Clinician of the Future 2023 Education Edition

Elevating global voices in healthcare

Summary Report

In the new report Clinician of the Future: Education Edition, from Elsevier Health, students share insights into their education, career plans and expectations of future trends in healthcare. Their views, set alongside those of practicing clinicians, give an indication of trends in healthcare and highlight potential problems to address. Here we share a summary of our key findings.

The views of students and their instructors, set alongside those of practicing clinicians, give an indication of trends in healthcare and highlight potential problems to address. It builds on findings from the global research conducted in the inaugural Clinician of the Future Report and this year's Clinician of the Future 2023: Elevating global voices in healthcare.

Student: In this report, we share insights from medical students and nursing students; unless specified, we are referring to a mix of both.

Clinician: In this report, when we talk about 'clinicians' we are referring to physicians and nurses in primary and secondary care.

Student survey

10-15-minute online survey

n=2,212 students from 91 countries
April and May 2023

See the [full report](#) to explore the methodology and results in more detail.

Clinician of the Future: Education Edition

The new report presents the results of a survey of 2,212 students from 91 countries and two roundtable sessions with key opinion leaders in faculty in the USA and UK. The aim is to gain a deep understanding of students' experiences today and their expectations of the future in healthcare, as well as the perspectives of those instructing them.
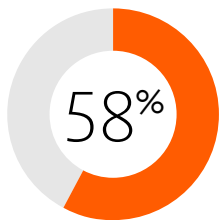
Students seeking broader horizons

For details, see Chapter 1 of the [full report](#)

Students are committed to and positive about their education, but with concerns about mental health, study–life balance, combined with external worries such as the rise of misinformation and looming clinician shortages, some are considering quitting their course altogether, while others are thinking about non- patient-facing roles once qualified.
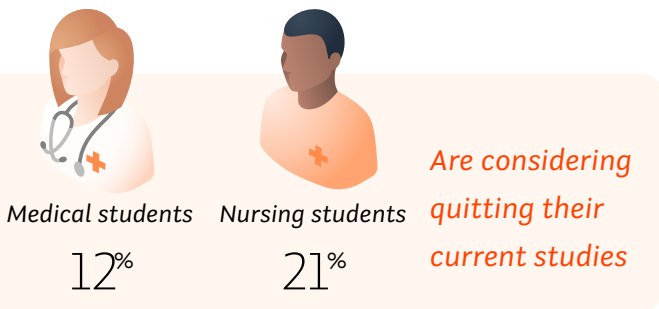
> "I will use current studies to broaden my horizons and look for other possibilities where I don't directly treat patients"
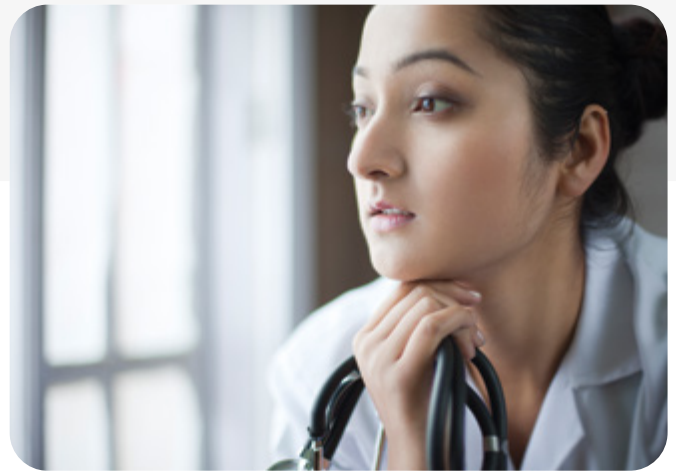>
> Medical student, 2023 survey

58% see their current studies as a stepping-stone towards a broader career in healthcare

While a minority of students plan to quit their studies, the majority report that they plan to move into roles in which they will not treat patients directly. Globally, 58% of students (54% medical students, 62% nursing students) see their current studies as a stepping-stone towards a broader career in healthcare that will not involve directly treating patients. The main career paths students are interested in pursuing are public health, research and business consulting.

