

隔離與檢疫

衛生署 疾病管制局

中區傳染病防治醫療網

王任賢 指揮官

Isolation (隔離) and Quarantine (檢疫)

- Isolation: **separation (for period of communicability)** of known infected persons to prevent transmission of an infectious agent
- Quarantine: **restriction of activities during the incubation period** of healthy persons exposed to a communicable disease to prevent transmission if infection occurs

隔離與檢疫的歷史

人類執行隔離與檢疫其實已經很久了：

- 癩瘋病
 - Old Testament : Isolation for persons with leprosy
- 東羅馬帝國皇帝查士丁尼一世
 - 532 AD: Persons arriving into Constantinople from “contaminated localities” placed in special housing
- 鼠疫
 - 14th-15th centuries: Venice imposed harbor quarantine (It. *quaranta* - 40-day period of detention for arriving ships)

美國隔離與檢疫的歷史

- 1647: 麻州海灣的居民為了防止鼠疫，限制由西印度來的船隻靠港
- 1660's: 訂立檢疫條款
- 1796: 聯邦政府恢復已廢除的檢疫條款
- 1880's: 紐約市檢疫靠港的人、船、貨
 - 必須檢疫的病： 霍亂、黃熱病、鼠疫、癩瘋、天花
 - 以史泰登島 (Staten Island) 當作檢疫站及建立隔離醫院

傷寒瑪莉 (Mary Mallon)



傷寒瑪莉的故事：I

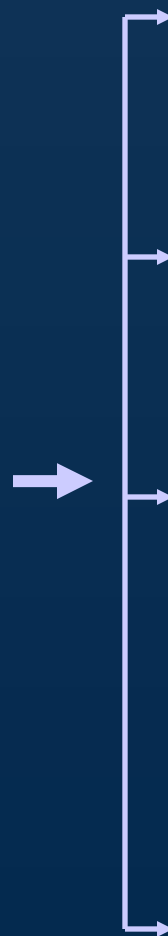
- 瑪莉 (Mary Mallon) 是愛爾蘭人，青少年時便移居到紐約。1906 年夏天，瑪莉被紐約一戶有錢的銀行家 Charles Henry Warren 聘到家裡當廚師。但就在瑪莉剛上班的 3 個禮拜之內，這戶人家 11 人之中就有六人感染傷寒。在當時紐約，傷寒是貧苦人家常見的疾病，但很少見於有錢人。於是這戶人家就聘請下水道工程師 George Soper 來進行調查，Soper 是第一個認定這次事件是由健康帶原者所造成的人。因為 Soper 追蹤瑪莉的過去史，發現瑪莉在過去十年曾擔任過八個家庭的廚師，其中七個家庭曾產生過傷寒的聚集，並造成一人死亡。於是紐約市衛生局便於 1907 將瑪莉隔離在紐約 Riverside 醫院內，讓瑪莉沒法再繼續擔任廚師。紐約的媒體並稱瑪莉為『傷寒瑪莉』。這個封號讓瑪莉非常憤怒，因為瑪莉堅持自己是健康的。

傷寒瑪莉的故事：II

- 1910 年瑪莉由 Riverside 醫院脫逃，，並在外面以假名繼續擔任廚師。1915 年瑪莉在曼哈頓 Sloane Maternity Hospital 擔任廚師時被找到。就在這家醫院工作的三個月當中，瑪莉又將傷寒傳給了 25 名醫護同仁，並造成兩人死亡。瑪莉被找到後就被送至 North Brother Island 終生隔離
- 1938 年瑪莉死在此島上。死後媒體對瑪莉做了一個統計，光衛生局登錄有案者，其總共就將傷寒傳染給了 237 個人。

Communicable Disease Responses

- Number of cases/exposed
- Exposure category
 - Known
 - Unknown (unlinked)
- Generations of transmission
- Morbidity and mortality
- Ease/rapidity of spread
- Movement in/out of community
- Resources for response
- Risk of public panic



