

# TESTING

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Dr Sarah Pitt and Dr Mark Erickson report the findings of their research into the feelings of UK biomedical scientists and other IBMS members during the COVID-19 pandemic.

Since December 2019 the world has witnessed an unprecedented level of change as a result of the COVID-19 pandemic. International borders have closed, countries have enforced lockdown measures, and daily reporting of death rates has become normal. The global health crisis has prompted a global response from national governments and international agencies. This response has catapulted healthcare professionals and public health workers into the spotlight:

their actions literally do have life or death consequences for individuals infected with the virus.

In the UK we saw a complex package of public health measures rolled out across the country from early 2020. The government produced simple messages to encourage personal and social hygiene to reduce transmission of respiratory infections. The importance of rapid and accurate testing of symptomatic patients and their contacts became clear early on in the pandemic. It also later transpired that a significant proportion of those infected

could be asymptomatic. Therefore “testing and tracing” and the overall public health response has been the subject of much discussion by politicians, opinion formers in the media, but also laboratory and public health professionals.

## The forefront of testing

IBMS members have been at the forefront of the testing programme. Biomedical scientists, clinical scientists and assistant and associate practitioners in diagnostic laboratories have rapidly implemented SARS-CoV-2 PCR testing. They have been



“I feel as though I am making a difference, but that it is not recognised or appreciated outside of my profession”

making a vital contribution to the assessment and monitoring of patients who are seriously ill with COVID-19. Serological surveys for anti-SARS-CoV-2 have also been incorporated into the testing repertoire. However, anticipating a lack of testing capacity across the existing diagnostic laboratory networks, the UK government set up three “Lighthouse Laboratories” to extend testing capacity. In April 2020 two English laboratories were set up by accountancy firm Deloitte and bypassed both the NHS and public health laboratories, and the Scottish one was

organised by the University of Glasgow. The SARS-CoV-2 PCR testing regime was then organised into “Pillars”: Pillar 1 was NHS and public laboratories, which processed tests from patients and some healthcare workers and Pillar 2 was the Lighthouse Laboratories. Testing became a major topic for the news media throughout 2020. The UK government particularly focused on setting and meeting “targets” for processing numbers of tests. This was not always led by the usual considerations of clinical requirements. Issues with testing, such

as prolonged turnaround times and results not being reported to local public health authorities, were regularly and widely reported. It was not always clear that these problems related to the Lighthouse Laboratories. Similarly, it was the Pillar 2 system where staff experienced computer database glitches and health and safety breaches.

### Testing and screening

In the autumn of 2020, the government increased the emphasis on the importance of the testing programme as a way of

curbing the pandemic and “defeating the virus”. To that end, they introduced “screening” using a variety of point-of-care tests. Mass testing outside of the laboratory setting using a lateral flow antigen test began in the city of Liverpool. The test was intended by the manufacturers to be used as a rapid test for symptomatic patients, but is being used to screen asymptomatic individuals. Universities were asked to use it to test students in December 2020 before they returned home. The plan to continue to use it was paused in January 2021, due to a surge in cases of the SARS-CoV-2 virus and a decision by the Medicines and Healthcare Products Regulatory Agency (MHRA) not to approve it for use in regular screening of pupils and staff in schools.

Although this screening is not being conducted in laboratories or by registrant laboratory professionals, it is nevertheless included in the national discourse about testing. The IBMS has provided resources for its members about all the available test assays and it has promoted the profession and offered professional advice.

By autumn 2020 it became clear that the UK testing programme was in some disarray, having faced communication problems, equipment and staff shortages since the start of the pandemic, and this led to media criticism. Bearing the brunt of this were biomedical scientists working in NHS facilities, many of whom are members of the IBMS. We decided to investigate how these workers were coping with being the focus of media attention, and also how their working lives had changed through the course of the pandemic. Our brief online survey, which was disseminated using social media and via the IBMS website, attracted 164 responses, of which 98 were complete. Despite this low response rate, we collected data from a good cross-section of IBMS members in terms of age, gender, grade and region. We present some results here, with a particular focus on our two research themes: How did

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38%

OF PARTICIPANTS REPORTED BEING LESS SATISFIED IN THEIR WORK NOW

biomedical scientists feel about the way their profession, work and response to the pandemic was represented in the media? And in what ways had their work changed as a result of the pandemic?