Medical students | **Nursing students** | *Are considering quitting their current studies*
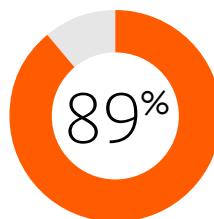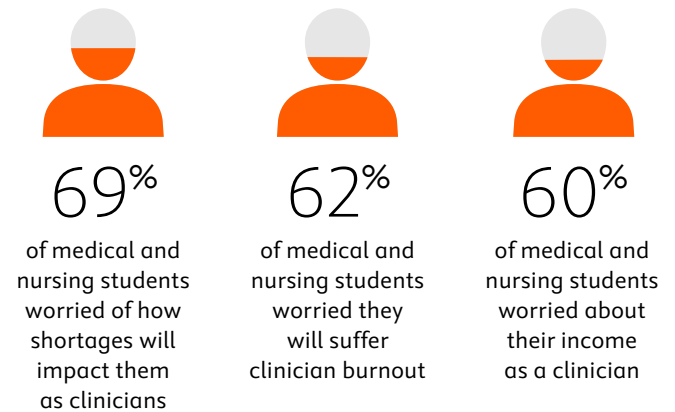12% | 21%

A proportion (16%) of students are rethinking their career on the frontline of healthcare. Nursing students (21%) are more likely than medical students (12%) to be considering dropping out. Indian nursing students also show higher desire to leave their current studies (29% versus 21% global).

25% of medical students in the USA and 21% in the UK are considering quitting their studies

60% are worried about their current mental health.

Students, like their counterparts in practice, are under a lot of pressure. Most students globally (60%) are worried about their mental health. According to their responses, some of the underlying factors might include study–life balance, financial pressure and the cost of studying, academic pressure, knowledge and misinformation, and the worry of future shortages and burnout.

69% of medical and nursing students worried of how shortages will impact them as clinicians

62% of medical and nursing students worried they will suffer clinician burnout

60% of medical and nursing students worried about their income as a clinician

89% are devoted to improving patients' lives

Despite pressures, worries and many considering quitting, students are devoted to making a positive difference in patients' lives, including in broader non-patient-facing roles like research and development, management consulting and public health.
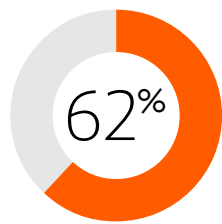
How can we adjust education to future-proof the healthcare workforce?

➤ Provide guidance and support

➤ Harness the power of AI

➤ Accelerate the evolution of education
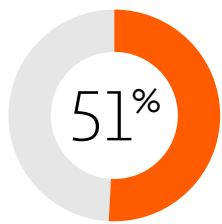
Harnessing the power of GenAI

Technology – particularly generative AI (GenAI) – is an enabler to learning, students welcome it, and over half use it today. The upward trend in support and use in healthcare that we predicted in previous Clinician of the Future reports will continue in the next generation of clinicians, most students believe GenAI will be used in clinical care, despite some concerns.
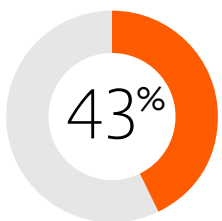
62%

Feel excited about the use of AI for their education

The majority of medical and nursing students globally are enthusiastic about the use of generative AI in their education. About three-fifths (62%) of respondents to the Clinician of the Future: Education Edition survey agree they are excited about the use of generative AI (tools like ChatGPT and Bard) for their medical or nursing education.

51%

of students are using GenAI to support their learning

Half of students globally have used tools like ChatGPT and Bard for their medical or nursing education. The top three uses among respondents are for coursework, exam preparation and to get updates on their field of study.

43%

of students say instructors are welcoming of AI

Four in 10 students say their instructors welcome their use of GenAI for education purposes, with nursing students significantly more likely to agree (49%) compared to medical students (38%). In the roundtables, while noting the potential limitations of the technology, instructors were also welcoming of students' use of GenAI.

However, while most students are excited by AI and many have used it in the course of their studies half worry about its impact on education.

51%

are worried about the impact of AI on education.

56%

fear the negative effects of GenAI on the healthcare community.

A similar proportion are concerned about the effect on clinical practice. This echoes the sentiments of today's practicing clinicians, as shared in the Clinician of the Future 2023 report.

In spite of concerns 70% think GenAI will aid diagnoses, treatments and patient outcomes in the future

Seven in 10 students believe AI advancements will aid in diagnoses, treatments and patient outcomes, and over half (56%) predict that in 10 years' time clinical decisions will be made with the assistance of GenAI.

