



Nurturing the next Generation of healthcare professional

Dr Gordon Wong
Assistant Dean (Professional
Development)
HKUMed

Why was I invited to speak to you?

Dr Gordon Wong

Assistant Dean (Professional Development)

HKUMed

What do I do?

- Counsel students with conduct issues and to recommend disciplinary measures
- Counsel interns with poor performance and to diagnose contributing factors and to recommend remedial measures

Admissions

Clinical skills

Assessment

Curricular development



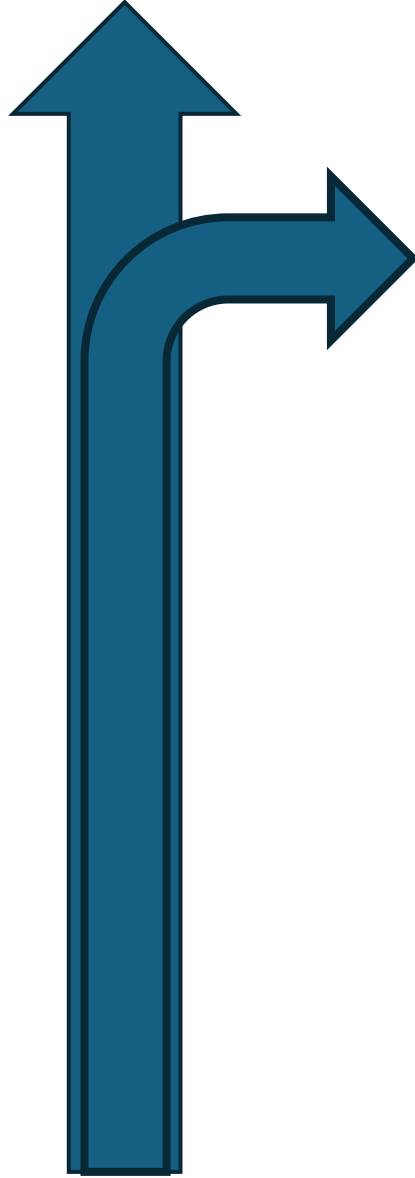
<https://www.pinterest.com/pin/i-put-the-pro-in-procrastination-funny-cute-lazy-panda--739294095103704501/>



“The guys are a little soft.....You know who the worst bully was in school when I was a kid? My Mum...my mom said the worst s#@#”







Nurturin

g Training the next

~~Generation~~ of healthcare
professional

Why nurturing, not training?



**Training imply more
knowledge and technical
aspects**



**Training aspects quite
advanced and convenient**

Advancement in medical education
pedagogical

Curricular development

On demand resources

Technological aids

Team members



Professor Gary Lau
Department of Medicine
Director of EdTech and SIMHSE



Dr Tomasz Cecot
School of Biomedical Sciences
Coordinator of Active Learning Pedagogy



Dr Enoch Chan
School of Clinical Medicine &
School of Biomedical Sciences
Coordinator of SIMHSE in EdTech



Professor Joshua Ho
School of Biomedical Sciences
Deputy Director of EdTech (AI)



Dr Mei Li Khong
School of Clinical Medicine &
School of Biomedical Sciences
Coordinator of SIMHSE in EdTech
and Active Learning Pedagogy



Dr Jian Yang
School of Biomedical Sciences
Deputy Director of EdTech (AR/VR)



Dr John Fung
School of Nursing
Coordinator of SIMHSE in EdTech
and Active Learning Pedagogy



Education Technology and Student in Medical and Health Sciences Education

“To empower students through integration of EdTech and SIMHSE, fostering innovation and excellence in education and healthcare to prepare our future leaders for a digital world.”



Integration of
technology



Incorporation
of AR, VR & AI



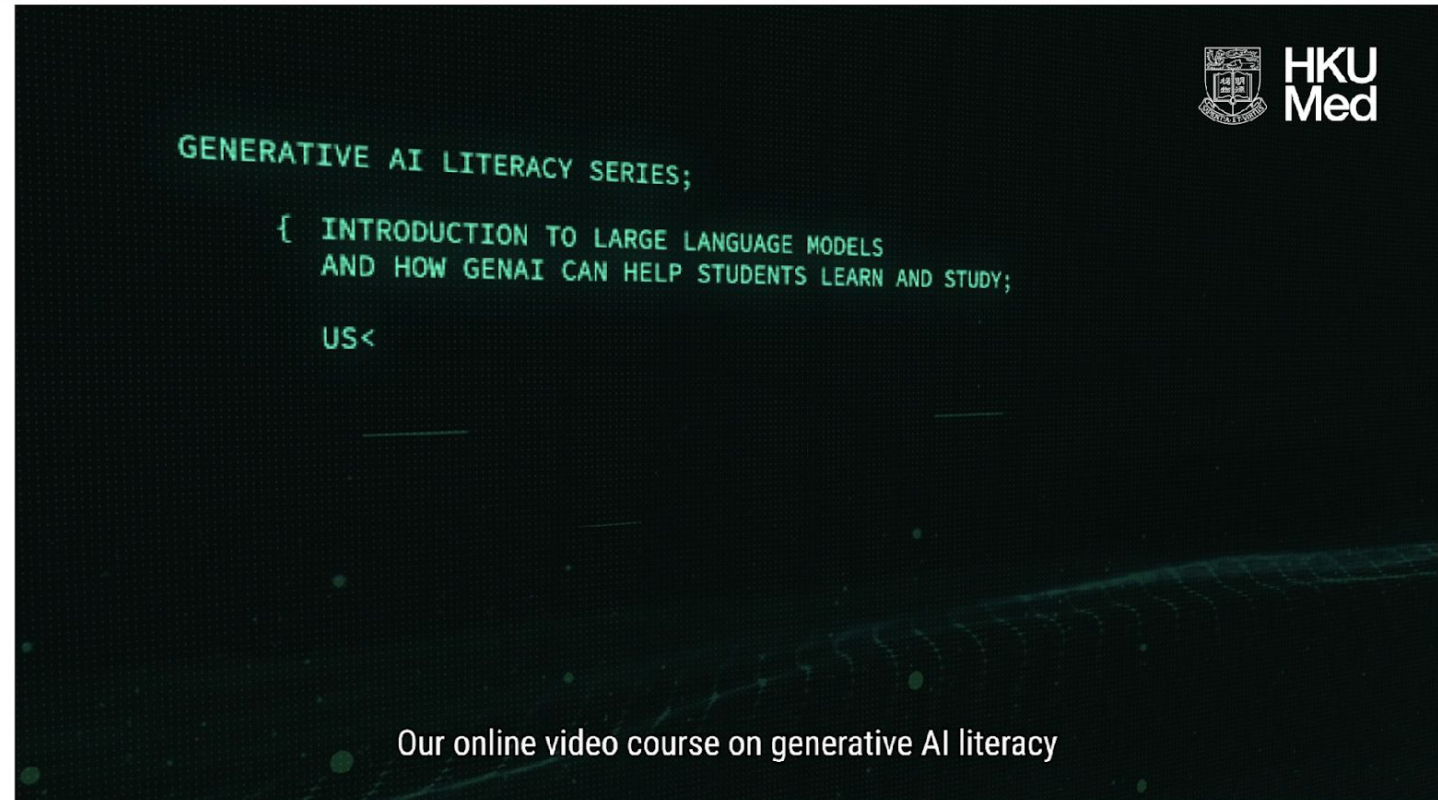
Student-
Educator
partnership



Future-ready
healthcare
workers

GenAI Resource Hub

- **GenAI Literacy Video Series**
 - Educate the HKU community as well as general public on how generative AI may facilitate teaching and learning
 - Pre- and post-assessments
 - Evaluate the efficacy of videos on enhancing GenAI literacy
 - Aimed at educators and students
- ets.med.hku.hk/resources

