

***Keeping Track of the Risks of Contact Tracing:
An International Law Analysis of Contact Tracing
in New Zealand and the Prospect of Cross-Border
Contact Tracing***

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Contact tracing is a common public health surveillance tool used to combat the current global pandemic, COVID-19. This article explores whether the practice of contact tracing can be reconciled with other legal obligations at international law to ensure the protection of fundamental human rights and freedoms. The implementation of contact tracing by States is consistent with international law obligations under the International Health Regulations 2005, human rights law, the duty to prevent transboundary harm and the precautionary principle. However, contact tracing poses a significant threat to privacy, with data protection and surveillance concerns. Contact tracing in New Zealand serves as a case study to explore whether these tensions can be resolved. This article argues that New Zealand's contact tracing system is imperfect but nevertheless provides hope that contact tracing can uphold public health while also mitigating privacy concerns. From an international law perspective, cross-border contact tracing should be implemented by States in the global response to COVID-19.

I INTRODUCTION

Contact tracing is a “classic tool used by public health entities to arrest the spread of communicable diseases”.¹ This article analyses contact tracing through an international law lens, contextualised by

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¹ Joseph A Cannataci *Report of the Special Rapporteur on the right to privacy* UN Doc A/75/147 (27 July 2020) at [18].

the current COVID-19 pandemic. It grapples with an inherent tension: can States protect public health through contact tracing whilst upholding other fundamental rights and freedoms under international law? If so, does this mandate the provision of cross-border contact tracing?

Part II introduces contact tracing practice. It provides an overview of manual and digital tracing before describing the New Zealand approach. Part III argues that international obligations mandate the use of contact tracing, thus becoming a must-have in States' responses to COVID-19. Part IV examines risks associated with contact tracing. The most notable of these risks are the implications for privacy rights, particularly data protection and increased surveillance. Various international law obligations are examined alongside the available international guidance on rights regarding contact tracing. Part V evaluates contact tracing in New Zealand using a four-tiered framework. This analysis concludes it is possible for a State to implement contact tracing in a manner that upholds its international law obligations whilst minimising the risks to fundamental rights and wider society. Part VI explores the prospect of cross-border contact tracing using the European Union (EU) interoperability gateway as a blueprint.

II UNDERSTANDING CONTACT TRACING

Since the 1920s, contact tracing has been used to fight against infectious diseases.² Contact tracing has evolved with time. However, its basic elements remain the same. If an individual tests positive for a communicable disease, a public health official will investigate to determine where that person may have contracted the disease and who else may have been infected.³ For example, a person who comes within one metre of a probable or confirmed case of COVID-19 for at least 15 minutes is considered either a face-to-face or direct physical contact. He or she is then classified as a "contact" for contact tracing purposes.⁴ These people are identified, assessed and managed in an effort to prevent onward transmission.⁵ Where an individual is

2 Amy Lauren Fairchild, Lawrence O Gostin and Ronald Bayer "Contact tracing's long, turbulent history holds lessons for COVID-19" (17 July 2020) *The Conversation* <www.theconversation.com>.

3 Wendy K Mariner "Mission Creep: Public Health Surveillance and Medical Privacy" (2007) 87 *BU L Rev* 347 at 352.

4 World Health Organization *Public Health Surveillance for Covid-19* (Interim Guidance, 16 December 2020) at 3.

5 World Health Organization *Contact Tracing in the Context of COVID-19* (Interim Guidance, 10 May 2020) at 1.

deemed likely to transmit the disease to others, he or she may be subject to isolation or quarantine.⁶

In order to fully understand contact tracing, this Part will explore the differences between manual and digital tracing, before moving on to discuss the operation of contact tracing in New Zealand.

COVID-19 Contact Tracing

COVID-19 is a disease caused by a novel form of coronavirus, SARS-CoV-2 (or severe acute respiratory syndrome coronavirus 2), that can affect a person's lungs and airways.⁷ The disease has spread at pace around the globe since its discovery in late 2019.⁸ To reduce the virus' spread, the chains of disease transmission must be broken.⁹ The World Health Organization (WHO) has emphasised the need for early identification of COVID-19 cases through comprehensive surveillance systems and contact tracing.¹⁰

Contact tracing will not always be an appropriate tool to break the chain of disease transmission. For example, influenza has a short incubation period, making contact tracing infeasible.¹¹ As COVID-19 has a relatively long incubation period of 14 days, contact tracing is feasible and has been implemented globally.¹² According to WHO, any person who may have been exposed to COVID-19 should be identified and followed up with daily until 14 days since the exposure date.¹³ This makes it possible to quarantine potentially infectious individuals before they spread the virus.¹⁴ However, COVID-19 can be transmitted while people are asymptomatic or pre-symptomatic.¹⁵ Contact tracing, both manual and digital, has therefore become a crucial tool in containing the pandemic.

1 Manual contact tracing

Manual contact tracing requires contact tracers and medical teams to interview infected individuals, investigate their movements and

6 Mariner, above n 3, at 352.

7 Ministry of Health "About COVID-19" (20 August 2020) <www.health.govt.nz>.

8 See World Health Organization "Timeline: WHO's COVID-19 Response" (25 January 2021) <www.who.int>.

9 Jeffrey P Kahn *Digital Contact Tracing for Pandemic Response* (John Hopkins University Press, Baltimore, 2020) at 13.

10 World Health Organization, above n 4, at 4.

11 Michael G Baker, Amanda Kvalsvig and Ayesha J Verrall "New Zealand's COVID-19 Elimination Strategy" (2020) 213 *Mdd J Aust* 198 at 199.

12 At 198.

13 World Health Organization, above n 5, at 1.

14 World Health Organization, above n 4, at 5.

15 World Health Organization, above n 5, at 1.

identify those with whom they have been in contact.¹⁶ Health authorities will contact a person who has been, or may have been, infected to collect this information and instruct self-isolation.¹⁷ Confirmed cases and contacts must provide personal information such as their physical address, email address and phone number.¹⁸ They must disclose their recent contacts and the nature and intensity of those encounters.¹⁹ This may extend to explaining what they do for work, how they travel, where they shop and other locations they visited when they were likely to have been infectious.²⁰ The process essentially relies on memory recall, but can be supported by people logging their movements themselves or by using a contact tracing register at private and public venues.

2 Digital contact tracing

Many countries have developed digital contact tracing systems alongside manual systems to contain the pandemic more effectively. WHO has classified three digital tools used for contact tracing: symptom tracking tools, outbreak response tools and proximity tracing tools.²¹ At the heart of all operations is the collection of individuals' data. Symptom tracking enables citizens to self-check and self-report any health symptoms, providing additional benefit where in-person contact tracing is limited or impossible.²² Outbreak response tools are used by public health personnel to investigate and identify contacts using special databases and digital investigation forms, and analyse the data collected.²³ These tools enable digital data to be captured and managed to avoid data entry errors, and reduce processing time associated with paper-based systems.²⁴ Proximity tracing or tracking tools are implemented either through GPS location or Bluetooth signals.²⁵ Location-based systems identify when a person has been in the same location as a confirmed case. Alternatively, Bluetooth signalling informs users if they have been in close proximity to a case

16 Teresa Scassa "COVID-19 Contact Tracing: From Local to Global and Back Again" (2021) 10(2) *International Journal of E-Planning Research* 45 at 46.

17 Cannataci, above n 1, at [20].

18 Kahn, above n 9, at 30.

19 At 30.

20 At 30.

21 World Health Organization *Digital Tools for COVID-19 Contact Tracing* (Interim Guidance, 2 June 2020) at 1.

22 At 2.

23 At 2.

24 At 2.

25 At 2.

without providing the location information.²⁶ This is done by sending signals from one device to another.²⁷ Proximity tracing tools can be categorised as either centralised or decentralised. Where centralised, a national authority (often the national health authority) holds and processes the information. Decentralised proximity tracing tools are restricted so that data is held only by the individual device and not distributed automatically to authorities.²⁸

Global efforts to enhance COVID-19 digital contact tracing initially focused on utilising readily available data, such as phone location data or credit card records.²⁹ This approach is still preferred in South Korea where authorities can access mobile data, medical records, CCTV footage and credit card records to determine individuals' whereabouts.³⁰ However, using pre-existing data raises obvious concerns about individuals' ability to consent to such data collection.³¹ Due to user familiarity, many countries have turned to applications (apps) to provide some, if not all, of the digital tools classified by WHO.³² These apps can be voluntary or mandatory. To enter South Korea, all inbound travellers are required to download the Self-quarantine Safety Application on their phones, which includes a self-diagnosis feature, GPS location tracking and self-quarantine information.³³ In China, an app-driven system uses self-reported and authority-collected data to allocate users a colour: green for healthy, amber for contact with an infected individual and red for symptomatic or a positive test result.³⁴ Only green users can travel freely.³⁵ Evidently, approaches to contact tracing differ between countries.

