

出國報告（出國類別：研究）

赴美國瞭解其流感疫情及疫苗接種現況並
進行國際港埠對流感疫情監測與控制措施
之交流研習報告

服務機關：衛生署疾病管制局 第七分局

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派赴國家：美國

出國期間：民國 98 年 12 月 20 日至 12 月 26 日

報告日期：民國 99 年 1 月 20 日

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摘 要

跨入 2010 年，H1N1 疫情仍持續為世界各國備受關注的焦點。台灣自 2009 年 11 月 1 日起，全國各縣市同步開始執行 H1N1 新流感疫苗接種計畫，並自 12 月 12 日起，全民開放施打 H1N1 疫苗，之後整體疫情從各項監測指標看來，都一致顯示已持續下滑，但根據世界衛生組織最新公布的 H1N1 資料顯示，截至 2009 年 12 月 13 日止，全球仍有至少 208 個國家通報有實驗室檢驗確認之 H1N1 新流感確定病例，死亡病例並已超過 10,582 例；全球流感病毒活躍地區目前仍在北半球溫帶地區，北美已過高峰期，東南、中歐以及中、南亞則持續進行中；至於病毒變異情形對公共衛生或疾病嚴重度的影響，皆須持續監測觀察。而目前新流感疫苗施打的策略，仍是我們亟需面對接受挑戰的艱難課題。

本次赴美國堪薩斯州及密蘇里州衛生部，以瞭解其流感疫情監測及疫苗接種現況。同時赴各機場了解其檢疫措施，並也前往兩州之衛生局疫苗門診以及大型疫苗施打計畫之場地，實地勘查相關動線及應變做為。除了解此兩地州政府衛生部門對此次疫情的應變措施及成效外，會議中並以簡報報告台灣 H1N1 監測介紹及疫苗施打現況，獲得好評。此次行程獲益良多，並以此建立雙方未來的連絡管道，其雙方優異處亦值得為政策後續擬定時的重要參考指標。

赴美國瞭解其流感疫情及疫苗接種現況並進行
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目 的

1. 鑒於今年 H1N1 造成全球大流行，赴美國瞭解其流感疫情及疫苗接種現況。
2. 進行國際港埠對流感疫情監測與控制措施之交流學習，提昇本局防疫醫師在國際港埠傳染病防治及監測能力。
3. 堪薩斯州環境及衛生部除邀請雷永兆醫師，另邀請羅一鈞醫師至當地參與研習活動。



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過程

- (1) 12月20日早上，由桃園機場搭乘西北航空班機出發，中途經由日本東京成田國際機場、美國明尼蘇達州明尼亞波利國際機場轉機，前往美國堪薩斯州機場，於當地時間12月20日下午2點44分抵達堪薩斯機場，與羅一鈞醫師會合後，前往旅館休息並進行細部行程討論及簡報修改。
- (2) 12月21-22日與羅一鈞醫師前往堪薩斯州政府環境及衛生部門研習，共二日

Monday, December 21, 2009

- 9:30 – 10:00 Welcome and overview with Charlie Hunt, State Epidemiologist
- 10:00 – 10:30 Meet with Dr. Jason Eberhart-Phillips, State Health Officer
- 10:30 – 11:30 Surveillance meeting (BT Conference Room)
參加每週監測疫情討論會議
- 11:30 – 12:00 Meet with Mindee Reece, Director, Bureau of Public Health Preparedness
了解堪薩斯州之流感大流行準備計劃全貌
- 12:00 – 1:00 Lunch
- 1:00 – 2:00 Travel to Jefferson County Health Department
1212 Walnut St. Oskaloosa, KS 66066
- 2:00 – 4:00 Visit / observe Jefferson County 2009 H1N1 immunization clinic for
Jefferson County North Elementary/Middle Students
至 Jefferson County 之 H1N1 疫苗施打公衛門診進行參訪，並與當地校護及衛生所主任了解當地校園接種規劃等事宜

Tuesday, December 22, 2009

- 8:30 – 9:30 KDHE Incident Command briefing meeting
(Department Operations Center)
會議中由雷永兆醫師以簡報報告台灣 H1N1 監測介紹及疫苗施打現況
(簡報附於後)
- 9:30 – 10:00 Meet with Sue Bowden, Immunization Program Director (Suite 210)
了解堪薩斯州之疫苗施種計劃全貌
- 10:00 – 10:30 Meet with Maggie Thompson, Communications Director (Suite 540)
進行公眾宣導與媒體溝通之討論
- 10:30 – 11:00 Meet with Brenda Nickel, community mitigation (Suite 220)
討論社區減害 (community mitigation) 之相關課題與運作模式
- 11:00 – 11:15 Wrap-up with Charlie Hunt
- 12:00 – 1:00 Lunch
- 2:00 – 4:00 Visit Clay County Medical Examiner's Office



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Visit H1N1 vaccination clinic (Baptist Church, Liberty, MO)
至 Baptist Church 實地參訪 Clay County 之疫苗社區施打情形

(3)12月21-22日與羅一鈞醫師前往密蘇里州政府衛生部門研習，共二日

Wednesday , December 23, 2009

- 8:00 – 9:00 Overview of the Department of Health and Senior Services
Dr. Sarah Patrick, State Epidemiologist and Section Administrator
Section of Epidemiology for Public Health Practice
Location: Dr. Patrick's office, 920 building
由 Dr. Sarah Patrick 簡介密蘇里州政府衛生部門組織
- 9:15 – 10:00 Pandemic Influenza Planning: What we thought, what we got, and how we responded. Aaron Winslow (by phone), Emergency Response Coordinator, Center for Emergency Response and Terrorism
參加 Pandemic Influenza Planning 之電話溝通會議
- 10:15 – 10:45 National Stockpile Release Planning and Implementation in Missouri
Sue Heisler, RN, 912 building, Center for Emergency Response and Terrorism
討論抗病毒藥物、口罩等物資之存放及管理問題
- 11:00 – noon Health Professional Hotline experiences
Julie Weber, Director, Missouri Regional Poison Center (314-612-5715)
contractor to the Center for Emergency Response and Terrorism
就密蘇里州政府衛生部 Hotline 設置經驗與處理情形做意見交換與討論
- 1:30 – 2:00 Missouri H1N1 Vaccine Distribution
Jeannie Ruth, DHSS Immunization Program Director
Section of Disease Control and Environmental Epidemiology
(will meet in Dr. Patrick's office)
了解密蘇里州 H1N1 疫苗施打計畫並討論相關議題
- 2:00 – 4:00 Council of State and Territorial Epidemiologists core competencies and capacity assessment in applied epidemiology – Dr. Patrick
討論州政府及地方流行病學能力及人才能量等問題

Thursday , December 24, 2009

- 8:00 – 10:30 ESSENCE surveillance system evaluation and use in H1N1 response
Philip Yi-Chun Lo, MD, Epidemic Intelligence Service Officer
Section of Epidemiology for Public Health Practice
Location: Dr. Lo's office, 920 building



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討論密蘇里州 ESSENCE surveillance system 在 H1N1 疫情時之應用

10:30 – 11:15

Adverse Event Tracking Program internship and hands-on VAERS data searching opportunity, Stephanie Scrivner, 920 building (Stephanie's office), Section of Epidemiology for Public Health Practice.

