

Communicable disease control: The Intertwining of Public Health Measures and Ethical Dilemmas

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ABSTRACT

This paper delves into the communicable disease control in Hong Kong and mainland China from the perspectives of public health and ethics. It first introduces Hong Kong's public health law, policies, and organizational structure for disease control. Then, it applies theories such as Utilitarianism, Deontology, Communitarianism, and Libertarianism to justify infectious disease control measures, including coercive methods like isolation and quarantine. Through the analysis of real - world cases of SARS and H7N9, it demonstrates the effectiveness of control measures. The research shows that communicable disease control is a vital part of public health. Although some measures may interfere with individual freedoms, they are justifiable based on specific moral principles in different situations. The moral foundation of these control policies is relatively solid, and they have positive effects in preventing the spread of infectious diseases.

KEYWORDS

Communicable disease control; Public health; Moral theories; Isolation; Quarantine

This paper consists of three parts to introduce the communicable disease control in Hong Kong and mainland China. The first part is introduction to public health law fact, policies and the organization in Hong Kong. The second part use some theories like Utilitarianism, Deontology, Communitarianism and Libertarianism to justify the infectious disease control measures which includes some coercive ways like isolation and quarantine. The third part will analyze the control measures of SARS and H7N9 in combination with the actual cases.

1 Communicable disease control in Hong Kong

1.1 The Government of the Hong Kong Special Administrative Region and mission

Hong Kong's department of health and hospital authority are mainly responsible for the prevention, control and treatment of infectious diseases. The centre for health protection (CHP) under the department of health is responsible for disease control and prevention. It was established in 2004 and is administered by the department of health. The Centre for Health Protection (CHP) has three main approaches to controlling infectious diseases which called '3Rs': real-time surveillance, rapid intervention and responsive risk communication. Not only that, The Centre for Health Protection also took a series of measures(2016, Dr KH WONG).

We continue to strengthen the surveillance system, infection control and laboratory diagnostic capacity; implement vaccination programmes; draw up emergency response plans; conduct risk communication and health promotion activities; and develop applied research and training programmes. For non-communicable diseases, we put emphasis on promoting healthy living in the community, and our 'Strategic Framework for Prevention and Control of Non-communicable Diseases' has set out a comprehensive strategy and goals.

The Centre for Health Protection seeks to prevent communicable and non-communicable diseases with the following commitment (the '3Ps'): Protect the health of the community; Promote healthy living; Partner with stakeholders (2015, Dr CHAN Hon-ye). The mission of the Centre for Health Protection is to achieve effective prevention and control of diseases in Hong Kong in collaboration with major local and international stakeholders (2015, CHP).

1.2 Organization

CHP leader is Director of Health. There is Controller under Director of Health. There are six branches under the Controller: Surveillance & Epidemiology Branch, Infection Control Branch, Emergency Response & Information Branch, Public Health Services Branch, Public Health Laboratory Services Branch.

Emergency Response & Information Branch is involved in the work of the port health department to prevent people with severe infectious diseases from bringing diseases into Hong Kong or out of the customs. It also includes an Emergency Response/Contingency Planning Unit and Risk Communication/Corporate Planning Unit to respond to and manage public health crises, including formulating and updating Contingency plans, Planning and coordinating exercises and exercises, and Planning CHP's objectives.

Infection Control Branch involves the development, publication and assessment of Infection Control guidelines and

Infection Control training for healthcare professionals in both healthcare and non-healthcare Settings. Surveillance & Epidemiology Branch infectious disease control division is responsible for conducting epidemiological surveys on outbreaks and for monitoring and controlling infectious diseases in Hong Kong. In addition, Public Health Services Branch mainly provides community support Services for infectious disease control.

Public Health Laboratory Services Branch provides laboratory diagnostic services and public advisory services on virology for disease surveillance and control, health promotion and disease prevention. Program Management & Professional Development Branch focuses on the government's vaccination programs and arrangements for quarantining of close contacts without symptoms of infectious diseases in centers, isolation and evacuation of affected buildings/premises. At the same time, Program Management & Professional Development Branch also do a lot of CHP related work coordination.