3 Blended contact tracing

Digital technologies should be established alongside traditional contact tracing methods.³⁶ Manual contact tracing can be problematic due to inadequate paper-based reporting, complicated requirements

26 At 2.

27 Scassa, above n 16, at 47.

28 World Health Organization, above n 21, at 2.

29 Scassa, above n 16, at 46.

30 The Government of the Republic of Korea *Flattening the curve on COVID-19: How Korea responded to a pandemic using ICT* (11 May 2020) at 41.

31 Scassa, above n 16, at 47.

32 At 48.

33 The Government of the Republic of Korea, above n 30, at 35.

34 Molly Bode and others "Contact Tracing for COVID-19: New considerations for its practical application" (8 May 2020) McKinsey & Company <www.mckinsey.com>.

35 At 8.

36 World Health Organization, above n 21, at 4.

for data processing and management, and deficient or delayed identification of contacts.³⁷ Other challenges include accurate recall of exposure events, resource-heavy processes, and inefficient manual location and notification of contacts.³⁸ Manual tracing poses further challenges where contacts do not have addresses, locations have no street names, and in countries where there is no national identification programme such as birth certificates or national health numbers.³⁹

Digital tracing circumvents manual issues of poor memory recall and lack of contact information.⁴⁰ Digital technologies may also support prompt reporting of COVID-19.⁴¹ Easy accessibility of information allows for rapid notification and tracing of potential contacts while using fewer resources than manual tracing.⁴² However, WHO has cautioned that digital technologies alone are insufficient in fighting COVID-19 without supplementary manual systems.⁴³

4 Effectiveness

According to the Special Rapporteur on the right to privacy, “[a]ll available evidence suggests that there is presently no alternative to ... contact tracing that enables contagion to be arrested, limited and often contained.”⁴⁴ It is unlikely that COVID-19 can be contained solely through the quarantine and isolation of infected individuals without thorough contact tracing.⁴⁵ Equally, contact tracing alone is insufficient as its effectiveness depends on testing capacity and wider compliance with COVID-19 restrictions, among other factors.⁴⁶

37 At 1.

38 Luca Ferretti and others “Quantifying SARS-CoV-2 transmission suggests epidemic control with digital contact tracing” (2020) 368 *Science* 619 at 619; and European Centre for Disease Prevention and Control Resource estimation for contact tracing, quarantine and monitoring activities for COVID-19 cases in the EU/EEA (March 2020) at 7.

39 World Health Organization *Implementation and management of contact tracing for Ebola virus disease* (Emergency Guideline, September 2015) at 13.

40 Ayesha Verrall *Rapid Audit of Contact Tracing for COVID-19 in New Zealand* (Ministry of Health, Audit Report, 10 April 2020) at 8.

41 World Health Organization, above n 5, at 7.

42 Isobel Braithwaite and others “Automated and partly automated contact tracing: a systematic review to inform the control of COVID-19” (2020) 2 *Lancet Digital Health* 607 at 618.

43 Daniel Kahn Gillmor *Principles for Technology-Assisted Contact Tracing* (American Civil Liberties Union, ACLU White Paper, March 2020) at 4.

44 Cannataci, above n 1, at [19].

45 Ferretti and others, above n 38, at 625.

46 At 620.

COVID-19 Contact Tracing in New Zealand

“Contact tracing is a well-established public health process that is routinely performed in public health units (PHUs) in New Zealand.”⁴⁷ Contact tracing plays an essential role in New Zealand’s COVID-19 elimination strategy which includes controlled border entries, quarantine requirements, physical distancing, isolating cases and an alert level system.⁴⁸ Contact tracing methods continue to evolve in this digital age. New Zealand has a robust contact tracing system that employs both manual and digital systems to fight COVID-19. Here, I discuss New Zealand’s use of these two contact tracing systems.

1 Manual contact tracing

New Zealand’s communicable disease control system consists of twelve PHUs staffed by health professionals experienced in communicable disease control.⁴⁹ PHUs are informed of newly confirmed or probable cases by laboratories and clinicians. They contact the individuals to provide isolation instructions, identify any contacts and check in daily.⁵⁰ The National Investigation and Tracing Centre supports PHUs by informing close contacts and passing that information to Healthline, who follow up with contacts on day seven and 14 of isolation.⁵¹ Manual tracing is further supported by a cloud-based platform called the National Contact Tracing Technology Solution (NCTS), which stores case and contact details linked by exposure events.⁵² PHUs use this back-end digital system to support manual tracing efforts as it provides a common database to source contact details by connecting to existing health information via the National Health Index.⁵³

Individuals are encouraged to track their activity using physical registers at businesses and venues. Since the introduction of a tracer app (discussed below), businesses are no longer legally required to use alternative manual record-keeping systems during Alert Levels 2 and 3.⁵⁴ At Alert Level 1, individuals may log their movements in a

47 Verrall, above n 38, at 4.

48 Ministry of Health “COVID-19: Elimination Strategy for Aotearoa New Zealand” (8 May 2020) <www.health.govt.nz>.

49 Verrall, above n 38, at 4–5.

50 At 4–5.

51 At 5.

52 Verrall, above n 38, at 5.

53 At 5; and Brian Roche and others *Interim Report on the Contact Tracing System* (Contact Tracing Assurance Committee, 12 June 2020) at 12.

54 COVID-19 Public Health Response (Alert Levels 3 and 2) Order (No 2) 2020, cl 10. This order was revoked by the COVID-19 Public Health Response (Alert Level Requirements) Amendment Order (No 3) 2020, cl 7.

printable Covid Tracer Booklet, rather than using the App. This Booklet records who they have seen, where they have gone and what time they were there.⁵⁵

2 Digital contact tracing

In May 2020, the Government launched the NZ COVID Tracer App (the App).⁵⁶ The App was developed by New Zealand company Rush Digital for the Ministry of Health and relied in part on the Amazon Web Services platform.⁵⁷ The App allows users to scan QR codes with their smartphone when visiting places such as shops and event venues, forming a private Digital Diary of their whereabouts.⁵⁸ Where QR codes are unavailable, users can add detailed location information manually to assist memory recall. Businesses are legally required to ensure a QR code is “displayed in a prominent place”.⁵⁹ There is no requirement to use the QR code tracing function, though it is actively encouraged.⁶⁰ Bluetooth proximity tracing is an additional voluntary feature within the App.⁶¹ Users are encouraged to enable the Bluetooth function, but it does not replace the QR code functionality.⁶² Trials were conducted at the end of 2020 to determine the viability of Bluetooth contact tracing cards.⁶³ However, the trials illustrated that this form of technology is unreliable and impractical, particularly in comparison to the App’s Bluetooth functionality.⁶⁴

55 New Zealand Government “NZ COVID Tracer Booklet” Unite against COVID-19 <www.covid19.govt.nz>.

56 RUSH “Developing essential technology to empower and protect a team of five million during the pandemic.” <www.rush.co.nz>.

57 Ministry of Health “Privacy and Security for NZ COVID Tracer” <www.health.govt.nz>.

58 New Zealand Government “NZ COVID Tracer App” Unite against COVID-19 <www.tracing.covid19.govt.nz>.

59 COVID-19 Public Health Response (Alert Level Requirements) Order 2020, cl 8(1).

60 New laws effective from September 2021 are more stringent. They require businesses that are open at Alert Levels 2, 3, 4 to have systems and processes in place (to the extent reasonably practicable) to ensure that everyone over 12 years old who enters their workplace either: scans the NZ COVID Tracer QR code, makes some kind of personal contact record or provides their name and phone number to the business, alongside date and time they were present. See COVID-19 Public Health Response (Protection Framework) Order 2021, s 22.

61 Ministry of Health *Privacy Impact Assessment: COVID-19 Contact Tracing Application* (4 December 2020) at 20.

62 New Zealand Government, above n 58.

63 New Zealand Government “Trials for Bluetooth contact tracing card begins in Rotorua” Unite against COVID-19 (3 November 2020) <www.covid19.govt.nz>.

64 RNZ “Covid-19: Chris Hipkins confirms CovidCard not practical” (online ed, New Zealand, 3 March 2021) <rnz.co.nz>.

III INTERNATIONAL LAW OBLIGATIONS MANDATING CONTACT TRACING

Four international obligations require States to contact trace: the International Health Regulations 2005 (IHR);⁶⁵ fundamental international human rights law; the duty to prevent transboundary harm; and the precautionary principle.

International Health Regulations 2005

International efforts to control infectious diseases date back to the first International Sanitary Conference in 1851.⁶⁶ Afterwards, there was intense diplomatic activity regarding the control of infectious diseases, culminating in the first effective International Sanitary Convention in 1892.⁶⁷ The European cholera epidemics and the growth of international trade and travel required increased international cooperation.⁶⁸ The Convention sought to protect Europe from imported diseases and reduce the burden of quarantine on international trade.⁶⁹ The international conventions had a shared purpose to create and enforce an international surveillance system.⁷⁰ However, the patchwork of different international conventions and treaties on international disease control left this area of international law unclear.⁷¹ This was remedied by the establishment of the International Sanitary Regulations in 1951, which led to the eventual creation and adoption of the IHR.⁷² The IHR binds WHO Member States.⁷³ Its objective remains to prevent and protect against the international spread of disease with a public health response that refrains from unnecessary interference with international traffic or trade.⁷⁴

65 International Health Regulations (2005) 2509 UNTS 79 (entered into force 15 June 2007) [IHR].

66 David P Fidler *International Law and Infectious Diseases* (Oxford University Press, New York, 1999) at 21.

67 At 25.

68 At 27.

69 At 28.

70 At 42.

71 At 58 and 59.

72 Fidler, above n 66, at 59.

73 Constitution of the World Health Organization (1946) 14 UNTS 186 (opened for signature 22 July 1946, entered into force 7 April 1948), art 22.