No restrictions



Targeted population-specific restrictions



Community-wide measures to increase social distance

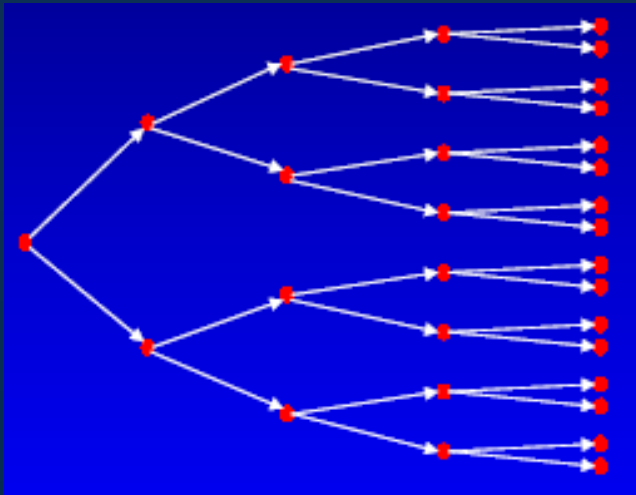


Compulsory activity restrictions

- Curfews on activities
- Closing of mass transit
- Closing access routes
- Closing borders

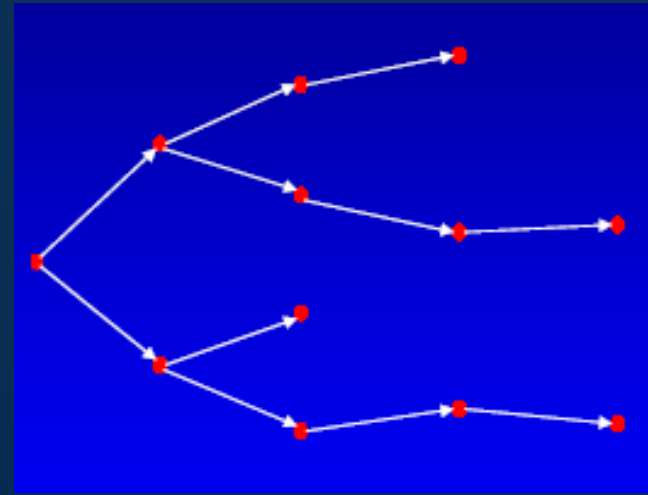
Effect of Increasing Social Distance

Exponentiation



$R_0 = 2.0$
Progression = 1:2:4:8:16

Suppression



$R_0 = 0.67$
Progression = 1:2:4:3:2

何時需要特殊公權力介入？

- 全球擴散之高傳染力傳染病
- 新的疾病或新的變異菌株
- 有生物恐怖疑慮之疾病
- 人畜共通傳染病

⇒ 必須重新評估傳統公衛法規是否適用

Isolation and Quarantine

Not “all or none”

- **Complete**: full-time confinement or restriction of movement
- **Modified**: a selective, partial limitation of freedom of movement or actions
- **Protective** (isolation): separation of a susceptible individual from an environment where transmission is occurring to prevent acquiring a communicable disease

由 SARS 中學到的現代檢疫 與隔離觀念

- 2003 年多倫多遭逢 SARS 襲擊時檢疫與隔離的經驗
- 大部分人均會自動順從指令：
 - 29,000 人接受隔離或檢疫
 - 只有 27 人必須動用到法條
- 為何老百姓會有如此高的順從性
 - 大量社區民眾教育之貢獻
 - 資訊公開、清楚、又透明

檢疫的兩面評價

- 檢疫的負面評價

- 黑死病、黃熱病、禽流感
- 大型收容場所等同監獄
- 汙名化（例如汙名為外來的病）
- 公權力常遭濫用

- 檢疫的正面評價

- 是有效防止疾病散播之工具
- 與其他手段比起來算是有效的方法

隔離與檢疫

法律基礎

隔離與檢疫之適應症

- 危險且會傳染的疾病
- 將沒病的人與有病的人分開
- 要有足夠的資源執行此項介入政策
 - 確保病人之基本需求
 - 要監控病人之健康狀況
 - 提供醫療照顧
 - 落實發病的人能立即轉成隔離
- 執行期間只能到不具傳染力為止（例如檢疫期間只能等於該疾病之潛伏期）

民事拘禁令

- 政府在隔離或檢疫一個人時必須要讓人不覺得是有犯罪的感覺
- 作為時必須兼顧：
 - 保障無辜大眾的權益
 - 不違反憲法保障人民自由的條款

Public good

Civil liberties



Isolation and Quarantine Protocol

What is Voluntary Compliance?

Voluntary compliance with isolation or quarantine means a patient cooperates and complies with Public Health's instructions to separate themselves from others in order to prevent the spread of disease.

What is Involuntary Detention?

- This is what Public Health will pursue if patients do not voluntarily comply with an isolation or quarantine order.



