

Repercussions of COVID-19 Pandemic on Urology Residency Training and Career Prospects in India

ABSTRACT

Background: COVID-19 pandemic called for residents from all specialties to care for COVID patients and elective admissions and surgeries to be deferred. After 2 years into pandemic, residents who lost on surgical hands-on experience are now completing their training and start individual practice. **Aim:** This study aimed at gauging repercussions of COVID-19 pandemic on training, surgical hands-on experience and career prospects of urology residents in India. **Materials and Methods:** We conducted a nationwide, anonymous, and online survey among urology residents in India from May 14, 2022, to June 5, 2022. Trainees who were during second or third year of their training as on March 2020 were included in the study. The period that was considered was between March 2020 and March 2022. The questions covered six domains – Demographic data, workload before and during the pandemic, training, social impact, future prospects, and suggestions. This questionnaire was circulated through social media (Facebook, WhatsApp, and Twitter) as well as E-mail. **Results:** We received 58 responses over 3 weeks, majority of residents agreeing to negative impact of pandemic on training, surgical hands-on experience, and social life. Those who were in final year of training at start of pandemic felt less confident ($P < 0.05$) to start individual practice after obtaining degree. Majority residents suggested inclusion of virtual training/wet laboratories or postings at subspecialty centers. **Conclusions:** Urology training needs to include more competency based training methods and extend psychosocial and career related support to young urologists affected by pandemic.

Key words: COVID-19, Impact, Residents, Training, Urology

INTRODUCTION

The COVID-19 pandemic has now entered its 2nd year after wreaking havoc with three waves of case surges. With resources and manpower being diverted for the management of these cases, elective surgical work was severely hit during the pandemic and so was training of urology residents all across the globe.^[1] Individuals who were trainees during these 2 years who have now cleared their qualifying examinations plan to foray into surgical practice. We intend to understand if the loss of hands-on training has had any impact on the future career prospects for these trainees and what are likely measures that can be taken for the subsequent batch of trainees.

MATERIALS AND METHODS

We conducted a nationwide, anonymous, and online survey among urology residents in India for 3 weeks from May 14, 2022, to June 5, 2022, to study the impact of COVID-19 on urology training in India. Trainees who were during second or 3rd year of their training as on March 2020 were included in the study. The period that was considered was between March 2020 and March 2022. The questionnaire was devised with questions spanning domains – Demographic data, workload before and during the pandemic, training, social impact, future

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prospects, and suggestions. This questionnaire was circulated through social media (Facebook, WhatsApp, and Twitter) as well as E-mail. In this nationwide survey, we received 58 responses over 3 weeks.

RESULTS

Demographic representation [Table 1]

Respondents' age ranged from 28 to 37 years with maximum respondents between 31 and 35 years of age. Nearly 69%

Table 1: Profile of respondents

| Study variable | Frequency (n=58) | Percentage |
|------------------------------------|------------------|------------|
| Age Group | | |
| 30 and below | 7 | 12 |
| 31–35 | 47 | 81 |
| 36–40 | 4 | 7 |
| Region | | |
| West | 40 | 69.0 |
| South | 11 | 19.0 |
| North | 6 | 10.3 |
| East | 1 | 1.7 |
| Year of Residency | | |
| Second | 33 | 56.9 |
| Third | 25 | 43.1 |
| Programme | | |
| DrNB | 23 | 39.7 |
| MCh | 35 | 60.3 |
| Institute | | |
| Government/Public sector | 26 | 44.8 |
| Private | 32 | 55.2 |
| Source of Learning during Pandemic | | |
| Classroom/PG activity/Journal Club | 13 | 22.4 |
| Primarily Web based | 45 | 77.6 |

of respondents were from Western India. Majority of the respondents were in their second year of training (56.9%). About 55.2% worked in private sector hospital.

Comparison in workload reduction before and during pandemic

On call duties, diagnostic procedures and endoscopic procedures were the most frequent procedures held whereas minimally invasive surgeries and major open surgeries had less frequencies before pandemic. It was found that minimally invasive and major open surgeries took a severe hit during the pandemic with majority respondents (50% and 56%, respectively) perceiving >75% reduction in frequency of these surgeries during the pandemic [Figure 1]. This was consistent with results found in other studies.^[2-3] About 79.3% of respondents had worked in COVID wards, 62% of respondents claimed that they were provided sufficient PPE, and 53.4% were redeployed to work in other departments.

Impact on educational activities

Majority (58.7%) respondents felt that they found more time for reading, but only 44.9% felt that they found more time for research activities. This could be due to low outpatient visits and decreased admission rates. This was consistent with results

Table 2: Confidence to start individual practice

| Region of India | Do you feel confident to start individual practice after finishing training | | | Fisher's exact |
|------------------------------|---|------------------|-------------------|-----------------------|
| | May be 14 (24.1%) | No 30 (51.8%) | Yes 14 (24.1%) | |
| East | 0 0.0% | 1 100% | 0 0.0% | P=0.735 |
| North | 0 0.0% | 5 83.3% | 1 16.7% | |
| South | 3 27.3% | 5 45.5% | 3 27.3% | |
| West | 11 27.5% | 19 47.5% | 10 25% | |
| Year | | | | |
| 2.0 | 8 24.2% | 13 39.4% | 12 36.4% | P=0.03 Significant |
| 3.0 | 6 24% | 17 68% | 2 8% | |
| Course | | | | |
| DrNB | 6 26.1% | 14 60.9% | 3 13% | P=0.340 |
| MCh | 8 22.9% | 16 45.7% | 11 31.4% | |
| Institute | | | | |
| Government/ Public sector | 6 23.1% | 12 46.2% | 8 30.8% | P=0.609 |
| Private | 8 25% | 18 56.3% | 6 18.8% | |

of other study done in India.^[4] About 72.4% of respondents found webinars to be useful source of learning and online classes were the most common source of learning during the pandemic. About 91.4% of respondents felt that they missed opportunities to attend conferences during this period.

