

CMAAO Symposium



Health Care in COVID-19 Pandemic

Taiwan Medical Association

The 36th CMAAO General Assembly and the 57th Council Session

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Karachi, Pakistan

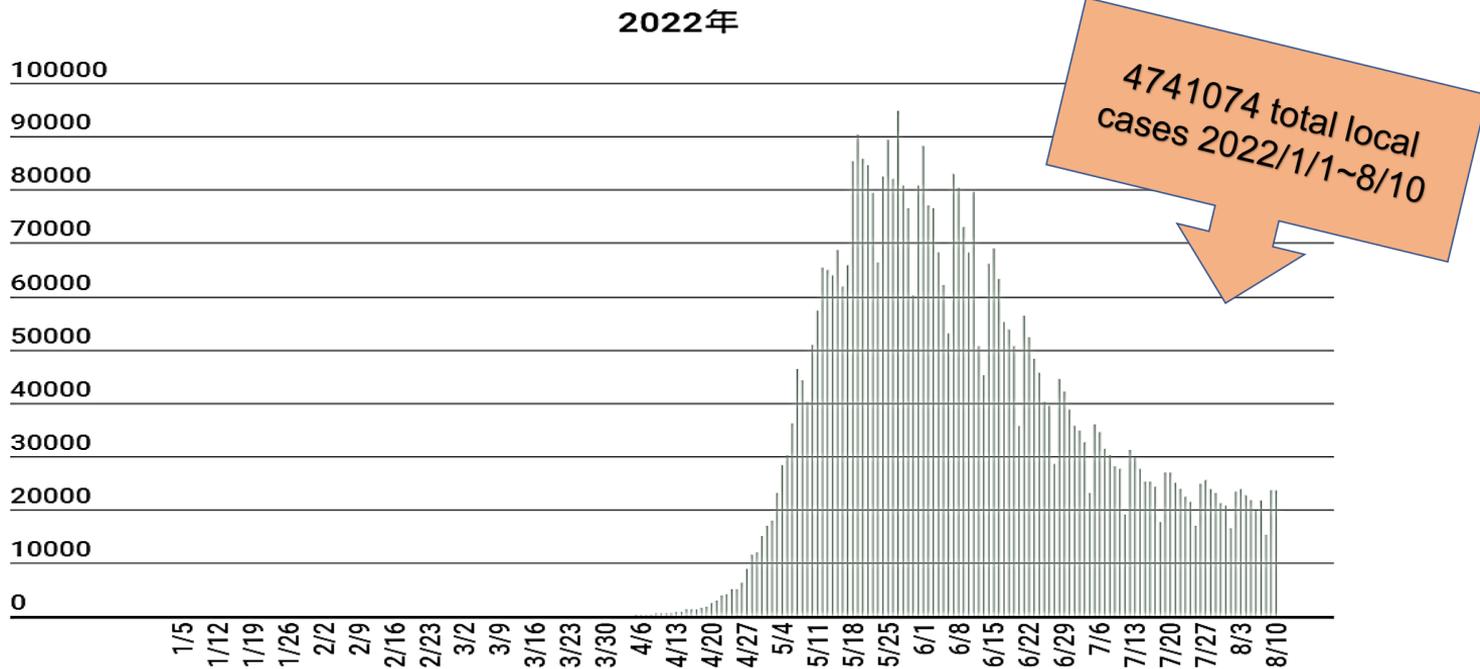
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Current status of COVID-19 in Taiwan

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Trend of COVID-19 Incidence in Taiwan, 2022





Local COVID-19 cases surge

99% of cases are mild or asymptomatic

2022/01/01-08/09本土病例共**4,741,074**例分析

今日新增85例本土中重症以上個案及25例死亡個案(4例為先前已公布個案)。
(1-8月中重症**21,919**、其中**8,445**名死亡)。

輕症/無症狀	中重症		中重症(含死亡)病例 年齡/人數
	中症	重症	
4,719,155人	12,073+59-4人	9,761+26+4人 (其中死亡：8420+25人)	中症： 未滿10歲 291人 10多歲 81人 20多歲 128人 30多歲 197人 40多歲 411+5人 50多歲 953+8人 60多歲 1901+5人 70多歲 2728+13-1人 80多歲 3654+24-3人 ≥90歲 1729+4人 重症(其中8420+25人死亡)： 未滿10歲 136+1人 10多歲 34人 20多歲 42人 30多歲 88+1人 40多歲 280人 50多歲 629+1人 60多歲 1350+2人 70多歲 2129+4+1人 80多歲 3176+13+3人 ≥90歲 1897+4人
99.54%	0.25%	0.21%	

