Effect of the COVID-19 pandemic on training

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Background:

The COVID-19 pandemic started to spread across the United Kingdom in February 2020. By mid-April, hospitals were full of severely unwell patients with the respiratory disease. Hospital wards, anaesthetic rooms and theatres were re-allocated to critical care or respiratory teams and the medical workforce was redeployed away from their specialised services to care for these patients. The workforce was further depleted by the mandatory requirement to self-isolate if infected or in contact with COVID, and by the advice that vulnerable colleagues should shield at home. An RCOG Workforce survey identified that 53% of responding units redeployed some members of their junior doctors outside of maternity services, and 22% had to redeploy all junior doctors.[1] Consequently, a General Medical Council (GMC) survey identified that 23% of trainee doctors were at moderate to high risk of burnout in 2021, with a substantial increase in levels of burnout compared to earlier years.[2]

Whilst it was acknowledged that the demand for maternity and acute gynaecology services was not expected to change,[3] non-urgent outpatient clinics and surgical lists were postponed or cancelled in order to manage the depleted speciality workforce and services overwhelmed by patients unwell with COVID-19.[4] The NHS bought capacity and support from independent healthcare sector providers,[5] and agreed principles included the enablement of junior doctors to continue their surgical training at these alternative sites,[6] although trainees reported difficulties in accessing these cases. Outpatient appointments were frequently transferred onto virtual platforms, with 42% of trainee doctors reporting to the GMC that they had been providing more care remotely than face to face.[2]

Recognising the unavoidable disruption that the COVID-19 pandemic had had on training, the GMC and RCOG agreed a set of temporary derogations for medical education and training.[7] These included a relaxation of rules allowing progression through specialty training without timely achievement of some required clinical competencies or having obtained a pass of membership examinations. These were acknowledged at the Annual Review of Competency Progression in the form of outcome '10'.

The aim of this report is to evaluate the extent to which the COVID-19 pandemic affected the experience of training during 2021, comparing effect across regions and by stage of training, to the responses received prior to the start of the pandemic (2018 and 2019).

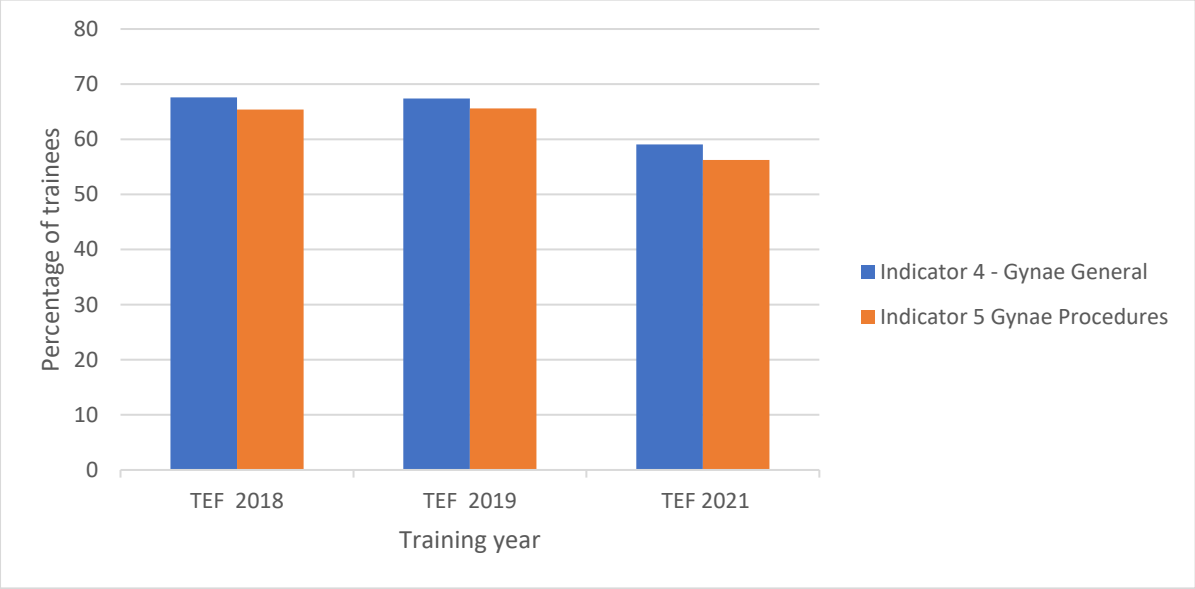
Analysis:

Data were analysed from the 2021 RCOG Training Evaluation Form (TEF) survey (conducted between 20/06/21 to 20/07/2021) and the 2021 GMC Trainee Survey (carried out two months earlier, between 20/04/2021 and 18/05/2021).[8,9] For the 2021 TEF survey, 1493 responses were received from ST1-7 trainees across the UK (373 at ST1-2 level, 680 at ST3-5 level and 417 at ST6-7 level). These are slightly fewer than the number of responses received prior to the COVID-19 pandemic (1657 in 2019 and 1654 in 2018). For the GMC survey, 1619 responses were received from ST1-7 trainees across the UK).