What Does it Mean to be Isolated or Quarantined?

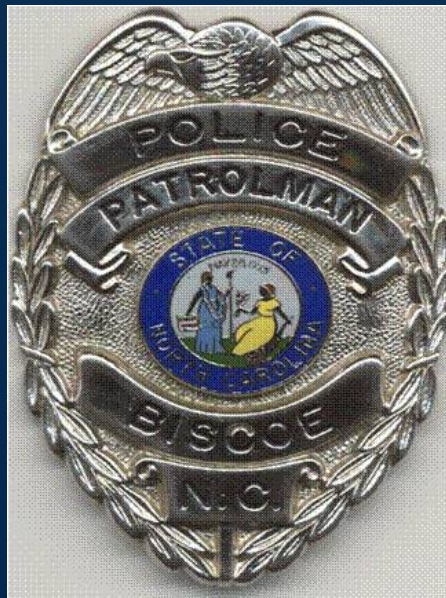
- **No contact with any new people**
- **Can not leave home or place of containment**
- **For evaluation and verification purposes patient needs to check in with Public Health**

What are the Rules?

- **Local health officer** may isolate or quarantine because:
 - a patient is sick, or thought to be sick, with a disease that could pose a serious risk to the public's health
- Local health officer may:
 - **request** voluntary compliance
 - issue an **emergency detention order** for involuntary detention
 - **petition the court for an order** to involuntary detain the individual or the group

Who Can Enforce these Rules?

- An order issued by the local health officer must be enforced by **all local law enforcement**



What are the Steps in Isolating or Quarantining a Patient or a Group of Patients?



First:

- **Find a good location**
- **Activate the legal process**
- **Initiate patient monitoring and service delivery**
- **Educate patient, partners, media and public**

Next:

Figure out who in Public Health carries out these steps:

- Incident commanders
- Risk communications
- Logistics
- Infectious disease team
- Public Health Legal team
- Clinical Operations team

Finally

- **When** should these groups be notified?
- **How long** will it take for them to initiate a response?
- **At what point in the process do they play a role and what is that role?**

When Public Health takes the action of isolating or quarantining

everyone involved becomes part of the legal process

QUARANTINE

CONTAGIOUS DISEASE

NO ONE SHALL ENTER OR LEAVE THIS HOUSE WITHOUT WRITTEN PERMISSION
OF THE LOCAL HEALTH AUTHORITY. (Art. 4477 - V.A.C.S.)

NO PERSON EXCEPT AN AUTHORIZED EMPLOYEE OF THE HEALTH DISTRICT SHALL
ALTER, DESTROY OR REMOVE THIS CARD. (Art. 4477 - V.A.C.S.)

ANYONE VIOLATING THIS REGULATION WILL BE FINED NOT LESS
THAN \$10.00 NOR MORE THAN \$1,000.00 FOR EACH VIOLATION. (ART.
770 Texas-Penal Code)

BY ORDER OF

DIRECTOR OF HEALTH

SAN ANTONIO METROPOLITAN HEALTH DISTRICT

Three Different Options for Isolating or Quarantining a Patient:



- I or Q Request for Voluntary Compliance
- Emergency Detention Order
- Superior Court Petition - *ex parte*

When Would a Request for Voluntary be Issued?

- ID Section determines isolation or quarantine is needed
- PH seeks compliance and cooperation from the patient

Responsibilities Under a Request for Voluntary Compliance



Infectious Disease Section

- **Initiate contact** with patient and HCP
- **Explain nature of illness** and intent to isolate or quarantine
- **Notify** Public Health Teams
- **Develop request** for voluntary compliance



Public Health Legal Team

- Track all legal dates and timelines
- Advise PH teams regarding legal issues
- Notify PH/Law Enforcement I and Q team and PAO



Clinical Operations Section

- Deliver I and Q **info packet**
- Provide **training** for patient and family
- **Daily monitor** patient's compliance and health status
- Assess and provide for **patient's needs**
- Provide ID section with **daily updates**
- Assist with case and **contact investigations**
- **Support and staff I & Q facilities**

Emergency Detention Order



What is an Emergency Detention Order?

- **Order issued by the local health officer** requiring the **immediate detention** of an individual or group
- **Enforced by local law enforcement**



What is the Time Frame for an Emergency Detention Order?