1.3 Prevention and Control of Disease Ordinance (Cap. 599)

Prevention and Control of Disease Ordinance (Cap. 599) is an Ordinance to provide for the control and prevention of disease among human beings; to prevent the introduction into, the spread in and the transmission from, Hong Kong of any disease, source of disease or contamination; to apply relevant measures of the International Health Regulations promulgated by the World Health Organization; and to provide for connected purposes (2008, L.N. 202).

The Ordinance are mainly six parts, respectively is Preliminary, Powers of Seizure and Forfeiture, Powers of Arrest, Regulations, Miscellaneous, Repeals, Savings and Consequential Amendments.

Powers of Seizure and Forfeiture means the health officer may, with the written approval of the director, control or prevent the spread of any disease that poses a public health risk if he has reason to believe that an article or part thereof is (contains) an infectious agent. And the health officer may confiscate any article discharged on land or otherwise brought into Hong Kong by any person in contravention of this ordinance or attempt to discharge any article on land in contravention of this ordinance.

Powers of Arrest means if a health officer or police officer reasonably suspects that a person has committed or is committing an offence under this ordinance, the health officer or police officer may stop, detain or arrest the person without a warrant. Any person detained under this ordinance who flees or attempts to escape commits an offence and is liable on conviction to a fine at level 2 and imprisonment for 6 months (2008, L.N. 202).

Regulations includes three parts are: Power to make Regulations; Public health emergency regulation; Measures applied in light of WHO's temporary recommendations. Power to make Regulations contains the secretary for food and health may make regulations (the regulations) - for the purposes of (a) to prevent any disease, its source or pollution from being introduced into, spreading in and from Hong Kong; and (b) prevention of any disease (2008, L.N. 202). Public health emergency regulation focus on where the chief executive in council considers any situation to be a public health emergency, the chief executive in council may make regulations to prevent, respond to or mitigate the effects of such public health emergency and to protect public health.

Measures applied in light of WHO's temporary recommendations mainly means:

The Director may, for the purposes of preventing the introduction into, the spread in and the transmission from, Hong Kong of any disease, by order published in the Gazette, prescribe any measure to be applied in the light of any temporary recommendation made by WHO pursuant to articles 15, 17 and 18 of the International Health Regulations."

2 The Moral Theory Foundation of Communicable Disease Control

In accordance with the relevant entry context of public health from the Stanford Encyclopedia of Philosophy, it has four characteristics that provide much of the subject matter for public health ethics: (1) it is a public or collective good; (2) its promotion involves a particular focus on prevention; (3) its promotion often entails government action; and (4) it involves an intrinsic outcome-orientation. Control of communicable diseases is a crucial part to improve and protect the health of communities, and it inevitably requires a series of public health measures which might be coercive and rely on the law enforcement to prevent the spread of infection but may interfere with freedom and rights of individual person. Such as, mandatory quarantine, isolation and medical treatment.

2.1 Consequentialism

Consequentialism, as its name suggests, is simply the view that normative properties depend only on consequences (2003, Stanford dictionary). Consequentialism holds that whether an act is morally right depends only on the consequences of that act or of something related to that act, such as the motive behind the act or a general rule requiring acts of the same kind. (2003, The Stanford Encyclopedia of Philosophy).

In public health, it is primarily results-oriented so government do care about whether the result is better and

sometimes. The government would do some compulsory quarantine measures to control the infectious diseases well, ignoring some problems in the process.

Utilitarian View

The exemplar case of consequentialism is utilitarianism which aims maximize the greatest benefit of greatest number of people. In public health, the health maximizer would like to pursue the max utility of health. Therefore, the result-orientation makes utilitarian tend to control infectious diseases so that fewer people are infected no matter whether or not the process involves coercive measures that limit freedom or cause real economic losses.

Harm Principle

About Harm Principle, John Stuart Mill articulated this principle in *On Liberty*, "The only purpose for which power can be rightfully exercised over any member of a civilized community, against his will, is to prevent harm to others." In another word, it is justified for the government to restrict A' action when A makes harmful effects on B. Combined with prevention and control measures, there are two common situations. For the first situation, Infected persons infects other people intentionally or unintentionally, this can be regarded as a kind of certain physical harm to others. Meanwhile, the compulsory interventions to infected persons who resist isolation and medical treatment is justified. For the second one, people who used to be exposed to a contagious disease need to be quarantine. Although, it is still not diagnosed whether they are sick, the liberty of them has to be restricted in order to minimize potential uncertain risk to others. Therefore, harm principle can provide sufficient justification for government interventions of infectious diseases control.