74 IHR, above n 65, art 2.

1 Core capacities

States must “develop public health surveillance systems that capture critical data for their COVID-19 response”.⁷⁵ Such surveillance is critical to reduce the spread of COVID-19, although applicable to all infectious diseases.⁷⁶ This duty stems from the IHR which requires States to “develop, strengthen and maintain ... the capacity to detect, assess, notify and report events”.⁷⁷ Events are defined as “a manifestation of disease or an occurrence that creates a potential for disease”.⁷⁸ An event is declared a public health emergency of international concern (PHEIC) where it poses a public health risk through the international spread of disease to other States, requiring a unified global response.⁷⁹ WHO declared COVID-19 a PHEIC on 30 January 2020.⁸⁰ The use of contact tracing systems as an essential surveillance tool upholds a State’s obligation to develop, strengthen and maintain the core capacity to detect disease under the IHR.

2 WHO temporary recommendation

Under the IHR, WHO may recommend States “implement tracing of contacts”.⁸¹ In the temporary recommendation issued to State Parties on 1 August 2020, WHO advised Member States to “continue to enhance capacity for public health surveillance, testing, and contact tracing” with regard to COVID-19.⁸² These temporary recommendations are non-binding;⁸³ however, they remain vital to WHO’s function of guiding States as they navigate notions of international best practice.⁸⁴ Further WHO guidance states that tracing is an “essential public health tool for controlling infectious disease

75 World Health Organization *Ethical considerations to guide the use of digital proximity tracking technologies for COVID-19 contact tracing* (Interim Guidance, 28 May 2020) at 1.

76 Institute of Medicine *Emerging Infections: Microbial Threats to Health in the United States* (National Academy Press, Washington, D.C, 1992) as cited in David P Fidler *SARS, Governance and the Globalization of Disease* (Palgrave Macmillan, New York, 2004).

77 IHR, above n 65, art 5.1.

78 Article 1.

79 Article 1.

80 World Health Organization *WHO Director-General’s statement on IHR Emergency Committee on Novel Coronavirus (2019-nCoV)* (Statement, 30 January 2020).

81 IHR, above n 65, art 18. See generally Fidler, above n 66, for a discussion on WHO action during the SARS epidemic.

82 World Health Organization *Statement on the fourth meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of coronavirus disease (COVID-19)* (Temporary Recommendation, 1 August 2020).

83 IHR, above n 65, art 1.

84 Gian Luca Burci and Claude-Henri Vignes *World Health Organization* (Kluwer Law International, The Hague, 2004) at 44.

outbreaks”.⁸⁵ WHO has also iterated that a failure to implement appropriate surveillance systems will obstruct an effective eradication strategy.⁸⁶

3 Other health measures

Though contact tracing is strongly recommended by WHO, the type of contact tracing is less prescriptive. Neither the IHR nor the temporary recommendation issued by WHO explicitly recommend technology-assisted contact tracing. Recent criticism that the IHR “need to be brought into the digital age” suggests that other assessments find it lacking in its ability to translate to digital contexts.⁸⁷

Under Article 43, States may implement other health measures that achieve the same or better health protection than WHO recommendations.⁸⁸ This provision ensures respect for States’ sovereign rights,⁸⁹ allowing for the creation of innovative technologies. However, these measures must not be more “invasive or intrusive to persons than reasonably available alternatives that would achieve the appropriate level of health protection”.⁹⁰ Presumably, the terms “invasive and intrusive” contemplate privacy concerns. States may create contact tracing systems beyond WHO recommendations or IHR requirements. Member States are required to base their pursuit of alternative health measures on scientific principles and evidence, or WHO guidance.⁹¹ States must consider WHO’s guidance on the implementation of digital contact tracing when deciding to use digital tracing technologies.⁹²

States are required to implement surveillance systems that satisfy core capacity requirements. Within these capacities, contact tracing can be read as an obligation that satisfies the capacity to detect. This is supported by WHO’s temporary recommendation urging States to improve their existing contact tracing capabilities, implying that Member States must implement contact tracing.⁹³ Though it is unclear what type of contact tracing should be

85 World Health Organization, above n 4, at 1.

86 World Health Organization *WHO guidelines on ethical issues in public health surveillance* (2017) as cited in World Health Organization, above n 75, at 1.

87 The Independent Panel for Pandemic Preparedness and Response *Second Report on Progress* (19 January 2021) at 6.

88 IHR, above n 65, art 43.

89 Caroline Foster “Justified Border Closures do not violate the International Health Regulations 2005” (11 June 2020) EJIL:Talk! Blog of the European Journal of International Law <www.ejiltalk.org>.

90 IHR, above n 65, art 43.

91 Article 43.

92 World Health Organization, above n 5.

93 World Health Organization, above n 82.

implemented, States will uphold their obligations under the IHR if they choose to implement digital tracing systems that are no more invasive than manual tracing systems.

International Human Rights Law

The right to health and the right to life must be at the core of all decision-making during a pandemic.

1 The right to health

The international right to health is contained in Article 12 of the International Covenant on Economic, Social and Cultural Rights (ICESCR) and is the right of everyone to enjoy the highest attainable standard of physical and mental health.⁹⁴ States must fulfil, protect and respect it.⁹⁵ The obligation to fulfil requires States adopt appropriate measures to realise the full right to health.⁹⁶ States must take all necessary steps to ensure the “prevention, treatment and control of epidemic diseases”.⁹⁷ General Comment No. 14 specifies that States must control the spread of disease by making relevant technologies available, using and improving public health surveillance mechanisms and data collection, and implementing infectious disease control strategies.⁹⁸ Contact tracing is a public health surveillance tool used to collect data to fight COVID-19 and prevent the spread of disease. Therefore, States that implement contact tracing uphold their duties under the right to health. Whilst States are obliged to devote maximum available resources to ensure the right to health is fully realised,⁹⁹ the Covenant does not require that States take steps beyond what their available resources allow.¹⁰⁰ More is expected of high-income States regarding the implementation of contact tracing and the ability to make relevant technologies available.¹⁰¹

94 International Covenant on Economic, Social, and Cultural Rights 993 UNTS 3 (opened for signature 19 December 1966, entered into force 3 January 1976) [ICESCR], art 12(1).

95 Committee on Economic, Social and Cultural Rights *CESCR General Comment No. 14: The Right to the Highest Attainable Standard of Health (Art. 12)* UN Doc E/C.12/2000/4 (11 August 2000) at [33].

96 At [33].

97 ICESCR, above n 94, art 12(2)(c).

98 Committee on Economic, Social and Cultural Rights, above n 95, at [16].

99 Committee on Economic, Social and Cultural Rights *Statement on the coronavirus disease (COVID-19) pandemic and economic, social and cultural rights* UN Doc E/C.12/2020/1 (17 April 2020) at [14].

100 Manisuli Ssenyonjo “Economic, social and cultural rights: an examination of state obligations” in Sarah Joseph and Adam McBeth (eds) *Research Handbook on International Human Rights Law* (Edward Elgar Publishing, Cheltenham (UK), 2010) 36 at 51.

101 At 51.

The right to health mandates the implementation of contact tracing and requires individual States to make appropriate tracing technologies available where their resources allow. This obligation extends to international cooperation.¹⁰² Member States who do not implement an appropriate public health response to COVID-19 likely violate the Covenant and their obligations to uphold the right to health.

Additionally, “parties have extraterritorial obligations related to global efforts to combat COVID-19”.¹⁰³ Jurisdictional limitations that exist in other human rights instruments are notably absent in the ICESCR.¹⁰⁴ Therefore, obligations arising under the extraterritorial application of the right to health may extend to situations where a State’s acts or omissions cause foreseeable effects on the enjoyment of ICESCR rights within and beyond State territory.¹⁰⁵ The failure to establish appropriate health measures that attempt to contain COVID-19 could predictably impact people’s lives across borders, thus engaging the extraterritorial application of this right.

2 *The right to life*

The international right to life is contained in numerous international instruments including Article 6 of the International Covenant on Civil and Political Rights (ICCPR).¹⁰⁶ Under the ICCPR, “every human being has the inherent right to life”, which must be protected by law.¹⁰⁷ The right to life should be interpreted broadly.¹⁰⁸ Governments are required to take all reasonable measures to promote this right, and prevent real and immediate risks to life.¹⁰⁹

The Human Rights Committee has affirmed that the ICCPR implies States must “take appropriate measures to address the general

102 Committee on Economic, Social and Cultural Rights, above n 95, at [16].

103 Committee on Economic, Social and Cultural Rights, above n 99, at [20].

104 See International Covenant on Civil and Political Rights 999 UNTS 171 (opened for signature 19 December 1996, entered into force 23 March 1976) [ICCPR], art 2: “all individuals within its territory and subject to its jurisdiction”.