61%
Predict patients will use AI to help manage their treatment.

56%
Estimate clinical decisions will be made with the assistance of AI tools.

81%
Scientific research will be much better integrated into clinical practice.

How can GenAI best be harnessed to support learning while alleviating students' concerns?

➤ Establish guidelines

➤ Incorporate AI into the curriculum

➤ Encourage the development of critical thinking skills

Students predict their futures

For details, see Chapter 3 of the [full report](#)

Looking at students' expectations of the future compared to the expectations of today's practicing clinicians can highlight potential trends. Students, like clinicians, see the patient of the future being more empowered, and similarly they expect more personalized treatment. They also expect preventative care will be standard approach and digital healthcare to be the norm, though many acknowledge the potential for this to introduce inequalities in access to care and put additional pressure on clinicians. They envisage a more diverse, more digitally powered future, with AI playing a role in the healthcare team.

The Future Clinician as a Partner for Health works flexibly in partnership with patients, using digital technology to make informed decisions.

67%

of students agree the relationship of clinicians and patients will be a partnership.

The Future "Total Health" Clinician is skilled in communication and leadership and works within an integrated healthcare system that focuses on prevention.
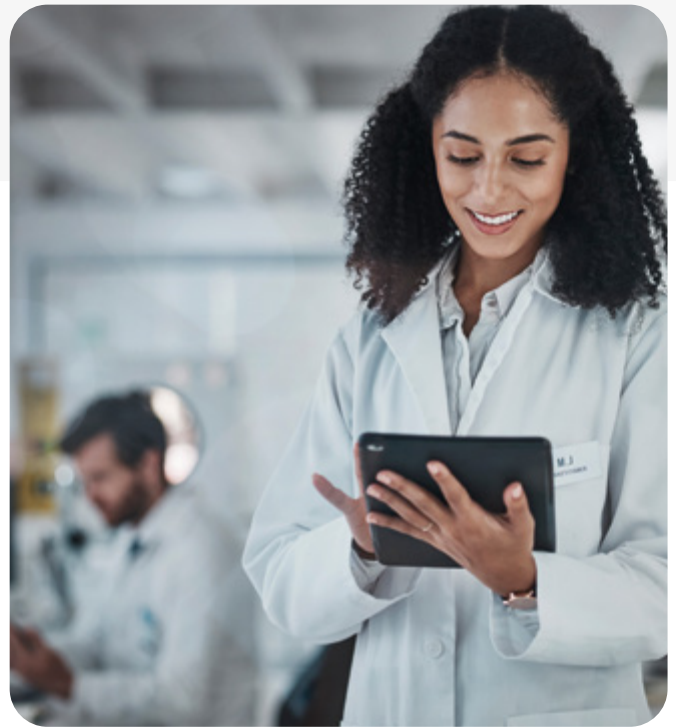
80%

of students consider managing public health a top priority.

The Future Tech-Savvy Clinician is skilled in the use of digital health technologies and often meets patients remotely, providing data-based personalized care.

71%

of students agree Digital Health Technologies will enable positive transformation of healthcare.

The Future Balanced Clinician receives the training they need to thrive and manages their own wellbeing in the context of staff shortages by accessing support services.

60%

of students agree use of Digital Health Technologies will be a challenging burden on clinicians' responsibilities – lower than clinicians today.

The Future Accessible Clinician works in a more equitable, accessible healthcare system and meets patients where they are, helping them maintain their health.

58%

of students agree the use of digital health technologies will exacerbate health inequalities.

How can we help medical and nursing students transition to their roles as the clinicians of the future while tackling the challenges they may face?

➤ Provide the foundational skills they need to succeed

➤ Support the patient of the future

➤ Accelerate transformation of the healthcare system

Solutions that address real challenges

Elsevier has played a role in healthcare by supporting clinicians for more than a century. Clinicians rely on our trusted, evidence-based content and clinical solutions to help improve patient outcomes. Elsevier Health's information, decision tools and analytics have evolved with the development of new technologies to ensure clinicians can make the most of cutting-edge solutions to benefit patient care.

This remains a dynamic picture, and as students continue to move through their training and enter the global health workforce, the landscape will evolve. We want to keep listening to clinicians, including those on their way to qualification.

We invite you to share your thoughts and input with us.

Read the full report and explore the data at

https://tinyurl.com/COTF2023Education

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