themes expressed by members of staff.

Materials and method
Fourteen focus groups were held in July 2020 in groups of two to four participants of similar grade over a period of two weeks, accounting for social distancing. Staff members were approached via e-mail and written notice in public areas. Participation was on a voluntary basis and held during working hours. The lead researchers (BS and JB) led the focus groups and were the only other members present in the private setting. JB had prior experience in conducting focus group studies and BS had researched the conduction of focus groups before this study. Responses were recorded by dictaphones and later transcribed anonymously into a word-processed document. Each participant completed a demographic questionnaire including gender, ethnicity, grade and their main working department.

A qualitative research study was chosen to provide a broader insight into the views and attitudes of staff members, and preferential to a survey to encourage richer discussion with depth and avoid binary responses.

Discussion schedule
The questions asked are shown in Table 1, including prompts used to expand discussion during each focus group and to reduce the risk of bias. Thematic analysis was performed on the verbatim transcript using NVivo 12 (QRS) software. Identified themes were organised into nodes, which were analysed to ensure that they represented quotes extracted from the data and subsequent analysis was carried out to ensure the nodal structure was representative of the data as a whole. Any confuted views were also identified and reported in the results and discussion. An outline of the key themes identified via qualitative analysis of the verbatim transcripts is presented (Fig. 1) and direct quotes from the focus groups have been included. The authors have used NVivo10 to order the array of concepts discussed into themes relating to wellbeing.

Results
Fourteen focus groups of a total of 40 participants were carried out over five dates, in private settings conducted by the researchers. In total, 85% (n = 34) of participants were female and 15% (n = 6) were male. The majority of participants were dental nurses (60%, n = 24), speciality doctors (17.5%, n = 7), speciality registrars (10%, n = 4), dental core trainees (10%, n = 4) and there was one consultant (2.5%). A total of 35% of participants were white (n = 14) and the remaining 65% (n = 26) were of Black, Asian and Minority Ethnic (BAME) groups.

Themes
Anxiety
Anxiety was highlighted by 18 participants in the focus groups and the words ‘anxious’ or ‘anxiety’ were mentioned 32 times in total. The words ‘worried’ and ‘worry’ were expressed by 26 participants and mentioned a total of 42 times during the discussions. This highlights a huge focus on fear of the unknown, particularly changes to daily activity and not necessarily about contracting COVID-19, as quoted below by participants:
• ‘[...] it was really scary because it was the unknown and we didn’t know what we were doing’
• ‘I think everybody got quite worried about it, then it clicked that this is quite real now’
• ‘[...] we were stepping into unknown territory’.

Feeling isolated
Isolation has been mentioned by some staff members within the focus groups, and the words ‘anxious’ or ‘anxiety’ were mentioned 32 times in total. The words ‘worried’ and ‘worry’ were expressed by 26 participants and mentioned a total of 42 times during the discussions. This highlights a huge focus on fear of the unknown, particularly changes to daily activity and not necessarily about contracting COVID-19, as quoted below by participants:

Table 1 Focus group discussion schedule

| Questions                                                                 | Prompts                                      |
|---------------------------------------------------------------------------|----------------------------------------------|
| How did you feel working during the pandemic?                             | Feelings/worries/anxieties? Positive/negative? |
| Did you feel safe coming in to work?                                     | Transport/availability of face coverings?    |
| Did you feel supported by your team?                                     | Fellow colleagues/seniors/management        |
| How did you feel about wearing the current PPE?                          | Availability/comfort/donning and doffing    |
| How did you find your roles in redeployment within the trust/UDC?         | Training/hours/familiarity                   |
| Were there any personal circumstances that you felt put you at further risk during the pandemic? | Shielding/vulnerable person at home/BAME |

Fig. 1 Key themes from thematic analysis of focus group discussions

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Table 2 Breakdown of participant involvement across different specialities

| Department                              | Number of participants | Percentage of participants (%) |
|-----------------------------------------|------------------------|--------------------------------|
| Restorative dentistry (RD)              | 15                     | 37.5                           |
| Oral surgery (OS)                       | 12                     | 30.0                           |
| Special care dentistry (SCD)            | 4                      | 10.0                           |
| Procedure zone (RD, OS, SCD, paediatric dentistry) | 9                      | 22.5                           |
| **Total**                               | **40**                 | **100**                        |

- ‘I find it quite isolating coming into work when the whole world was inside’
- ‘[…] it was quite isolating being at home’
- ‘I felt less isolated coming into work with social interaction but did feel anxious’.