Social impact

Only 41.3% trainees felt that they could devote more time for family and hobbies and had schedule flexibility during this period and 64.8% felt anxious, stressed, and burnt out during this period. Periods of quarantine and feelings of stigmatization along with rejection at home or neighborhoods^[5] could have been underlying causes to this looming threat of wide spectrum of mental health consequences of the pandemic on “first responders.”

Impact on future prospects

An astonishing 67.2% of respondents positively affirmed decreased job opportunities attributable to pandemic; 51.7% did not feel confident enough to start individual private practice. On statistical analysis using Fischer's exact test, this lack of confidence was more with the batch in their 3rd year of residency ($P = 0.03$) as compared to those who were in

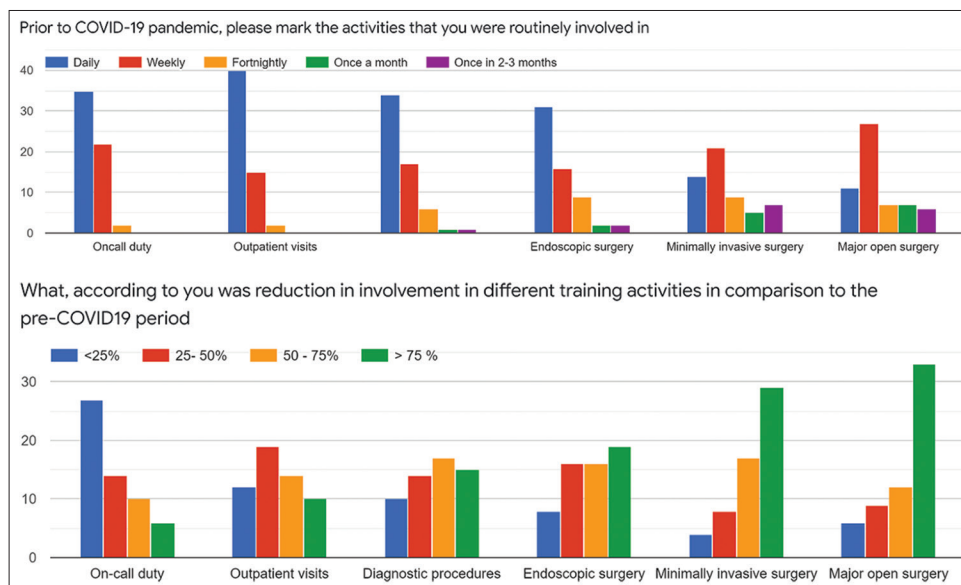


Figure 1: Pre- and post-COVID 19 work comparison

2nd year. This can be explained on basis that residents get to perform surgeries as operating surgeon or first assistants mainly in 3rd year of residency. There was no statistical difference in lack of confidence in starting individual practice among M.Ch. versus DrNB candidates or government sector versus private hospitals and across all four regions of India [Table 2] These are unnerving numbers which have hitherto been never directly addressed in urology surveys from India pertaining to this topic.^[2,3,6]

Suggestions

About 39.7% of trainees felt that their residency program should have been extended to make up for lost periods of training but 72.4% felt that they should have been posted at other hospitals catering cases of certain subspecialties or those with higher case load. About 79.3% of felt the need to incorporate wet training laboratories/virtual simulators in their training programs.

CONCLUSIONS

Urology is a superspecialty branch where majority trainees are in their thirties having traversed atleast a decade into medical training. This, apart being a productive age group, is also a period where most trainees have family responsibilities, face struggles to settle, and probably have financial needs to be addressed. Nearly, every study on impact of the pandemic on urology training at national and multinational level^[1,3,7] has depicted worrisome decrease in hands on surgical experience. This may cause a feeling of incompetence to set in. Hence, it is an unspoken responsibility on teaching institutions to prevent further burnout, anxiety, and extend psychological support

in the form of counseling and helplines.^[5] Young urologists who intend to start practice in metropolitan cities should be incorporated in groups to offer them support.

There is definitely a demand to incorporate simulators and wet training laboratories into training.^[8] Centers who cannot afford this setup should consider posting their residents at other hospitals endowed with this infrastructure. Centers of excellence in subspecialties such as laparoscopy, robotic surgery, reconstructive urology, transplant, and urooncology should consider short-term fellowships or observerships, cadaver workshops, live operative workshops for the batch of residents who have missed on training, and possibly offering discounts on fees. Teaching institutes to ensure maintaining log books of cases performed or assisted and reviewed regularly to check areas where particular trainee is lacking exposure.

This pandemic has brought out novel methods of teaching in terms of webinars and online classes. Active participation of residents should be encouraged by keeping interactive sessions over didactic lectures.

As norms are now easing and majority population is now vaccinated, conferences with physical attendance should be resumed to encourage residents to present their work.

Finally, we should not forget that all work and no play makes Jack a dull boy. Urology is a specialty with high burnout rate^[9] and hence pursuing hobbies, participation in extracurricular activities should be encouraged.

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