Training in Gynaecology

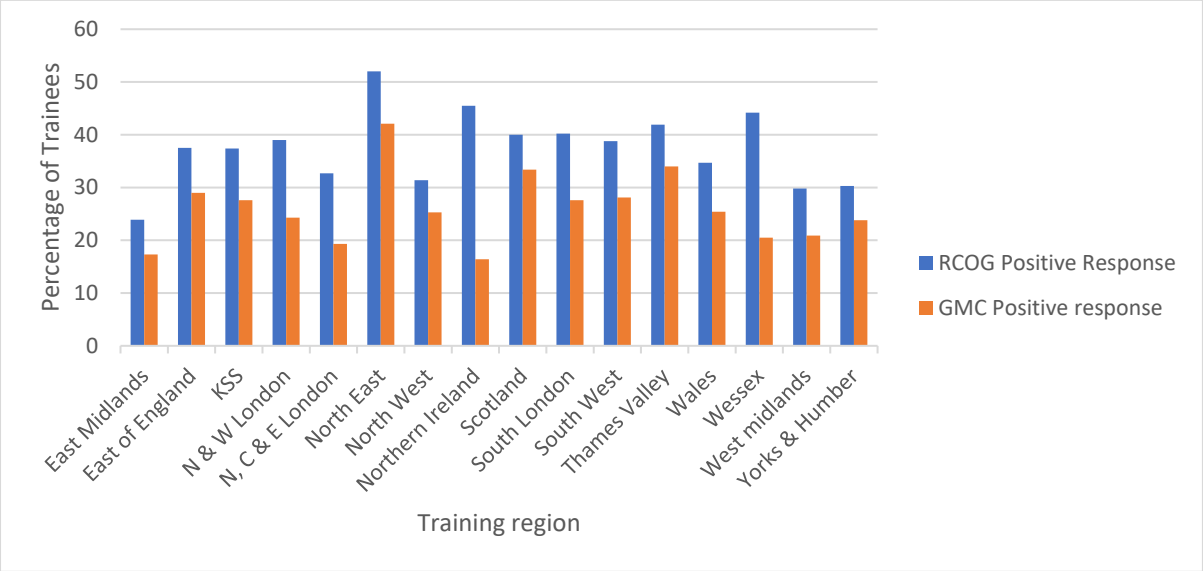
Analysis of data from the TEF surveys across 2018-2021 reveals that the largest drop in trainees reporting positive or neutral outcomes occurred in Overall Indicators 4: General Gynaecology and 5: Gynaecology Procedures (Figure 1).

Figure 1 - Proportion of trainees reporting positive or neutral responses to Overall Indicator 4: General Gynae and Overall Indicator 5: Gynae procedures



More in-depth analysis of the effect of COVID-19 on training in gynaecology shows that trainees reported that they had experienced fewer opportunities to fulfil their gynaecology training requirements in 2021 than prior to the pandemic (36.1% reported receiving an appropriate amount of opportunity in 2021, compared to 58.8% in 2019 and 56.9% in 2018). Regional variation across the proportion of trainees who felt that they had 'appropriate opportunity to fulfil [their] training requirements for the year in gynaecology' is reported in Figure 2. The GMC Training survey 2021 asked an identical question relating to having opportunity to meet training requirements and revealed a similar regional distribution of positive responses but at a lower level for all regions (also Figure 2).

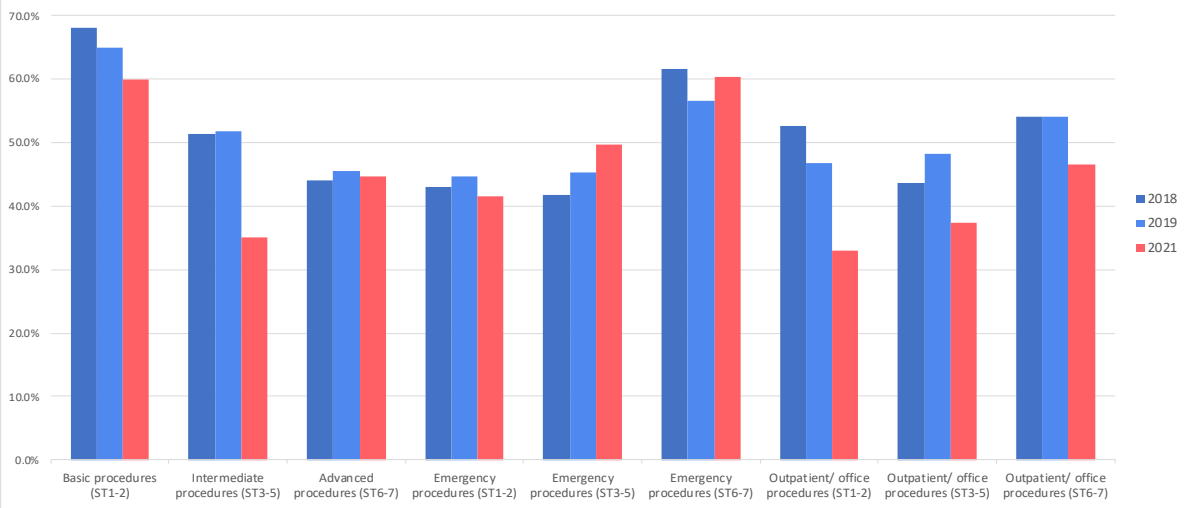
Figure 2 – Proportion of trainees reporting that their training requirements were met in gynaecology, by training region. Comparing responses to the RCOG and GMC training surveys.



