Dr Alex is a family physician who works as a locum medical doctor during his free time. He is currently pursuing a Master of Laws with the University of London. Aside from his medical qualifications, he also holds the degrees of Bachelor of Laws, Master of Professional Accounting and Master of Business Administration. He is an incoming practice trainee lawyer at Donaldson & Burkinshaw LLP.

Traditionally, patient confidentiality and data privacy form the cornerstones of medical ethics. While it is not uncommon that established rules and regulations are set aside during public health emergencies, it is recognised that without the assurance of confidentiality, most patients would be unwilling to share their health information. Such information, however, is vital to curbing the spread of infectious diseases like COVID-19. This article explores some of the professional, ethical and medico-legal issues that have arisen as a result of the COVID-19 pandemic, along with how much clinical information should be collected for public health purposes without threatening patient confidentiality, and how to ensure fairness in the distribution of medical resources in overloaded healthcare systems.

Patient confidentiality and data privacy

A doctor's duty to respect patient confidentiality has its medical ethics origins in the Hippocratic oath1 and also receives unqualified protection in the Declaration of Geneva.2 In Singapore, the doctor's duty to maintain confidentiality is governed by common law,3 statute4 and also by the Singapore Medical Council Ethical Code and Ethical Guidelines. The legal duty of confidentiality is not absolute; in exceptional situations like a court order or where public interest in disclosure outweighs the public interest in respecting confidentiality, a healthcare professional is allowed to deviate from this duty. The COVID-19 pandemic is certainly an exception to the doctrine of patient confidentiality, but are some governments' actions too extreme, resulting in an irreversible breakdown in trust?

For example, in the US⁶ and Europe,⁷ warnings were issued to ensure that monitoring applications or contact tracing activities do not breach patient privacy laws. In Nigeria,8 details of individuals with positive COVID-19 tests were publicly announced by the government, and some patients heard about their positive test results from social media rather than directly from the government. In Indonesia,9 the first cases of COVID-19 were released directly to the news media, bypassing the patients themselves who found out through the news, subjecting them to unnecessary harassment and discrimination. In India,10 the government published contact details of close to 20,000 people as part of a surveillance measure.

Herein lies the conundrum: how aggressively should governments attempt to contain the pandemic at the expense of patient confidentiality, data privacy and the potential discrimination it could cause? In Singapore, when the national contact tracing programme TraceTogether (TT) was first announced, Minister for Foreign Affairs Dr Vivian Balakrishnan, who oversaw the Smart Nation drive, assured Singaporeans that TT data would be used "purely for contact tracing, period".11 However, the Singapore Government subsequently backtracked and admitted that the data was still subjected to Section 20 of the Criminal Procedure Code which gave the police the power to access the data. To mitigate the backlash in loss of public trust, the Government subsequently passed a new law to ensure the data is only used for "serious crimes". This is in contrast to the approach taken in Australia where their government has outright refused police requests for contact tracing data. 12 The new law was introduced on a Certificate of Urgency, which means that the proposed law was urgent enough to be put through all three readings in one parliamentary sitting, instead of over separate sessions.13

Utilitarianism

Utilitarianism seeks to achieve the "greatest amount of benefits obtained for the greatest number of people in the society" and it has been described as an ethical approach that is "societycentred."14 Under the utilitarianism

consequentialist approach,15 the outcomes of the loss of confidentiality and privacy will be weighed against the effects of controlling the spread of the pandemic.15 The consequentialist argument for respecting patient confidentiality is that good medical care depends upon patients being honest with their doctor. Without an assurance of confidence, patients might withhold information that is necessary to diagnose and treat them properly.16 In healthcare, utilitarianism focuses on utility, and places a premium value on life17 and the conditions needed to support it.18 Since the COVID-19 pandemic consequences are deadly, there is greater utility in curbing the infection spread than protecting confidentiality and private data. This argument thus supports aggressive government intervention and the taking of draconian measures.

The basic reproduction number R0 is an indication of the transmissibility of a virus and a central concept in infectious disease epidemiology. For R0 > 1, the number infected is likely to increase, and for R0 < 1, transmission is likely to peter out. Studies have shown that the R0 of COVID-19 is as high as 6,19 putting it on the same scale as smallpox.²⁰ Comparing the small number of patients that will be detrimentally affected by the loss of confidentiality and privacy against the vast number of potential persons that can be infected if the pandemic goes unchecked, the balance will probably tilt in favour of the latter based on the utility argument. Privacy derives value in enabling other social goods;²¹ therefore, as long as there are safeguards in place to ensure that the private data is not misused, the utilitarian argument for more aggressive data collection policies in terms of tracking to contain the pandemic can be justified.