- The order needs to be written and delivered to the patient **within 12 hours of emergency detention**
- **It can not last for more than 10 days**



Petition to Superior Court

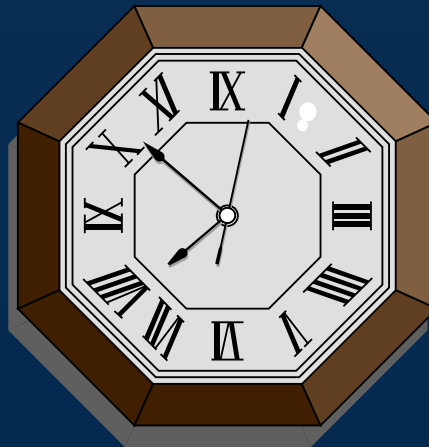


What is a Petition to the Superior Court *Ex Parte*?

- Request by the **Prosecuting Attorney's Office** for a court order authorizing involuntary detention
- *Ex Parte* means that the action is taken without the person having to be present
- Enforced by local law enforcement

What is the Time Frame for a Petition to the Superior Court *Ex Parte*?

- The court must hold a hearing within 72 hours
- Similar to an Emergency Detention Order, it can not last for more than 10 days



What Questions Must be Answered Before an Emergency Detention Order or Petition to the Superior Court can be Pursued?

- **Is the person sick, or thought to be sick, and infectious with a disease that poses a serious risk to the public?**

Questions continued

- Is it **necessary** to isolate or quarantine the person to protect the public's health?
- Has Public Health really tried to get the patient **to cooperate**? OR
- Is the disease so dangerous that there **isn't time** to get the patient's compliance?

Continuation of Isolation and Quarantine Beyond 10 Days



Petition to the Superior Court for Continued Detention

- An order is about to expire and it's necessary to continue the I or Q
- Continuation is needed **up to 30 days**
- Coordinated by the legal team

Release from Isolation or Quarantine



How is Someone Released from Isolation or Quarantine?

- The local health officer can release a person when:
 - we find out they **never had the disease**
 - or
 - they **get better** and they **no longer pose a risk** to the health and safety of others
 - or
 - **an emergency detention order has expired**, and the LHO determines that continued detention is not warranted

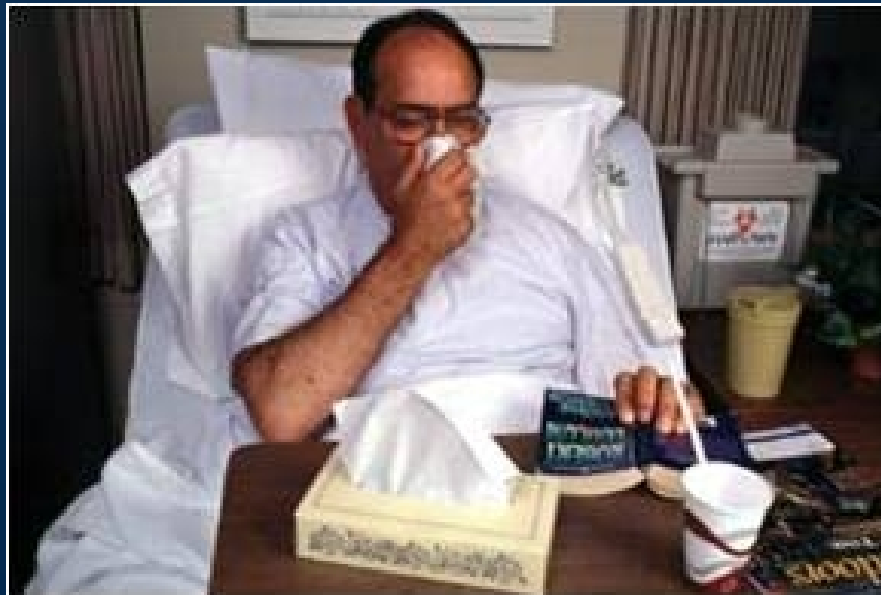
What are the Steps to Release Someone from I or Q?

- **Determine they no longer need** to be contained
- Communicate this to the person or group **verbally and in writing**
- **Document the release** in the I and Q Registry and deactivate the case



ID Section

- **Make medical determination that the patient may be released from I or Q**
- **Notify Public Health and partners that the patient should be released**



Public Health Legal Team

- Coordinate with appropriate sections and develop documentation stating the person is being released from I or Q



Clinical Operations Section

- Verbally and in writing inform patient that they are released from I or Q
- Document in I and Q Registry





Thank you