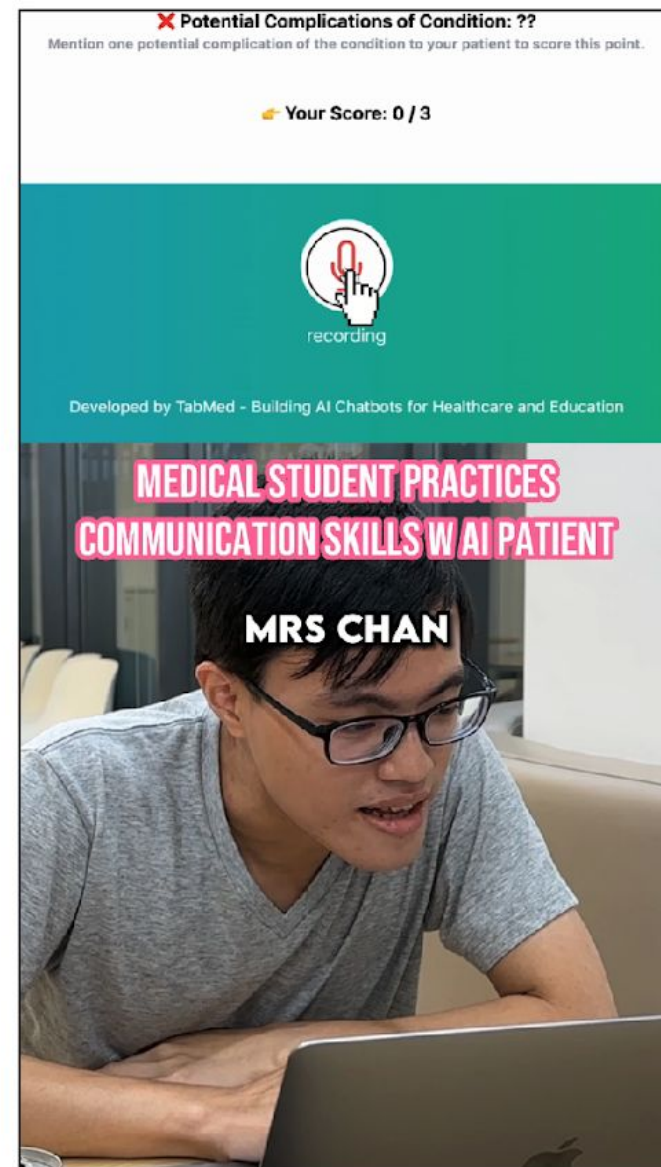


Core Contributors

Chun Ka Wong, Billy Ho-Hung Cheung, Michael Co,
Jason Chan, Calvin Cheung, Kelvin Cheng

Virtual Patient Simulation

- Cases are dynamically linked to a backend database via Supabase (PostgreSQL)
- Initial chat screen shows instructions and initial template messages
- Realistic, layman and simple outputs from virtual patient with realistic voice output
- Objective-based conversation with differential diagnosis verification
- Instantaneous algorithmic feedback with correct or wrong answers
- Case editor to add / edit cases easily



Core Contributors

Billy Cheung, Chris Ng, Orange Ng, Derrick Chan, Robert Ho, Dickson Yiu

MCQ Generator / Viva Bot for Assessment

- Prototype platform developed that can generate MCQs / viva questions based on course content
- Questions can be individualised based on student's needs
- Pending testing and optimisation

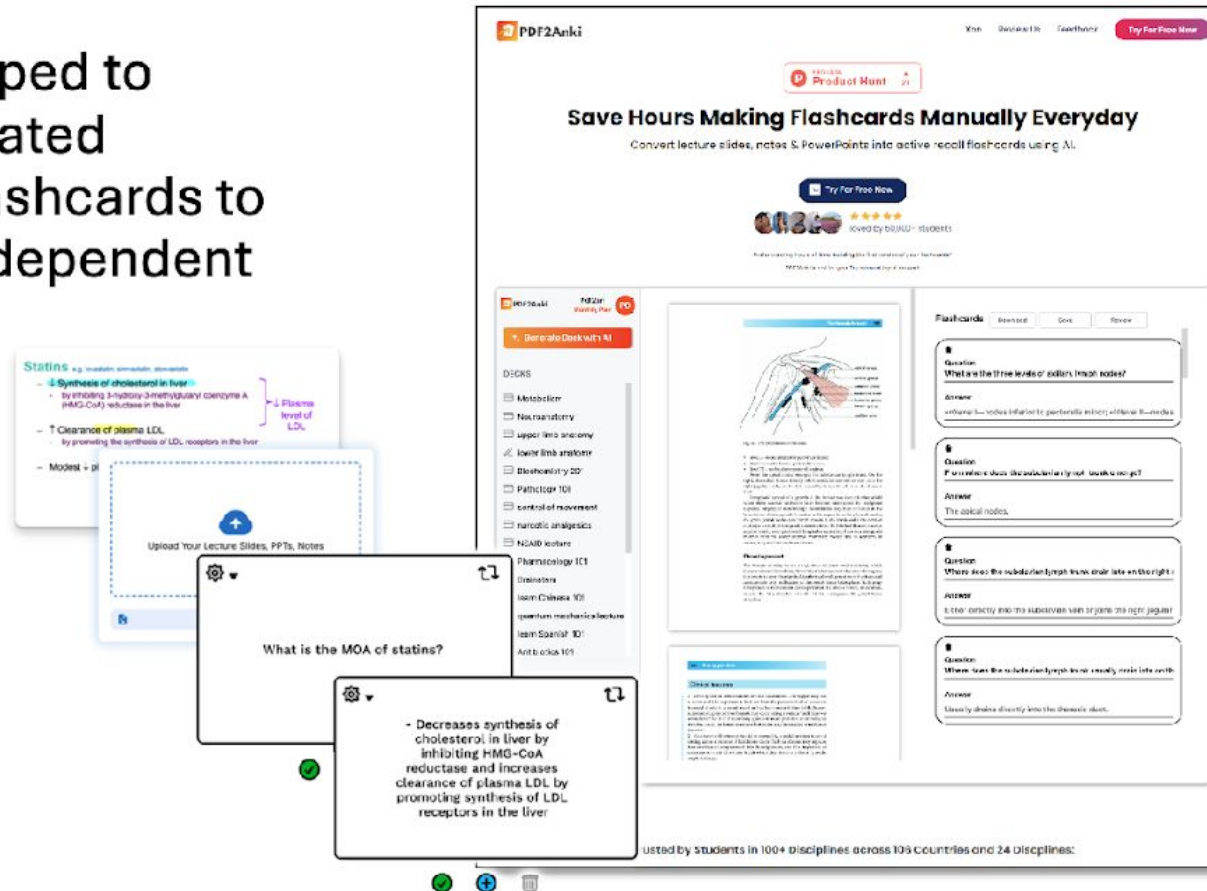


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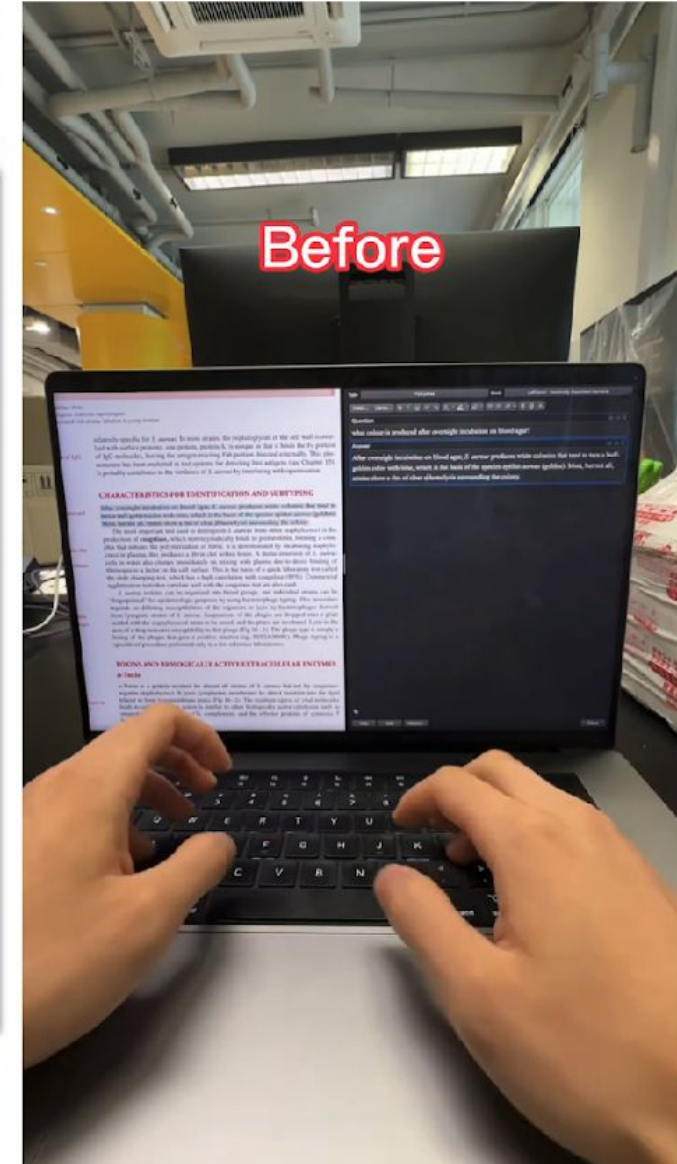
Jason Chan, Calvin Cheung, Mei Li Khong