Egalitarianism

The premise of egalitarianism is that "all persons are equal and deserve equal opportunities", and the importance of egalitarianism principles in the arena of population health was explicitly highlighted in a bulletin of the World Health Organization.²² Egalitarianism positions healthcare as an ethically superior social good that should be pursued at the cost of other social

goods,²³ and this is because good health allows normal functioning that provides people with a fundamental equal opportunity in life.²⁴ Following this line of reasoning, a breach of patient confidentiality and privacy is allowed if it leads to increased efficacy in curbing the pandemic and an overall improvement in health for everyone else.

Medical resource distribution

The global shortage of medical personal protective equipment like face masks²⁵ and ventilators²⁶ were two major issues that emerged early during the pandemic. Governments around the world scrambled to supply enough face masks for healthcare workers and some issued controversial advice to their citizens like "do not wear a mask if you are well", to dampen the hoarding and demand of face masks. This led some doctors to issue advice that directly contradicted the government's official position.28 In some countries, doctors had to decide which patients to save due to a lack of ventilators,29 and some healthcare authorities even imposed directives to refuse treatment to anyone above a certain age to conserve the precious resources for younger patients.30 These decisions pose many ethical questions which will be discussed below.

Utilitarianism

When we apply utilitarianism to the choice between conserving medical supplies for healthcare workers or distributing limited medical supplies to pacify the public, the issue is whether prioritising healthcare workers so that they can fight against the pandemic generates more utility than distributing face masks to the general public to reduce community spread. Similarly, the choice between conserving ventilators for younger patients and assigning them on a first-come, first-served basis regardless of patient age will depend on whether the overall life expectancy as a nation will increase or decrease based on that decision. The Italian Health Ministry stated that its aim was to maximise the benefit for the largest number of people, and the guidance given to doctors was to favour "greatest life expectancy" when deciding which patient should be admitted to the intensive care unit,31 thus adopting a utilitarian approach.¹⁵ Although one can argue that such a directive is unfair towards elderly patients, the decision

is sound from a utilitarian perspective because utilitarianism simply makes an overall calculation of utility in terms of life expectancy and does not give each unique life any special consideration.³²

Egalitarianism

Contrasting with the utilitarian view above which treats every individual as equal when calculating life expectancy, Rawls' theory of distributive justice espouses applying "distributive principles that are appropriately sensitive to considerations of responsibility and luck"33 and argues that resources should not simply be equally distributed as every individual is unique. One of his key assertions is that "no one should be advantaged or disadvantaged by natural fortune or social circumstance."34 Norma Daniels classified healthcare as a primary social good, without which an individual would be subject to further inequalities in life.24 Therefore, she argued that healthcare resources must have a distributive justice element and not be simply subject to a utilitarian analysis, and hence redistribution of healthcare resources should be prioritised to the most disadvantaged groups instead. However, in reality, the healthcare system is unevenly distributed,³⁵ and the trend is common whether it is a country as big as the US35 or a small city state like Singapore.36

Deontology

In deontology, acts are morally correct as long as they conform to a principle of rights and duties.34 Deontology is not concerned with the outcome and consequences of actions. Immanuel Kant argues that motive is the key to assessing morality. He believes that our acts are governed by our will, whose purity will determine how ethical an act is.34 He concludes that the only proper way to determine what moral constitutes is to have a process where we can establish the rule in advance such that our subsequent judgements do not depend on probabilities or chance.34 The key issue is therefore whether the act of saving lives regardless fulfils the categorical imperative formulations of universality and humanity. It is submitted that in accordance with Kant's formulations, the best approach when it comes to allocating limited healthcare resources should be a first-come, first-served basis since it can hardly be argued as moral if a healthcare professional refuses to save a life. Deontology is thus at odds with both utilitarianism and egalitarianism.