Precautionary Principle

In the second case above, it may refer to another principle, called precautionary principle, which can be applied to deal with uncertain risk. Since there are more than one definition of this principle, we choose a relatively globally accepted one which results from the work of the Rio Conference in 1992. The principle 15 of the Rio Declaration notes: "... Where 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." It also offers justification for communicable control policy.

2.2 The Deontological view

Kant argues that to act in the morally right way, people must act from duty (Pflicht). Besides, he emphasizes the importance of the motive of one's action rather than the outcome. As people's government, to protect its citizens from epidemics is an undeniable duty. Regardless of the possible consequences, the measures taken by the government are to prevent the spread.

2.3 Legal Paternalism

Here are two definitions of paternalism, one is that "interference with a person's liberty of action justified by reasons referring exclusively to the welfare, good, happiness, needs, interests or values of the person being coerced" (Dworkin 1971). Another is from Oxford English Dictionary—"coercive intervention to the behavior of a person in order to prevent the individual from causing harm to his or her self." It means that the main purposes of paternalistic interventions are to promote one's welfare and protect from self-harm. Paternalism can be divide into two versions, hard paternalism and soft one, based on the different attitudes to the voluntariness of personal actions. For hard paternalism, to protect competent adults can serve as a reasonable reason to justify government interference regardless of their will. For soft paternalism, yet, "it holds that the state has the right to prevent individual from self-harmful conduct when but only when that conduct is substantially nonvoluntary, or when temporary intervention is necessary to establish whether it is voluntary or not" (Feinberg, "The Moral Limits of the Criminal Law Volume 3" 12).

Supposing that there is a threat which comes from the sudden emergence of a new lethal epidemic, and the government immediately decides to impose vaccination. If someone refuse to accept for some reason, he will be likely to be infected by this kind of disease with high mortality rate. Despite refusing vaccination, he does not desire to die, which means that dying of contagion is not his original goal. Although, Mill holds that no one especially the state has a right to intervene a fully voluntary choice made by calm and rational human being, he may permit the state to protect a person from his ignorance. Moreover, even if he objected to compulsive vaccination due to the consideration of freedom, The risks he takes are unreasonable. What he sticks with possibly makes him lose his life. And the presumption is that most mature and reasonable one won't take such a risk. Therefore, in case such as this, no matter hard paternalism or the soft version, both them can provide meaningful theoretical support for infectious control measures.

2.4 The Communitarian view

Communitarianism focuses on the balance between individual and the community. When it is used to justify relevant control means of communicable diseases, an explanatory note from *Introduction to Public Health* written by Mary Louise

Fleming, Elizabeth Parker gives us a reasonable statement.

Communitarianism recognizes humans as social beings, thus emphasizing relationships and shared values (Sindall 2002). this perspective requires enforcing limits on individual autonomy for the benefit of the community (Callahan & Jennings 2002).

That is to say, when the state is confronted with emergency situation, for example, the outbreak of some certain serious infectious diseases, compared with the safety of the community personal choices and individual autonomy, it would prefer to the community than the individual. At the same time, necessarily forcing quarantine and isolation along with mandatory medical treatment are justifiable, even they might infringe personal freedom. After all, limiting liberty of some individuals can benefit the whole community.