Confusion
New guidance was issued on a weekly basis and was seen as a stressor by some participants, with drastic daily changes within the hospital, impacting on the wellbeing of the workforce:
- ‘As a senior nurse I was very worried because I thought everybody would be asking me questions and I wouldn’t have the answers’
- ‘[…] the confusion was around the rules, they were changing on a daily basis’.

Safety
The word safety was mentioned 32 times within the focus groups, highlighting the importance of feeling safe for staff members during the pandemic, particularly in reference to suitable personal protective equipment (PPE) and their daily commute.

PPE
All focus groups mentioned good availability of appropriate PPE; however, many participants suggested that the adjustment to level-three PPE suitable for AGPs was difficult. The main concerns highlighted included the uncertainty of wearing PPE correctly to provide maximum protection, discomfort during lengthy procedures and the ongoing changes to the level of PPE required. There was also a focus on the lack of adoption of fit testing within the early stages of the pandemic, which is now in place:
- ‘[…] we don’t even know if we have been wearing it all correctly’
- ‘It’s hard to wear a mask 12 hours a day, it’s hard to breathe’
- ‘[…] there was everything, FFP3 masks, disposable visors, a hood if you wanted to wear that’
- ‘I’m struggling to breathe even for a short procedure and in theatres’.

Transport to work
There was a mixed consensus regarding the safety of travelling into work. Transport for London announced a temporary suspension of congestion charges and parking permits were issued to key workers during the first UK lockdown. This allowed staff members to drive in to work, which provided a heightened level of safety for these staff members. In comparison, staff members stated that public transport was safe due to the lack of the general public using these services. However, many still felt initial anxiety and hesitance to use public transport:
- ‘The public transport situation was fine because you could socially distance from people’
- ‘I felt really safe on the trains because I had the whole compartment to myself’
- ‘I still have concerns about travelling in because I come in on the bus’.

Teamwork
Communication
The theme of teamwork and support was greatly evidenced throughout the focus group discussions, with team spirit, morale and encouragement evidenced during the pandemic despite changing work structures. The words ‘support’ and ‘team’ were mentioned favourably in all focus group discussions, with quotes mentioned below:
- ‘[…] we had a good team spirit I must say’
- ‘We are always behind our team’
- ‘It brought all of our strengths out, and we might not have seen that before’
- ‘[…] we were always supporting each other’
- ‘I had good support and good team morale here which made it easier’.

Organisation
It was also highlighted by all the senior nurses included in the focus groups that the pandemic allowed for their teams to be brought together quickly with rapid re-organisation and there was a generalised feeling of pride, as mentioned by senior nurses’ comments below:
- ‘It’s also worth saying that our team worked well to our strengths, you share your knowledge. It definitely improved communication and I think it was actually a really positive thing we got out of it’
- ‘[…] the feedback I got was brilliant and it was so nice to hear, I was very proud of them all’.

Integration
It was highlighted by all focus groups that the pandemic provided an increased level of collaboration of different specialties and this was a huge positive development for team morale within the dental hospital, as quoted below:
- ‘Everything has changed for the better, it’s integrated specialties’
- ‘It was quite exhausting but having everybody here from different teams helped and made it easier’
- ‘Working with new people was good and we got to bond with different people’
- ‘I think it was really nice to finally meet everybody that works here instead of just writing them letters’.

This allowed for barriers to be broken between teams and enabled specialities to work together on a daily basis, through redeployment and the formation of the Urgent Dental Centre (UDC). A breakdown of participant involvement can be found in Table 2.