### Job satisfaction/work changes

Over 60% of participants reported that their workload had increased, and over 50% said they had continued to carry out their usual duties and took on new duties because of the pandemic (Fig 1/ Fig 2).

Such a large amount of change in work practices and level would likely have an effect on job satisfaction.

We asked participants to report on their job satisfaction and also on how this had changed because of the pandemic. IBMS members show high levels of general job satisfaction, but it is clear that the pandemic has caused a lot of disruption to this usual pattern (Fig 3/ Fig 4).

In total, 38% of participants reported being less satisfied in their work now. We followed up this question by asking respondents to explain further by providing some text comments (n=67). We carried out a basic thematic analysis of these text comments and found, perhaps unsurprisingly, that almost a third reported more pressure at work. Typical comments included:

*“Having to work six days a week every week and longer hours. It is too much.”* – Band 7 senior biomedical scientist

*“I love my job but the extra work and staff shortages are exhausting.”* – Band 5 biomedical scientist

*“Still proud of what I do, but due to high workload other aspects have slipped and I am not completing all the tasks I should.”* – Band 7 senior biomedical scientist

*“I feel overwhelmed and under pressure to increase capacity and turnaround time for Sars-CoV-2 testing as well as keep on top of stock control, quality assurance, staff training and competencies.”* – Band 7 senior biomedical scientist

*“Work was really bad, huge pressures to deal with routine work and now... we have to deal with COVID samples also.”* – Student/trainee biomedical scientist

Other prominent themes included identification of positive work changes:

*“I enjoy new challenges.”* – Band 7 senior biomedical scientist

*“I have got more involved in training and hence [the] IBMS. It has given me a sense of purpose.”* – Band 6 specialist biomedical scientist

*“I feel that work being done by my team is helping towards finding a cure and that our contribution has been vital to research. I have enjoyed the collaborative nature of working across many disciplines both academic and clinical.”* – Band 8 biomedical scientist/manager

*“Seeing through the media, family and friends everyday the impact of COVID and knowing you are actively helping with the national effort every day by doing your usual job, really gave a morale boost to myself. We all work in the NHS to help people but sometimes with the heavy workloads*

## FIGURES 1–6: SURVEY RESULTS GRAPHS

N\* INDICATES THE NUMBER OF MISSING VALUES [ME: STANDARD SOCIAL SCIENCE NOTATION]

Figure 1: Reported changes to workload during 2020, (n=97 n\*=1)

### Workload: My workload...

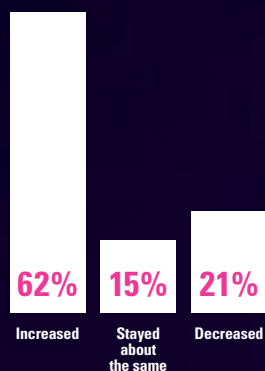


Figure 2: Changes to work practices during 2020 (n=97, n\*=1)

### Work Practices: While at work...

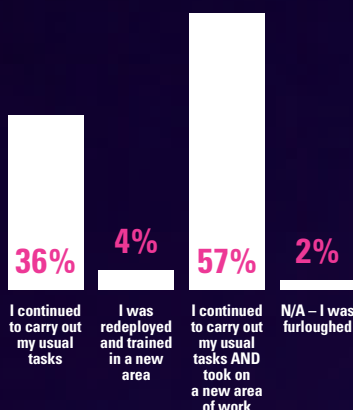


Figure 3: Reported overall job satisfaction (n=89, n\*=9)

### Overall, I am satisfied in my work.

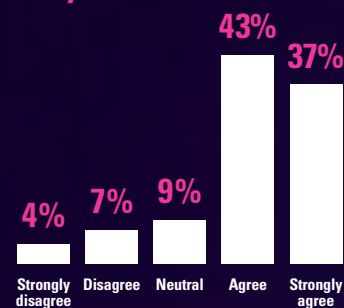


Figure 4: Change in reported work satisfaction (n=95, n\*=3)