105 ETO Consortium *Maastricht Principles on Extraterritorial Obligations of States in the Area of Economic, Social and Cultural Rights* (January 2013) at 7.

106 ICCPR, above n 104. See also *Universal Declaration of Human Rights* GA Res 217A (1948) [UDHR]; and *Convention for the Protection of Human Rights and Fundamental Freedoms* 213 UNTS 221 (opened for signature 20 March 1952, entered into force 3 September 1953).

107 ICCPR, above n 104, art 6(1).

108 *General Comment No. 36, Article 6 (Right to Life)* UN Doc CCPR/C/GC/36 (3 September 2019) at [3].

109 Elizabeth Wicks *The Right to Life and Conflicting Interests* (Oxford University Press, New York, 2010) at 240; and Jon Yorke “Introduction: The Right to Life and the Value of Life: Orientations in Law, Politics and ethics” in Jon Yorke (ed) *The Right to Life and the Value of Life: Orientations in Law, Politics and Ethics* (Ashgate Publishing, Surrey, 2010) 1 at 4.

conditions in society that may give rise to direct threats to life” which may include “the prevalence of life-threatening diseases”.¹¹⁰ Contact tracing is an appropriate measure to protect lives during a pandemic. States have an additional duty to protect against deprivations of the right to life caused by private persons.¹¹¹ A possible interpretation is that States must also protect the lives of individuals where they are threatened by others carrying a communicable and deadly disease like COVID-19.¹¹² States may again fulfil their duty through contact tracing.

The Duty to Prevent Transboundary Harm

International law requires a State “not to allow knowingly its territory to be used for acts contrary to the rights of other States”.¹¹³ The International Court of Justice has asserted that States are obliged under international environmental law “to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control”.¹¹⁴ Principle 21 of the Stockholm Declaration of 1972 stipulates this same obligation, but couched as a responsibility.¹¹⁵ The International Law Commission expanded this principle so that a State must “take all appropriate measures to prevent significant transboundary harm or at any event to minimize the risk thereof”.¹¹⁶

States are held to a due diligence standard within this principle. Where it is impossible to prevent transboundary harm entirely, States are obliged to minimise the risk of harm eventuating.¹¹⁷ The duty is triggered when a State knows, or should have known, of the significant risk of harm.¹¹⁸ This principle can be applied to COVID-19 as a virus that causes widespread harm across borders.

However, the standard of due diligence “may change over time as measures considered sufficiently diligent at a certain moment may become not diligent enough in light, for instance, of new scientific or

110 Human Rights Committee *General comment No. 36* UN Doc CCPR/C/GC/36 (3 September 2019) at [26].

111 At [7].

112 Alessandra Spadaro “COVID-19: Testing the Limits of Human Rights” (2020) 11EJRR 317 at 318.

113 *Corfu Channel (United Kingdom v Albania) (Merits)* [1949] ICJ Rep 4 at 22.

114 *Legality of the Threat or Use of Nuclear Weapons (Advisory Opinion)* [1996] ICJ Rep 226 at [29].

115 *Report of the United Nations Conference on the Human Environment* UN Doc A/CONF.48/14/Rev.1 (June 1972).

116 *International Liability for Injurious Consequences Arising out of Acts not Prohibited by International Law (Prevention of Transboundary Harm from Hazardous Activities)* [2001] vol 2, pt 2 YILC 144 at 153.

117 At 153.

118 At 155.

technological knowledge”.¹¹⁹ Due diligence is flexible and assessed in light of the particular circumstances.¹²⁰ Manual contact tracing systems have several identified flaws so may not be “sufficiently diligent” compared to digital tracing. Digital technology may become the standard to meet due diligence obligations. Overall, States are obliged to take all appropriate measures to minimise the risk of COVID-19 spreading beyond borders — an obligation supported by contact tracing.¹²¹

The Precautionary Principle

According to the Independent Panel for Pandemic Preparedness and Response, had the precautionary principle been applied at the first indication of human-to-human transmission, more rapid and effective action could have limited the spread of the virus.¹²² This principle of precaution recognises that where urgent action is required, States often need to act without formal scientific proof.¹²³ The principle is commonly applied in the context of environmental issues, formulated in principle 15 of the Rio Declaration, which states “[w]here there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”¹²⁴ The principle is transferrable to a public health scenario.¹²⁵ Where there is a serious threat to human health — like COVID-19 — a lack of scientific certainty must not prevent States from taking preventive measures.¹²⁶

Contact tracing can certainly act as an appropriate measure to address the threat of disease spread; but it is unclear what type of tracing this mandates as the precautionary principle “does not necessarily dictate what *form* of precautionary action will be

119 *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area (Advisory Opinion)* [2011] ITLOS Rep 10 at [117].

120 Malcolm N Shaw *International Law* (8th Ed, Cambridge University Press, Cambridge, 2017) at 648.

121 Antonio Coco and Talita de Souza Dias “Part I: Due Diligence and COVID-19: States’ Duties to Prevent and Halt the Coronavirus Outbreak” (March 24, 2020) EJIL:Talk! Blog of the European Journal of International Law <www.ejiltalk.org>.

122 The Independent Panel for Pandemic Preparedness and Response, above n 87, at 15.

123 Shaw, above n 120, at 657.

124 *Rio Declaration on Environment and Development* UN Doc A/CONF.151/26 (12 August 1992).

125 See Marco Martuzzi and Joel A Tickner (eds) *The precautionary principle: protecting public health, the environment and the future of our children* (The Regional Office for Europe of the World Health Organization, Copenhagen, 2004).

126 John Tobin *The Right to Health in International Law* (Oxford University Press, New York, 2012) at 184.

appropriate”.¹²⁷ Looking to the environmental sphere for guidance, precautionary action requires the use of the “best available technology” to combat environmental threats.¹²⁸ However, the obligation to apply the best available technology may not always be consistent with the precautionary principle, particularly where such technology is unavailable.¹²⁹ Prior to the creation of digital contact tracing measures, the precautionary approach required States implement manual tracing. As additional COVID-19 strains are discovered, States must continue to take precaution using appropriate measures such as contact tracing.

Concluding Remarks

Though not explicitly mandated by international law, contact tracing can be read in as a requirement for State compliance under international law. Regardless of whether manual or digital mechanisms are implemented, contact tracing will generally ensure States meet their international obligations.

IV THE RISKS OF CONTACT TRACING

While contact tracing is clearly a tool used to fulfil international law obligations, it has inherent risks. This Part argues that the threats posed by contact tracing systems are deeply problematic and impact individual rights and wider society. International guidance to protect against these risks is also assessed.

Privacy Concerns

Early in the COVID-19 pandemic, WHO commented that increased surveillance and the collection of data obtained through contact tracing may threaten fundamental human rights — including the right to privacy.¹³⁰ This surveillance and data collection may also have a

127 David Freestone and Ellen Hey “Implementing the Precautionary Principle: Challenges and Opportunities” in *The Precautionary Principle and International Law: The Challenge of Implementation* (Kluwer Law International, The Hague, 1996) at 251 (emphasis in original).

128 André Nolkemper “What you Risk Reveals what you Value: and Other Dilemmas Encountered in the Legal Assaults on Risks” in David Freestone and Ellen Hey (eds) *The Precautionary Principle and International Law: The Challenge of Implementation* (Kluwer Law International, The Hague, 1996) at 89.

129 At 89.

130 World Health Organization, above n 75, at 1.

chilling effect on wider society and notions of democracy. Data collection, processing, disclosure and protection are central issues.

1 Data Protection

Contact tracing is privacy-invasive because it requires detailed disclosure of a person's movements, including their association with others.¹³¹ Personal data, likely including contact details, may be gathered with limited controls.¹³² The collection of personal information is legitimate where implemented for the fast detection and arrest of outbreaks, efficient and accurate identification of contacts, and the monitoring of long-term virus trends.¹³³ These objectives are reasonable and justifiable in the name of public health — provided the data is processed in line with legislation and international law that protect privacy.¹³⁴

Data processing risks are perhaps one of the largest privacy concerns for both manual and digital tracing tools, particularly improper data disclosure or misuse. Where personal data is collected in bulk, it may be disclosed, leaked or used by a person or agency with authorised access for an improper purpose, or by someone who has unauthorised access.¹³⁵ Data collected via digital tracing methods may be particularly susceptible to security risks, resulting in people's data being exposed or subject to malicious attacks or hacking.¹³⁶ For example, there are reports of scammers claiming to be public health officials and attempting to acquire private information like bank details.¹³⁷ At an international level, the misuse of information could lead to major diplomatic incidents.

With the rise of digital tracing solutions, the debate between centralised and decentralised apps has dominated global discussions,¹³⁸ as has whether such technical solutions should be mandatory or voluntary. The most concerning systems are those that require mandatory provision of information. India is the only democracy that has made it compulsory to download a contact tracing

131 Cannataci, above n 1, at [18].

132 World Health Organization *Joint Statement on Data Protection and Privacy in the COVID-19 Response* (Statement, 19 November 2020).