就密蘇里州及美國疫苗不良反應系統通報及處理進行了解及討論

(4)12月24日下午前往堪薩斯市，並於隔日早上08:50分搭乘西北航空班機，途經明尼亞波利機場、東京成田機場轉機，順利於12月26日晚間十點返抵台灣。



赴美國瞭解其流感疫情及疫苗接種現況並進行 國際港埠對流感疫情監測與控制措施之交流研習報告

心得

一、美國醫療及公共衛生體制介紹，以密蘇里州為例

美國是一聯邦制度國家，中央的疾病管制局(Centers for Disease Control and Prevention)以負責制定各種衛生及疾病相關的 guideline 和 recommendation 為主，各州衛生部則負責將正確的概念及政策推廣，推動州政府制定該州相關法律，將概念性的政策，合法化 (policy powers) 於給各州下面，真正負責執行的是各區的縣市衛生局，並進行監督與監測。因此，當重大的衛生政策及疫苗施打需要進行到各社區時，實際上負責執行的是各縣市衛生局。各縣市衛生局本身是各自獨立的單位，並不完全被動地受州衛生部的控制，州和區的角色是負責協助、支援，並需要統籌各種流病資料以回饋給中央。以密蘇里州為例，密蘇里州共有 114 個縣(county)，和兩個直轄市--聖路易市、堪薩斯市(堪薩斯市有一半屬於堪薩斯市州)。這 116 個縣市皆有自己獨立運作的衛生局，體制跟台灣一樣，而衛生局的政務官是由地方首長任命，大部分的縣衛生局都有設立流行病學家的職位(local epidemiologist)。在傳染病方面，為了容易管理，全州分成 5 個區(district)，包括東區、東南區、中區、西南區、西北區。區的辦公室也有設流行病學家的職位(district epidemiologist)。平時每兩週，區辦公室會召集縣衛生局開電話會議，了解各縣最近傳染病通報狀況。每週二，州衛生部會開電話會議，各區流行病學家簡報各區傳染病狀況。因此縣市→區→州，是整個指揮鏈(chain of command)的基本架構。

以下為密蘇里州衛生部門 (Missouri Department of Health and Senior Services, DHSS) 的組織架構

DIVISION OF COMMUNITY AND PUBLIC HEALTH Organizational Structure—Established September 1, 2007				
Division Office: Glenda Miller, Director; Harold Kirby, Deputy Director 751-6080; Tricia Schlechte, Deputy Director 751-6423; Kerri Tesreau, Director of Operations 526-0219 Center for Emergency Response & Terrorism, Las Hancock, Interim Director 526-4768 Office of Financial and Budget Services, Jeff Zoelner, Chief 751-6207 State Public Health Laboratory, Bill Whitmer, Interim Director 751-7233 Office of Epidemiology and Public Health Practice (EPPH), Tricia Schlechte, Deputy Director 751-6423; Kerri Tesreau, Director of Operations 526-0219				
Section for Chronic Disease Prevention and Nutrition Services (CDPS) 522-2800 Brad Hall, Administrator Kris Ricketts, Deputy	Section for Healthy Families and Youth (HFY) 751-6253 Melinda Sanders, Administrator Charlene Wilkison, Deputy	Section for Disease Control and Environmental Epidemiology (DCEE) 751-6141 Scott Clardy, Administrator Kristi Campbell, Deputy	Section of Epidemiology for Public Health Practice (EPPH) 751-6128 Dr. Sarah Patrick, State Epidemiologist Tricia Schlechte, Interim Deputy	Center for Health Policy Integration (CHPI) 526-2767 VACANT, Director Betty Nash, Deputy
Bureau of Cancer and Chronic Disease Control (CCDC) Belinda Helmreichs, Chief 522-2860 • Arthritis and Osteoporosis • Asthma Prevention and Control • Diabetes Prevention and Control • Heart Disease and Stroke • Organ Donor Program • Show-Me Healthy Women (Breast and Cervical Cancer Control) • WISEWOMAN • Comprehensive Cancer Control	Section for Healthy Families and Youth (HFY) • Early Childhood Comprehensive System Grant • Maternal and Child Health (MCH) Block Grant Bureau of Genetics and Healthy Childhood (GHC) Sharnell Rogers, Chief 751-6262 • Genetics and Early Childhood Unit • Adult Cystic Fibrosis Program • Adult Hemophilia Program • Adult Sickle Cell Anemia • Genetic Services Program • Metabolic Formula Distribution • Newborn Blood Spot Screening • Newborn Hearing Screening • Sickle Cell Anemia • Healthy Births and Babies Unit • Alcohol, Tobacco and Other Drug Prevention and Awareness • Alternatives to Abortion • Birth Defects Awareness • Breastfeeding Program • Fetal and Infant Mortality Review • Folic Acid Program • MCH Home Visiting Programs • Building Blocks Program • Community Based Home Visiting Program • Newborn Health Program • TEL LINK • Healthy and Safe Environment Unit • Adolescent Health Program • Injury/Violence Prevention • Safe Kids Coalition • Sexual Assault Forensic Examination and Child Abuse Resource and Education • School Health Program Bureau of Special Health Care Needs (SHCN) Gary Harrison, Chief 751-6246 • Adult Head Injury Implementation • Traumatic Brain Injury Implementation Partnership Project • Children with Special Health Care Needs Program • Integrated Community Services for Children and Youth with Special Health Care Needs • Healthy Children and Youth Program • Physical Disabilities Waiver Program • Family Partnership Initiative • Family-to-Family Health Information and Education	Bureau of Environmental Epidemiology (BEE) Cheryl Baysinger, Chief 751-6102 • Indoor Air/Radon • Hazardous Substance Health/Risk Assessment • Environmental Illness Surveillance • Environmental Tracking Grant • Childhood Lead and Lead Case Management Bureau of Environmental Health Services (BEHS) Mary Glassburner, Chief 751-6111 • Environmental Child Care Program • Food Safety • On-Site Waste Water Treatment Program • Lead Licensing Program • Lodging Program • Frozen Dessert Program Bureau of Communicable Disease Control and Prevention (CDCP) Harvey Marx, Chief 751-6113 • Communicable Disease Investigation and Control • Communicable Disease Reporting and Surveillance • Zoonotic Illnesses • Food/Water Borne Illnesses • TB Control Bureau of Immunization Assessment and Assurance (BIAA) Jeannie Ruth, Chief 751-6124 • Immunizations and Vaccines • Influenza Vaccine • Immunizations Registry (MORSAIC) • School and Day Care Assessments • Clinic Assessment Software Application (CASA) Bureau of HIV, STD and Hepatitis (HIV/STD) Mike Herbert, Chief 751-6439 • AIDS Drug Assistance Program (ADAP) • HIV/STD Programs and Services • Hepatitis C • Prenatal Hepatitis B Reporting and Case Management • Medicaid AIDS Waiver • Syphilis Elimination • Missouri Infertility Prevention Project (MIPP)	Office of Epidemiology Vancit, Chief 751-6264 • MCH Epidemiology Response • Communicable Disease Response • Chronic Disease and Epidemiology Response • BRFSS • Cancer Registry • PaRNSS, PRSS, FRAMS, & YTS Office of Community Health Information (CHI) Jeanie Bryant, Chief 526-7811 • Public Information Activities • Web Site Maintenance • Publications Bureau of Health Informatics (BHI) Susan Elder, Chief 751-6272 • Healthcare Data Analysis • Health Informatics Resources • Surveillance and Research • Vital Statistics Analysis • Program Data and Statistical Support • Birth Defects Registry • Patient Abstract System • MCHRS Data Systems • MCA Bureau of Vital Records (BVR) Michelle Zellman, Chief 526-0348 • Birth Certificates • Death Certificates • Marriage and Marriage Dissolution Records • Putative Father Registry Dr. George Turabelidze, Deputy State Epidemiologist	
Bureau of Health Promotion (BHP) Dennis Spurring, Chief 522-2820 • Tobacco Use Prevention and Cessation • Chronic Disease Primary Prevention • Team Nutrition	Bureau of Community Food and Nutrition Assistance Programs (CFNA) Ann McCormack, Chief 751-6251 • Child & Adult Care Food Program • Summer Food Service Program • Community Supplemental Food Program (CSFP)	Bureau of WIC and Nutrition Services (WICNS) Lyn Kowarski, Chief 751-6255 • Supplemental Nutrition Program for Women, Infants and Children (WIC) • Breastfeeding Peer Counseling • Program for Diabetic Intermittents	Office of Minority Health Joseph Palm, Chief 751-6664 • Minority Health Advisory Committee • Regional Minority Health Alliances • Minority Health Initiatives • Infant Mortality • HIV/AIDS in the African American Community • Minority Health and Aging • Obesity Prevention • Health Equity Office on Women's Health Tuck Van Dyne, Chief 526-0445 • Women's Health Communication Network • Women's Health Council • Women's Health Collaboratives • Rape Education Initiative • Physical Activity Initiatives • Sexual Assault Prevention and Education/Victims Services	Performance Management, Betty Nash • Quality Assurance • Administrative Rules/Policies Center for Local Public Health Services, Anne Lock, Director 526-0177 • Core Public Health Program • Maternal Child Health Program • Child Care Health Consultation Program • Council for Public Health Nursing • Director's Advisory Council • MoALPHA Collaborative • State Association of Local Boards of Health • Community Development Services • Public Health Work Force Development • Strategic Planning • Speakers Bureau • Facilitator Group
1:CPHD/Division/DCPH/1. Division Directors Office/CPH Organization Docs_Charts				