3 The Real Cases of Communicable Disease Control

3.1 Liberalism View

From the liberalism's point of view, infectious disease isolation may be opposed because the compulsory isolation will limit people's freedom. As Iain Mclean and Alistair McMillan says, "Liberalism in general, the belief that it is the aim of politics to preserve individual rights and to maximize freedom of choice" (Mclean, McMillan 1). The first situation that liberal may object is, for example, in an outbreak of a communicable disease, the personal information of some patients may be known to the public, which damages the patient's personal privacy. The real cases are as follows: the first case of SARS was reported on December 15, 2002. The patient's name is Huang Xingchu and she lives in Heyuan City, Guangdong province. Another case is the first patient of Ebola virus, her name is Esther Awete, she was the first Ebola patient found in Uganda. The second situation that liberals may object is to control the spread of communicable diseases by conducting border security so that people are not free to go where they want to go. The World Health Organization (WHO) divides influenza pandemic warning into six levels. When it reaches level 4 or higher, it means that countries should take measures to cope with the spread of the communicable disease. For example, in 1997, after the outbreak of H5N1 avian influenza in Hong Kong, the World Health Organization (WHO) first raised the influenza pandemic warning from level 3 to level 4, which means that in order to prevent the influenza pandemic, the World Health Organization (WHO) may support the government to take measures to inspect people at the border checks. The third possible objection of liberalism is that in the case of forced segregation, people may face the risk of unemployment because of restrictions on their freedom, which lead to people not working properly. For example, according to a report, after the SARS epidemic, on April 15, 2009, a 24-year-old Chinese woman died of severe pneumonia on a train to Moscow, and the Russian Kirov State Government feared that she might be fatally affected by SARS. Fifty-three Chinese on the same train with her were sent to hospital for isolation and observation.

3.2 Cases of Communicable Disease Control in China

Let us turn to some mandatory isolation cases that effectively inhibits the rapid spread of the infectious diseases, which preventing harm to more innocent people. First of all, the severe acute respiratory syndrome (SARS) case. According to the report on December 15, 2002, the first case of SARS was a patient named Huang Xingchu and she lives in Heyuan City, Guangdong province. Hong Kong is just next to Guangdong province, was also affected by SARS. The SARS was known on October 2, 2003 when news media in Hong Kong began reporting an unusual epidemic of fatal pneumonia-like illness in the Province (SARS Expert Committee 13). With the exposure of the SARS, people started to become panicking. In Hong Kong, people began to buy a large number of antibiotics and masks and other preventive supplies. On March 10, mainstream media in Hong Kong reported that the disease was found to be infectious in a hospital in Shatin. On March 12, the World Health Organization issued a global warning recommending quarantine for suspected cases and set up a network of health workers to assist in the study of the SARS epidemic. On March 15, the World Health Organization officially named the disease SARS. Next, in view of its infectious and lethal characteristics, the government adopted a series of isolation measures to prevent SARS from spreading continuously. Among them, the main measures are: in mainland China, the government established Xiaotangshan SARS Hospital to treat SARS patients, primary and secondary schools were suspended, travel to Guangdong was not encouraged on May Day holidays at the same year, students' original holidays were delayed and postponed the postgraduate entrance examination re-examination at the same year, etc. On May 9, Premier Wen signed Decree 376 of the State Council, promulgating and implementing Regulations on Emergency Response to Public Health Emergencies. On the same day, Beijing announced that the proportion of SARS infections among medical workers had declined significantly (PEOPLE). In Hong Kong, the government has segregated a building to prevent the spread of SARS and set strict standards for physician-patient segregation to prevent the continuing deterioration of physician-patient transmission. The U.S. government warned people not to go to Hong Kong or Guangdong province of China if it is not necessary. The Swiss government disqualified Hong Kong manufacturers from participating in the Swiss Watch Fair of the same year. Until the same year of July, the

World Health Organization removed many SARS epidemic areas or countries from the warning list and the SARS epidemic was basically over.

Another case is H7N9 avian influenza, which has attracted much attention because of its short onset cycle and higher mortality than SARS virus. To avoid the risk of human transmission of H7N9 avian influenza virus, the government has taken measures to isolate and treat patients who got the H7N9 avian influenza virus. In 2013, the first case of H7N9 infection was found in Shanghai. The government adopted a measure called the direct online reporting system to monitor the development of avian influenza and to inform the World Health Organization (WHO) and Hong Kong, Macao and Taiwan in real time. From a consequentialist point of view, if these patients who got the H7N9 avian influenza virus are not segregated then have serious consequences when human-to-human transmission occurs, therefore, they should be treated in isolation. The last case is a real case that happened to me. In the nursery school, a child suffered from the Parotitis, which is an infectious disease that can be transmitted from person to person. The nursery school asked her to rest at home and isolated from us. However, in an activity, before she recovered, she returned to the nursery school and to play games with us. As a result, more than half of the class, including me, all suffered from the Parotitis.