Having fewer training opportunities in gynaecology was associated with an overall fall in the proportion of trainees who would recommend their hospital to other O&G trainees for the development of gynaecology skills (49.7% of trainees would recommend the unit their trained in in 2021, compared to 61.2% of trainees in 2019 and 60.4% in 2018).

Specifically for gynaecology procedures, trainees at both ST1-2 and ST3-5 level reported receiving fewer training opportunities for gynaecology procedures relevant to their level of training in 2021, compared to before the pandemic (Figure 3). Trainees at ST6-7 level reported no change, although they were already experiencing low levels of training opportunities for advanced procedures. Trainees at all levels reported no change to their exposure to emergency gynaecology procedures, but trainees at all stages of training experienced a fall in opportunities to train with outpatient or office gynaecology procedures, when compared to before the COVID-19 pandemic (also Figure 3).

Figure 3 - Proportion of trainees who agreed (strongly agree/agree) that they had sufficient training opportunity for curriculum needs and stage of training - gynaecology procedures*



*There has been a slight change in question phrasing between the pre-COVID and post-COVID TEF. In the 2018 and 2019 TEF, the 2021 'basic procedures' were called 'minor procedures', and the 2021 'advanced procedures' were referred to as 'major'

There were also falls in the proportion of trainees reporting sufficient opportunities during the COVID pandemic to attend both general (Figure 4) and specialist (Figure 5) gynaecology clinics. This fall was greatest amongst ST3-5 trainees reporting opportunities to attend general gynaecology clinics.

Figure 4 - Proportion of trainees reporting opportunities to attend general gynaecology clinic that were frequent enough to fulfil their learning needs

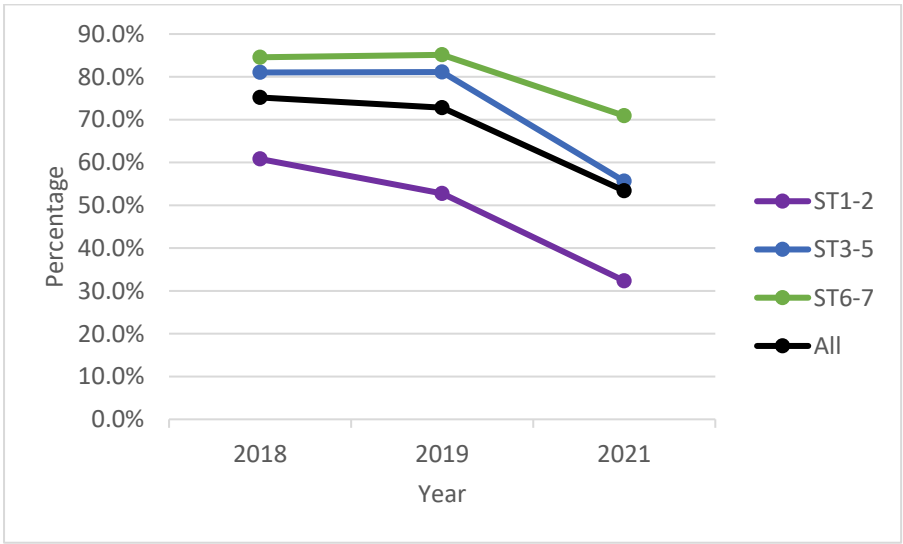
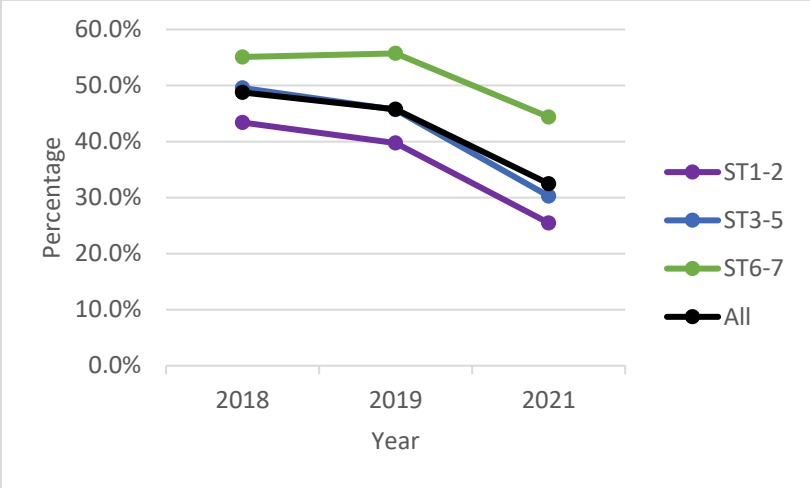
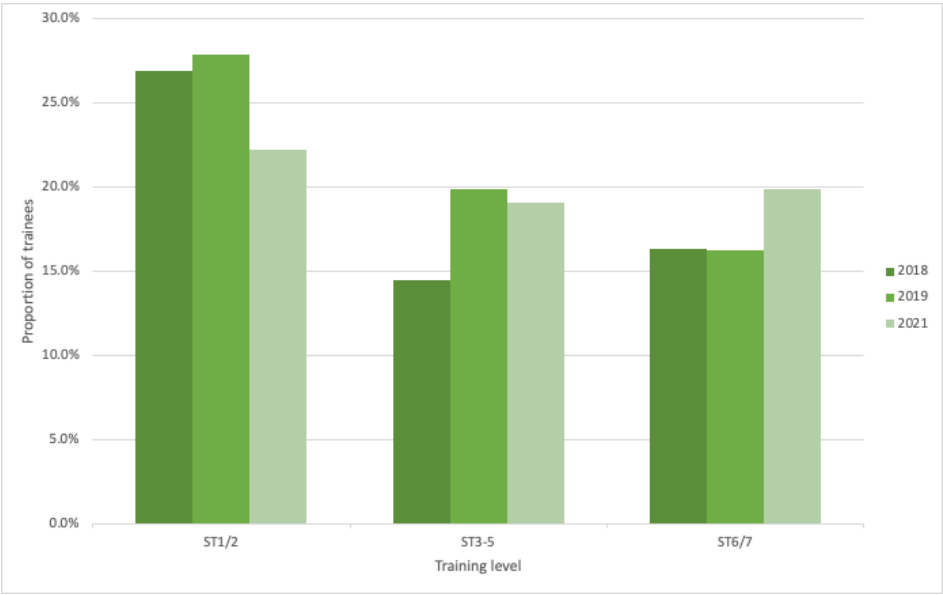