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二、新流感應變作為

(1) 中央監測系統

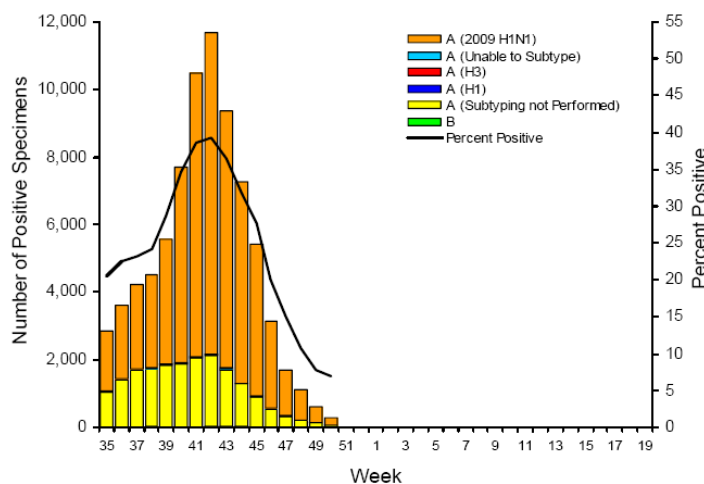
美國中央疾病管制局針對流感 (influenza) 有數個監測系統，包括有：

1. 社區病毒監測系統(U.S. Virologic Surveillance)：由World Health Organization (WHO) 和 National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories，及相當於台灣各合約或定點實驗室診斷證實的流感通報病毒監測系統

	Week 50
No. of specimens tested	4,440
No. of positive specimens (%)	306 (6.9%)
Positive specimens by type/subtype	
Influenza A	303 (99.0%)
A (2009 H1N1)	233 (76.9%)
A (subtyping not performed)	66 (21.8%)
A (unable to subtype)*	4 (1.3%)
A (H3)	0 (0.0%)
A (H1)	0 (0.0%)
Influenza B	3 (1.0%)

*Subtyping results for all four specimens in this category were inconclusive because of low levels of viral RNA.

Influenza Positive Tests Reported to CDC by U.S. WHO/NREVSS Collaborating Laboratories, National Summary, August 30-December 19, 2009

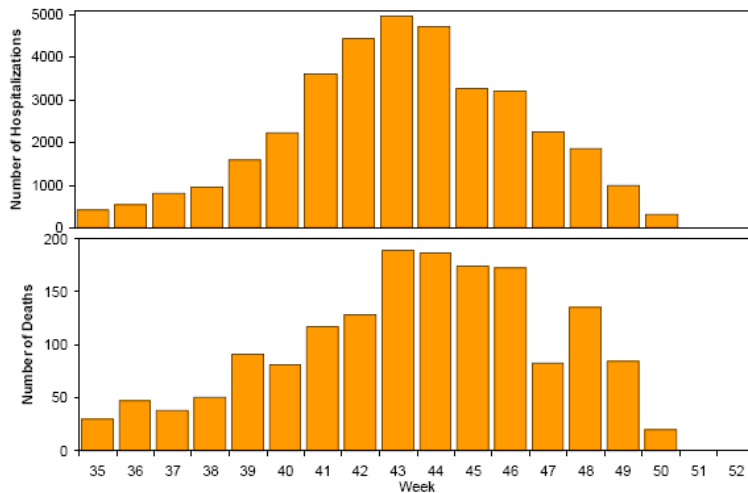


2. 肺炎及流感住院及死亡追蹤(Pneumonia and Influenza Hospitalization and Death Tracking)：包含所有流感，不單只有swH1N1，這是從2009年八月後新成立的新系統，個案必須要符合實驗室確定流感的住院及死亡病例。



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Weekly Laboratory-Confirmed Influenza-Associated Hospitalizations and Deaths, National Summary, August 30 – December 19, 2009



3. 流感病毒抗藥性及菌株分型分析 (Antiviral Resistance & Antigenic Characterization) :

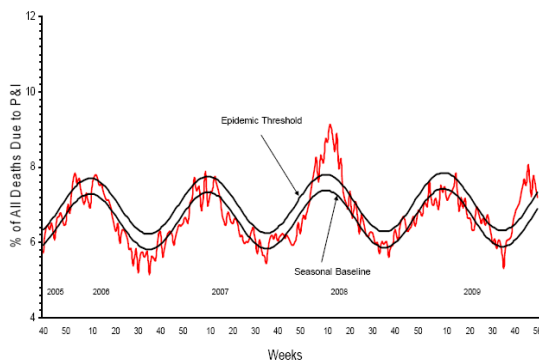
Antiviral Resistance Testing Results on Samples Collected Since September 1, 2009.

	Viruses tested (n)	Resistant Viruses, Number (%)	Viruses tested (n)	Resistant Viruses, Number (%)	Isolates tested (n)	Resistant Viruses, Number (%)
		Osetamivir		Zanamivir		Adamantanes
Seasonal Influenza A (H1N1)	1	1 (100.0)	0	0 (0)	1	0 (0)
Influenza A (H3N2)	8	0 (0)	0	0 (0)	6	5 (83.3)
Influenza B	1	0 (0)	0	0 (0)	N/A*	N/A*
2009 Influenza A (H1N1)	2,384	34 ^{†‡} (1.4)	631	0 (0)	620	619 (99.8)

*The adamantanes (amantadine and rimantadine) are not effective against influenza B viruses.
[†]Two screening tools were used to determine osetamivir resistance: sequence analysis of viral genes and a neuraminidase inhibition assay.
[‡]Additional laboratories perform antiviral resistance testing and report their results to CDC. Two additional osetamivir resistant 2009 influenza A (H1N1) virus has been identified by these laboratories since September 1, 2009, bringing the total number to 36.

