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for prolonged periods of time, the changes in operating guidelines for private clinics, increased workload.[2] In an opinion piece by Dr Tina Tan in the SMA News, she wrote that we should rest well and make a conscientious effort to unwind, be aware of our own needs and talk to someone about it.[3] "If you are not coping well, seek professional help. Each institution in Singapore has peer support, and there are free psychological services for healthcare workers we can access." The psychological effects of this prolonged pandemic has far reaching implications especially in the aspects of mental health. Burnout and Post Traumatic Stress Disorder can affect all of us, and self-care and mutual care are of paramount importance. Let us support each other, and if necessary, seek help as we continue to battle the scourge of COVID-19.

1. Impact of COVID-19 on the mental health of Singaporean GPs: a cross-sectional study: Alvin Lum, Yen-Li Goh, Kai Sheng Wong, Junie Seah, Gina Teo, Jun Qiang Ng, Edimansyah Abdin, Margaret Mary Hendricks, Josephine Tham, Wang Nan, Daniel Fung, BJGP Open 20 Jul 2021.
2. Burnout and Associated Factors Among Health Care Workers in Singapore During the COVID-19 Pandemic: Tan, Benjamin Y.Q. et al. Journal of the American Medical Directors Association, Volume 21, Issue 12, 1751-1758.e5
3. https://www.sma.org.sg/news/year/2020/month/May/psychological-fallout--doctors-in-the-covid-19-pandemic accessed 09082021

CM

Interview with Dr Gyles Morrison

Interviewed by Dr Tan Li Wen Terence, Editorial Team Member (Team A)

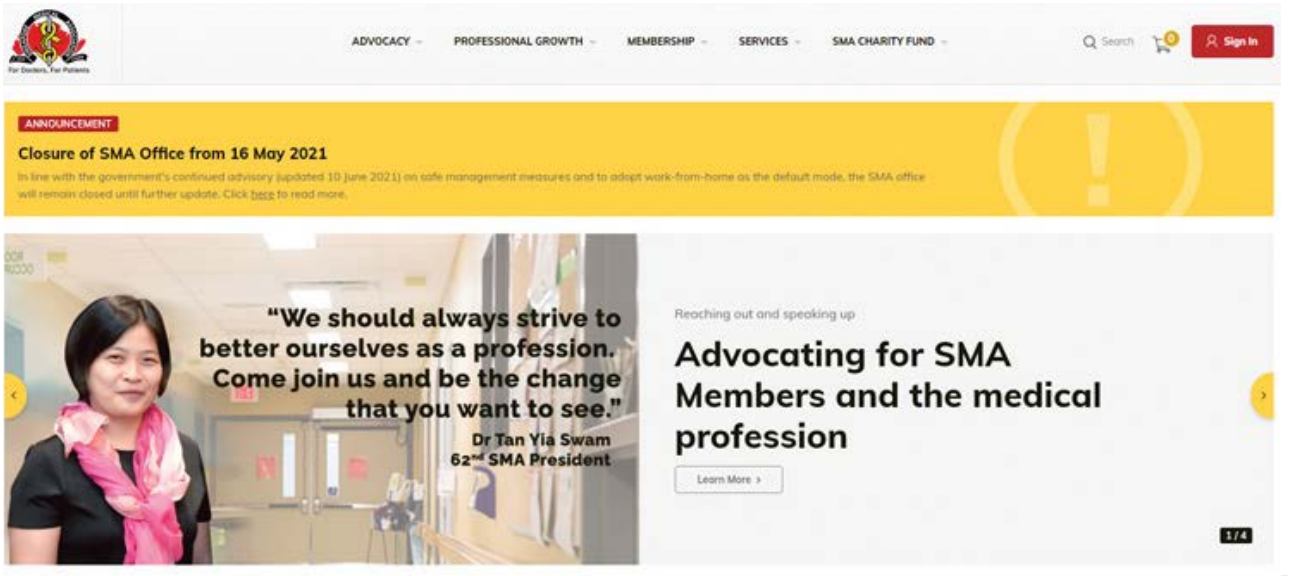
Dr Gyles Morrison has been a Clinical UX Specialist since 2014, after working as a doctor for 3 years. His role involves applying best practice UX, medical knowledge and experiences, and problem-solving skills to improve the design of healthcare technology and services. He specialises in healthcare behavioural science and digital therapeutics which are digital tools that prevent, manage and treat disease. He is also the founder of the Clinical UX Association, the world's leading authority on UX in healthcare.

User experience (UX) is how a **user experiences** and interacts with a product, system or service.

This includes user's perception of ease of use, efficacy and desirability.

Example of bad UX:

You can't tell what this website is about at first glance. Chaotic and hard to navigate.



UX for SMA website is better, it is better laid out, and you can navigate with ease.