Figure 5 - Proportion of trainees reporting opportunities to attend specialist clinics (e.g., urogynaecology, fertility and paediatric and adolescent clinics) that were frequent enough to fulfil their learning needs



Simulation training was seen as an alternative method for the acquisition of gynaecology surgical skills whilst surgical lists were reduced or cancelled during the pandemic. Despite this, ST1-2s actually reported a reduction in access to a formal programme of simulation training in gynaecological procedural skills during 2021, compared to pre-pandemic levels (Figure 6).

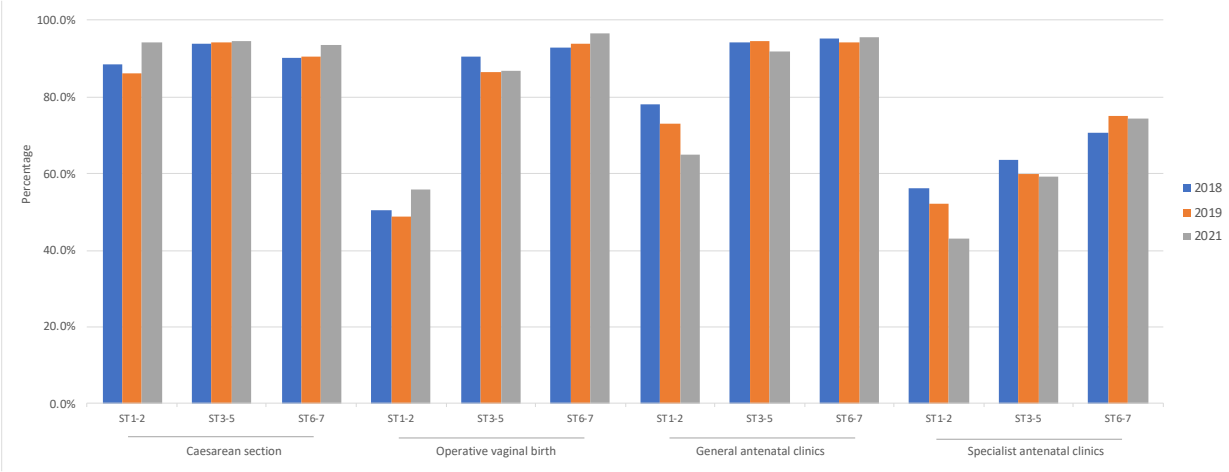
Figure 6 - Proportion of trainees reporting access to a formal programme of simulation training in gynaecological procedural skills, by training level



Training in Obstetrics

On the other hand, obstetric training was overall unaffected (88.4% reported appropriate opportunities in 2021, compared to 83.1% in 2019 and 84.3% in 2018) and the proportion of trainees who would recommend obstetric training in their hospital did not change pre- and post- pandemic (84.4-85.0% of trainees agreed with this statement in 2018, 2019 and 2021). The proportion of all trainees reporting that they had sufficient opportunities to perform caesarean section delivery and operative vaginal birth appropriate to their level of training was unchanged pre- and post-pandemic, although there was an increase for trainees at ST1-2 level (Figure 7). The proportion of trainees overall who reported that they had frequent enough opportunities to attend antenatal clinics to satisfy their learning needs and any opportunity to attend specialist antenatal clinics was unchanged in 2021, compared to 2018 and 2019, however junior trainees (ST1-2) reported a fall in their training opportunities for both types of antenatal clinic (also Figure 7).