133 World Health Organization, above n 4, at 3–4.

134 Cannataci, above n 1, at [59].

135 Department of Defense *Safeguarding Privacy in the Fight Against Terrorism: The Report of the Technology and Privacy Advisory Committee* (March 2004) at 40.

136 Serge Vaudenay "Centralized or Decentralized: The Contact Tracing Dilemma" Swiss Federal Institute of Technology Lausanne (2020) at 5 as cited in Scassa, above n 16, at 47.

137 CERT NZ "Attackers using COVID-19 themed scams - updated alert" (26 March 2020) <www.cert.govt.nz>.

138 Scassa, above n 16, at 47.

app, although countries such as South Korea have required mandatory tracing for certain people.¹³⁹ Even where data collection is voluntary, laws and systems should be fully transparent in their process to ensure people are giving full and informed consent.

2 Surveillance

Contact tracing must not be normalised. “Mission creep”¹⁴⁰ or “function creep”¹⁴¹ is where contact tracing data is retained long-term and used for illegitimate, unstated purposes that are unrelated to public health. In Singapore, police can access data retrieved via contact tracing apps for criminal investigations.¹⁴² Digital contact tracing systems in particular have the potential to go beyond a lawful, temporary measure that is required in emergency situations.¹⁴³

The use of contact tracing information for secondary purposes is especially problematic where that information is used to infringe on other fundamental freedoms. Illegitimate use of contact tracing data can impact freedoms of association,¹⁴⁴ movement¹⁴⁵ and expression.¹⁴⁶ Governments can access information about individual and group associations, and may deduce one’s political or cultural views. Some countries have revoked these freedoms altogether during COVID-19, taking advantage of the pandemic to “shut down political dissent and criticism”.¹⁴⁷ This erodes democracy, affects rights and causes anxiety around governmental interpretation of one’s actions.

Increased surveillance also lays the foundation for exacerbated harm against marginalised communities, such as migrants, women and LGBTQ people. This is particularly true in countries where their rights are already threatened.¹⁴⁸ Additionally, businesses and individuals that are publicly declared as being connected to an outbreak may experience discrimination and public shaming.¹⁴⁹ For

139 Cannataci, above n 1, at [75].

140 Mariner, above n 3, at 348.

141 Cannataci, above n 1, at [81].

142 Andreas Illmer “Singapore reveals Covid privacy data available to police” (5 January 2021) BBC News <www.bbc.com>.

143 Sharifah Sekalala and others “Analysing the Human Rights Impact of Increased Digital Public Health Surveillance During the COVID-19 Crises” (2020) 22(2) Health and Human Rights Journal 7 at 12.

144 UDHR, above n 104, art 20.

145 Article 13.

146 Article 19.

147 Office of the United Nations High Commissioner for Human Rights “Press Conference opening statement” (press release, 9 December 2020).

148 Sekalala and others, above n 143, at 11.

149 Sara LM Davis “Contact Tracing Apps: Extra Risks for Women and Marginalized Groups” (29 April 2020) Health and Human Rights Journal <www.hhrjournal.org>.

example, upon the tracing of an outbreak back to a Muslim gathering in India, Muslim communities were attacked via media, facing intense discrimination and violence.¹⁵⁰

Protection under International Law

International law offers guidance to mitigate these privacy concerns. In particular, this Subpart will address IHR data protections, international human rights law and international advice — such as the Recommendation on the Protection and Use of Health-Related Data, which solidifies expectations laid upon States regarding privacy rights.¹⁵¹

1 International Health Regulations 2005

When implementing IHR international obligations, WHO Member States must ensure “full respect for the dignity, human rights and fundamental freedoms of persons”.¹⁵² In terms of specific privacy protections, Article 45(1) of the IHR states:¹⁵³

Health information collected or received by a State Party pursuant to these Regulations from another State Party or from WHO which refers to an identified or identifiable person shall be kept confidential and processed anonymously as required by national law.

This specifically relates to information sharing between States or between a State and WHO. The wording “as required by national law” is ambiguous. It could mean that information referring to an identifiable person must be kept confidential and anonymous to the extent that such requirements are enshrined in domestic legislation; or that information must be kept confidential, and anonymous processing requirements are optional depending on domestic law. Regardless, the IHR obligation is weak as it is qualified by domestic data protection law and is open to interpretation.

Further, Article 45(2) states:¹⁵⁴

Notwithstanding paragraph 1, States Parties may disclose and process personal data where essential for the purposes of assessing

150 Sameer Yasir “India is Scapegoating Muslims for the Spread of the Coronavirus” (22 April 2020) Foreign Policy <foreignpolicy.com>.

151 Joseph A Cannataci *Report of the Specialacy* UN Doc A/74/277 (5 August 2019).

152 IHR, above n 65, art 3(1).

153 Article 45(1).

154 Article 45(2).

and managing a public health risk, but State Parties, in accordance with national law, and WHO must ensure that the personal data are:

- (a) processed fairly and lawfully, and not further processed in a way incompatible with that purpose;
- (b) adequate, relevant and not excessive in relation to that purpose;
- (c) accurate and, where necessary, kept up to date; every reasonable step must be taken to ensure that data which are inaccurate or incomplete are erased or rectified; and
- (d) not kept longer than necessary.

It is inferred that Article 45(2) also refers to the sharing of information regarding an identifiable person between States or with WHO. However, the IHR appears silent on requirements for a State's own citizens, leaving enforcement to international human rights law and national legislation. Article 45(2) standards are important in a domestic context and should be the benchmark for data disclosure and processing within and between States. If States comply with these obligations when deploying tracing systems, they will likely uphold many of their international human rights obligations.

Unfortunately, WHO lacks IHR enforcement powers.¹⁵⁵ Other States are likely to push for accountability for non-compliance under Article 45, the consequences of which may include a tainted international image, unilateral trade restrictions and public outrage.¹⁵⁶ These consequences hold some weight but are arguably insufficient to protect against serious IHR breaches.

2 International Human Rights Law

The IHR lacks specific reference to the right to privacy, instead relying on international human rights law. The international right to privacy is found in Article 17 of the ICCPR,¹⁵⁷ Article 12 of the Universal Declaration of Human Rights (UDHR)¹⁵⁸ and Article 8 of the European Convention on Human Rights.¹⁵⁹ Under the ICCPR,

155 Fidler, above n 66, at 68.

156 World Health Organization "Frequently Asked Questions about the International Health Regulations (2005)" <www.who.int> at [7].

157 ICCPR, above n 104.

158 UDHR, above n 106.

159 Convention for the Protection of Human Rights and Fundamental Freedoms, above n 106.

“[n]o one shall be subjected to arbitrary or unlawful interference with his privacy, family, home or correspondence”; thus, interference with a person’s right to privacy is only permissible if the interference is not arbitrary or unlawful. In many countries, COVID-19 has been treated as an exceptional case where the right to privacy is not necessarily absolute.¹⁶⁰ The Human Rights Committee explained that State interference with privacy must be provided for in law, and that such law must “be in accordance with the provisions, aims and objectives” of the Covenant.¹⁶¹ Any such interference must be reasonable in the circumstances.¹⁶² Where there are restrictions on rights under the Covenant.¹⁶³

States must demonstrate their necessity and only take such measures as are proportionate to the pursuance of legitimate aims in order to ensure continuous and effective protection of Covenant rights

The Siracusa Principles on the Limitation and Derogation Provisions in the ICCPR also requires that any limitation placed on a Covenant right is “based on one of the grounds justifying limitations recognized by the relevant article of the Covenant”, is in response to a “pressing public or social need”, “[p]ursues a legitimate aim” and is “proportionate to that aim”.¹⁶⁴ Considered alongside international case law and further practice from the Human Rights Committee, it is clear that overarching principles of legality, necessity and proportionality are of crucial importance to any restrictions on privacy rights.¹⁶⁵ Therefore, contact tracing measures must not limit privacy in unlawful or arbitrary ways and must be necessary, legitimate and proportionate to the aim of arresting the spread of COVID-19.

3 Other relevant international guidance

The patchwork of international guidance on privacy continues to increase. In 2017, the Human Rights Council recognised the need to

¹⁶⁰ Cannataci, above n 1, at [18].

¹⁶¹ United Nations Human Rights Committee *General Comment No. 16 Article 17 (Right to Privacy) The Right to Respect of Privacy, Family, Home and Correspondence, and protection of Honour and Reputation* UN Doc HRI/GEN/1/Rev.9 (8 April 1988) at [3].

¹⁶² At [4].

¹⁶³ United Nations Human Rights Committee *General Comment No. 31: The Nature of the General Legal Obligation Imposed on State Parties to the Covenant* UN Doc CCPR/C/21/Rev.1/Add. 13 (29 March 2004) at [6].

¹⁶⁴ United Nations Economic and Social Council *The Siracusa Principles on Limitation and Derogation Provisions in the International Covenant on Civil and Political Rights* UN Doc E/CN. 4/1985/4 (28 September 1984) at 3.