### Are you more satisfied in your work now than before the COVID-19 pandemic started?

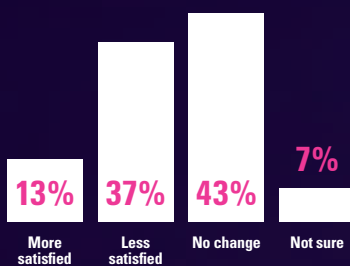


Figure 5: Media reports and feelings (n=98)

### Media reports about the contribution of healthcare workers during the COVID-19 crisis have made me feel...

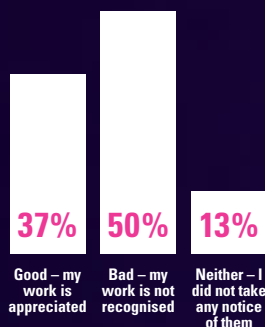
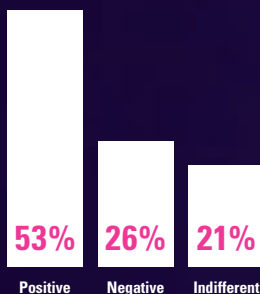


Figure 6: Assessment of media reports (n=98)

### In general I feel that media representations of healthcare workers during the COVID-19 crisis have been...



and stress staff can become disillusioned but this brought to the forefront of the mind why we work in the NHS every time I left for a day, night or weekend shift. I think I moaned less to my manager as well!" – Band 6 specialist biomedical scientist

However, in contrast to this comment many participants identified a lack of public and institutional recognition and support:

"I feel as though I am making a difference, but that it is not recognised or appreciated outside of my profession." – Band 7 senior biomedical scientist

"I feel we have been overlooked as a profession. Additional resources poured into NHS path labs would have been a much better option and provided long-term benefits for the service and staff. This was our opportunity to shine as a profession and the government took it away from us." – Band 8 biomedical scientist/manager

"No appreciation, no support." – biomedical scientist, grade not specified

"The establishment in which I work has shown little appreciation for the efforts we have made to deliver a full and timely service. It merely complains and blames when results have been delayed." – Band 6 specialist biomedical scientist

The theme of feeling blamed and scapegoated also appeared in comments about media representations, which we will turn to now.

### Media reporting and representations of biomedical scientists

We asked participants to report on their perceptions of media reports, and also how these made them feel about themselves and their work (Fig 5/Fig 6).

We followed this second question up with a request for participants to explain in their own words how the media portrayal of diagnostic laboratories and staff working in them during the pandemic had made them feel. We carried out a basic thematic





analysis of the 76 write-in text comments.

The strongest theme that emerged was a thoroughgoing criticism of the media as a whole for misrepresenting and misunderstanding the testing process and the landscape it sits within. Here are some typical comments:

*"I think the negative focus on the labs' testing capabilities has been really upsetting for our team. The team have adapted brilliantly, go above and beyond but according to media it's never good enough. Really disappointed in the media's representation of the labs during the pandemic."* – Band 8 biomedical scientist/ manager

*"It has undermined the message I have been giving for the last 40 years on the importance of the biomedical science profession. As a virologist it has been hard to take the ignorance spouted by the media."* – Band 8 biomedical scientist/ manager

*"It's a joke. Mainstream media should be ashamed."* – Band 7 senior biomedical scientist

*"Media [has] not helped saying army doing tests and then saying labs have been poor to get the test results back."* – Band 5 biomedical scientist

*"The media has not indicated the differences between pillar 1 testing laboratories (NHS) & Pillar 2 (Government) lighthouse labs. I feel disappointed that the public may think that the*

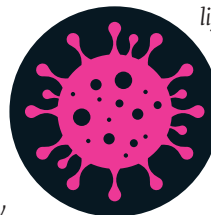
*poor turnaround of results from the lighthouse labs is anything to do with the NHS labs."* – Band 7 senior biomedical scientist

*"The media hasn't portrayed biomedical scientists like me. Instead it has focussed on private labs staffed by non-professional lab workers. If anything this has had a negative impact upon public perception of 'lab staff'."* – Band 6 specialist biomedical scientist

This trenchant criticism of the media's understanding of the science and practicalities of laboratory testing was coupled to considerable dismay at the operation of the UK's Lighthouse Laboratories, which received very heavy criticism for a range of perceived flaws and faults:

*"Very disappointed, the lighthouse lab poor service is bringing the rest of the profession into disrepute. There is no requirement for staff to have the correct qualifications, HCPC registration, UKAS registration, IBMS training portfolio, or the requirements to follow SOPs or SMIs as required in NHS or PHE labs."* – Band 6 specialist biomedical scientist

*"Some of the lab staff I worked with in the early days of the pandemic worked 7 days a week. I don't think you would have got this in a*



*lighthouse lab. Also, the media don't distinguish between NHS labs and lighthouse labs, so when there's test result issues (such as delays or inability to get a test) its automatically thought of as an NHS issue."* – Band 7 senior biomedical scientist

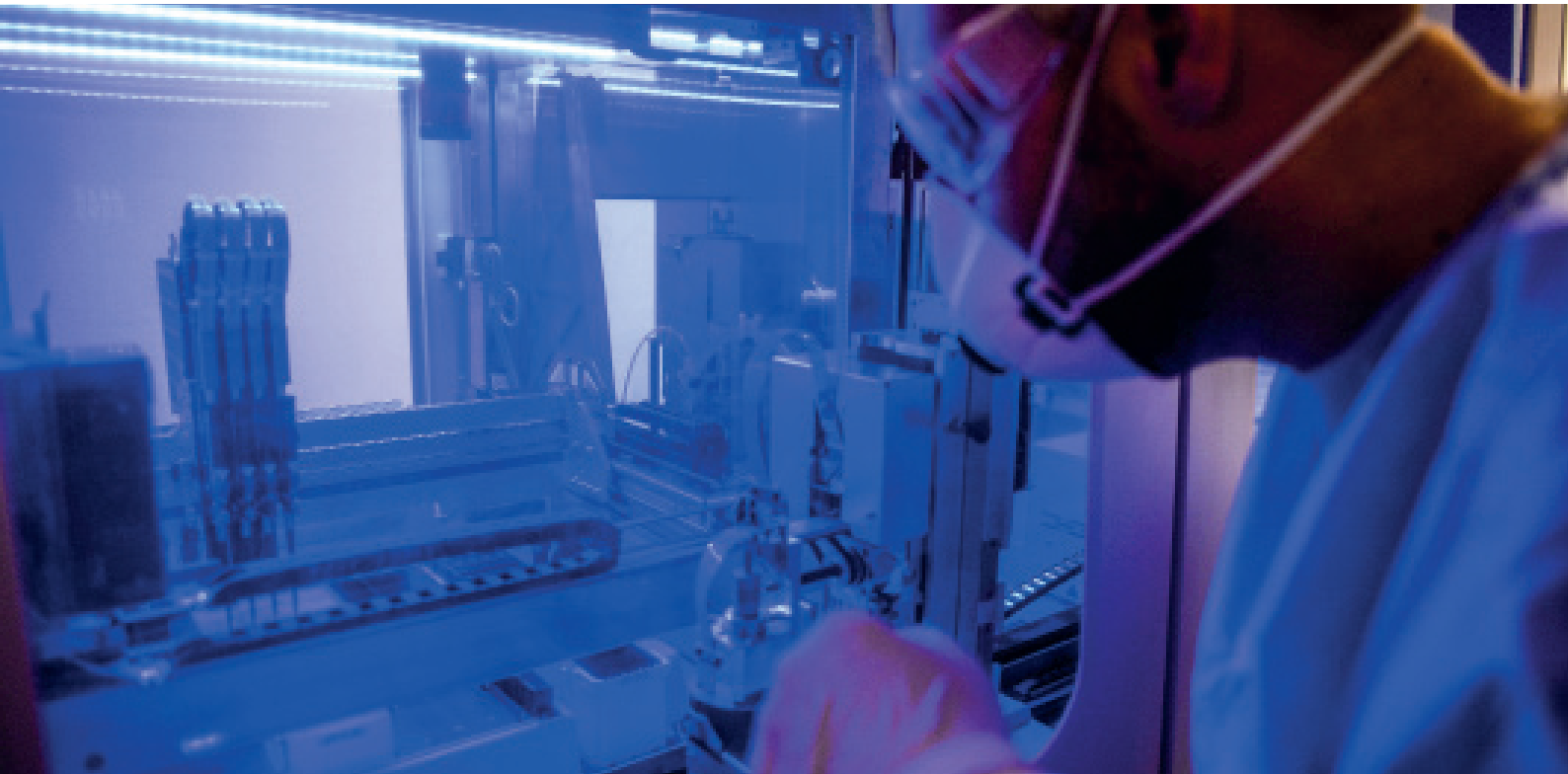
*"Annoyed due to the problems with lighthouse labs which has portrayed the real biomedical scientists in a bad light."* – Band 7 senior biomedical scientist