Family
It is worth mentioning that 17 participants (42.5%) mentioned that, as a key worker, they were not concerned about contracting the virus themselves, but more being an asymptomatic carrier and passing it to family members unknowingly:
- ‘[…] if I get it, I get it, that’s never been an anxiety for me, I worry that I could get it and pass it on to an elderly relative’
- ‘I live with family and giving it to them was my biggest concern’.

BAME
Although 65% of participants were from the BAME community, little additional anxiety or fear was expressed regarding higher risks of contracting COVID-19 in BAME groups:
- ‘I did get quite worried when the whole BAME thing came out, that was scary’
- ‘[…] it puts a bit more pressure on you knowing that the statistics were out there’.
Redeployment
Many team members were redeployed within the trust to provide assistance in maternity services, oral and maxillofacial surgery, intensive care units, phlebotomy, COVID-19 testing and remote triaging with 111 services. NHS England provided guidance to redeploy the dental workforce to undertake activities to aid the wider workforce due to their wide range of skills. This guidance ensured that the dental team was redeployed within their competencies and that the UDC was not left understaffed.

New skills
Many participants commented on the positives of being redeployed in terms of gaining new skills and knowledge through the early stages of the pandemic. This highlights the versatility of the dental team, by adapting themselves to work in completely different settings:

- ‘It was nice for us to see the transferable skills that we have’
- ‘[…] we had to keep adapting and building the resilience of our team’
- ‘I enjoyed being redeployed; it was something different’.

Within the focus group sessions, some participants also highlighted negative feelings of being redeployed and not being appropriately placed. It is important to note that the below comments and opinions were made apparent by all grades, including clinicians and nurses:

- ‘As a DCT, we were redeployed in various different places and not necessarily in our scope of practice but I guess it was fine’
- ‘We went somewhere where we didn’t know anybody and different to what we do here, which felt like a new job plus COVID’
- ‘When getting redeployed…it felt like we were being put at risk for no reason’.

The new norm
Another theme mentioned throughout the focus group discussions was the change in daily life caused by the pandemic and a general consensus of a new norm in all aspects of life, not just working patterns:

- ‘[…] this is a part of our new life but for how long?’
- ‘[…] then you think when can you stop worrying. It’s a losing battle and it can take over your mind’.

It was also mentioned by one participant that there was a fear of becoming more relaxed with the pandemic as they became more comfortable with changes. This included ‘it is interesting how your mentality changes, you slowly fall back into bad habits of normal life, so now I worry about being too relaxed about it’. This quote suggests that there can be an ongoing fear or worry for many members of the workforce across all stages of the pandemic.

Discussion
Before the pandemic struck, high levels of stress and burnout levels among dentists were evidenced within the UK, with identified stressors related to regulation and fears of litigation. Highest levels of stress have been reported in general dental practitioners (GDPs), followed by community dentists and both significantly higher than hospital dentists. It has been found that dentists are twice as likely to contemplate suicide in the last 12 months (10%) in comparison to the general public due to stressors of work. It is important to note that dentists do not have the highest suicide rate among healthcare occupations, and are below nurses, doctors and vets. Sadly, some suicide deaths have been reported during the pandemic of our fellow dental professionals. The importance of dentists’ wellbeing has recently been recognised, with specific services now made available such as NHS Practitioner Health, a dedicated mental health service for all doctors and dentists across the UK in late 2019. Early evidence suggests that there has been disturbances in mood and sleep for healthcare workers during this pandemic in a recent review, with insomnia reported at 38.9% across five studies. It has been concluded through a national poll by Mind that 22% of people with no previous history of mental health issues have developed poor mental health and wellbeing as a direct consequence of the pandemic. It has been reported that 41.1% of dentists had been affected by the pandemic in regard to their mental health and 77.2% have had financial implications. It must be highlighted that many primary care dental teams, community services and hospital dental services are under increased pressures professionally, personally, financially and through redeployment, and therefore support should be in place for their wellbeing and they should not be excluded from services readily available to medical professionals. Interestingly, there is little evidence available on stress levels of other roles within the dental team at present and much of the available literature relates to UK dentists alone. This paper incorporates the importance of wellbeing for the wider dental team, and highlights their thoughts and opinions that were expressed within the focus groups (Fig. 2). Recent research has also highlighted that some dentists who...
were able to work remotely welcomed the break from direct clinical care as a positive experience, highlighting a reduction in psychological distress. There has been a large focus on improving the wellbeing and support of staff at University College of London Hospitals NHS Trust (UCLH) through wellbeing champions, specific counselling and drop-in sessions with the staff psychology and welfare service. We acknowledge this is the benefit of facilities at a large trust in secondary care.