¹⁶⁵ *Report of the Office of the United Nations High Commissioner for Human Rights* UN Doc A/HRC/27/37 (30 June 2014) at [22]–[23].

promote the protection of privacy in the digital age; and to examine the way surveillance strategies interact with “principles of non-arbitrariness, lawfulness, legality, necessity and proportionality”.¹⁶⁶

The Special Rapporteur’s Report on Data Protection and Surveillance discussed various instruments and recommendations to promote privacy protection during the pandemic.¹⁶⁷ The Report drew on the Recommendation on the Protection and Use of Health-Related Data, submitted to the General Assembly in 2019 by the Special Rapporteur.¹⁶⁸ The Recommendation provides an international baseline for minimum health-related data protection standards,¹⁶⁹ with the intention of aiding States in fulfilling their international human rights obligations.¹⁷⁰ It required that the processing of health-related data comply with various principles. Data processing must be: necessary; for a legitimate and limited purpose; carried out in a transparent and lawful manner; and done with adequate security and oversight bodies to ensure the rights of the data subject are at the core of processing systems.¹⁷¹ The Recommendation was released prior to the pandemic but is particularly relevant to data collection by contact tracing, processing and disclosure. This is because it addresses the increasingly digitalised nature of data processing whilst remaining applicable to manual tracing systems.¹⁷² The Special Rapporteur encourages citizens to ask: “to what extent, if at all, does my country effectively enforce the standards set out in the Recommendation on the Protection and Use of Health-Related Data?”¹⁷³

Similar principles are found in recent WHO guidance regarding digital contact tracing.¹⁷⁴ WHO stipulates contact tracing can be implemented in a manner consistent with human rights but strong national laws, policies and oversight bodies are required to place limitations on its potential (ab)use.¹⁷⁵ WHO’s ethical guidelines include principles of proportionality, use restriction, data minimisation, transparency, security, limited retention, accountability and oversight.¹⁷⁶

166 *Resolution on the Right to Privacy in the Digital Age* GA Res 34/7 (2017) at 2.

167 Cannataci, above n 1.

168 Cannataci, above n 151, at 3.

169 At 5.

170 Cannataci, above n 1, at [10].

171 Cannataci, above n 151, at [4.1].

172 Cannataci, above n 1, at [34]. The Special Rapporteur clarified that information collected and processed in the context of COVID-19 comes under the general term of “health-related data”: at [7(b)].

173 At [38].

174 World Health Organization, above n 75, at 3–5.

175 At 1.

176 At 3–5; and World Health Organization, above n 21.

Concluding Remarks

There are inherent risks associated with COVID-19 contact tracing. The IHR cannot hold States accountable for negative consequences arising from disease surveillance. However, international human rights law, in conjunction with soft law guidance, provides clear standards by which States are to be held accountable for their contact tracing. These standards will be utilised in the framework of Parts V and VI to analyse New Zealand's contact tracing system from an international legal perspective and consider whether cross-border contact tracing should be implemented.

V EVALUATING CONTACT TRACING IN NEW ZEALAND

By implementing contact tracing, New Zealand broadly upholds international law obligations. However, Part V considers whether New Zealand's protections against the associated risks are adequate, using a four-tiered framework. This Part grapples with a key tension — is it possible for a State to reconcile its international law obligations to contact trace for the good of public health with its obligations to protect and maintain other fundamental rights and freedoms?

The Framework

States must comply with four criteria when contact tracing. They must:

- (1) only collect necessary information when gathering contact tracing data;
- (2) ensure processing, use and disclosure of such data is legitimate and proportionate;
- (3) limit the retention of contact tracing data; and
- (4) ensure adequate oversight of, and accountability for, contact tracing.

These criteria are drawn from the guidance listed in Part IV — in particular, the Recommendation on the Protection and Use of Health-Related Data.¹⁷⁷ For the purpose of analysis, some criteria are omitted and others are combined; the analysis cannot fully appreciate all contact tracing considerations. Human rights principles of legality, necessity, proportionality, lawfulness and non-arbitrariness will guide

¹⁷⁷ Cannataci, above n 1, at [10].

this analysis. Article 45 of the IHR is also used as an authoritative benchmark on data privacy standards, despite ambiguity as to its authority within a State's territory. WHO's Ethical Guidelines assisted in the framework's creation.¹⁷⁸

Notably, the primary mechanism to protect against the over-collection and misuse of data is found in domestic constitutional and human rights law. However, this article seeks to analyse New Zealand's contact tracing framework through an international law lens.

Restricted and Necessary Data Collection

Health-related data must only be collected "for explicit, specific and legitimate purposes".¹⁷⁹ Legitimate purpose includes public health reasoning such as containing the spread of infectious disease.¹⁸⁰ Article 45 of the IHR states that the collection of personal data must be "adequate, relevant and not excessive in relation to that purpose".¹⁸¹ Therefore, data obtained through contact tracing must be constrained. New Zealand's current contact tracing system satisfies this criterion.

If an individual tests positive for COVID-19 or is identified as a close contact, they are expected to provide relevant details to contact tracers. The Health Act 1956 can compel individuals to provide information about their close contacts.¹⁸² This information includes the name, age, sex, address and contact details of each contact and any other information required for this purpose.¹⁸³ The contact tracer must consider the extent to which such information is necessary for contact tracing purposes before requiring this information.¹⁸⁴ The COVID-19 Public Health Response Act 2020 also provides for mandatory contact tracing. A section 11(1)(a)(ix) order empowers the Minister of Health to require any person to provide, "in specified circumstances or in any specified way, any information necessary for the purpose of contact tracing".¹⁸⁵ The public health response must serve the purpose of preventing and limiting the spread of COVID-19,¹⁸⁶ whilst remaining

178 World Health Organization, above n 75.

179 Cannataci, above n 151, at [4.1(b)].

180 At [5.2(c)].

181 IHR, above n 65, art 45.2.

182 Health Act 1956, s 92ZZC.

183 Section 92ZZC(4).

184 Section 92ZZD.

185 COVID-19 Public Health Response Act 2020, s 11(a)(ix).

186 Section 4(a).

“proportionate”.¹⁸⁷ Though “any information necessary” appears broad, both Acts contain appropriate safeguards that limit information gathering to what is strictly necessary.

In terms of the App, if a person is identified as a close contact or tests positive, contact tracers may ask for their Digital Diary to be shared with the Ministry of Health. A Digital Diary, which remains voluntary, collects information by manual data entry or QR code scanning.¹⁸⁸ It includes location information, identifying where and at what time a person was at a particular venue or business.¹⁸⁹ Meanwhile, the Bluetooth functionality gives a “digital high-five to other people’s phones”.¹⁹⁰ A random ID code is privately and securely sent to record how close another phone was and for how long, provided the other phone also had Bluetooth tracing enabled.¹⁹¹

If Person X tests positive, their phone can recognise the user IDs they ‘high-fived’ within 14 days¹⁹² and a contact tracer will ask whether they want to notify other App users who were in close contact with Person X of their test result.¹⁹³ If so, then Person X can upload the Bluetooth keys to the NCTS, generating a private and anonymous alert to those other users.¹⁹⁴ Person Y — who was in close contact with Person X — receives a private alert advising them that a close contact has tested positive, when they are last thought to have been exposed to the virus and the safety precautions they should take.¹⁹⁵ This data is only received by contact tracers if Person X chooses to share it.¹⁹⁶ This ensures that the amount of information collected via location and proximity tracking is not excessive as contact tracers are prevented from unilaterally determining an individual’s movements and contacts. This satisfies the criterion as the provision of information is voluntarily and sufficiently restrictive.

187 Section 4(c).

188 Ministry of Health, above n 61, at 10.

189 At 7.

190 New Zealand Government, above n 58.

191 Ministry of Health, above n 61, at 9.

192 At 18.

193 At 8.

194 At 8.

195 At 6.

196 At 8 and 13.

Legitimate and Proportionate Processing, Use and Disclosure of Data

The processing of data collected via contact tracing must be necessary and limited to tracing contacts in order to protect public health.¹⁹⁷ The data must not be processed for purposes other than that which it was originally collected.¹⁹⁸ The IHR obliges States to not disclose and process data in a manner “incompatible with that purpose”.¹⁹⁹ Therefore, contact tracing will only be proportionate where information is strictly used for legitimate public health surveillance.²⁰⁰ Contact tracing in New Zealand currently fails to fully satisfy this criterion as there are insufficient protections against data being used for alternate purposes.