Conclusion

The COVID-19 pandemic is unprecedented both in terms of scale and measures taken by governments to curb the spread of the disease. With regard to patient confidentiality and data privacy, it is submitted that the balance is tipped in favour of sacrificing patient confidentiality and data privacy for the benefit of controlling the pandemic. The support for this argument can be seen from the fact that the Singapore Minister for Health invoked powers conferred under the Infectious Diseases Act,3 issuing regulations which essentially made it an offence for anyone who fails to inform employers and schools that an individual was subjected to movement control measures.38 However, having said that, the importance of privacy laws goes beyond pandemics; once the pandemic has resolved, lessons need to be learnt from the infringement of privacy laws

and their many consequences. Ironically, it appears that the quardianship of data privacy is now in the hands of technology giants like Apple who are fulfilling the role of what regulators traditionally do. For instance, several countries which initially pursued the development of centralised contact tracing apps³⁹ (which consolidate data on central servers) have decided subsequently to adopt the decentralised architecture offered by Apple and Google (using Exposure Notifications that stores data on the user's phone only), because Apple's iOS suspends Bluetooth scanning when centralised contact tracing applications are running in the background and Apple refuses to rectify the issue citing privacy concerns.⁴⁰

Regarding the distribution of medical resources, the application of the three ethical frameworks did not lead to a unanimous conclusion. The utilitarian and egalitarian theories favour resource

distribution based on a consequentialist approach to improve the overall life expectancy and overall health of the society. Deontology favours the moral approach which is to allocate resources on a first-come, first-served basis. In the past, the availability of resources did not usually enter the decision-making process and influence the option of the individual case, until resources become so scarce that it was not possible to treat all patients who could hypothetically benefit from a specific clinical treatment.33 However, the COVID-19 pandemic has stretched the limits of medical ethics to its maximum. It is therefore submitted that where medical resources are adequate, medical policy should adopt a Rawls' distributive justice model. However, if medical resources are severely constrained, the utilitarian model appears to be the more appropriate option.

References

- 1. Marks JW. Medical Definition of Hippocratic Oath. MedicineNet. Available at: https://bit.ly/3oXMXR3. Accessed 1 December 2020.
- 2. World Medical Association. Declaration of Geneva, The "Modern Hippocratic Oath". Available at: https:// bit.ly/3nNYfly. Accessed 1 December 2020.
- 3. W v Egdell [1990] 1 Ch 359.
- 4. Personal Data Protection Act 2012 (No. 26 of 2012). Available at: https://bit.ly/31SrX39.
- 5. Singapore Medical Council. Ethical Code and Ethical Guidelines 2016 Edition. Available at: https:// bit.ly/3ubNYqq. Accessed 1 November 2020.
- 6. Blumenthal D, Blumenthal R. Contact tracing must balance privacy and public health. STAT. 15 May 2020. Available at: https://bit.ly/30OXIxn.
- 7. Abeler J, Bäcker M, Buermeyer U, Zillessen H. COVID-19 Tracing and Data Protection can Go Together. JMIR Mhealth Uhealth; 8(4):e19359.
- 8. Obina C, Olawale G. COVID-19: Alleged Benue state index case demands rerun of test. Vanguard [Internet]. 2 April 2020. Available at https://bit.ly/3nL8TiY.
- 9. Syakriah A, Fachriansyah R, Aqil MI. COVID-19 patients become victims of Indonesia's lack of privacy protection. The Jakarta Post [Internet]. 5 March 2020. Available at: https://bit.ly/30WgD96.
- 10. Menezes N, Thomas B. Government publishes details of 19,240 home-quarantined people to keep a check. Bangalore Mirror [Internet]. 25 March 2020. Available at: https://bit.ly/3FDeGNC.
- 11. Baharudin H. Police's ability to use TraceTogether data raises questions on trust: Experts. The Straits Times [Internet]. 5 January 2021. Available at: https:// bit.ly/3nKFnK9.
- 12. Karp P. Government refuses police request for access to Australian coronavirus contact tracing app. The Guardian [Internet]. 23 April 2020. Available at: https://bit.ly/3l42Zbg.
- 13. Parliament of Singapore. Urgent Bill. Available at: https://bit.ly/3oZqfrZ.
- 14. Mandal J, Ponnambath DK, Parija SC. Utilitarian and deontological ethics in medicine. Tropical Parasitology 2016; 6(1):5-7.