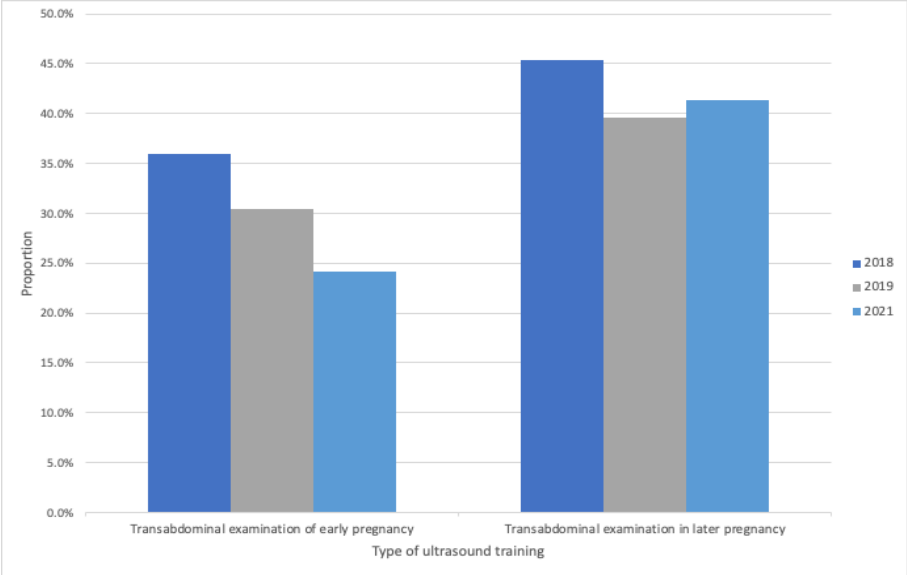
Figure 7 - Proportion of trainees reporting sufficient training opportunities in each type of obstetric activity



Training in ultrasound

In addition to acquisition of surgical and delivery skills, junior trainees are expected to be trained in transabdominal ultrasound of early and late pregnancy, acquiring competence in basic ultrasound by the end of ST3. Whilst the proportion of ST1-2 trainees reporting adequate training in obstetric ultrasound was unchanged during the COVID pandemic, compared to pre-pandemic, the proportion reporting adequate training opportunities in transabdominal ultrasound of early pregnancy, a gynaecology skill, fell during the pandemic (Figure 8).

Figure 8 - Proportion of ST1-2 trainees reporting adequate training opportunities in transabdominal ultrasound examination of early and late pregnancy*

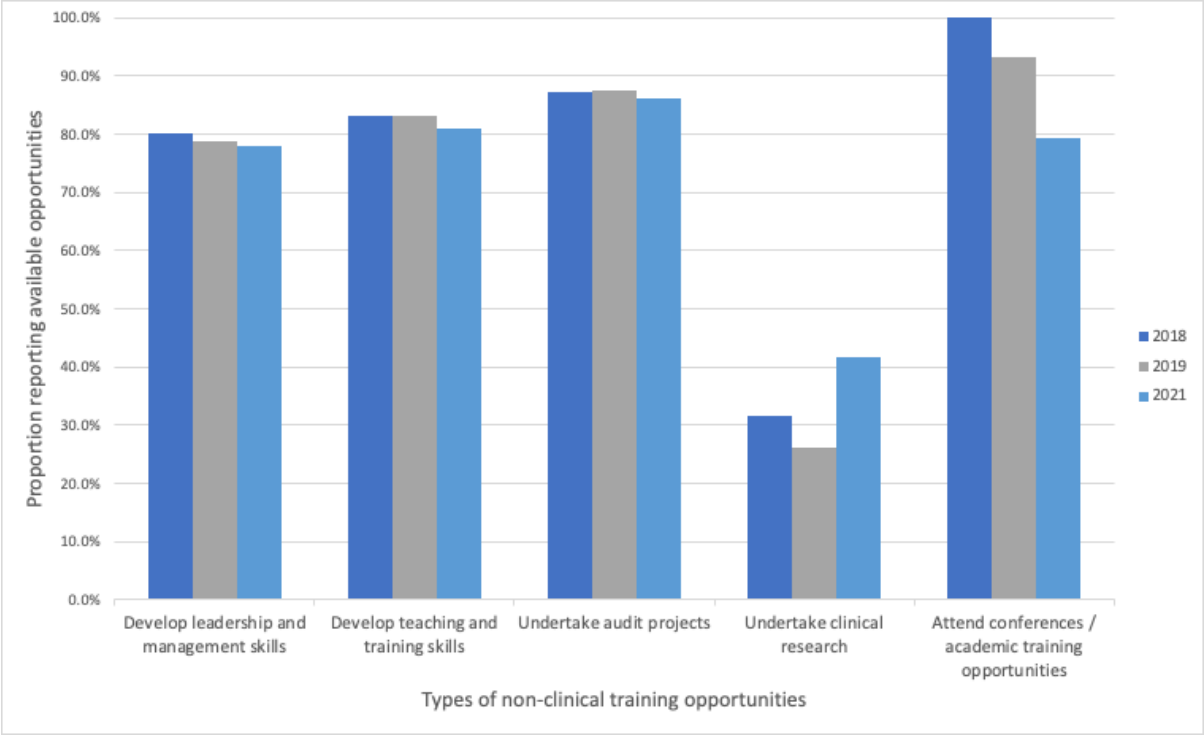


*There was a change in the wording of the question between 2021 and 2018-2019. Pre-pandemic the questions were: '*I have had adequate opportunities for training in Module 1 : Basic - Ultrasound examination of early (8-12 week) pregnancy'* and '*I have had adequate opportunities for training in Module 2: Basic: Ultrasound assessment of fetal size, liquor and the placenta'*.

Training in non-clinical skills

The training curriculum also requires trainees to acquire non-clinical skills in leadership and management, training and teaching, audit and clinical research, as well as to take opportunities to attend academic training opportunities and conferences. Whilst there was no change in the proportion of all trainees who had opportunities to develop the former three skills, trainees reported an increase in opportunities to be involved in clinical research, but a fall in opportunities to attend conferences and academic training opportunities during the pandemic (Figure 9).