Research shows that post-traumatic stress and psychological distress were evidenced with healthcare workers being in direct contact with patients during times of emerging virus outbreaks. A recent rapid review on the psychological impact of healthcare workers following viral outbreaks highlighted that symptoms of post-traumatic stress disorders were found up to three years after the 2003 SARS pandemic. This emphasises the need to monitor and support healthcare workers over a longer period as the true psychological impact may only manifest once the immediate threat of the pandemic has dissipated. Many participants stated that they were used ‘to just getting on with the job’, which may have reduced initial and immediate psychological stresses but the possible long-term impact is unknown.

A recent wellbeing study within the UK has also found that many key workers expressed higher levels of life satisfaction during the pandemic with a feeling of importance, sense of purpose and appreciation. Reported lower levels of psychological distress of hospital dentists compared to GDPs, and in particular practice principals, may be explained due to redeployment roles on the frontline and the feeling of importance, as shown in this study with many participants highlighting the positive experience of being part of a larger team through UDC activity. Recommendations following previous pandemics to deal with psychological impact during outbreaks include staff ‘buddy’ systems, sufficient time off and recognition of staff efforts. This is very important to take into consideration by NHS England, senior management and supervisors to ensure that the wellbeing of dentists is still taken into account in years to come.

A new online resource tool has recently been published to provide guidance on wellbeing specifically for the dental team, focusing on self-care, personal life and sources of additional support. This is a huge step forward in ensuring that the dental team is not forgotten about once the current pandemic state comes to an end and the true effects of wellbeing come to the surface. This document lists a great number of resources and organisations who can provide further support for dental team members, including specific advice from the Every Mind Matters campaign.

These focus groups informed us of staff members’ views during the height of the pandemic, which may not have otherwise been formally expressed. These opinions were specific to the 40 participants involved in the study and cannot be deemed generalisable to the whole workforce of the hospital. The reduced volunteer uptake may be due to a number of reasons including lack of incentives, worry of being identified, time constraints and social distancing restrictions. The authors attempted to ensure that similar grades were placed in each focus group to avoid senior members of staff being present in a junior focus group. Clear signposting of this at invitation may have increased participant uptake.

Conclusion

The themes that have been drawn from this study identify reasons to establish support networks for the dental workforce across the UK. Locally, we found many positive accomplishments including integration of teams and the support of senior management throughout the pandemic, which will inevitably be echoed across many services nationally. It highlights the true adaptability of the dental team and the ability to break barriers to aid in combating a global pandemic. All members of the dental workforce, including community, primary or secondary care settings, can access support directly for their wellbeing as mentioned below.

Resources available:

1. ‘Wellbeing support for the dental team’ available at: https://madeinheeneehee.nhs.uk/Portals/0/Wellbeing-Support-for-the-Dental-Team.pdf
2. Every Mind Matters available at: https://www.nhs.uk/oneyou/every-mind-matters/
3. NHS Practitioner Health available at: https://www.practitionerhealth.nhs.uk/accessing-the-service-for-doctors-and-d.

Ethics declaration

UCLH Ethics Committee deemed the project as a service evaluation and therefore the need for ethics approval was waived. An exemption letter was provided. All participants consented to participate in the study and their data to be used as part of the research study (written consent form).

Author contributions

BS and JB conducted the study, analysed results and collated participants’ comments for the article. BS wrote the main body of the article, JB provided further additions to the article and completed the referencing of all papers used. SK supervised the whole study and reviewed the article, providing additions where necessary.

Conflict of interest

The authors declare there are no conflicts of interest.

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