- 15. Chan KYG, Shenoy GT. Ethics and social responsibility: Asian and Western perspectives. 3rd ed. Singapore: McGraw-Hill Education Asia, 2016.
- 16. Gillion R, Sokol DK. Confidentiality. In: Kuhse H, Singer P, eds. A Companion to Bioethics. Blackwell: Oxford, 1998: 425-31.
- 17. Bellefleur O, Keeling M. Utilitarianism in Public Health. Montréal, Québec: National Collaborating Centre for Healthy Public Policy 2016. Available at: https://bit.ly/3DPiyuG.
- 18. Dean R. The value of humanity in Kant's moral theory. Oxford: Oxford University Press on Demand, 2006.
- 19. Ying L, Gayle AA, Wilder-Smith A, Rocklöv J. The reproductive number of COVID-19 is higher compared to SARS coronavirus. J Travel Med 2020; 27(2):taaa021.
- 20. Gani R, Leach S. Transmission potential of smallpox in contemporary populations. Nature 2001; 414:748-51.
- 21. Rosenzweig P. Privacy as a Utilitarian Value. Lawfare [Internet]. 12 November 2014. Available at: https://bit.ly/30Q5xCq.
- 22. World Health Organisation. Bulletin of the World Health Organization. Available at: https://bit.ly/32Y9E0b.
- 23. Ekmekci PE, Arda B. Enhancing John Rawls's Theory of Justice to Cover Health and Social Determinants of Health. Acta Bioeth 2015; 21(2):227-36.
- 24. Daniels N. Just health: Meeting Health Needs Fairly. New York: Cambridge University Press, 2007.
- 25. World Health Organisation. Shortage of personal protective equipment endangering health workers worldwide. 3 March 2020. Available at: https://bit. ly/3r69Jcj. Accessed 1 December 2020.
- 26. Kliff S, Satariano A, Silver-Greenberg J, Kulish N. There Aren't Enough Ventilators to Cope With the Coronavirus. The New York Times [Internet]. 26 March 2020. Available at: https://nyti.ms/3xmWWn5.
- 27. Ministry of Health. Advisory on Wearing Mask. Available at: https://bit.ly/3HUIMOD. Accessed 1 December 2020.

- 28. Khalik S. Medical chief rebuts doctors' mask advice. The Straits Times [Internet]. 13 February 2020. Available at: https://bit.ly/3r7gPgx.
- 29. Beall A. The heart-wrenching choice of who lives and dies. BBC [Internet]. 29 April 2020. Available at: https://bbc.in/3rdrnep.
- 30. McGleenon B. Italy coronavirus victims over 80 WON'T receive ICU treatment – UK feared on similar path. Express [Internet]. 16 March 2020. Available at: https://bit.ly/3CQUJ44.
- 31. Vergani M, Bertolini G, Giannini A, et al. Clinical ethics recommendations for the allocation of intensive care treatments in exceptional, resourcelimited circumstances: the Italian perspective during the COVID-19 epidemic. Crit Care 2020; 24:165.
- 32. Mulgan T. Understanding Utilitarianism. Routledge, 2014: 98.
- 33. Stanford Encyclopedia of Philosophy. Distributive Justice. Available at: https://stanford. io/3FOErdV. Accessed 1 December 2020.
- 34. Gibson K. An Introduction to Ethics. New Jersey: Pearson Education, 2014.
- 35. Thomas B. Health and health care disparities: the effect of social and environmental factors on individual and population health. Int J Environ Res Public Health; 11(7):7492-507.
- 36. Lim J. Health equity in Singapore: A plan for action. Today [Internet]. 6 July 2016. Available at: https://bit.ly/3r8z8SM.
- 37. Infectious Diseases Act (Cap. 137, 2003 Rev. Ed.). Available at: https://bit.ly/3HRtA4Z.
- 38. Infectious Diseases Act. Infectious Diseases (COVID-19 — Stay Orders) Regulations 2020. Available at: https://bit.ly/3l2guYT.
- 39. Criddle C, Kelion L. Coronavirus contact-tracing: World split between two types of app. BBC [Internet]. 7 May 2020. Available at: https://bbc.in/3l7gQx8.
- 40. Fouquet H. France Says Apple Bluetooth Policy Is Blocking Virus Tracker. Bloomberg [Internet]. 21 April 2020. Available at: https://bloom. bg/3FOIUxd.