Example of bad UX:

Passwords

How often have you been asked to create a new password, only to be faced with a blank field?

In this example above, you have no idea what the requirements are, or even what you have typed in!

In this example, you know what the requirements are, which ones you have fulfilled and what you keyed in. This allows you to complete the task effectively.

College Mirror (CM): Hi Gyles, thanks for taking the time to chat! I hope you could give us a rundown on what exactly is Clinical User Experience?

Dr Gyles Morrison (GM): Sure, Clinical UX is about the experiences and interactions clinicians and patients have with healthcare technology and services, that lead to better outcomes. It requires specialist knowledge of healthcare science, services, laws and practices as well as knowledge of how clinicians and patients behave.

CM: Fantastic and can I ask how you got involved with Clinical UX?

GM: I fell into it, to be honest. When I left medicine in 2014, I had worked as a doctor for 3 years. Medicine was my first degree. And apart from a random waitering job at Wembley Stadium, I never worked nor took breaks from studying. So I didn't know about UX let alone Clinical UX.

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I took a job as a Clinical Analyst at a large hospital in London which had me working on systems changes to the Electronic Health Record System, iSoft Clinical Manager. As I worked on the briefs, I conducted research about the problem, explored solutions, then tested them in both a safe and life environment before rolling out the final changes. It was six months into the job when I was introduced to UX by a senior UX consultant training me on how to make prototypes for digital products.

It dawned on me that no one at work talks about UX let alone have UX in the job title. So I wouldn't have been able to learn more there. Therefore, I found mentors, became well-read on the topic, and even enrolled on to a Masters degree program in Human-Computer Interaction with special modules in healthcare. I also shared what I learned with others, and focused on working on healthcare projects, which further strengthened my knowledge of, and desire to work in, Clinical UX.

CM: Thank you for sharing! Given your clinical background, how would you say that UX affects clinicians and the delivery of healthcare?

GM: It affects every single aspect of healthcare, no doubt about it! UX ultimately is about the experiences and interactions people have with anything that has been designed. In other words, anything that isn't naturally occurring. All these interactions are supposed to help people achieve some sort of goal. To be entertained. To stay connected with friends and family. To cure a disease. The list is endless.

In healthcare, we are often having clinicians use technology that doesn't really help them perform their tasks. But they are forced to use the technology they are given as it's part of their job.

And because UX in healthcare is historically bad, many clinicians just expect it to remain as such.

CM: I see and could you help give us an example of maybe a bad UX design for clinicians which has been solved?

GM: Yes, I can think of a great example, although the solution, surprisingly, took a long time to be implemented. When patients need an infusion of very precise medication over a long period of time, this is generally given via an electronic infusion pump. Historically these infusion pumps would have a number pad to input the dose and time. But research has shown that people can make all kinds of mistakes pressing the wrong numbers and not noticing the error, which can harm if not kill the patient. These machines also often store the most recent settings which may not be of any use to the next patient. Again, this has led to fatal harm. The solution is simple; use arrows to change the dose and don't save the data after use! Incorrect dosing has now plummeted as a result.

CM: Thank you for sharing, Gyles. Do you think that the UX of clinician tools has been improving?

GM: Barely. There is little incentive for suppliers to improve, especially EHR vendors because there is not enough competition, the contracts can last a decade, and non-clinicians don't have "clinical UX must be great" as criteria during procurement.

CM: And what do you think we can do to improve things for the future?

GM: A few thoughts come to mind. The first is we need better regulation of digital health solutions that are not medical devices or software as medical devices. The everyday administrative software needs to be regulated too. Further to this, need people who know about UX involved in procurement, which itself should involve truly assessing if the procured products live up to the expectations of the user. Finally, we need people to speak up when they see problems with healthcare technology and services. Silence is very dangerous in this regard, and only falsely convinces suppliers and managers that everything is fine.

CM: Finally, do you think manufacturers should hold some degree of liability for errors stemming from poor design?

GM: Yes, I do. They should go through a rigorous design and testing process to prevent errors in the first place and should insist on being involved in all investigations when an error takes place. Too often error is deemed the result of human input. It's rather offensive to be honest, because if humans are not using the products and services, then we won't achieve anything with them. Products and services don't use themselves! Nor do they design themselves. So yes, the manufacturers need to step up and be involved with optimising efficiency and remove the risk of harm or failure.

CM: Thanks for taking the time to chat with us, Gyles. Would you have any message to any clinicians who are frustrated with their tools?

GM: For sure! If you are frustrated, channel that energy into bringing about change. Connect with people in positions of power to see how you can influence their decision making. Learn from others who are solving these problems that are frustrating you. Be a change maker, don't just complain and let this frustration hamper your ability to do your job. And of course, get in touch with me, I'd love to support you on your journey, as we need more clinicians in digital health and clinical UX.

CM