4. 肺炎及流感住院及死亡監視 (Pneumonia and Influenza (P&I) Mortality Surveillance) : 和追蹤系統不同的是此間是資料來自122-Cities Mortality Reporting System

Pneumonia and Influenza Mortality for 122 U.S. Cities
Week ending 12/19/2009



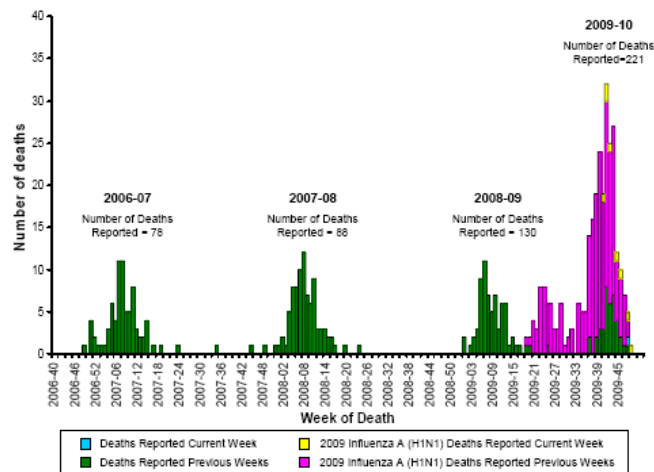
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5. 兒童流感死亡監視 (**Influenza-Associated Pediatric Mortality**): 這部份包含有個案續發性感染的資料, 以及各年齡層的監測分析

Laboratory-Confirmed Influenza-Associated Pediatric Deaths by Date and Type/Subtype of Influenza.

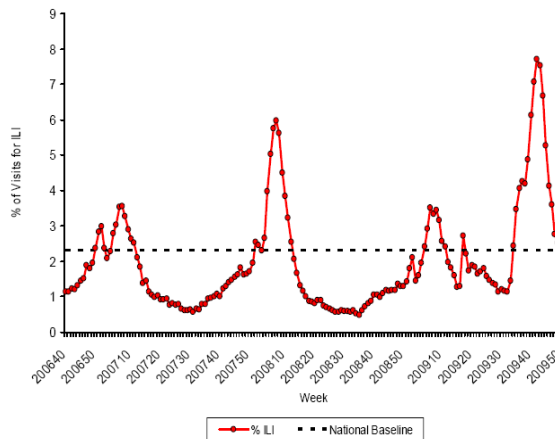
Date	2009 H1N1 Influenza	Influenza A-Subtype Unknown	Seasonal Influenza	Total
Number of Deaths REPORTED for Current Week – Week 50 (Week ending December 19, 2009)	8	1	0	9
Number of Deaths OCCURRED since August 30, 2009	181	39	1	221
Number of Deaths OCCURRED since April 26, 2009	241	42	2	285

Number of Influenza-Associated Pediatric Deaths by Week of Death: 2006-07 season to present



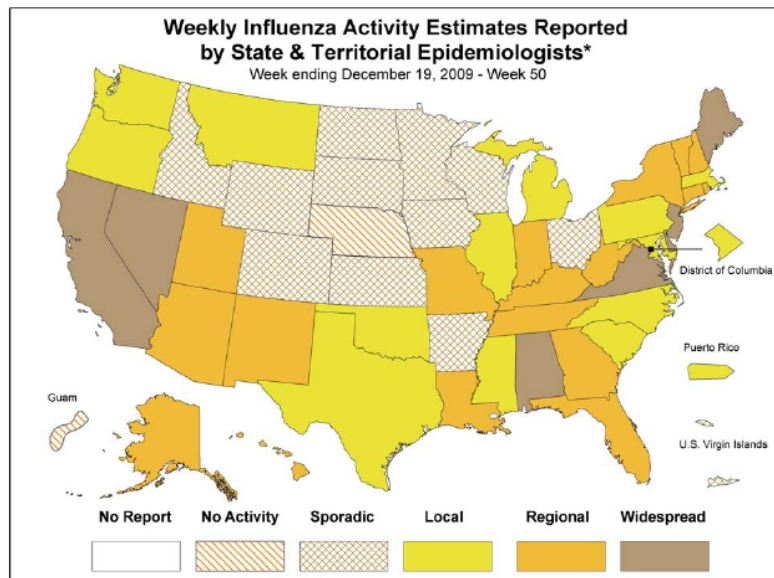
6. 門診類流感監測 (**Outpatient Illness Surveillance**): 資料由美國各定點醫師 U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) 而來

Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Weekly National Summary, October 1, 2006 – December 19, 2009



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7. 由各州的流病學家定時報告當地流感疫情程度：由此可呈現流感的散播程度（傳染力），但並不相當於流感的「嚴重程度」。



* This map indicates geographic spread & does not measure the severity of influenza activity

中央政府負責收集各州通報來的數據加以整合分析，並且每週在網站上公佈最新監測結果（FluView：<http://www.cdc.gov/flu/weekly/>），本次H1N1疫情通報也是經由這些既有管道進行。為何美國要如此大費周章進行多項監測？因為，若只通報實驗室檢驗確定的流感病例，由於培養確定的個案數會受到送檢數的影響，因此並沒有辦法反應疫情實際嚴重程度。另一方面，由於美國目前並沒有完全實行全民健保制度，因此許多人其實無力自行付費或由保險公司負擔其H1N1檢驗費用，所以，真正的疫情其實很可能仍是被低估的。

(2) 地方監測系統

各州政府擁有足夠的權力以決定要採用那些監測指標，通常各州衛生部門也都有各自的網站用來公布最新的相關疫情、應變措施、疫苗施打地區診所等，資料由專門處理流病資料的小組進行。在堪薩斯州及密蘇里州雖都擁有各自的監測系統，但仍有異同。因此，點擊堪薩斯州衛生部官網（<http://www.kdheks.gov/>）即可在首頁極明顯處迅速看到有關H1N1的捷徑以及各項資訊（<http://www.kdheks.gov/H1N1/index.htm>）；而密蘇里州衛生部的官網（<http://www.dhss.mo.gov/>）上亦有相同捷徑可瀏覽H1N1相關地方及醫療訊息（<http://www.dhss.mo.gov/missouriflu/H1N1Flu.html>），當然，所有官網均有通向CDC的友善連結以供參考。

堪薩斯州本身有較完整的流病監測團隊，隸屬於州政府環境及衛生部門下（Kansas Department of Health and Environment, KDHE）。如同CDC一樣，KDHE也會將流病及監測數據至製做週報並掛網（http://www.kdheks.gov/H1N1/H1N1_Epi_Reports.htm），包括有：



衛生署疾病管制局

Centers for Disease Control
Taiwan, R.O.C.

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1. Outpatient Influenza-like Illness (ILINet) :

Forty-two (59%) of the 71 ILINet Sites in Kansas reported ILI data

2. Hospital Admissions for Pneumonia or Influenza (EMSystems) :

93 (70%) of the 132 hospitals

3. Hospital Situational Awareness : 96 (73%) of the 131 hospitals

4. Mortality Due to Pneumonia or Influenza

5. Self-Reported Influenza-like Illness (ILI)

6. School Absenteeism Surveillance

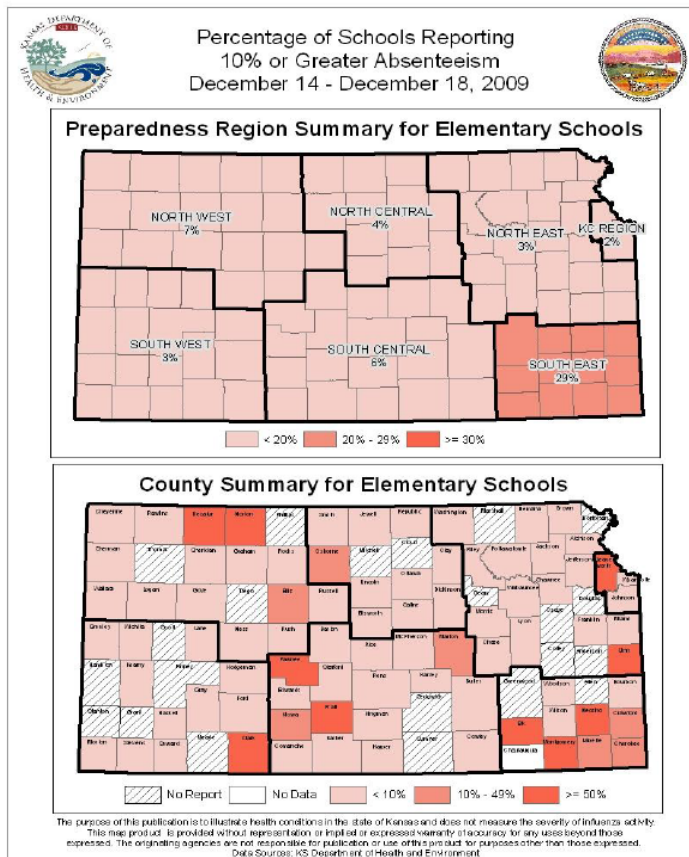
7. Laboratory Testing at Kansas Health and Environmental Laboratories (KHEL)