Contact tracers have a duty of confidentiality and cannot use or disclose information collected by contact tracing for any purpose other than managing COVID-19.²⁰¹ Access to contact tracing information will be logged by audit records within the NCTS to ensure legitimate and policed access.²⁰² The App privacy statement further iterates that “[a]ny information [a person chooses to] share with the Ministry via the [App] will not be shared with other Government agencies unless they are directly involved in assisting with the public health response to COVID-19.”²⁰³ It also states clearly that such information “will not be used for enforcement purposes”.²⁰⁴

These protections are insufficient. The App collects location and proximity information, and so in effect, an agency can access an individual’s data for any purpose. A unilateral statement from the Ministry of Health does not provide the same protection against possible abuse as enforceable legislation would. This is a central concern in Part IV regarding surveillance creep. In Singapore, the Government has retroactively and surreptitiously removed privacy protections and repurposed data. This concern has been echoed by two academics who argue the lack of protections in place regarding the potential use of contact tracing information by other agencies is

197 Cannataci, above n 151, at [4.1(c)].

198 At [4.1(b)].

199 IHR, above n 65, art 45(2)(a).

200 Sekalala and others, above n 143, at 14.

201 Health Act 1956, s 92ZZG.

202 Ministry of Health, above n 61, at 13.

203 Ministry of Health “Privacy and Security Statement” NZ COVID Tracer app <tracing.covid19.govt.nz>.

204 Ministry of Health, above n 203.

insufficient.²⁰⁵ New Zealand’s privacy legislation could be amended to align with Australia²⁰⁶ by clarifying who can and cannot access tracing information collected via national apps.²⁰⁷ Other agencies may not necessarily need to be prevented from using such information, but its use would be restricted for contact tracing purposes only.²⁰⁸ This is essential to ensure a transparent, proportional and lawful system. While New Zealand has some important protections in place, to fully satisfy this element, legislation could be amended to ensure information gathered by contact tracing cannot be repurposed.

Limited Retention of Data

Health-related data must not be retained for longer than necessary²⁰⁹ and should be limited in scope²¹⁰ to restrict the opportunities for misuse. New Zealand’s current contact tracing system fails to fully satisfy this criterion.

Digital Diary information is automatically deleted 60 days after entry, or can be manually deleted by App users at any time.²¹¹ When users voluntarily upload their Digital Diary to the NCTS upon request from a contact tracer, information is either “deleted at the end of the pandemic”²¹² or held in accordance with appropriate legislation if it becomes part of a person’s health records.²¹³ Location information is only stored on a consumer’s phone for 14 days.²¹⁴ If users provide their Bluetooth proximity information to contact tracers, it is only stored for 14 days.²¹⁵ The self-deleting data feature is an important safeguard against prolonged retention.

However, the deletion of data “at the end of the pandemic” is concerning. This data includes Digital Diary information and tracing information collected through contact tracer interviews.²¹⁶ Within the Ministry of Health, the Data Governance Group is responsible for

205 Privacy Foundation New Zealand Inc “Data Use Protections for NZ COVID Tracer” (5 January 2021) <www.privacyfoundation.nz>.

206 See Privacy Amendment (Public Health Contact Information) Act 2020 (AU).

207 Privacy Foundation New Zealand, above n 205.

208 Privacy Foundation New Zealand, above n 205.

209 World Health Organization, above n 75, at 4.

210 Cannataci, above n 151, at [10.1].

211 Ministry of Health, above n 61, at 29.

212 At 29.

213 See Health (Retention of Health Information) Regulations 1996.

214 Ministry of Health, above n 61, at 24.

215 At 29.

216 At 29.

ensuring data deletion at the end of the pandemic,²¹⁷ but there is no specified date for deletion. Criteria must be established to determine when the pandemic is classified as having ended, preferably in legislation. Two academics recently recommended that an “end point” for data collection be defined in New Zealand, determining when data will be destroyed or fully anonymised for research purposes.²¹⁸

New Zealand’s clear restrictions on the retention of contact tracing data collected via the App are satisfactory. However, deletion at “the end of the pandemic” renders the current system inadequate and unable to satisfy this criterion.

Oversight and Accountability

Contact tracing systems must be subject to regular review to ensure compliance with applicable data protection and privacy principles.²¹⁹ WHO’s Ethical Guidelines recommended independent oversight bodies be instated to ensure data collection, processing and disclosure are lawful, necessary and proportionate.²²⁰ These bodies should remain until the pandemic’s end, ensuring digital tracing technologies are dismantled.²²¹ Oversight bodies ensure transparency and hold authorities accountable where systems fail to meet appropriate privacy and data protection standards. New Zealand’s contact tracing system satisfies this criterion.

The Ministry of Health — in consultation with the Office of the Privacy Commissioner — released a Privacy Impact Assessment at the development phase of the COVID Tracer App to assess privacy compliance.²²² The Data Governance Group ensures accurate and proper use of data.²²³ The App and supporting web services are subject to an independent security review by an All of Government approved supplier.²²⁴ The Office of the Privacy Commissioner and the Government Chief Privacy Officer also provided independent, privacy compliant advice at each phase of the App’s development.²²⁵

217 At 29.

218 Privacy Foundation New Zealand, above n 205.

219 Cannataci, above n 151, at [4.3].

220 World Health Organization, above n 75, at 5.

221 At 5.

222 See Ministry of Health, above n 61. Multiple privacy impact statements have been released since the beginning of the COVID-19 pandemic: see <www.health.govt.nz/system/files/documents/pages/pia_-_nz_covid_tracer_-_release_8_plus_potential_contact_form.pdf>.

223 At 30.

224 At 9.

225 At 9.

Further, the Contact Tracing Assurance Committee provides independent advice to the Ministry on New Zealand's contact tracing system as a whole.²²⁶ Whilst the Committee does not focus specifically on privacy protections,²²⁷ it is unnecessary to expand the Committee's scope given that the Office of the Privacy Commissioner independently reviews actions taken by the Ministry of Health. For example, the Privacy Commissioner made clear recommendations to the Ministry of Health on ways to improve its practices and better uphold privacy rights.²²⁸ The risks of contact tracing are always present. However, it is the ability of national systems to respond when problems arise, that is crucial. Therefore, New Zealand satisfies this criterion.

Concluding Remarks

New Zealand effectively mitigates certain privacy and surveillance concerns surrounding its contact tracing, but it has some systemic flaws. New Zealand's failure to meet the relevant criteria is due to limited provisions to safeguard against the repurposing of contact tracing information and the absence of clear data retention timelines. These concerns can be easily addressed with additional legal protection given the strong privacy-compliant foundation of the system. New Zealand's contact tracing system has a clear basis in law; only requires information necessary to identify contacts; limits data retention; contains provisions to ensure data is proportionate; and is held to account by independent oversight. Therefore, it is possible to reconcile the competing obligations at international law that arise from the practice of contact tracing. If New Zealand implemented the above recommendations, it would reinforce the required standard for privacy compliance and surveillance protection when contact tracing.

VI CROSS-BORDER CONTACT TRACING

Borders remain tightly regulated worldwide.²²⁹ With global vaccine development, inter-country travel may gradually increase. What role

226 Roche and others, above n 53, at 19.

227 At 19.

228 Office of the Privacy Commissioner *Inquiry into Ministry of Health Disclosure of COVID-19 Patient Information* (September 2020) at 22.

229 See World Nomads "COVID-19 Travel Alert: Which Countries Have Open Borders?" <www.worldnomads.com> for an updated list of border closures.

should contact tracing play in the re-opening of international borders? This Part will now discuss whether there is a mandate for cross-border tracing at international law and whether privacy and surveillance concerns can be adequately safeguarded.

International Law Obligations

The implementation of international contact tracing has a legitimate basis in international law. Tracing upholds the IHR's fundamental purpose, is explicitly recommended by WHO and speaks to the international duty to cooperate.

1 International Health Regulations 2005

WHO explicitly recommended State Parties “facilitate international contact tracing”.²³⁰ Per Part III, while strongly encouraged, temporary recommendations are non-binding. WHO has not provided further guidance on the possibility of international contact tracing, however the following interpretation of the IHR supplements this recommendation.

The IHR does not explicitly mandate international contact tracing, but international tracing has a basis in the IHR. A central aspect of the IHR is the promotion and facilitation of international information sharing during health emergencies. The IHR requires a State Party's National IHR Focal Point to send urgent communications to WHO IHR Contact Points arising from the application of the Regulations,²³¹ including notifying events that constitute a PHEIC.²³² This includes “all relevant public health information”.²³³ Information provided to WHO includes contact tracing data, contemplated by Article 45 in discussion about the treatment of data relating to an identifiable person.²³⁴ The IHR also anticipates information sharing between States.²³⁵ Therefore, the IHR contemplates the sharing of information at an international level during a pandemic response. The IHR's overarching purpose is protection against international disease while “avoid[ing] unnecessary interference with international traffic and trade”.²³⁶ International

230 World Health Organization, above n 82.

231 IHR, above n 65, art 4.

232 Articles 4 and 6.

233 Article 7.

234 Article 45(1).

235 Article 45(1).

236 Article 2.

contact tracing, alongside vaccinations, are mechanisms States can employ to increase international traffic and facilitate global information sharing — two key components of the IHR.

Academics speculate that many States breached the IHR by failing to coordinate their responses and choosing to close national borders at the beginning of the pandemic.²³⁷ This is because the IHR obliges States to collaborate through the “provision or facilitation of technical cooperation and logistical support”.²³⁸ The IHR do not clearly define “collaborate” but a failure to cooperate likely constitutes a breach.²³⁹ Technical and logistical support may indeed include international contact tracing which would uphold various IHR obligations.