AI Flashcard Generation

- Platform developed to facilitate automated generation of flashcards to aid student's independent study
- Flashcards promote active recall
- Optimisation of platform in-progress

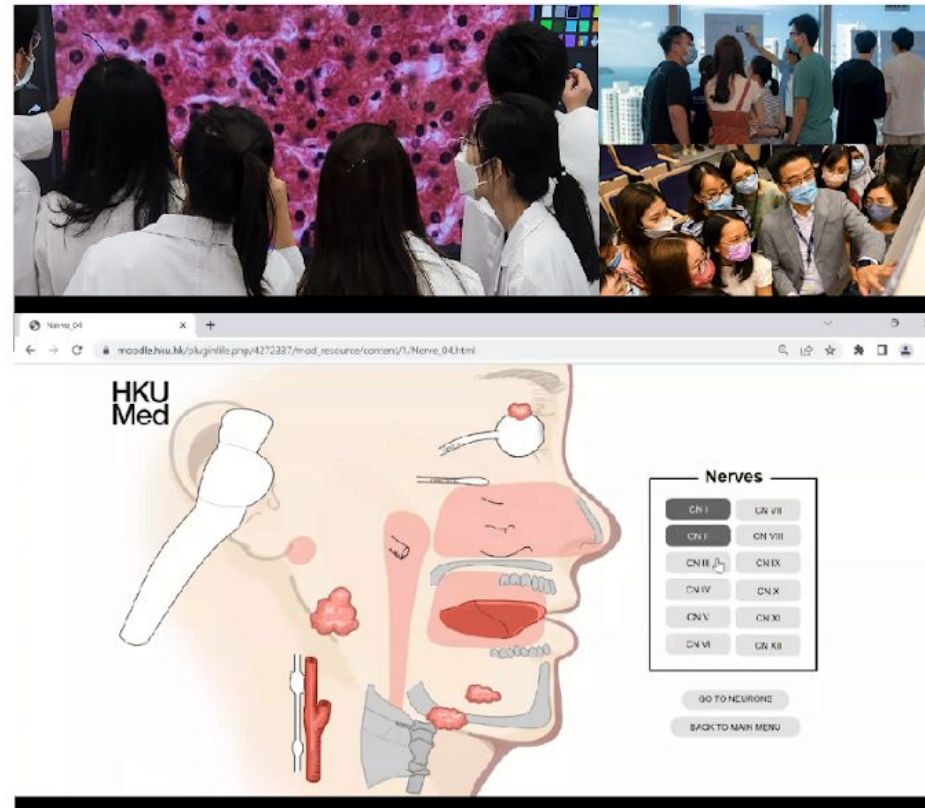


The screenshot displays the PDF2Anki web application. At the top, it says "Save Hours Making Flashcards Manually Everyday" and "Convert lecture slides, notes & PowerPoints into active-recall flashcards using AI." Below this, there's a "Try For Free Now" button. The main interface shows a list of uploaded documents on the left, including "Statin", "Metabolic", "Microbiology", "Upper limb anatomy", "Lower limb anatomy", "Electrolyte 20", "Pathology 101", "Control of movement", "Neurotic analgesics", and "NCMB lecture". The central area shows a preview of a document titled "Statin" with a diagram of the liver and a list of bullet points: "↓ Synthesis of cholesterol in liver", "↓ Clearance of plasma LDL", and "Modest ↑ plasma level of LDL". The right side shows a list of generated flashcards, including "What is the MOA of statins?", "Decreases synthesis of cholesterol in liver by inhibiting HMG-CoA reductase and increases clearance of plasma LDL by promoting synthesis of LDL receptors in the liver", "What are the three levels of cellular lipid metabolism?", "Where does the cholesterol synthesis pathway take place?", "What is the rate-limiting step in cholesterol synthesis?", and "What is the final product of cholesterol synthesis?".



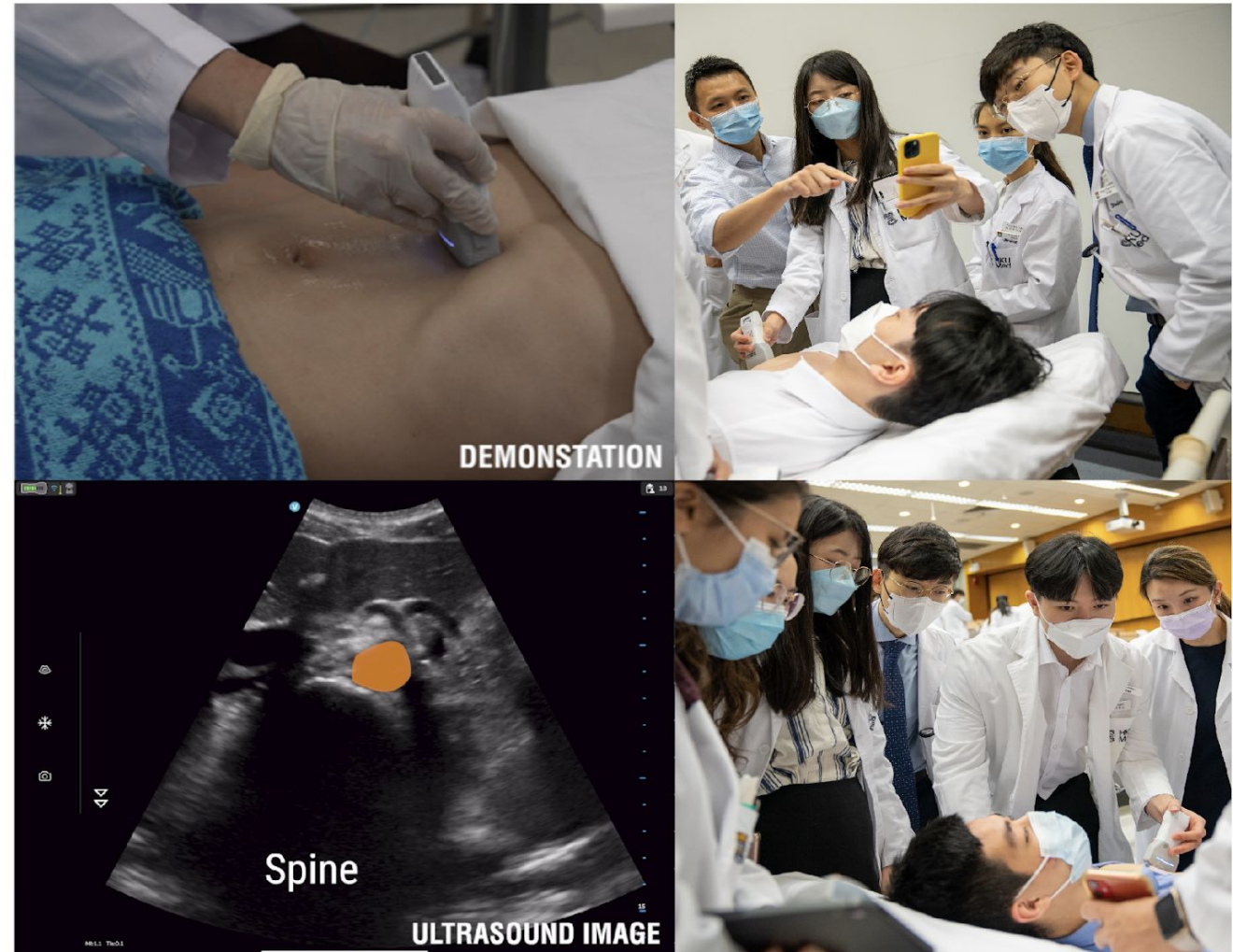
EdTech

- **Interactive Worksheets**
 - Prof. US Khoo
- **Adaptive Learning**
 - Dr Abigail Wright
- **Ultrasound / Simulation-enabled Practical**
 - Dr Enoch Chan
- **Flashcards**
 - Department of Pharmacology & Pharmacy