2022/08/10 中央流行疫情指揮中心



To coexist with the COVID

New Phase in COVID-19 Management

- ◆ Prevent progression severe disease and control the occurrence of fatal events
- ◆ Manage patients with mild symptoms
- ◆ Adapt to live with COVID-19 and stay safe

To set up a tiered healthcare system
For ensuring sufficient healthcare capacity

**重症求清零
輕症可控管
正常過生活**

強化輕重症分流
確保整體醫療量能充足!

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Case management

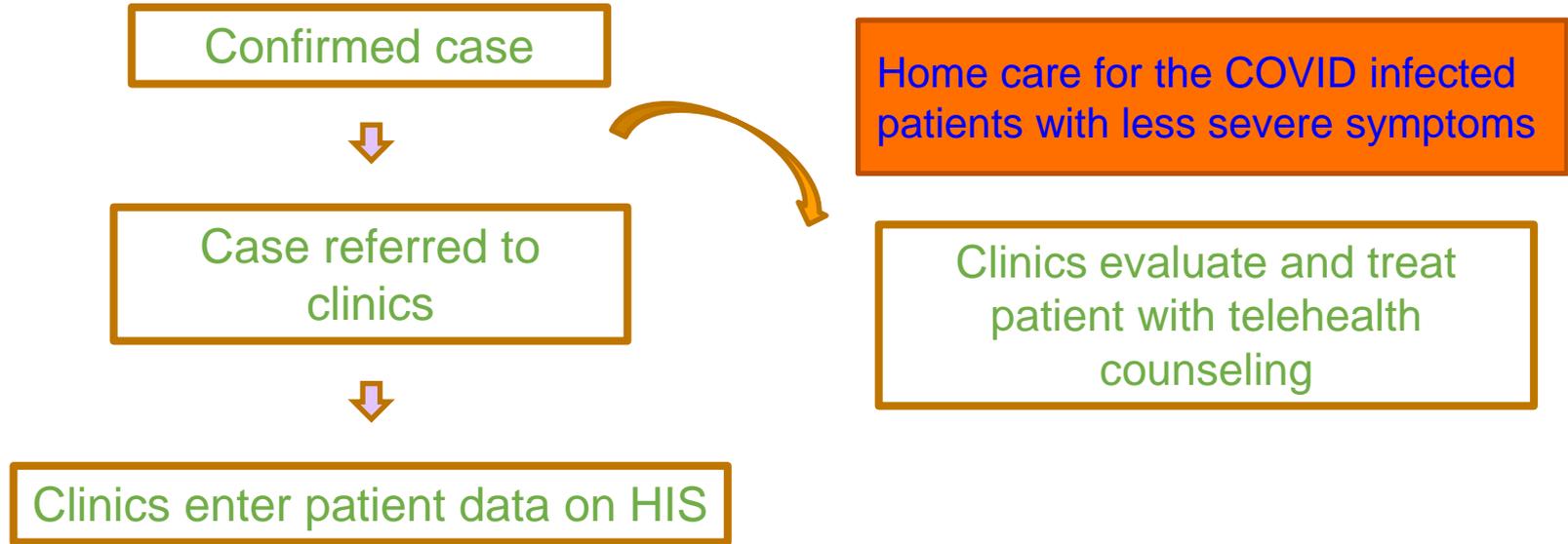
Tiered COVID-19 Treatment Model

Hospital - based care for moderate-to-severe cases

Community/home - based care for mild cases



New Taipei City COVID-19 Home Care Procedure





Treatment

Anti-viral agents

Paxlovid, Molnupiravir

To prescribe and dispense anti-viral agents both in hospitals and primary care settings for the high risk COVID infected patients

Procedures for COVID-19 home-based consultation and anti-viral agent prescription



Indications for orally administered drugs

Paxlovid: age ≥ 12

Molnupiravir: age ≥ 18

Age ≥ 65 , Cancer, DM, CKD

Cardiovascular disease

Chronic pulmonary disease

Tuberculosis

Chronic liver diseases

Disabilities

Mental disorders, dementia

Smoking

BMI ≥ 30

Immunocompromised individuals



Tiered treatment approach to reserve capacity of hospitals

Taiwan model of tiered primary health care

TMA documented the collaboration between governmental and private healthcare network in response to the outbreak in 2020.