Figure 9 - Proportion of all trainees reporting opportunities to develop non-clinical skills



Formal teaching attendance

Finally, formal programmes of local and regional teaching are considered essential aspects of training in obstetrics and gynaecology. A higher proportion of trainees reported being able to attend local teaching 'less frequently than bimonthly' in 2021 (25.0%) compared to in 2018 (18.8%) and 2019 (17.9%), see Figure 10. A similar pattern was also seen for regional teaching attendance, with 52.7% reporting less than bimonthly attendance in 2021, compared to 39.8% in 2018 and 42.4% in 2019 (Figure 11).

Figure 10 - Frequency of attendance reported by trainees to local teaching, by TEF year

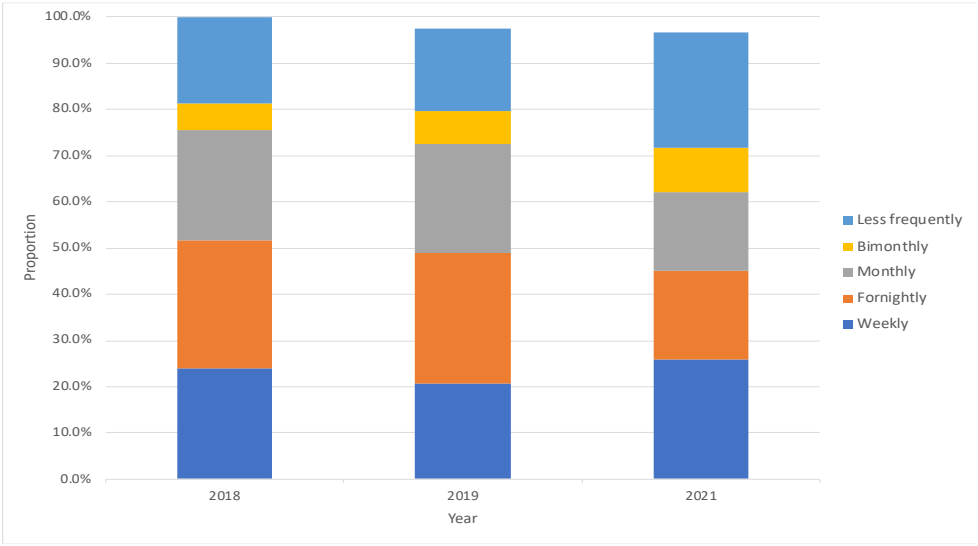
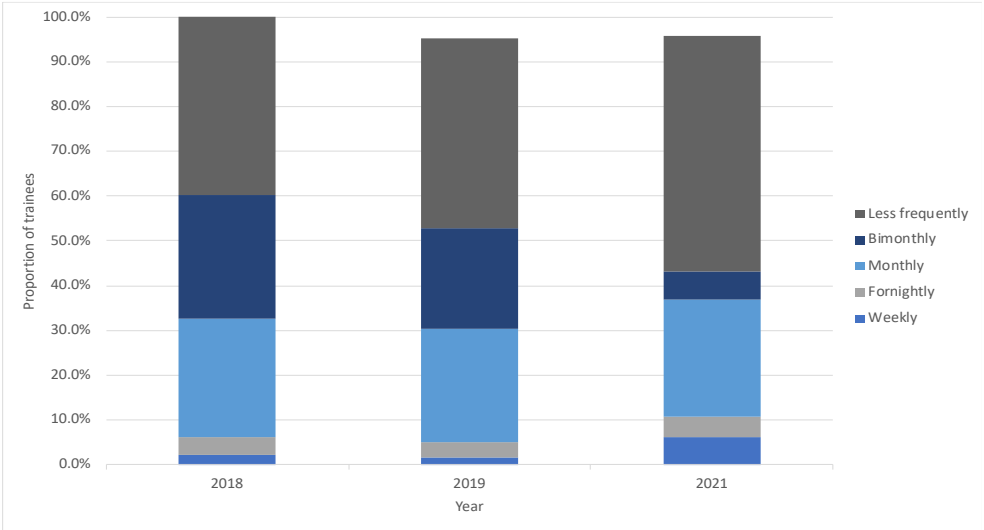


Figure 11 - Frequency of attendance reported by trainees to regional teaching, by TEF year



Discussion

Summary of findings

Comparison of RCOG TEF results from during the COVID-pandemic (2021), to the two continuous years prior to the pandemic (2018 and 2019), identified a fall in the proportion of trainees reporting a positive experience in both general gynaecology training and gynaecology procedures. Fewer trainees reported positive experiences to the GMC Training Survey, performed two months earlier, than to the RCOG survey.

In 2021, fewer than half of trainees across all regions reported that they had appropriate training opportunities in gynaecology training overall, in advanced gynaecology procedures (for those trainees in whom this is relevant) and in opportunities to attend specialist gynaecology clinics. The COVID-pandemic most affected the gynaecological surgical training experience of trainees at basic and intermediate training levels (with intermediate trainees being most affected), and also affected training in elective and office procedures but not in emergency procedures. Just over a quarter of trainees reported access to a formal programme of simulation training; ST1-2 trainees reported a reduction compared to pre-pandemic levels. Overall, only 45% of trainees reported adequate training in transabdominal ultrasound of late pregnancy, and only 35% of trainees agreed that they had adequate training in transabdominal ultrasound of early pregnancy. In particular, ST1-2 trainees reported a pandemic reduction in opportunity to train in transabdominal ultrasound of early pregnancy. Trainees at all levels reported a reduction in opportunities to attend both general and specialist gynaecology outpatient clinics with intermediate trainees being most affected.