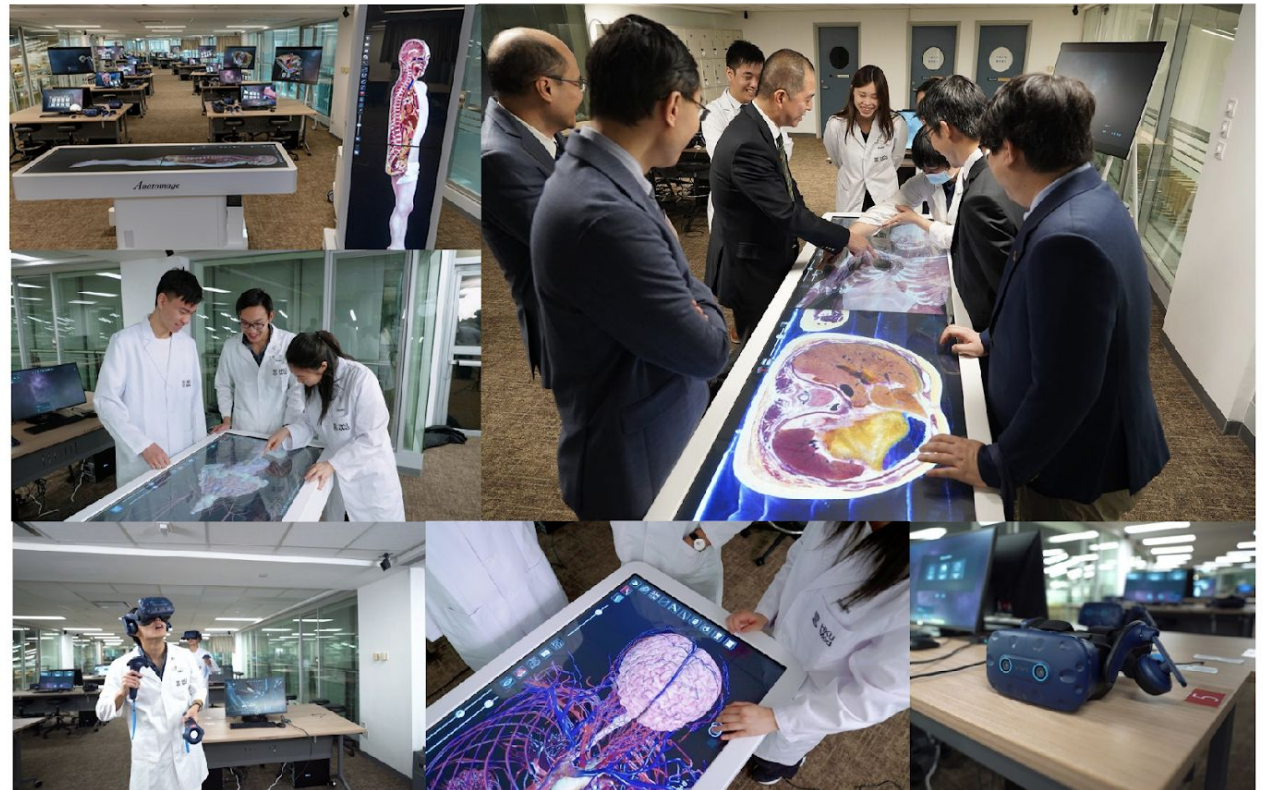
Bedside Ultrasound

- Undergraduate ultrasound teaching used to be limited to theory, with little practical experience.
- Patients were scanned by attending physicians in the ward for quick diagnosis and management.
- All MBBS students in their 5th and 6th years have personal ultrasound devices.



Technology-Enriched Learning Mezzanine

- TechMezz
- A learning space located at **Yu Chun Keung Medical Library** at HKUMed
- Houses the latest VR tools to advance medical students' understanding of anatomy
 - Anatomage tables
 - Virtual reality stations
 - Latest interactive whiteboards



Why is
nurturing so
much more
important
now?

Students and young doctors have
different outlook and needs

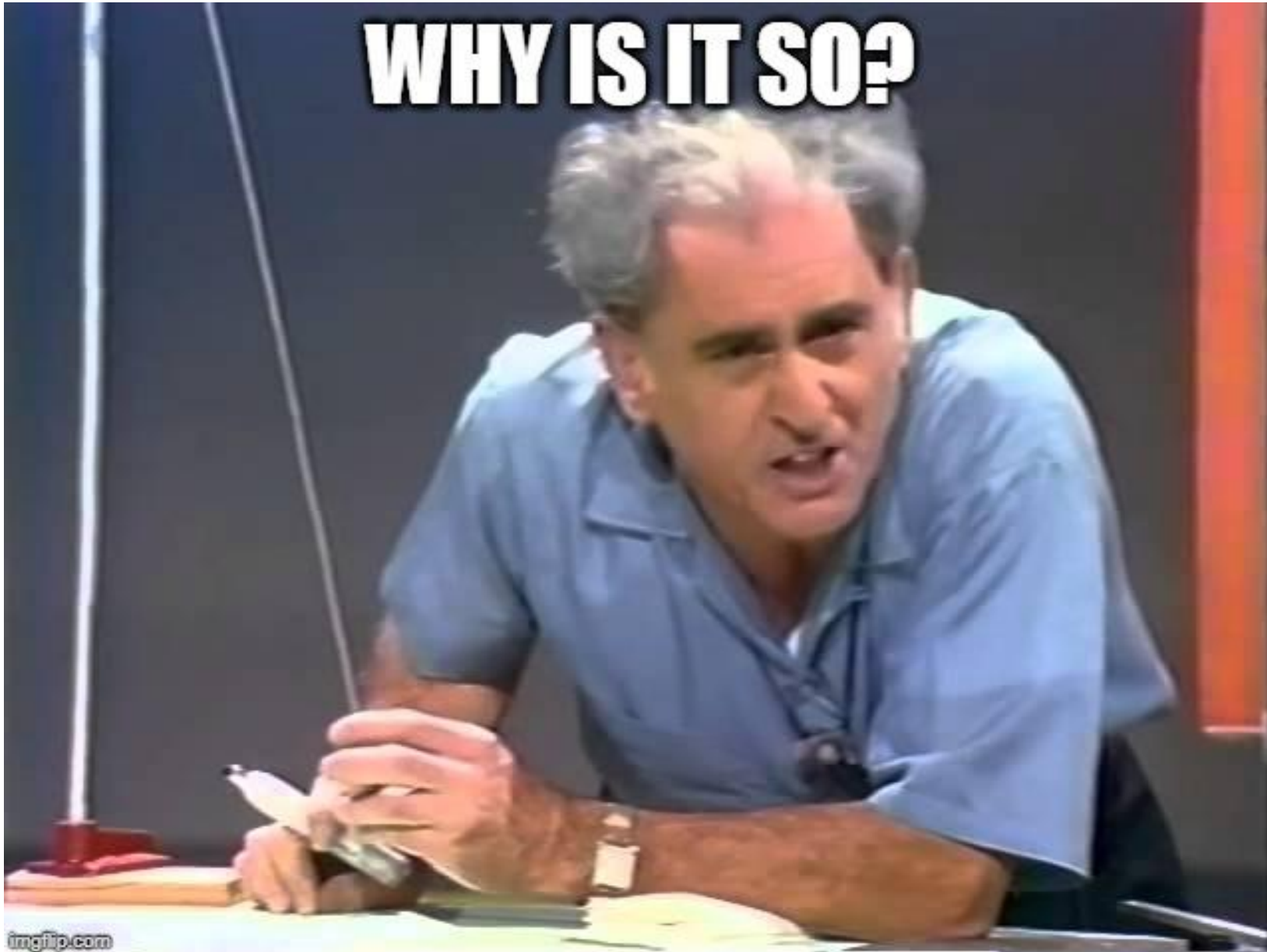


Need to maintain them at a psychological
state where they can effectively be
trained

Receptiv
e

Capable

WHY IS IT SO?