Chang, Brian Bih-Jeng, and Chiu, Tai-Yuan. "Ready for a long fight against the COVID-19 outbreak: an innovative model of tiered primary health care in Taiwan." *BJGP open* 4.2 (2020).



Ready for a long fight against the COVID-19 outbreak: an innovative model of tiered primary health care in Taiwan

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Between January 15 and March 31 2020, Taiwan reported 31 800 subjects tested, 322 confirmed COVID-19 cases (including 276 imported and 46 indigenous), and five deaths. Taiwan has been able to control the epidemic more effectively than many other countries in the Asia-Pacific region through a combination of measures, including border control; testing and quarantine of individuals with history of contacts; at-home self-isolation; and real-time linking of immigration records with healthcare information. Society maintains trust in governmental agencies thanks to daily press conferences, with full disclosure of key metrics and clear guidelines. An average of 675.76 tests per million individuals were performed. Our containment strategy ensured the numbers of new cases per day remain in single digits, delaying peak time and protecting the medical system from being overwhelmed. While first responses by primary health care is slowing down the outbreak, the Taiwan Medical Association (TMA) has devised a long-term strategy to handle the inevitable scenario of community transmission. Our plan relies on a tiered primary healthcare network of community healthcare groups prepared clinics (CHGPC)¹ and community screening stations (CSS)² to treat patients with mild symptoms at community clinics so hospitals and medical centres can focus on serious cases. Close coordination of hospitals and community care providers is key to guard the medical system against possible collapse due to sudden outbreaks of unknown pathogens.

More than 90% of the clinics in Taiwan participate in the National Health Insurance and accept walk-in patients. This provides a venue for rapid responses including education, diagnosis, isolation, and referral to de-escalate the virus outbreak. The importance of an effective community clinic is clear from the observation that between February 12 and March 13, 60% of the citizens returning from high-risk areas volunteered to visit community clinics (694 633 visits) (National Health Insurance Administration, Ministry of Health and Welfare Taiwan, The Statistical Analysis of Outpatients' Clinical Data from NHF MedCloud system, unpublished report, 2020).

The Taiwanese primary healthcare model consists of four tiers (Figure 1):

- Tier 1: Walk-in clinics are equipped with standard protection equipment and provide general diagnostic and treatment services including chronic diseases, long-term care, preventive care, mental health care, wound care, and management of unknown symptoms.
- Tier 2: Community Healthcare Groups Prepared Clinics (CHGPC) accept patients with fever, cough, upper respiratory symptoms, or possible COVID-19 cases. CHGPCs provide the same services as walk-in clinics and can also monitor isolated cases with video conference calls. CHGPCs have reinforced protection. Participation is entirely voluntary. The government provides protective equipment and subsidies in order to recruit at least 20% of the clinics to participate in the programme.
- Tier 3 Community Screening Stations (CSS) consist of community health centres, regional hospitals, and other volunteering clinics that satisfy the programme requirements. CSSs are equipped with x-ray devices and can test and quarantine possible cases referred from CHGPCs. Confirmed

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Implementation of Taipei Statement

Confederation of Medical Associations in Asia and Oceania (CMAAO)

Taipei Statement on Collaborative Work for Managing Novel Pandemic Pathogens

Over the past centuries, human beings have overcome poverty, famine and war to evolve into modern society. The Severe Acute Respiratory Syndrome (SARS) outbreak in 2003, H1N1 in 2008, Ebola in 2014, and the recent COVID-19 pandemic demonstrate that emerging infectious diseases have overtaken nuclear weapons as the most lethal threats to the whole world.