Obstetric training was less affected. Only ST1-2 trainees reported a change in their training, with a slight increase in their opportunities to train in caesarean and assisted vaginal birth, and a slight decrease in their opportunities to attend antenatal clinics. Training opportunities in transabdominal ultrasound of late pregnancy were also unchanged.

Training in many aspects of non-clinical skills was mostly unaffected, although trainees interestingly reported an increase in opportunities to undertake clinical research, and as expected, a fall in opportunities to attend conferences and academic training opportunities (many of which were cancelled). The frequency of attendance at local and regional teaching reduced; attendance at regional teaching was most impacted.

Interpretation of findings

The first wave of the pandemic occurred between April and July 2020. It was during this time that there was probably the greatest effect on training due to the reduction in elective services and staff redeployment. The TEF did not run in 2020 but it is quite possible that if data had been collected the trends seen in the 2021 TEF data relating to gynaecological training would have been even greater. There is some evidence for this from the GMC Trainee survey 2021, which reveals a reduced number of trainees responding positively

regarding attainment of curriculum requirements than in the TEF 2021 survey across all regions – the GMC survey began in April 2021 – 2 months before the TEF survey.

Reductions in the proportion of trainees receiving sufficient training in elective gynaecology procedures at basic and intermediate training levels but not at the advanced level is explainable. Advanced level trainees are likely to have been prioritised to receive what surgical opportunities there were to enable them to complete the advanced surgical competencies in both the core and advanced curricula required for CCT. The largest decline in surgical training opportunities occurred at the intermediate training level. Current matrix requirements are that, by the end of ST4, trainees should be able to demonstrate competence in hysteroscopy and diagnostic laparoscopy and, by the end of ST5 (training waypoint), they should also be able to demonstrate competence in simple operative laparoscopy. It would be important for educational supervisors to be aware that intermediate level trainees in particular may be struggling to acquire these competencies.

One of the options to mitigate the effects of the pandemic on exposure to surgical and clinical procedures was to increase the use of gynaecological surgery simulators. Whilst there was evidence of this for advanced level trainees, there was no evidence of this for intermediate level trainees and actually a reduction was seen in the proportion of basic level trainees reporting access to programmes of simulation training gynaecological skills.

From an outpatient perspective, the reduction in the proportion of trainees who were able to access both general and specialist outpatient clinics could affect the capacity to complete ATSM's by reducing the number of clinical opportunities for trainees to manage the conditions required for completion of the curricula.

In 2021, there was regional variation in the opportunities for trainees to fulfil their gynaecological training requirements, with between 23.9% and 52% trainees reporting adequate opportunities across regions. We consider that it would be worth asking 'well-performing' regions what measures they put in place to mitigate against the loss of access to elective gynaecological procedures. Sharing of good practice may support regions who are struggling to provide opportunities during training recovery programmes.

Being a non-elective specialty, obstetrics was much less affected by the pandemic. The reduction seen in the number of training opportunities at ST1-2 level in antenatal clinics could possibly be explained by greater numbers of basic level trainees being redeployed to cover out-of-specialty clinical duties because they were more likely to have recent experience of generic medical skills.[1]

The reduction seen in access to transabdominal ultrasound training opportunities in early pregnancy may be explained by the changes to the recommendations for scanning in early pregnancy,[10] which led to a reduced number of women attending for early pregnancy scans. Alternatively, it may be explained by trainees being redeployed to help out in other

specialties, or by the expectation that social distancing be applied in ultrasound rooms, leaving no space for trainees. As this is a skill requiring competence to be demonstrated by the end of ST3, it is essential that educational supervisors are aware that trainees at basic and early intermediate training levels require sufficient opportunities to make up for any deficiencies that occurred during the pandemic.

Reassuringly, review of data relating to opportunities to develop non clinical skills showed no significant reductions apart from in rates of attendance at conferences and academic training opportunities. Due to the lockdown and the needs for social distancing many conferences and training meetings were cancelled or converted to online formats. We expect that advanced trainees were most affected by the reduced access to training courses required by ATSM curricula. Derogations to the matrix requirements were put in place by the RCOG to ensure that this did not affect the award of CCT. An increase was seen in opportunities to undertake clinical research in 2021 compared to pre-pandemic years, possibly because of both an increased opportunity to fulfil this opportunity as a result of increased cancellation of elective outpatient and theatre activity, as well as greater availability of projects inspired by the evolving pandemic itself.

The reduction in the numbers of trainees being able to access at least bimonthly teaching sessions for both local and regional training may be accounted for by the disruption to face-to-face teaching sessions because of social distancing requirements and delays in switching teaching to an online format. It is important to assess whether current provisions for both local and regional teaching are able to provide (and catch-up) for the necessary curriculum requirements.

Strengths and limitations of approach

This analysis was strengthened by the number of trainees, at all levels of training, who submitted meaningful responses to the TEF survey. This meant that we were able to compare responses by region, or by training year giving a more granular level of analysis.