GENERATIONAL DIFFERENCES IN THE WORKPLACE

TRADITIONALISTS

Born: 1925 – 1945

Dependable | Straightforward | Tactful | Loyal

Shaped by:

The Great Depression, World War II, radio, and movies

Motivated by:

Respect, recognition, providing long-term value to the company

Communication style:

Personal touch, handwritten notes instead of email

Worldview:

Obedience over individualism; age equals seniority; advancing through the hierarchy



BABY BOOMERS

Born: 1946 – 1964

Optimistic | Competitive | Workaholic | Team-Oriented

Shaped by:

Vietnam War, Civil Rights Movement, Watergate

Motivated by:

Company loyalty, teamwork, duty

Communication style:

Whatever is most efficient, including phone calls and face-to-face

Worldview:

Achievement comes after paying one's dues; sacrifice for success



49%

Baby Boomers who expect to or already are working past age 70 or do not plan to retire*

10,000

Baby Boomers reach retirement age every day*

GENERATION X

Born: 1965 – 1980

Flexible | Informal | Skeptical | Independent

Shaped by:

The AIDS epidemic, the fall of the Berlin Wall, the dot-com boom

Motivated by:

Diversity, work-life balance, their personal-professional interests rather than the company's interests

Communication style:

Whatever is most efficient, including phone calls and face-to-face

Worldview:

Favoring diversity; quick to move on if their employer fails to meet their needs; resistant to change at work if it affects their personal lives



55%

Startup founders who are Gen Xers—the highest percentage*

BY 2028

Gen Xers will outnumber Baby Boomers*

MILLENNIALS

Born: 1981 – 2000

Competitive | Civic- and Open-Minded | Achievement-Oriented

Shaped by:

Columbine, 9/11, the internet

Motivated by:

Responsibility, the quality of their manager, unique work experiences

Communication style:

IMs, texts, and email

Worldview:

Seeking challenge, growth, and development; a fun work life and work-life balance; likely to leave an organization if they don't like change



75%

Percentage of global workforce to be made up of Millennials by 2025*

18% men

12% women

Millennials ages 25-34 living at home with their parents*

GENERATION Z

Born: 2001 – 2020

Global | Entrepreneurial | Progressive | Less Focused

Shaped by:

Life after 9/11, the Great Recession, access to technology from a young age

Motivated by:

Diversity, personalization, individuality, creativity

Communication style:

Social media, texts, IMs

Worldview:

Self-identify as digital device addicts; value independence and individuality; prefer to work with Millennial managers, innovative coworkers, and new technologies



67%

Gen Zers who want to work at companies where they can learn skills to "advance their careers"*

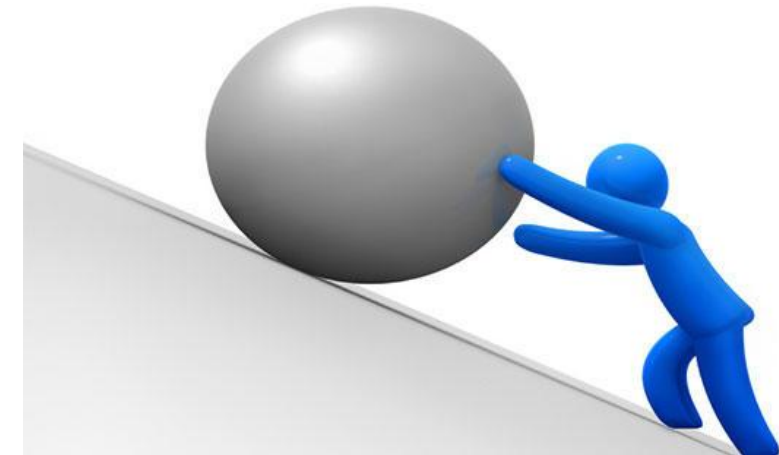
80%

Gen Zers who believe government and employers should subsidize, pay full tuition or provide direct training for students.*



TRAINING PLACE

- University
- Teaching hospitals
 - Seniors
 - Patients



<https://www.nist.gov/blogs/manufacturing-innovation-blog/challenging-times>

<https://www.purdueglobal.edu/education-partnerships/generational-workforce-differences-infographic/>

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Percentage of global workforce to
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Millennials ages 25–34 living at
home with their parents^b

Generational gaps

- Multiple, both in the health care setting and in the teaching environment
 - Generational is now smaller
 - Generational differences are more profound
- Training period is long, and a student/young trainee will encounter teachers from multiple generations
- Non work sentiments are extending into the medical world





The Medical Profession is no longer special!

- Willing to put up with some suffering for the perceived future reward of a great career
- "Reward" may no longer be worthwhile



The Medical Profession is no longer immune

- Knowledge gradient
- Respect gradient
- Earning capacity gradient
- Reliance on / experience with the medical system and doctors..decades away
 - Reduced childhood illnesses from improved hygiene and vaccinations
 - Experience not always positive
 - Expensive
 - Long wait
- Being a doctor is just like another other job..why do I did to sacrifice so much?

Changing Value Systems

- Respect? Number of likes
- Punctuality? We can work online or from home
- Contributing to society? Adults denying me home and jobs



A black stethoscope with a circular chest piece and two earpieces is positioned diagonally across the frame. It lies on a plain white surface. In the upper right corner, a portion of a white computer keyboard is visible, showing keys such as 'Z', 'X', 'C', 'V', 'B', 'N', 'M', and 'command'. The image is presented with a white border and a slight curve on the right side.

- 2 medical schools: intake numbers workforce based determined by government. 6 years undergraduate program
- Low doctor to population ratio
- Restrictive policy to foreign doctors
 - Language issues
- Low birth rate
- Massive emigration problem
- Post Covid

Selection of cases and complaints (students and interns)

- Attitudinal issues
 - Poor and late attendance
 - Insistence on leaving work “on time” before the work is completed
 - Insistence of attending work while impaired
- Ethical Issues
 - Falsifying attendance
 - Falsifying sick leave to go on overseas trips
- Psychological and psychiatric issues
 - PTSD following encounter with combative patient
 - Fear of darkness ☐ unable/refusal to do nightshifts

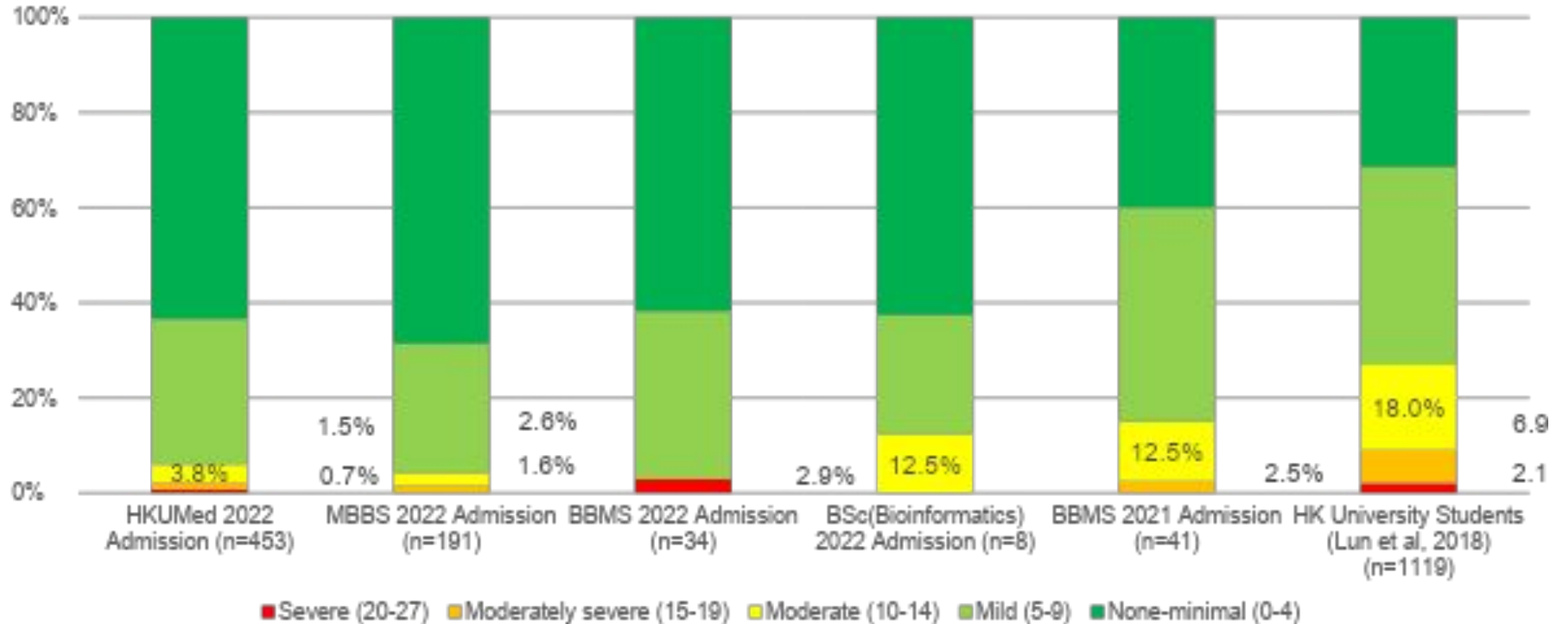
What our students are like?