As key guardians of healthcare, physicians play pivotal roles in containing and mitigating the spread of infection to preserve the wellbeing of the whole society. Establishing an effective medical system enables infectious cases to be managed and contained at the community level and may prevent overwhelming of the healthcare system. National medical associations and the government have respective important functions and roles in a pandemic and should collaborate to mount a coherent and effective response.

This Statement calls for a collaborative work of all parties involved for preventing and managing novel infectious diseases in all aspects, and hopefully curbing the pandemic nowadays.



President Tsai Ing-wen (left) attended the 35th CMAAO GA and CMAAO President Chiu' inauguration

Roles of Primary Care Physicians



Primary health care 基層醫療

Response to a pandemic and spreading 疫情快速擴散

1. Provide primary health care infrastructure for community surveillance and referral of suspected cases.
提供急性初級照護，社區疑似病例之監測，疑似個案轉診。
2. Provide remote medical consultation and monitoring of physical condition for persons quarantined at homes.
提供居家檢疫者遠距醫療諮詢及身體狀況監測。
3. Prepared clinics with ample support should be capable of handling suspected mild cases and provide referrals to secondary and tertiary care centers as required.
強化感控的診所，可處理疑似輕症個案，並提供轉診。
4. When the number of cases increases rapidly, primary health care providers should be capable of handling suspected or confirmed mild cases, and consider telemedicine if the option is viable.
傳染個案量大幅增加：由基層診所處理疑似或確診輕症個案，並可考慮採取遠距醫療。
5. Telemedicine could be considered to be temporarily employed by general clinics for the management of chronic illness and in the purpose of reducing the risk of disease, but should follow the World Medical Association Statement on the Ethics of Telemedicine and the relevant laws in their country.
遠距醫療僅為照顧慢性病患時減少傳播風險得短期使用，且需符合世界醫師會的倫理規範，也必須遵循各國的醫療法規。

分級醫療制度之建立

Establishment of a tiered medical system

Medical centers/Designated hospitals 醫學中心/指定醫院

Roles of Hospitals/Medical centers

- **Preparation before a pandemic 平時準備**

1. Safety stock of PPE. 防疫物資安全存量。
2. Establish clear work flows in infection control planning. 規劃感控動線。
3. Preparation of intensive care unit and emergency equipment. 重症病房、急救設備準備。

- **Response to a pandemic and spreading 疫情快速擴散**

1. Accept referrals and provide care of patients with confirmed diagnosis requiring hospitalization and quarantine.
接受轉診並提供確診且需住院隔離患者之照護，獨立團隊照護。
2. Maintain medical care capacity, reduce non-essential and non-urgent operations and treatments to reduce the strain on the healthcare system and to prepare for potential surges.
維持醫療能量，減少非必要手術與處置，避免醫療癱瘓。
3. When the number of cases increases rapidly, redesign facility layout to admit more confirmed patients with severe conditions.
傳染個案量大幅增加：空間重新規劃，增加收置確診重症病人。

- Assist the national health authorities to distribute PPE in feasible and effective way to increase the coverage rate. 協助國家衛生主管機關合理有效分配防疫物資，增加實質覆蓋率。
- Help healthcare facilities, including medical centers, hospitals, and primary care providers to compensate for the increased expense to control the pandemics. 協助爭取醫療機構補助，包括醫學中心、醫院和基層醫療因控制疫情而增加的費用。
- Coordinate with the donation of medical supplies from local organizations and distribute them according to the need of community hospitals. 協調各機構的醫療捐贈物資，並依據社區的需求進行分配。
- Strengthen the public outreach of clinical monitoring in each community; formulate a tiered system customized for the community. 加強社區臨床監測宣導，並配合該地區特性制訂適當的分級分流模式。
- Timely release of accurate pandemic information to calm the general public and stop spreading of rumors and misinformation. 協助發布正確疫情資訊，有效安撫社會恐慌狀態，避免謠言與假訊息流傳。