8. Descriptive Epidemiology of KHEL-Confirmed H1N1 Cases

其中較CDC不同的有第5及第6項，**School Absenteeism Surveillance**非常類似目前我們和教育部合作的學校監視系統，但是堪薩斯州並沒有100%的學校全部加入，只有約83間（79%）的學校納入監視，但廣度包含小學、國中、高中。

以小學為例可知道各縣市當週的缺席率，並可看出缺席的趨勢圖：

**School Absenteeism
(Surveillance Conducted via Health Departments)
Week ending December 18, 2009**



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在州和州的交界邊境處，常會有藥物供應短缺的情形，尤其以兒童劑型為最，主要是因為人民可能會到隔壁州的醫院或診所看病，因此，類似情況可由州衛生部和相臨州衛生部做反應及適度調配。目前全美藥物供應仍以 Tamiflu 為主，孩童部分有懸浮液可使用(台灣無進口)，另外也有吸入型的 Zanamivir(Relenza)，但針劑型的 Peramivir 仍需直接向 CDC 申請，州政府並沒有自行準備針劑的份量。政府網站上除了有 CDC 的用藥指引外，FDA 的警示，以及 FDA 相關緊急開放措施也會一併提供專業人士下載參考，提供堪薩斯州網頁範例供參：

Antiviral Information

- [Antiviral recommendations Updated October 16, 2009 \(link to CDC\)](#)
 - [Pediatric supplement \(link to CDC\)](#)
- [NAPH Form - En Español](#)
- **TAMIFLU**
 - [Parent Education for Tamiflu \(oseltamivir\) Suspension - En Español](#)
 - [Tamiflu Fact Sheet for Patients and Parents - En Español](#)
 - [Tamiflu Fact Sheet for Health Care Providers \(link to CDC\)](#)
 - [Emergency Dosing Recommendations for Pediatric Patients less than 1 year old \(link to FDA\)](#)
 - [FDA Notice: Stockpiled Antivirals at or nearing expiration \(link to FDA\)](#)
 - [FDA Notice: Information for Healthcare Professionals-Authorization of use of expired Tamiflu Oral Suspension \(link to FDA\)](#)
 - [Tamiflu Package Insert \(link to FDA\)](#)
 - [Fact Sheet for Patients and Parents \(link to CDC\)](#)
- **RELENZA**
 - [Relenza Fact Sheet for Patients and Parents - En Español](#)
 - [Zanamivir \(Relenza\) Fact Sheet for Health Care Providers \(link to CDC\)](#)
 - [Zanamivir \(Relenza\) Summary Fact Sheet for Patients and Parents \(link to CDC\)](#)
 - [How to use Relenza \(Zanamivir\) Step-by-Step \(link to CDC\)](#)
 - [Relenza Package Insert \(link to CDC\)](#)

三、新流感疫苗接種現狀






(1) 新流感 H1N1 疫苗施打廠牌

經由 FDA 核可的品牌共有五種 (table)，其中包含一種活性減毒的流感疫苗 (LAIV)，LAIV 看似方便只需用吸入即可，但其實民眾的接受度並不如傳統針劑來得高。



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TABLE 1. Influenza A (H1N1) 2009 monovalent vaccines approved for use in the United States, November 11, 2009

Vaccine type	Manufacturer	Presentation	Mercury content ($\mu\text{g Hg}/0.5\text{ mL dose}$)	Age group	No. of doses	Route
Inactivated*	Sanofi Pasteur 	0.25 mL prefilled syringe	0	6–35 mos	2†	Intra-muscular§
		0.5 mL prefilled syringe	0	≥36 mos	1 or 2†	Intra-muscular
		5.0 mL multidose vial	25.0	≥6 mos	1 or 2†	Intra-muscular
Inactivated*	Novartis Vaccines and Diagnostics Limited 	5.0 mL multidose vial	25.0	≥4 yrs	1 or 2†	Intra-muscular
		0.5 mL prefilled syringe	<1.0	≥4 yrs	1 or 2†	Intra-muscular
Inactivated*	CSL Limited 	0.5 mL prefilled syringe	0	6–35 mos§§ ≥3 yrs	2† 1	Intra-muscular
		5.0 mL multidose vial	24.5	≥6 mos¶¶	1 or 2†	
Inactivated*	ID Biomedical (Distributed by GSK) 	5.0 mL multidose vial	25.0	≥18 yrs	1	Intra-muscular
LAIV¶	MedImmune LLC 	0.2 mL sprayer**	0	2–49 yrs	1 or 2††	Intranasal

* A 0.5-mL dose contains 15 μg hemagglutinin of A/California/7/2009 (H1N1)pdm.

† Two doses administered approximately 4 weeks apart (≥ 21 days acceptable) are recommended for children aged 6 months through 9 years.

§ The preferred site for infants and young children is the anterolateral aspect of the thigh.

¶ Live attenuated influenza vaccine. A 0.2-mL dose contains 106.5--7.5 fluorescent focal units of live attenuated influenza virus reassortants of A/California/7/2009 (H1N1)pdm.

** Influenza A (H1N1) 2009 LAIV is shipped refrigerated and stored in the refrigerator at 36°F to 46°F (2°C to 8°C) after arrival in the immunization clinic. The dose is 0.2 mL divided equally between each nostril. LAIV should not be administered to persons with asthma. Healthcare providers should consult the medical record, when available, to identify children aged 2 through 4 years old with asthma or recurrent wheezing that might indicate asthma. In addition, to identify children who might be at greater risk for asthma and possibly at increased risk for wheezing after receiving LAIV, parents or caregivers of children aged 2 through 4 years of age should be asked: "In the past 12 months, has a healthcare provider ever told you that your child had wheezing or asthma?" Children whose parents or caregivers answer "yes" to this question and children who have asthma or who had a wheezing episode noted in the medical record during the preceding 12 months should not receive LAIV.

†† Two doses administered approximately 4 weeks apart are recommended for children aged 2 through 9 years of age.

§§ The CDC recommends the CSL™ 2009 H1N1 0.5 mL pre-filled syringe vaccine formulation be given to children ages 6 through 35 months ONLY when other age appropriate formulations are not available. This recommendation is not related to vaccine efficacy or safety concerns. It was made to reduce vaccine wastage. If providers choose to immunize children ages 6 through 35 months, using the CSL pre-filled syringe vaccine formulation, the dose is 0.25 mL. For additional guidance, refer to "[Updated Guidance for the Use of CSL's 2009 H1N1 Monovalent Vaccine](#)".

¶¶ The CSL™ 2009 H1N1 5 mL multi-dose vial vaccine formulation is recommended for use in persons 6 months and older. The quantities of ancillary supplies provided with each order are sufficient to administer 10 doses per vial. Providers who choose to administer more than 10 doses per vial will need to supplement their own ancillary supplies. For additional guidance, refer to "[Updated Guidance for the Use of CSL's 2009 H1N1 Monovalent Vaccine](#)".