- High academic achievers
- Highly competitive program



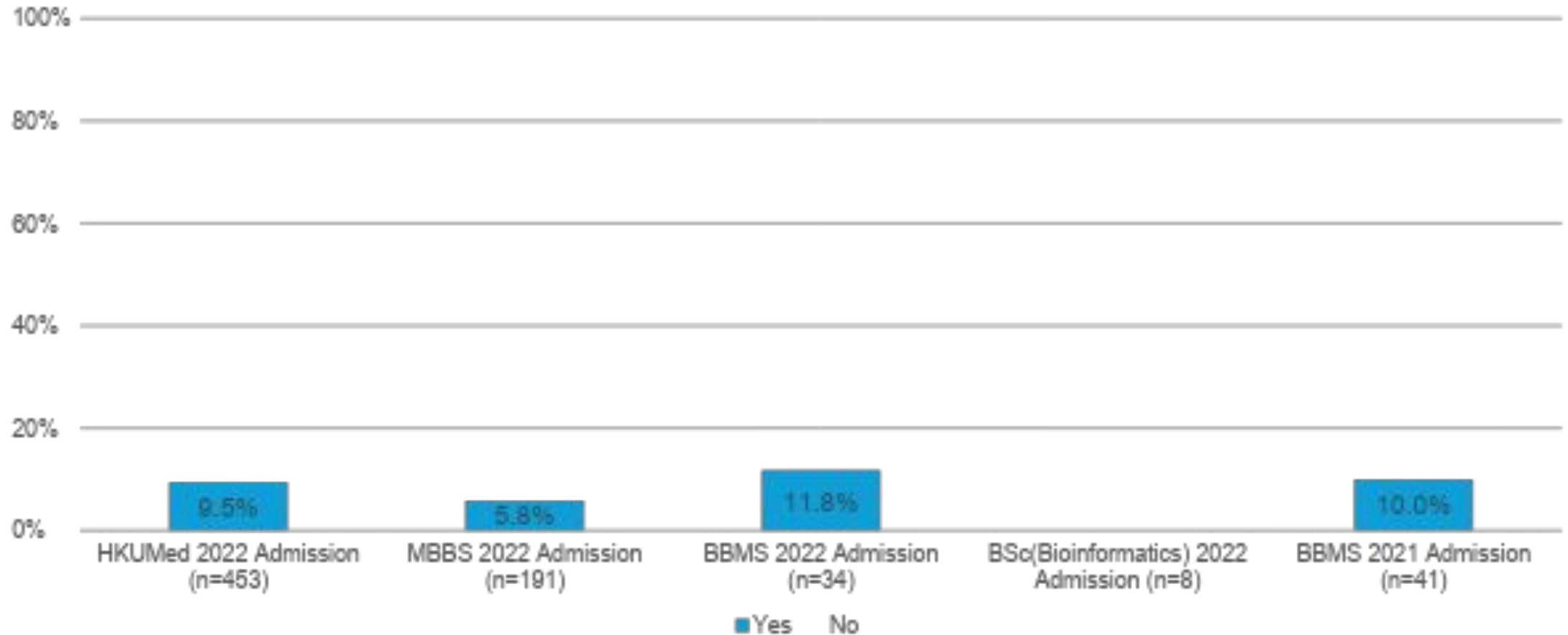
Depression

PHQ-9 – Categories



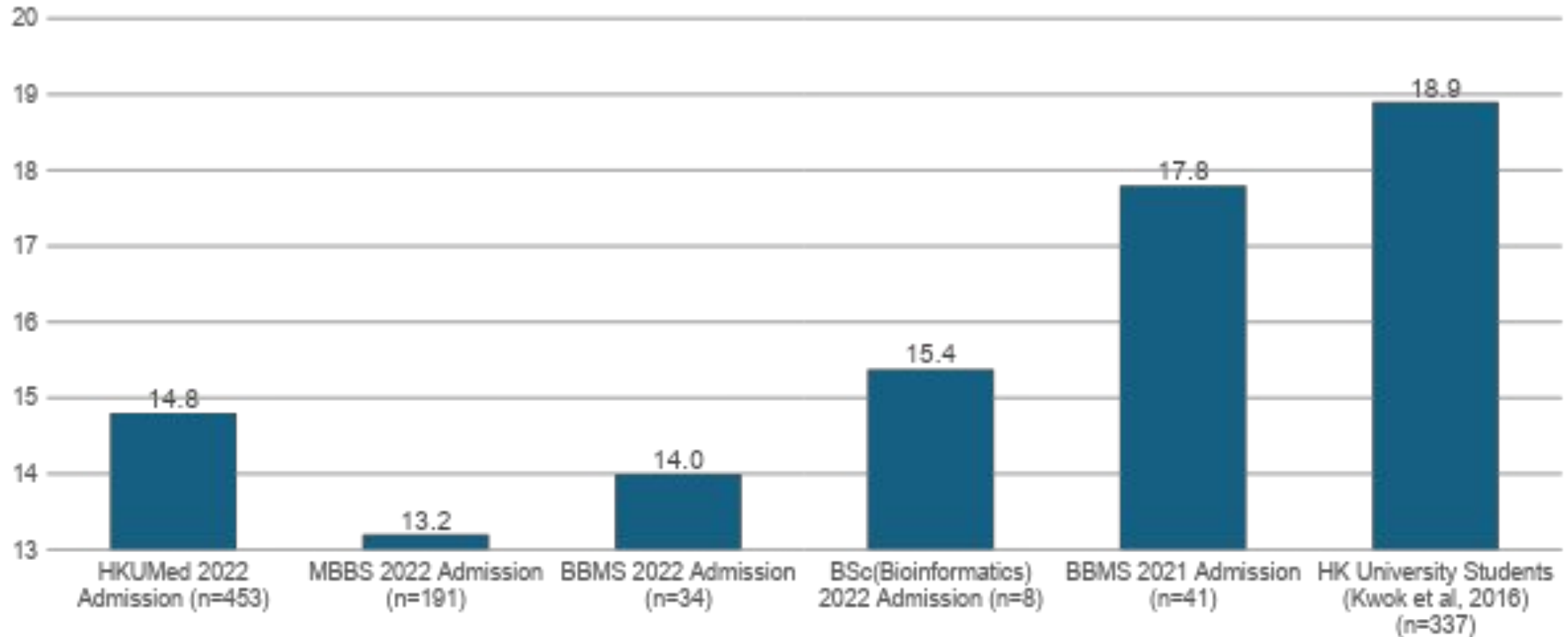
*data for “Moderate”, “Moderately severe” and “Severe” was presented in aggregate.