Response to a pandemic and spreading

疫情快速擴散

- Strengthen international communications, share experience of pandemic prevention and promote exchange of PPE. 強化國際交流，分享防疫經驗，交流醫療防疫物資。
- When the number of cases increases rapidly, National Medical Association should help coordinate with government to seek a balance between fundamental rights of medical personnel and wellness of the society. 於個案數快速增加時，醫師會可協助居中協調，維護基本人權與醫療公益之衡平性。
- Promote and coordinate necessary clinical research activities through national research organizations to provide the necessary timely preliminary answers in a new pandemic. 推動和協調國家研究機構必要的臨床研究，及時提供新興疫病防制的實證作法。
- Promote and coordinate necessary activities through professional bodies to provide guidelines for treatment in a new pandemic. 推動和協調專科醫學會提供新興疫病的治療指引。
- To promote vaccine awareness to the population through education and to combat vaccine hesitancy. 透過教育提升民眾疫苗的識能，並消除疫苗猶豫。

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Future Planning



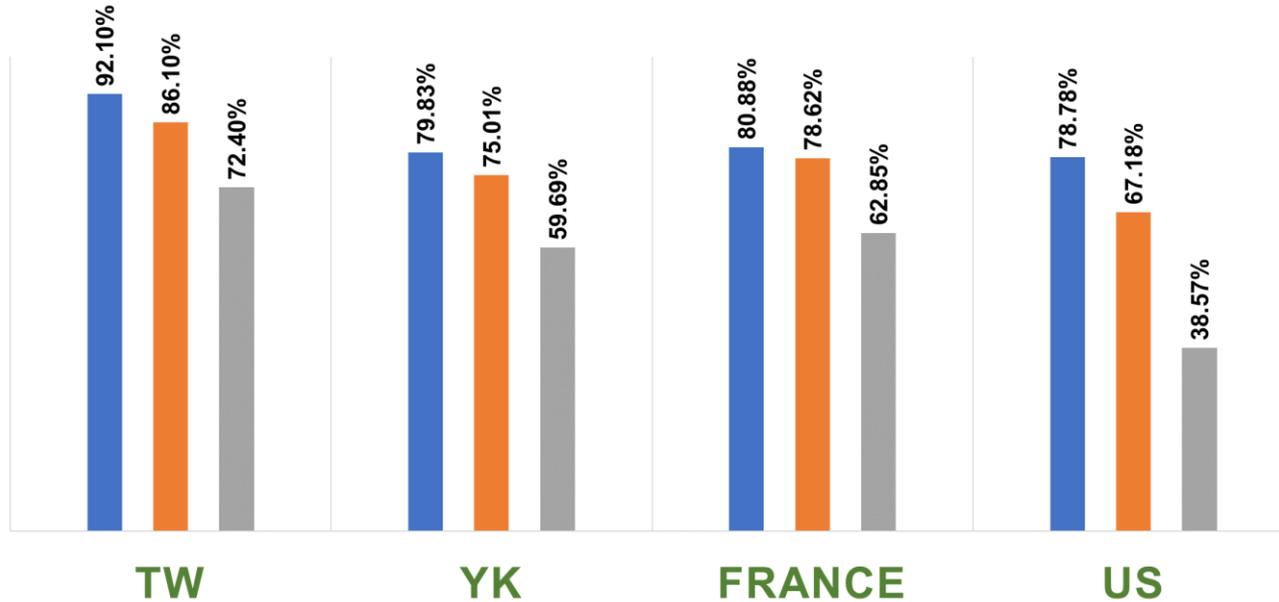
- Increase COVID vaccination rate among the elderly
- Vaccination to children between 6-11 y/o
- School-based screening, treatment and vaccination programs
- Holistic care approach: community healthcare groups for