(2) 新流感疫苗施打費用

疫苗的採購費用，包括空針、針頭、針筒甚至是消毒的酒精棉片，各州皆主要來自聯邦政府的補助；另外，州衛生部也可以從 CDC 獲得一些經濟的援助，但是 vaccine administration 仍是需要個人保險或公務部門的補助。因此，依照民眾選擇施打的地點、



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方式、本身的保險制度，會有不同狀況下的計價方式，非常繁瑣及複雜，也並不是「人人免費、人人可打」的狀態，以下列表格陳述其複雜的收費方式。

相反，在台灣一律免掛號費、免部分負擔的 free vaccine，在兩州的衛生部官員聽起來都是極度令人稱羨的措施。

	Private Sector Providers	Public Sector Providers
Insured	<ul style="list-style-type: none"> The administration fee charged or billed should not exceed the regional Medicare administration fee: <ul style="list-style-type: none"> \$19.06 in Kansas http://www.cms.hhs.gov/Adultimmunizations/Downloads/AdminRates09.pdf Providers are permitted to accept whatever reimbursement amount is provided by the insurance plan, even if it exceeds the regional Medicare administration fee. 	<ul style="list-style-type: none"> May not charge a fee or a co-pay to a patient. The administration fee billed should not exceed the regional Medicare administration fee. <ul style="list-style-type: none"> \$19.06 in Kansas http://www.cms.hhs.gov/Adultimmunizations/Downloads/AdminRates09.pdf Providers are permitted to accept whatever reimbursement amount is provided by the insurance plan, even if it exceeds the regional Medicare administration fee.
Uninsured/Underinsured	<ul style="list-style-type: none"> The administration fee charged or billed should not exceed the regional Medicare administration fee. <ul style="list-style-type: none"> \$19.06 in Kansas http://www.cms.hhs.gov/Adultimmunizations/Downloads/AdminRates09.pdf May waive the fee or charge a reduced fee. May administer vaccine for free to individuals who cannot afford the fee, or refer them to public health. 	<ul style="list-style-type: none"> May not charge any fee or co-pay to the uninsured or underinsured.
Medicaid	<ul style="list-style-type: none"> The administration fee may be billed to Medicaid. The amount billed cannot exceed the state rate of \$14.15: <ul style="list-style-type: none"> https://www.kmap-state-ks.us Please refer to the Medicaid Policy Chapter General Information for Providers, section 10.2, titled 'Charges: Providers cannot charge Medicaid a higher rate for a service rendered to a beneficiary than the lowest charge that would be made to others for the same or similar service. This includes advertised discounts, special promotions, or other programs to initiate reduced prices made available to the general public or a similar portion of the population. In cases where a beneficiary has private insurance and the provider is participating with the other insurance, refer to the Coordination of Benefits Chapter of this manual for additional information. 	<ul style="list-style-type: none"> The administration fee may be billed to Medicaid. The amount billed cannot exceed the state rate of \$14.15: <ul style="list-style-type: none"> https://www.kmap-state-ks.us Please refer to the Medicaid Policy Chapter General Information for Providers, section 10.2, titled 'Charges: Providers cannot charge Medicaid a higher rate for a service rendered to a beneficiary than the lowest charge that would be made to others for the same or similar service. This includes advertised discounts, special promotions, or other programs to initiate reduced prices made available to the general public or a similar portion of the population. In cases where a beneficiary has private insurance and the provider is participating with the other insurance, refer to the Coordination of Benefits Chapter of this manual for additional information.
Medicare	<ul style="list-style-type: none"> The administration fee billed should not exceed the regional Medicare administration fee. <ul style="list-style-type: none"> \$19.06 in Kansas http://www.cms.hhs.gov/Adultimmunizations/Downloads/AdminRates09.pdf 	<ul style="list-style-type: none"> The administration fee billed should not exceed the regional Medicare administration fee. <ul style="list-style-type: none"> \$19.06 in Kansas http://www.cms.hhs.gov/Adultimmunizations/Downloads/AdminRates09.pdf
Private Community Vaccinator	<ul style="list-style-type: none"> NO CONTRACT WITH INSURANCE PROVIDER: <ul style="list-style-type: none"> If the private community vaccinator does not have a billing relationship with that patient's insurance plan, the vaccinator could charge the insured patient an out-of-pocket fee up to the regional Medicare rate (or the patient could seek vaccination at another provider). 	<ul style="list-style-type: none"> CONTRACT WITH PUBLIC HEALTH: <ul style="list-style-type: none"> If the private community vaccinator is contracted to vaccinate on behalf of a public health entity, no patient may be refused vaccine due to inability to pay a vaccine administration fee. May not charge any fee or co-pay to the uninsured or underinsured.
All Provider Notes	<ul style="list-style-type: none"> May not bill for ancillary supplies. May not charge administration fee to eligible tribal members covered by IHS. 	<ul style="list-style-type: none"> May not utilize PHER funds and bill administration fee for the same service for the same beneficiary.

(3) 新流感疫苗施打順序

雖然 ACIP 早已將各族群建議接種施打順序公佈，但是其程度僅只於「建議」，而非指示(instructions)，也並沒有任何州政府的法律能馬上讓 ACIP 的「建議」變成具體可行的疫苗政策。因此，在各州執行的衛生局間，也可能因資源到位等問題而有施打順序上的不一致情形。這種各縣市不一致做法的情形屢見不鮮，州衛生部門對於各衛生局的約束力，其實並不如想像中大。因此，整體而言，美國的施打率絕對比不上台灣，上下動員的能力也無法跟台灣相比，不過就『社區』和『地方』意識的植入，以及「家庭醫生」在疫苗諮詢的角色，著實讓公共衛生單位省下不少麻煩。地方衛生單位，由於是自己決定疫苗施打計畫，所以會因應地方特殊狀況，選擇便利於民眾的方式來設立疫苗門診，有的地方衛生單位甚至會因為民眾疑慮，就選擇不提供活性減毒的 H1N1 疫苗。民眾詢問該不該打疫苗時，一定最後會加上一句『我們建議你跟自己的家庭醫生討論。』詢問疫苗是否安全？答案是『比不打然後得到 H1N1 來的安全。』或是『至少跟季節性流感疫苗一樣安全。』這類不掛保證、比較級的答案。



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(2) 新流感疫苗施打場所實地參訪經驗

美國各地疫苗施種場地非常多，有甚至在超級市場 Walmart 就可以打的狀況，主要是不需醫師現場評估判斷，只要民眾能就疫苗衛教單張、同意書的部份作了解後簽署就可以施打；另一方面則是因為醫師的費用高昂及人數很少，此點和台灣大為不同。

1. 堪薩斯州 Jefferson County 之 H1N1 疫苗施打公衛門診：

此處類似台灣的各鄉鎮衛生所功能，平時除疫苗施打外，亦進行家庭計畫、幼兒疫苗施種、甚至老年安寧照護等重要公衛政策。當地的校護是隸屬於衛生部門管理，因此可由衛生所負責調配適當工作，一個學校通常並不只有一個校護，一個校護也可能並不只管理單一學校的某項業務。由於當地衛生局並沒有到校服務的校園接種政策，因此我們看到的是家長帶小孩來衛生所施打的情形。