Suicidal thoughts (PHQ-9 item 9) – Yes vs No

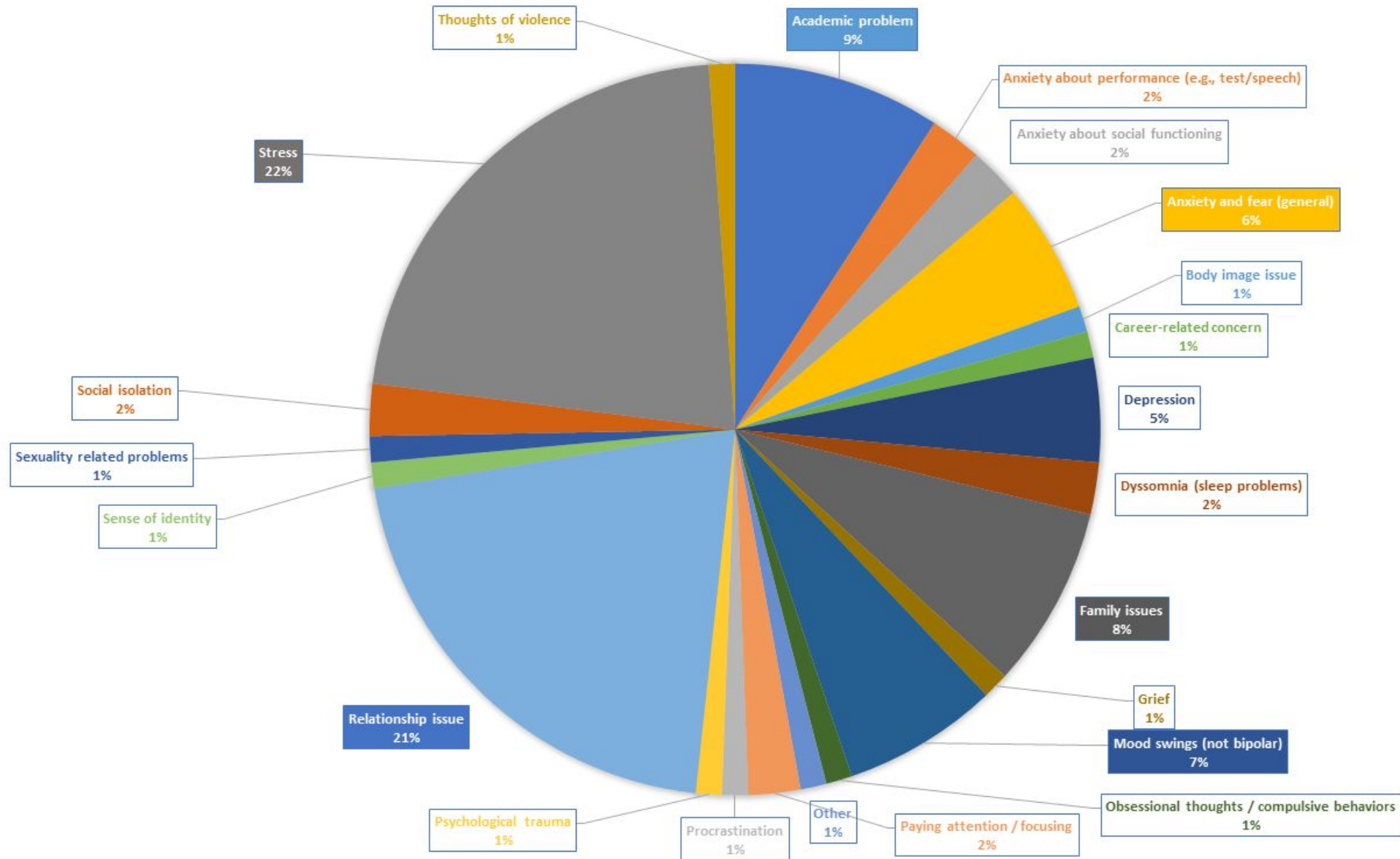


Perceived stress

PSS-10



Primary concern at Triage Session





Why may they be
like this?



In 2020 the doubling time of medical knowledge was estimated to be 0.2 years. That is 73 days.

Rethinking medical education in times of AI - Part 4: "When the half-life of medical knowledge shrinks."

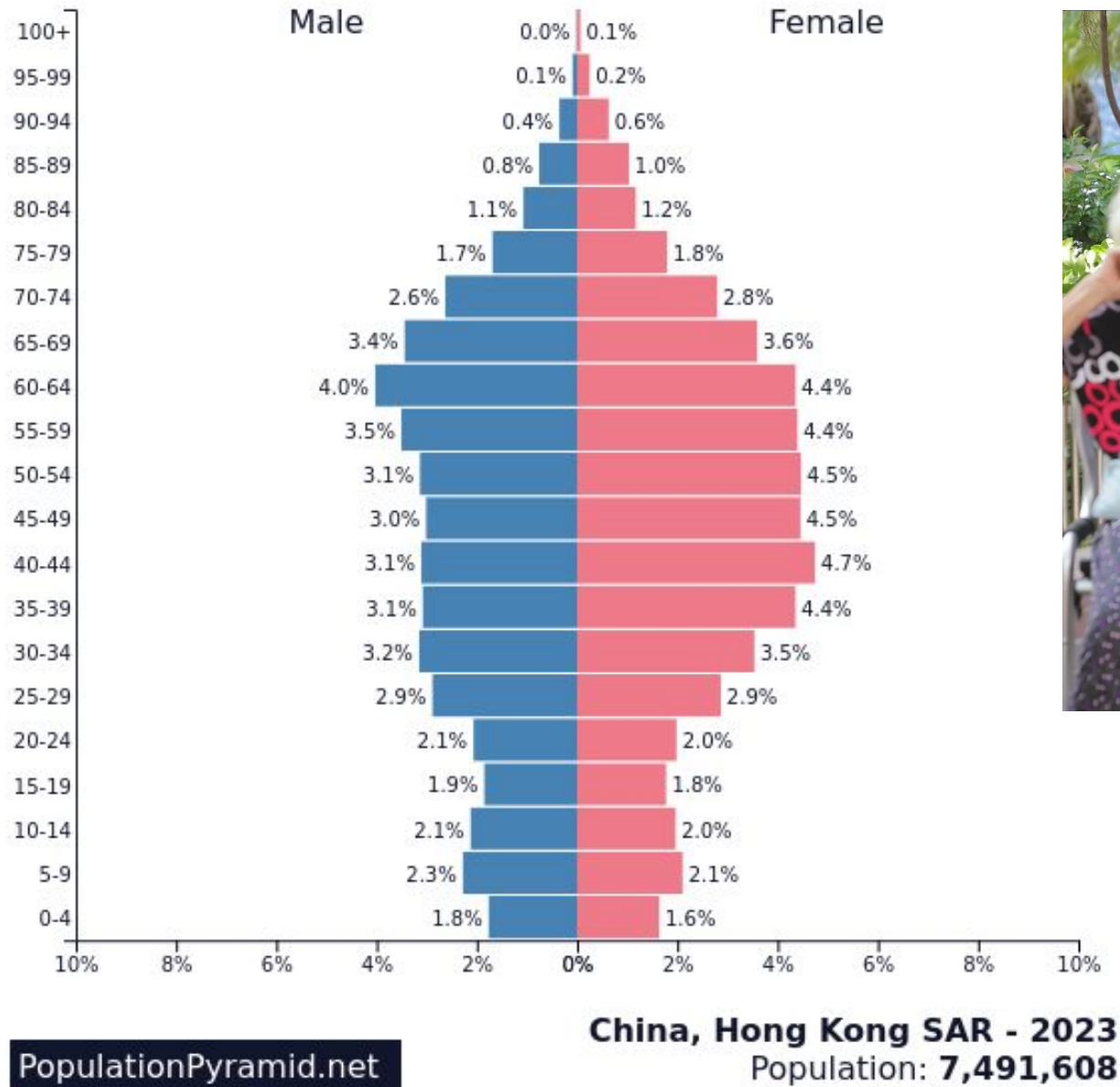


Medudy

Establishing innovative standards for medical education

Published Jan 24, 2024

+ Follow



More than one in three Hongkongers will be elderly by 2046, the government forecasts.
Photo: Jelly Tse

SCMP 17 Aug
2023



What can we do?