*"It annoyed me about the lighthouse labs and the use of unregistered members in private healthcare testing. I trained for years to get my registration!"* – Band 5 biomedical scientist

*"The Lighthouse labs have predominantly unqualified staff and that portrays the profession negatively as the public aren't aware there's a difference. Sampling is not testing!"* – Band 7 senior biomedical scientist

*"The IBMS has tried hard against the tide to promote the profession, but this voice is drowned out among bad publicity for testing centres employing non-biomedical scientist staff. This is demoralising."* – Band 8 biomedical scientist/manager

*"There has been confusion in respect of accredited laboratories and the lighthouse non-accredited labs. The IBMS President has done a fantastic job in trying to rectify these*



*misrepresentations.*” – Band 8 biomedical scientist/manager

Media representations did, for a small number, engender positive feelings and emotions:

*“It has shown the vital role that is played by staff in the laboratory.”* – Band 8 biomedical scientist/manager

*“Proud of the work we do and have been doing before the pandemic (when there was little to no recognition). The media did actually focus on laboratory staff as well as clinicians which I found a welcome surprise.”* – Band 6 specialist biomedical scientist

*“I feel valued, appreciated and fulfilled in my profession.”* – Band 6 specialist biomedical scientist

However, the vast majority of comments reflected participants’ sense that they were not appreciated or recognised.

These are typical responses to the question of “how did media representations make you feel?”:

*“Invisible.”* – Band 6 specialist biomedical scientist

*“We’re still seen like backstage workers, that no one knows we’re there or that we just there to put a test tube in a machine and the results just appear magically in the doctors and nurses hands.”*

– Band 6 specialist biomedical scientist

*“I work for PHE and found out about the proposed changes in the press. We have been made to feel that we are not fit for purpose, when we have been the backbone of the COVID testing work in the*

*country.”* – Band 7 senior biomedical scientist

*“Not valued. Like we don’t exist. Unfortunately, it is not only the media but our own Trust that not once has thanked us for the hard work.”*

– Student/trainee biomedical scientist

*“Undervalued and misunderstood.”* – Band 6 specialist biomedical scientist

*“Unappreciated and as though the poor testing situation is the fault of laboratories.”* – Band 8 biomedical scientist/manager

The media did actually focus on laboratory staff as well as clinicians which I found a welcome surprise

But more than just a lack of recognition or appreciation, a number of participants felt that they were being blamed and scapegoated for problems in the testing system that were simply beyond their control:

*“I feel we are continually blamed about test turnaround times, unavailability of tests, etc. The government have set up new testing facilities very quickly, I feel that this investment should have been made in the current laboratory services to enable us to provide a quicker, more efficient testing and turn around process.”* – Band 7 senior biomedical scientist

*“Mixed NHS with non accredited non professional labs and blamed us for testing failure.”* – Band 7 senior biomedical scientist

*“Delays in turn around times blamed on laboratories is not a fair judgement when*

48%

MANY PARTICIPANTS REPORTED THAT THE WAY THEIR TEAM WORKED TOGETHER HAD IMPROVED THROUGH THE PANDEMIC

NHS laboratories have been stripped to the bone. With proper investment in technology and people, NHS laboratories could have performed exceptionally well and expanded to take on all of the local coronavirus testing. Turn around times would have been better and result relayed to GP's or health professionals sooner. The media has not given the full story." – Band 6 specialist biomedical scientist

"Diagnostic laboratories have been blamed for lack of testing, delays in testing. The COVID testing has been additional to normal workload with no extra staff. Just blame the labs is what it feels like." – Band 7 senior biomedical scientist

Finally, a recurring theme was the sense of frustration: with the government, the media and the lack of support and equipment:

"I feel frustrated. Although I don't work in microbiology the fact the government decided to invest in private labs to carry out testing rather than improving hospital laboratories has fed into a belief that NHS scientist are not as good as university based staff. This has been followed up in the media. When things have gone wrong the NHS staff have been blamed and our knowledge and expertise is down played constantly. Whilst nursing and medical staff have rightly been celebrated the same hasn't happened with pathology staff." – Band 7 senior biomedical scientist

"Frustrated, we can do the tests but supplies of kits have been purposely limited." – Band 6 specialist biomedical scientist

"It is very frustrating to hear that there was a delay between April and October for the Health Minister at Westminster to respond to the plea and listen to the IBMS advice relating to laboratory investigations, equipment, supplies and the need to work collaboratively with Lighthouse labs and NOT waste public money on project managers who really do not understand the logistics of pre-analytical, analytical and post analysis all needing to be joined up for an audit trail and speedy turn around times." – Band 8 biomedical scientist/ manager

"To some extent [the media] failed to recognise existing NHS lab staff. Frustrating. IBMS President

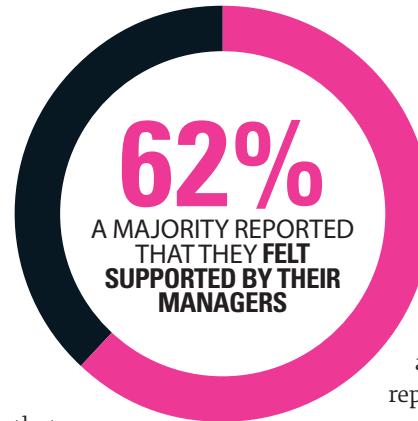
has done a fantastic job in trying to rectify this issue." – Band 8 biomedical scientist/manager

## Summary

In summary we can see that these have certainly been testing times for staff in diagnostic laboratories. They have faced considerable changes to their work practices and workloads as a result of the pandemic, and we are particularly grateful to those IBMS members who took time out from such busy schedules to complete our survey. Despite increased workload and pressure at work, job satisfaction remained high and, for some of our participants, actually increased. Many participants reported


## FURTHER READING

- ✓ **The BMJ** – The UK's public health response to COVID-19 [bit.ly/TestingTimes1](https://www.bmj.com/TestingTimes1)
- ✓ **Gov.uk** - Glasgow COVID-19 Mega Lab Opens [bit.ly/TestingTimes2](https://www.gov.uk/TestingTimes2)
- ✓ **Gov.uk** – Virus tests conducted in the UK [bit.ly/TestingTimes3](https://www.gov.uk/TestingTimes3)
- ✓ **BBC News** – Coronavirus testing lab "chaotic and dangerous", scientist claims [bit.ly/TestingTimes4](https://www.bbc.com/news/TestingTimes4)
- ✓ **Liverpool Express** – COVID testing: your questions answered [bit.ly/TestingTimes5](https://www.liverpoolecho.com/TestingTimes5)
- ✓ **The BMJ** – Covid-19: Government uses lateral flow tests to keep children in schools against regulator's advice [bit.ly/TestingTimes6](https://www.bmj.com/TestingTimes6)
- ✓ **Gov.uk** – Guidance: Student movement and plans for the end of term [bit.ly/TestingTimes7](https://www.gov.uk/TestingTimes7)
- ✓ **IBMS** – COVID-19 resources [bit.ly/TestingTimes8](https://www.ibms.org.uk/TestingTimes8)



that the way their team worked together had improved through the pandemic (48%), and a majority (62%) reported that they felt supported by their managers.

In addition, 80% felt that the IBMS had done a good job in representing them and their work to the outside world.

However, it is when we consider the world beyond the laboratory that we find some very significant issues emerging for biomedical scientists. Feelings of a lack of appreciation from the media and the public, despite participants noting that the media represented healthcare workers positively, were expressed by many. The efforts of the IBMS to promote the profession were noted and appreciated and participants commented positively about the regular media appearances of the IBMS President. Nevertheless, this survey found a sense of frustration with the media, the government and external institutions, and a general feeling of the media not understanding their role, the processes they were involved in, and the science behind testing were also expressed by participants. Perhaps most significantly, a number of our participants felt that they were being blamed and scapegoated for things that were simply beyond their control. Given these negative findings it is perhaps surprising that job satisfaction remains so high amongst biomedical scientists and other IBMS members. This highlights the need for further research into this important professional group. 



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