The report is limited by the need to compare responses by trainees with previous TEF surveys, in order to investigate the effect of the COVID-19 pandemic on training, because there were no questions that specifically enquired about the effect of COVID-19. Whilst many questions remained unchanged between the studied time periods, the exercise still proved challenging because some questions were entirely removed or added, others differed to varying degrees and furthermore, there was also a change in curriculum across this period. It was necessary to filter all questions to identify those that were similar enough to compare.

Regional comparisons across the trainee surveys were also hampered by the previous surveys having used the old English Deanery structure to define regional trainees, whereas the 2021 survey used the new Health Education England Office structure to differentiate

between regions. This meant merging some of the Deanery regions or splitting of others. Deaneries or Schools of the devolved nations were unchanged. Whilst it would be possible to reorganise the responses from individual training units into similar regional areas, this was not possible in the time allowed to produce the thematic report.

Finally, we were limited in our ability to examine the effect of COVID-19 on advanced training, specifically on attainment of ATSM certification. The format of the ATSM-specific results was changed between the studied time periods and whilst an analysis would be possible, it was expected to be complex. Furthermore, with a large number of ATSMs available, for which there are sometimes only a small number of trainees registered, a report of its own would be required and interpretation of results may be limited because of small numbers.

Recommendations:

1. **RCOG Directorate for Education**

- Contact Heads of School in regions with a higher proportion of trainees reporting adequate opportunities to fulfil training requirements and share any specific good practice point to aid recovery programme nationally;
- Contact all Heads of Schools to ensure adequate access to simulation equipment and training is available for all trainees;
- Support 'Gynaecology Simulation Task & Finish Group' to progress development of a national package to support training recovery;
- Ensure that Heads of Schools have made necessary adjustments to the provision of regional teaching and training programmes, intended to meet curriculum requirements.

2. **Heads of School**

- Ensure all trainees, specially ST1-2 who have been worst affected, have appropriate access to gynaecological simulators to facilitate development of technical skills and completion of matrix requirements;
- Consider developing regional networks whereby regions with good simulation facilities support regions where these may not be readily available;
- Ensure that local training units have made necessary adjustments to the provision of their local teaching and training programmes.

3. Educational Supervisors

- Meet with all trainees, but specifically ST3-5 who have been most affected, and have a focused meeting on the personal impact of the pandemic on their training in general gynaecology training or gynaecological procedure. A plan should be developed for any reported residual deficiencies in-terms of procedural confidence or matrix competencies;

- Develop strategies and measures to ensure adequate facilities are in place to support training in transabdominal ultrasound in early pregnancy, ensuring trainees achieve the necessary competence by the end of ST3. This could include the use of ultrasound simulators where available.

References

1. Royal College of Obstetricians & Gynaecologists. The impact of the redeployment of maternity staff during COVID-19 2020 [Available from: https://www.rcog.org.uk/en/careers-training/workplace-workforce-issues/impact-redeployment/ accessed 02 July 2020.
2. General Medical Council. The state of medical education and practice in the UK 2021 [Available from: https://www.gmc-uk.org/-/media/documents/somep-2021-full-report_pdf-88509460.pdf?la=en&hash=058EBC55D983925E454F144AB74DEE6495ED7C98 accessed 28 April 2022.
3. National Health Service. Redeploying your secondary care medical workforce safely. Version 2.0. 2020 [Available from: https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/03/C0666_Redeploying-your-secondary-care-medical-workforce-safely-v-2_14July.pdf accessed 28 April 2022.
4. Royal College of Obstetricians & Gynaecologists. Framework for staffing of obstetrics and gynaecology units during the COVID-19 pandemic 2020 [Available from: https://www.rcog.org.uk/media/4v1jbiro/2020-05-22-framework-for-staffing-of-obstetrics-and-gynaecology-units-d.pdf accessed 28 April 2022.
5. NHS England & NHS Improvement. Revised arrangements for NHS contracting and payment during the COVID-19 pandemic 2020 [Available from: https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/03/COVID-19_NHS-contracting-and-payment_26-March.pdf accessed 28 April 2022.
6. NHS England & NHS Improvement, Health Education England. Agreed principles and guidance around training in the Independent Sector for organisations working under the COVID 19 National Contract. 2020 [Available from: https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/09/C0730-NHSEI-and-HEE-Joint-Clinical-Trainee-Letter.pdf accessed 28 April 2022.
7. General Medical Council. Derogations from approved curricula 2021 [Available from: https://www.gmc-uk.org/education/standards-guidance-and-curricula/curricula/derogations-from-approved-curricula accessed 28 April 2022.
8. Royal College of Obstetricians & Gynaecologists. Training Evaluation Form (TEF) [Available from: https://www.rcog.org.uk/careers-and-training/starting-your-og-career/specialty-training/assessment-and-progression-through-training/training-evaluation-form-tef/ accessed 28 April 2022.
9. General Medical Council. National training survey [Available from: https://www.gmc-uk.org/education/how-we-quality-assure/national-training-surveys accessed 28 April 2022.
10. Royal College of Obstetricians & Gynaecologists. Guidance for rationalising early pregnancy services in the evolving coronavirus (COVID-19) pandemic 2020 [Available

from: https://www.rcog.org.uk/media/qxab0tfp/2021-05-25-guidance-for-rationalising-early-pregnancy-services-in-the-evolving-coronavirus-covid-19-pandemic.pdf accessed 28 April 2022.