2. Baptist Church 實地參訪 Clay County 之疫苗社區施打情形：

此教堂每年皆有例行幫當地居民施打季節性流感疫苗的慣例，和 Jefferson County 的門診相比，在教堂施打的人數可用人山人海來形容。由於美國法律並沒有規定疫苗施打需要先經過醫師評估，所以不論在哪個施打場所，我們皆沒有看到有醫師需要做問診和理學檢查等動作，但現場仍是有醫師在場，而他的工作在於負責急救或現場意外的處理等，而大部份的工作人員均為志工，人們花費最久的時間，除了外面的等待外，應該是負責施打前的衛教單說明、填寫問卷和同意書的部分。教堂裡有好幾個不同語言的團隊負責做衛教單張及同意書的說明，志工會非常有耐心逐一說明各種疫苗可能的副作用、發放衛教單張等，民眾也可以自由選擇疫苗廠牌。衛教單張的部分則多半是採用 CDC 建議提供的版本，而問卷在問題的內容上也非常多，填寫起來雖不若台灣版本的簡單，但有助於提醒民眾一些後續相關的注意事項。

填寫完同意書後，便可依序魚貫地進入施打間進行疫苗施打，每個施打小組由二人組成，僅負責一位民眾的施打，除了要經過三讀五對外，還需確認民眾同意書上所有的注意事項。現場也備有簡易的急救措施，美國有宣導大家打完針後要停留觀察三十分鐘後才能



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回去的建議，但是真正我們在現場看遵守建議的人很少，而使用活性減毒疫苗（LAIV）
的人也很少。整體現場秩序非常良好。



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2009 H1N1 Influenza Vaccine Consent Form

Section 1: Information about person to Receive Vaccine (please print)

NAME (Last)		(First)	(M.I.)	DATE OF BIRTH month _____ day _____ year _____	
PARENT/LEGAL GUARDIAN'S NAME (Last)		(First)	(M.I.)	AGE	GENDER M / F
ADDRESS				DAYTIME PHONE NUMBER Home: _____ Work: _____	
CITY	STATE	ZIP	COUNTY		
SCHOOL NAME, if applicable and GRADE				CLINIC NAME/SITE	

Section 2: Screening for Vaccine Eligibility

If child has already been vaccinated with 2009 H1N1 influenza vaccine, please tell us the number of doses and dates of vaccination. (2 doses only for children 6 months through 9 years)

Dose 1 Date received: month ____ day ____ year _____ Form (please circle): nasal spray shot
Dose 2 Date received: month ____ day ____ year _____ Form (please circle): nasal spray
shot

The following questions will determine if person is eligible for the 2009 H1N1 influenza vaccine. Please mark YES or NO for each question.

A. If the answer is "YES" for one or more of the following questions in this section a health care provider will discuss your options.

	YES	NO
1. Do you have a serious allergy to eggs?		
2. Do you have severe/life threatening allergies? Please list: _____		
3. Have you ever had a flu shot before?		
4. If yes to the previous question, did you have a serious reaction? Describe: _____		
5. Have you ever had Guillain-Barré Syndrome?		



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B. There are two kinds of 2009 H1N1 influenza vaccine. Your answers to the following questions will determine which vaccine you can receive.

	YES	NO
1. Have you been vaccinated with any vaccine (not just flu) within the past 30 days? Vaccine: _____ Date given: _____ month _____ day _____ year _____		
2. Do you have any of the following: auto immune disorder, asthma, diabetes, lung, heart, kidney, and/or liver disease?		
3. Are you on long-term aspirin or aspirin-containing therapy?		
4. Have you had a fever within the last 24 hours?		
5. Are you pregnant?		
6. Do you have close contact with a person who needs care in a protected environment (for example, someone who has recently had a bone marrow transplant)?		

Section 3: Consent

CONSENT FOR VACCINATION:

I have been offered a copy of the H1N1 Influenza “Vaccine Information Statement”. I have read or have had explained to me and understand, the information in this “Vaccine Information Statement”. I give consent for the person named at the top of this form to be vaccinated with H1N1 vaccine. I give my consent for information contained on this form to be released to the Kansas Countermeasure Response & Administration (KS-CRA) for the purpose of assessment and reporting.

Signature of Recipient/Parent/Legal Guardian

Date _____
Month / Day / Year

Section 4: Vaccination Record

FOR ADMINISTRATIVE USE ONLY

Vaccine	Date Dose Administered	Route	Dose Number (1st or 2nd)	Vaccine Manufacturer	Lot Number	Name and Title of Vaccine Administrator
2009 H1N1	/	IM				



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	/	Intranasal			
2009 H1N1	/	IM			
	/	Intranasal			

5.同意書 (Clay County) :

H1N1 PATIENT HEALTH ASSESSMENT & IMMUNIZATION

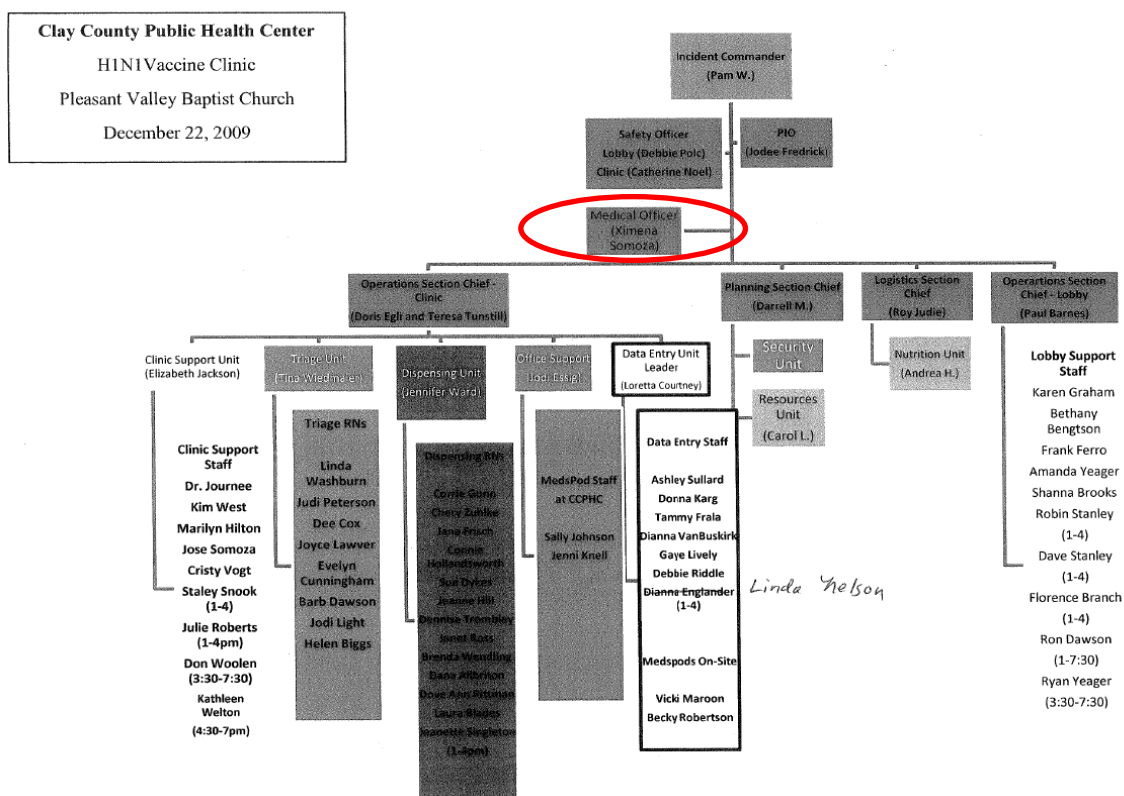
Clay County Public Health Center 2009-2010