influenza control as an example



Vaccination rate in TW, UK, France, US

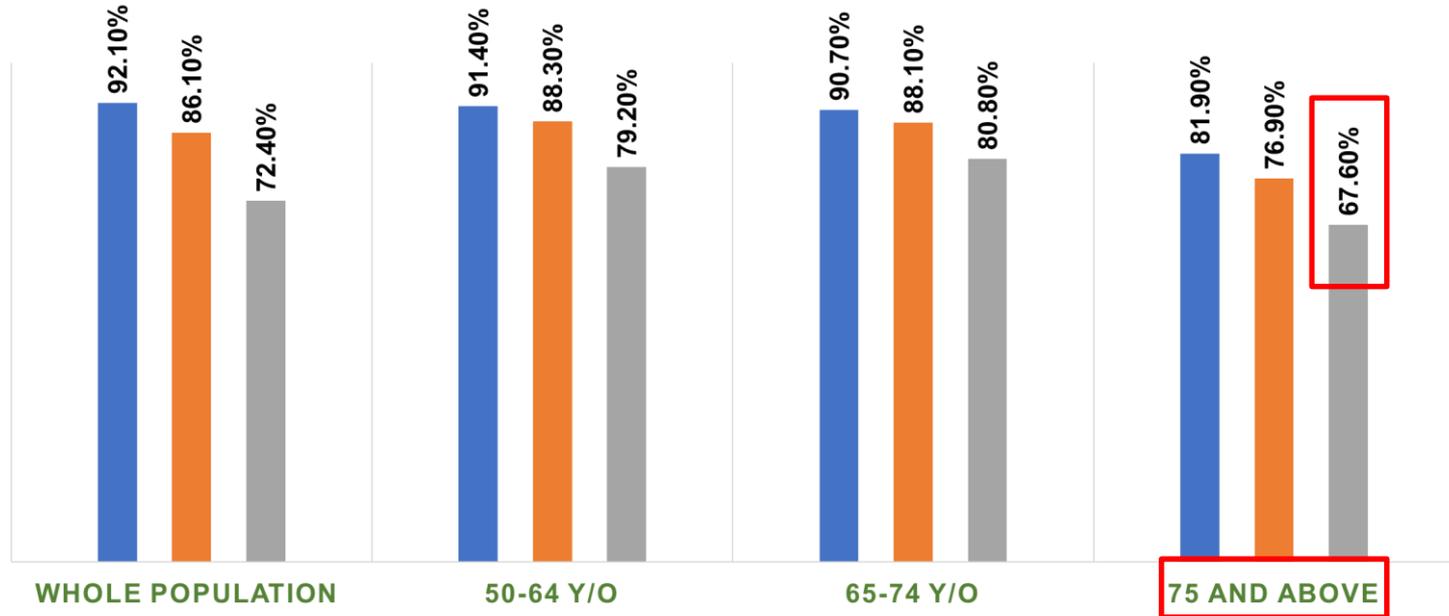
■ 1st dose ■ 2nd dose ■ Booster





Vaccination rate among the elderly in Taiwan

■ 1st dose ■ 2nd dose ■ Booster





COVID-19 related deaths in Taiwan

Age over 70 y/o

Comorbidity

Not fully vaccinated



Advice for Moderna/BNT pediatric vaccines

- ◆ **Target population: children aged 6-11**
- ◆ **Two doses, with a 12-week gap for moderna (0.25ml) or 21-day gap for BNT (0.2ml)**

**Promote and
implement
vaccination among
children 6-11**

**Provide protection
and prevent disease
progression**



School-based pandemic control

- Rapid testing (implemented by school nurse)
- Prompt identification and drug dispensing (diagnosis and treatment at community level healthcare organizations)
- Healthcare during home isolation/quarantine provided by community level healthcare organizations
- Online School curriculum
- School children vaccination program continues (implemented by school nurse)