The communicable diseases' characteristic is its infectivity, in order to control these possible risks, it is necessary to restrict the freedom of some people. As Noah says in his book *Controlling communicable disease*, "controlling communicable diseases, a task that is impossible without surveillance, knowledge of basic microbiology and multi-disciplinary public health teams" (Noah, 1). When these diseases are high risk and fatal, we can see that SARS and H7N9 avian influenza have been controlled by the government to prevent more innocent citizens from being harmed. According to the Harm Principle, "the only purpose for which we may intervene in the action of another against their will is to prevent harm to others" (Pike). Among these possible risks to others, we can see from the above cases that the World Health Organization has given six levels of pandemic warning, by clearly dividing different levels of risk to suggest that governments take different measures to effectively control the rapid spread of the communicable disease. This may be used to solve the problem of how to define risk and how to deal with different level of risks.

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References

- [1] Walter Sinnott-Armstrong, "Consequentialism", *The Stanford Encyclopedia of Philosophy*, May 20, 2003, 2019. URL = <<https://plato.stanford.edu/entries/consequentialism/>>, Accessed 10 June, 2019
- [2] Abbott Thomas Kingsmill (trans.), Immanuel Kant, *The Metaphysical Elements of Ethics*, Green & Co., 1889.
- [3] eBooks@Adelaide. <https://ebooks.adelaide.edu.au/k/kant/immanuel/k16e/#nr1>
- [4] Dworkin, Gerald. 1971. "Paternalism." In R.A. Wasserstrom, ed., *Morality & the Law* (Belmont, CA:Wadsworth), 107-126.
- [5] Feinberg, Joel. "Legal Paternalism." *The Moral Limits of the Criminal Law Volume 3: Harm to Self*. Oxford UP, 1989. Print.
- [6] Fleming Mary Louise and Parker Elizabeth, *Introduction to Public Health*, Elsevier, 2015.
- [7] Faden, Ruth and Shebaya, Sirine, "Public Health Ethics", *The Stanford Encyclopedia of Philosophy* (Winter 2016 Edition), Edward N. Zalta (ed.), URL = <<https://plato.stanford.edu/archives/win2016/entries/publichealth-ethics/>>.
- [8] Jon Pike. *Political Philosophy*. 2007. https://search-credoreference-com.lib-ezproxy.hkbu.edu.hk/content/entry/edinburghppaz/harm_principle/0#. Accessed 9 June, 2019
- [9] "Precautionary Principle." Wikipedia. n.p. 9 May 2019. Web. Accessed 10 June, 2019. https://en.wikipedia.org/wiki/Precautionary_principle
- [10] MINGPAONEWS. "Sudden death of a woman in Russia confirmed pneumonia." (April 2009) <https://web.archive.org/web/20090423002543/http://hk.news.yahoo.com/article/090416/4/bpk0.html> Accessed 10 June, 2019
- [11] SARS Expert Committee. "The prelude: events before the SARS epidemic" www.sars-expertcom.gov.hk/english/reports/reports/files/e_chp3_1.pdf. Accessed 10 June, 2019
- [12] <http://www.people.com.cn/GB/historic/0509/6299.html>. Accessed 9 June, 2019
- [13] Noah N. D. *Controlling Communicable Disease*. 2006. *Understanding Public Health*. Web.
- [14] Van Mill, David, "Freedom of Speech", *The Stanford Encyclopedia of Philosophy* (Summer 2018 Edition), Edward N. Zalta (ed.), URL = <<https://plato.stanford.edu/archives/sum2018/entries/freedom-speech/>>.
- [15] <https://books.google.com.hk/books?id=wzS2CgAAQBAJ&printsec=frontcover&dq=introduction+to+Public+Health&hl=zh-CN&sa=X&ved=0ahUKEwjYJvUxeHiAhVEUd4KHUzLDJlQ6AEIKDAA#v=onepage&q=introduction%20to%20Public%20Health&f=false>