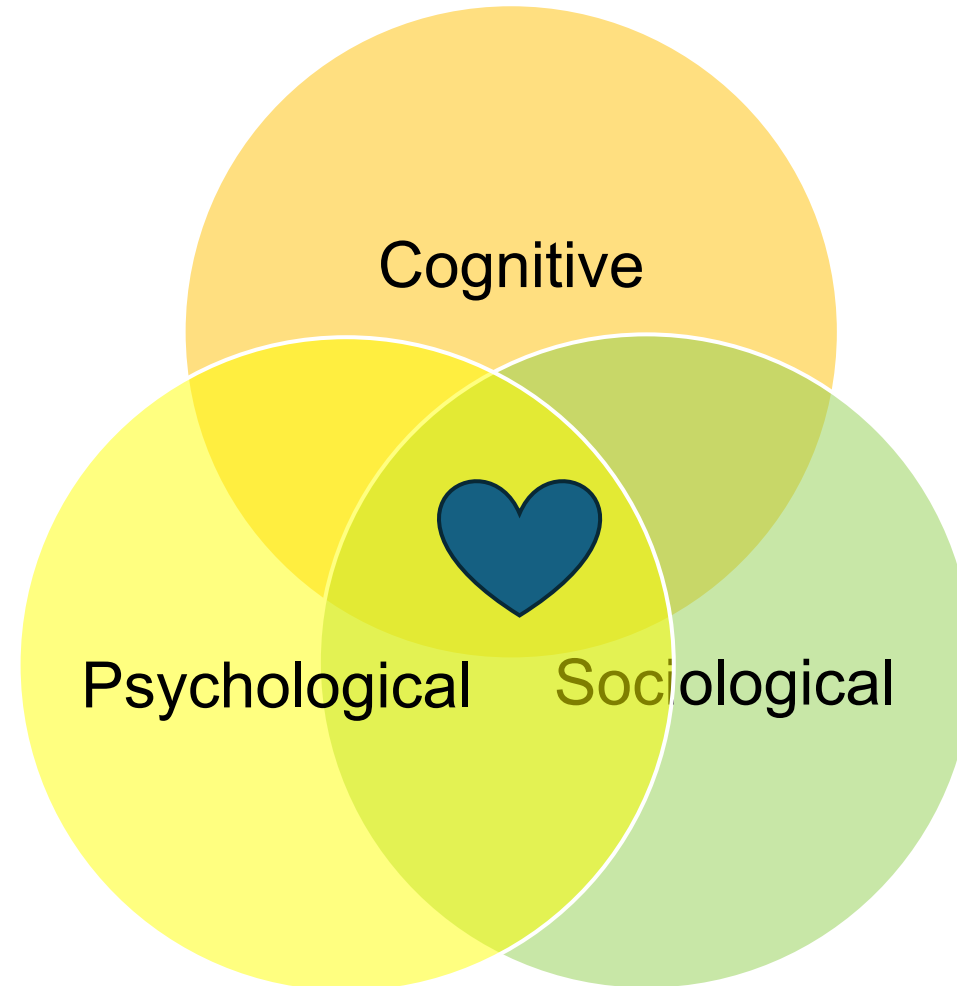
Medicine is an art and just more than technical

- More the just the delivery of physical care
- Navigate through the complexities of human interactions

Whole Person Care Model for
Understanding and Delivering Healthcare.



Cognopsychosocial model of nurturing next generation medical professionals



Student Wellness Counselling Services

- **Faculty-based counsellors to serve students at HKUMed**

Strive to support student wellbeing by providing timely interventions and resources for developing skills to meet students' psychosocial needs

- Consultation, counselling, coaching and psychotherapy
- Crisis management
- Psychological assessments
- Referral services to internal or external resources
- Sessions delivered in Cantonese, English and Mandarin
- Modality: face to face, video or phone
- Free of charge



Towards a Positive Learning Culture

Supported by
Board of LKS Faculty of Medicine
Medical Society
Nursing Society
Pharmacy Society
Biomedical Sciences Society
Chinese Medicine Society

Towards a Positive Learning Culture at HKUMed

Everyone who studies, teaches and works at HKUMed is a member of the educational community dedicated to creating and supporting the learning environment and culture that allow learners to thrive, to fully engage in the learning process and to reach their full potential. Members of our community may have diverse backgrounds, dissimilar beliefs or differences of opinion but coalesce under this singular aim. The articulation of the core principles that underpin such an environment and culture makes visible the standard we wish to uphold. The affirmation of these principles makes explicit our commitment to honouring the standards. A deliberate effort to uphold these in practice are vital to fostering and sustaining a positive learning culture.



As members of the HKUMed
educational community

We believe that

- quality medical and health sciences education is rooted in mutual respect and courtesy
- learning approaches that inspire, stimulate and provide positive reinforcement to learners should be the norm
- the places where learning and training occur are safe places that should be free from disrespectful behaviour such as discrimination, harassment, bullying and intimidation
- we each have an essential role to play and a collective responsibility to nurture the culture in which we wish to study and to work

In keeping with the spirit of these agreed principles, the accompanying Teaching and Learning Charter articulate the essential values and responsibilities of students and teachers at HKUMed that will inspire learning and allow learners to flourish.



Teaching and Learning Charter

Student

We, students of HKUMed affirm that we will

- be diligent and take responsibility for learning
- demonstrate integrity in our work
- provide, seek out and willingly accept meaningful feedback
- respect ourselves and respect others, regardless of academic performance, background, gender, disability, family status, race, sexual orientation, beliefs, social status and culture
- show compassion and support to others in the learning environment
- recognize any perceived disrespectful behaviour or mistreatment and follow up through appropriate channels
- reflect on, accept and take responsibility for our own actions, shortcomings and mistakes or wrongdoing
- attend to our own physical, emotional and social health and seek help if needed without feeling ashamed
- be the kind of person we enjoy working with; the kind of healthcare professional we would want for our families and ourselves; and the kind of person that we would want to emulate
- observe the policies and regulations that govern HKUMed and the University



Teacher

We, teachers of HKUMed affirm that we will

- provide a high quality educational programme that is fit for purpose
- facilitate learning using constructive educational approaches including language and conduct appropriate for today's learners
- fairly assess, and also provide and respond to timely and constructive feedback to help all students achieve excellence in their academic, clinical and professional work
- respect ourselves, and respect others regardless of academic performance, background, gender, disability, family status, race, sexual orientation, beliefs, social status and culture
- show compassion and support to others in the learning environment
- support students experiencing difficulties by being receptive to and responding appropriately to any perceived mistreatment
- serve as mentors and role models of integrity, professionalism and collegiality
- attend to our own physical, emotional and social health and seek help if needed without feeling ashamed
- recognize students in need and offer help when appropriate
- observe the policies and regulations that govern HKUMed and the University

For students

- Included in the “First-Year Student Portal” website
- Set as a screen saver/desktop background on all computers in the learning commons and meeting rooms

For teachers

- Mass emails or pamphlets (as shown below) will be distributed to all HKUMed teachers, including the Honorary teachers, at the beginning of the academic year to further raise awareness

Student Affairs - Creating a Lively Campus



HKU
Med





The guys are a little soft.....You know who the worst bully was in school when I was a kid? My Mum...my mom said the worst !#@#







“ It is our responsibility to remind them that this ship that there in right now, as beautiful as it is, this social media, we gotta remind them that it’s not @!#!@^ real.....They’re living in that time where they don’t know what’s real and what’s not....Everything that they are taught is in 15 @\$%^&& seconds....they’re taking that information in and that’s what they based their @@##!!! truth on”

“If there is a doctor here tonight, bring your compassion back...delivering bad news like it’s a matter of fact...”



Who knows what the future will hold?

-
- The top students will always do well
 - Large tails on the left side of the bell curve
 - Technology may buffer some of the problems



Take home messages

Accepting and flexible without compromising safety

- We are responsible ..parenting, corporate greed
- Swallow our pride

Engaging and ready to change

Generationally and societally aware

Challenging...requires patience, tolerance, empathy