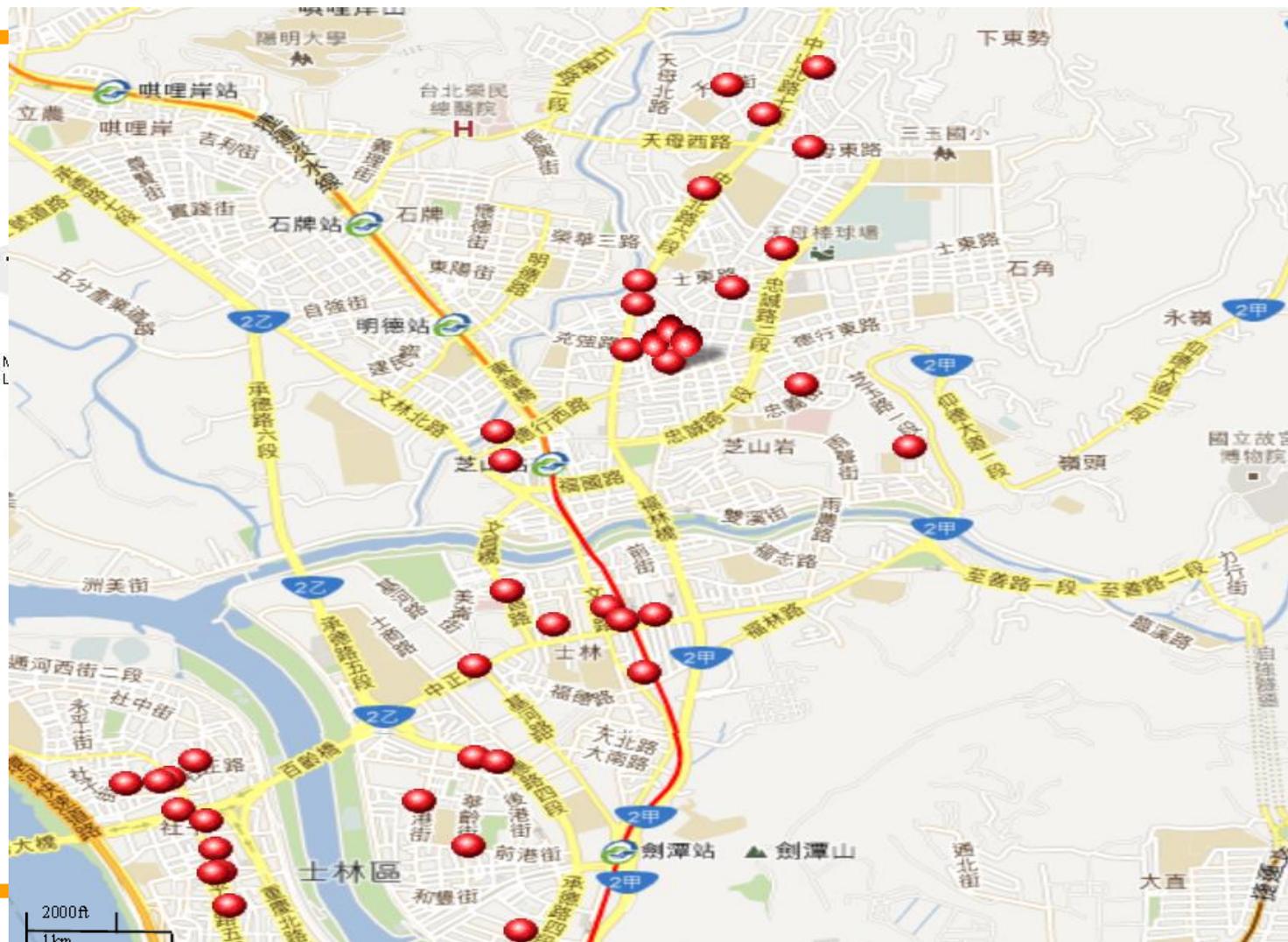
Community HealthCare Groups (CHCGs) helped in disease control *an example of flu attack*

- *Fever check-up*
- *H1N1 quick screening*
- *Anti-viral drug prescription and dispense*

In Taipei, 284 clinics worked with 12 public health center and 1 local health bureau to prevent virus transmission.

Individuals were able to reach one clinic in 8-minute distance*

Xu et al. Pilot study of building community health care network, 2009





People-centered care Model for COVID control

- High positives prediction rate of fast screening
- Availability of antiviral medication
- Establish clear work flows in infection control planning
- Telehealth care and follow up during the self-isolation period
- Establish rapid referral to hospital if necessary



Conclusion

- COVID has changed our life and the way of healthcare. People are socially distanced and receiving telehealth care more frequently.
- However, sharing and exchange of information takes place more often. Collaboration will enable us to devise effective strategies to combat epidemics in terms of diagnose and treatment.
- Viral evolution has prolonged the fight against COVID. We need to be resilient and prepared.
- Hope the day will soon arrive when we can travel without worries or restrictions.

THANKS!

**THANK YOU
FOR YOUR ATTENTION**

END