2 *The Duty to Cooperate*

States have an affirmative duty to work cooperatively with other States in order to curb the spread of COVID-19. Article 2(1) of the ICESCR requires State Parties to “take steps, individually and through international assistance and cooperation, especially economic and technical, to the maximum of its available resources”. The goal is to “achiev[e] progressively the full realisation of the rights” contained in the Covenant, such as the right to health.²⁴⁰ General Comment No. 14 stated that “the international community has a collective responsibility” to address the problem of transmissible diseases.²⁴¹ UNCESCR affirmed this need, declaring measures that facilitate international cooperation as “necessary for the realization of economic, social and cultural rights, [and] will ensure that the world is better prepared for future pandemics and disasters”.²⁴² Additionally, WHO called for increased international cooperation during COVID-19 as national measures are insufficient.²⁴³

All of these authorities point to the importance of cooperation during COVID-19. The nature of the duty to cooperate has been criticised as “weak and imprecise”.²⁴⁴ However, the wide scope of the duty encourages consideration of how to cooperate during the

237 Oona Hathaway and Alasdair Phillips-Robins “COVID-19 and International Law Series: WHO’s Pandemic Response and the International Health Regulations” (8 December 2020) Just Security <www.justsecurity.org>.

238 IHR, above n 65, art 44(1)(b).

239 Hathaway and Phillips-Robins, above n 237.

240 IHR, above n 65, art 2(1).

241 Committee on Economic, Social and Cultural Rights, above n 95, at [40].

242 Committee on Economic, Social and Cultural Rights, above n 99, at [25].

243 At [23].

244 John Tobin “The International Obligation to Secure the Right to Health” in *The Right to Health in International Law* (Oxford University Press, New York, 2012) 325 at 342.

pandemic. The establishment of cross-border contact tracing is a key measure through which States can uphold their obligations.

Underlying Concerns

The duty to cooperate to prevent the spread of COVID-19 conflicts with privacy and surveillance risks. Part IV's concerns are exacerbated where contact tracing is implemented at an international level.

1 Privacy and surveillance concerns

When proposing to disclose New Zealanders' personal information overseas, New Zealand organisations must ensure that the overseas entities have similar levels of privacy protection to those in New Zealand.²⁴⁵ The Government must look for proven compliance with privacy standards and oversight mechanisms before entering into international contact tracing agreements. This safety net has its limitations as overseas governments may abuse the data even if they appear to possess appropriate safeguards. Many countries' data protection laws do not meet New Zealand's standards. Despite this, the possibility of international contact tracing may create diplomatic pressure to work together. Additionally, surveillance creep may be exacerbated as numerous States may have access to contact tracing information. International tracing systems will require larger manpower than national systems, increasing the scope for potential misuse and abuse.

Traditional public health surveillance generally only involves the State; however digital solutions mean cross-border solutions will likely place more power into the hands of multinational data companies.²⁴⁶ Third parties have already been relied on extensively to deliver solutions to contact tracing via digital means. For example, New Zealand's contact tracing partially relies on the Amazon Web Services platform,²⁴⁷ and the App uses the Apple and Google Exposure Notification Framework.²⁴⁸ Whilst States have a duty to

245 Information privacy principle 12 in Privacy Act 2020, s 22; and Privacy Commissioner "New Principle for Disclosing Personal Information Overseas" (press release, 27 October 2020) <www.privacy.org.nz>.

246 Sekalala and others, above n 143, at 11.

247 Ministry of Health "Privacy and Security for NZ COVID Tracer" <www.health.govt.nz>.

248 Office of the Privacy Commissioner "Privacy Commissioner supports Bluetooth upgrade to COVID Tracer" (9 December 2020) <www.privacy.org.nz>.

protect against human rights abuse by third parties,²⁴⁹ technological engineering processes have historically focused on performance and functionality, not privacy.²⁵⁰ To what extent will cross-border contact tracing place further power into the hands of multinational companies?

A Blueprint for Interoperability

In spite of these concerns, the utility of an international contact tracing system must be appreciated. It would assist in the re-opening of borders by allowing people to be notified when they have come into contact with a confirmed or probable case, or when they have been at the location of an outbreak in a foreign country. To examine the viability of international tracing systems from a privacy and surveillance perspective, this Subpart will use the EU interoperability gateway as a case study.

1 The EU Interoperability Gateway

Most EU Member States have launched mobile apps to assist COVID-19 contact tracing with varying specifications.²⁵¹ The European Commission and Member States considered that interoperability between the apps and their technological systems was crucial for cross-border COVID-19 tracing.²⁵² Per the Interoperability Guidelines:²⁵³

... interoperability refers to these apps being able to exchange the minimum information necessary so that individual app users, wherever they are located in the EU, are alerted if they have been in proximity, within a relevant period, with another user who has notified the app that he/she has tested positive for COVID-19.

When implemented, EU National apps would notify EU users if they have been in proximity with a user who tests positive for COVID-19,²⁵⁴ and also notify them of country-specific safety steps.²⁵⁵ This requires users to download contact tracing apps and turn on their

249 Robert McCorquodale "Non-state actors and international human rights law" in Sarah Joseph and Adam McBeth (eds) *Research Handbook on International Human Rights Law* (Edward Elgar Publishing, Cheltenham, 2010) 9 at 114.

250 Cannataci, above n 1, at [70].

251 eHealth Network *Interoperability guidelines for approved contact tracing mobile applications in the EU* (13 May 2020) at 3.

252 At 3.

253 At 3.

254 At 3.

255 At 7.

Bluetooth capabilities. Only anonymous encrypted data keys are to be collected by the interoperability gateway — individuals cannot be identified, nor can their locations be tracked.²⁵⁶ Downloading country-specific apps would be voluntary and a user's home country app would continue to work in other EU countries.²⁵⁷ Participating EU countries all developed decentralised national apps meaning that all proximity information would be stored on that user's phone and only passed on voluntarily.²⁵⁸

2 Resolving the tension

An international contact tracing system must uphold principles of “non-arbitrariness, lawfulness, legality, necessity and proportionality”.²⁵⁹ Cross-border tracing must also satisfy the criteria outlined in Part V by having clear limitations on the scope of data collected and restricting the ability for data to be repurposed. Furthermore, there must be sufficient accountability oversight mechanisms. As proximity tracking data does not collect information that may identify a person, privacy concerns are mitigated. When basing international tracing systems on the EU interoperability gateway, the key concern is ensuring sufficient oversight as the EU factored into its design.²⁶⁰ Another layer of oversight, by a body independent of WHO, would need to be established for global implementation of these systems.

Concluding remarks

The EU interoperability gateway exemplifies the potential for cross-border contact tracing systems to respect privacy and balance public health and privacy rights. Time will tell if the gateway is as fit for purpose as it seems. Whilst the risks of surveillance and the accumulation of power within large multinational technology companies remains concerning, the international duty to cooperate exists to mitigate the risk. States can promote public health by collaborating and implementing international tracing systems. For example, the Australian and New Zealand quarantine-free travel “bubble” is a perfect opportunity for cross-border tracing to be

256 European Commission “Coronavirus: EU interoperability gateway goes live, first contact tracing and warning apps linked to the system” (press release, 19 October 2020).

257 European Commission, above n 256.

258 European Commission, above n 256.

259 *Resolution on the Right to Privacy in the Digital Age*, above n 165, at 2.

260 European Commission, above n 256.

explored. For now, cross-border interoperability is a “desire and recommendation for future”.²⁶¹

VII CONCLUSION

This article is hopeful about the use of contact tracing as a global response to COVID-19. The utility of contact tracing as a mechanism to meet international law obligations has been demonstrated. Though there are many risks associated with contact tracing systems, these systems can be established with safeguards that minimise risk potential. States must always ensure they meet international standards to protect their citizens’ rights.

This article recommends that New Zealand establish stricter privacy measures in its implementation of contact tracing to ensure proportionality, necessity, lawfulness and transparency. A further recommendation is the implementation of international contact tracing systems in the response to COVID-19 and future pandemics.

States hold immense power during times of crises and must be held accountable where their actions impinge upon human rights. It is relatively simple for a State to reconcile competing international law obligations, but it is crucial that they continue to do so — if only there were an app for that!

Post-script

The COVID-19 legal landscape continues to evolve. The substantive content of this article was written at the beginning of 2021, at a time when the Delta variant of COVID-19 had just emerged in other nations but was not yet of direct concern to New Zealand. At the time of publication, New Zealand is facing a significant outbreak of this variant in the community. Because of this, government strategies have adapted and shifted to meet the new demands of Delta. This means new contact tracing rules, updated privacy impact statements and legislative changes. This article has not attempted to reflect or comment on such changes, which means that some aspects of the article may not reflect the current legislative landscape in New Zealand, or even the latest international guidance on COVID-19. The purpose of this article is to encourage an international law perspective on contact tracing and suggest a framework by which contact tracing measures can be evaluated.

²⁶¹ Cannataci, above n 1, at [67].