ID #:		<input type="checkbox"/> Driver's License <input type="checkbox"/> Employee ID <input type="checkbox"/> Medicaid <input type="checkbox"/> Medicare <input type="checkbox"/> SSN <input type="checkbox"/> State ID			
Race / Ethnicity: <input type="checkbox"/> Asian <input type="checkbox"/> American Indian or Alaska Native <input type="checkbox"/> Bi / Multi-Racial <input type="checkbox"/> Black / African American <input type="checkbox"/> Hispanic / Latino <input type="checkbox"/> Native Hawaiian or other Pacific Islander <input type="checkbox"/> White					
DEMOGRAPHIC INFORMATION					
Last Name:		First Name:		Middle:	SS#:
Address:					
City:		State:		Zip:	County:
Home Phone: ()		Work Phone: ()		Mobile Phone: ()	
Birthdate:		Age Groups: <input type="checkbox"/> <6 months (DO NOT VACCINATE) <input type="checkbox"/> 6-23 months <input type="checkbox"/> 24-59 months			
Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female		<input type="checkbox"/> 5-18 years <input type="checkbox"/> 19-24 years <input type="checkbox"/> 25-49 years <input type="checkbox"/> 50-64 years <input type="checkbox"/> 65+ years			
HEALTH HISTORY					
Highlighted areas below are contraindicated with the use of Live, Attenuated vaccine (Nasal Spray), but may also be contraindicated with the use of IM H1N1 versions. Please see package inserts for specifics!					
Have you had any of the following symptoms in the last 3 days? Check all that apply.					WOMEN ONLY:
<input type="checkbox"/> Chills <input type="checkbox"/> Fever <input type="checkbox"/> Severe Headache					Are you currently pregnant or suspect pregnancy?: <input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Dry Cough <input type="checkbox"/> Muscle Aches/Pain <input type="checkbox"/> Sore Throat					
Check any medical conditions you have or have had:					
<input type="checkbox"/> Asthma/Emphysema/COPD <input type="checkbox"/> Kidney/Renal Disease <input type="checkbox"/> Immunosuppressed or HIV/AIDS <input type="checkbox"/> Guillain-Barré Syndrome					
<input type="checkbox"/> Diabetes <input type="checkbox"/> Cancer <input type="checkbox"/> Contact w/ Immunosuppressed <input type="checkbox"/> Unstable Neurological Disorders/Seizures					
<input type="checkbox"/> Heart Disease <input type="checkbox"/> Organ Transplant <input type="checkbox"/> Severe Vaccine Reaction					
Check any of the following medications you have had in the last 60 days:					
<input type="checkbox"/> Flu / Influenza Vaccine, Vaxigrip <input type="checkbox"/> Radiation Therapy <input type="checkbox"/> Steroid Therapy – Cortisone, Dexamethasone, Hydrocortisone Methylprednisolone Prednisolone, Prednisone, Triamcinolone					
<input type="checkbox"/> Live Virus Vaccines- e.g.- FluMist, MMR, MMRV, Typhoid, Yellow Fever <input type="checkbox"/> Antiviral Medication – Amantadine, Flumadine, Oseltamivir, Rimantadine, Symmetrel, Tamiflu, Zanamivir					
<input type="checkbox"/> Chemotherapy Agent					
Have you suffered a severe allergic reaction to any of the following? Check all that apply:					
<input type="checkbox"/> Egg <input type="checkbox"/> Neomycin <input type="checkbox"/> Any Flu/Influenza Vaccine <input type="checkbox"/> Thimerosal (Mercury)					
<input type="checkbox"/> Arginine <input type="checkbox"/> Polymixin <input type="checkbox"/> Live Flu Virus, FluMist <input type="checkbox"/> Any vaccines: What					
<input type="checkbox"/> Gelatin <input type="checkbox"/> Gentamicin <input type="checkbox"/> Latex					
CONSENT FOR TREATMENT AND INFORMATION RELEASE					
By signing, I am: Stating that the above information is correct and complete to the best of my knowledge. I have read the information regarding the vaccine and have received the 2009 H1N1 Influenza Vaccine Inactivated (the "flu shot") or the 2009 H1N1 Influenza Vaccine Live, Attenuated (the nasal spray vaccine) (10/2/09) Vaccine Information Sheet. I have had a chance to ask questions and had them answered to my satisfaction. I understand the benefits and risks of the vaccine requested and ask that the vaccine currently due be given to me or to the person named above for whom I am authorized pursuant to Section 431.058 RSMo to make this request. I understand that this is a voluntary and that the vaccine is being given with verbal and written screening under medical protocols by the appropriate medical officials. I understand there is no guarantee that the vaccine will be effective or free of side effects.					
Patient / Guardian Signature:					Date:
Relationship to Patient:					
FOR CLINIC STAFF USE ONLY					
Risk Groups: <input type="checkbox"/> Pregnant <input type="checkbox"/> Health Care Worker <input type="checkbox"/> 6 months to 24 years of age <input type="checkbox"/> Household w/infant <6 months old <input type="checkbox"/> 25-64 years old w/chronic condition					
Date:		Vaccine Given:		Manufacturer:	Site:
Administered By:		<input type="checkbox"/> ≥ 3years & Adult - 0.5cc (Multidose Vial)		<input type="checkbox"/> Sanofi Pasteur	<input type="checkbox"/> IM Right Deltoid
Lot #:		<input type="checkbox"/> No Pres. for ≥ 3years & Adult - 0.5cc		<input type="checkbox"/> Novartis	<input type="checkbox"/> IM Left Deltoid
Expiration Date:		<input type="checkbox"/> No Preservative for 6-36 months - 0.25cc		<input type="checkbox"/> GlaxoSmithKline	<input type="checkbox"/> IM Right Vastus Lateralis
Needs Second Dose:		<input type="checkbox"/> FluMist (Nasal Spray)		<input type="checkbox"/> MedImmune	<input type="checkbox"/> IM Left Vastus Lateralis
<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> CSL	<input type="checkbox"/> Intranasal
What Number Dose is this?					<input type="checkbox"/> Other:
<input type="checkbox"/> Dose #1 <input type="checkbox"/> Dose #2					



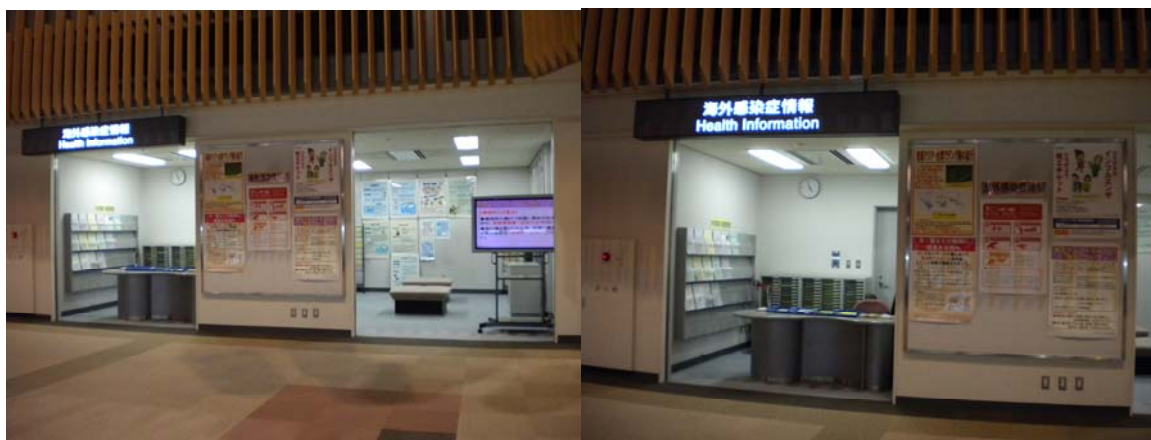
赴美國瞭解其流感疫情及疫苗接種現況並進行
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6. Clay County 疫苗施打組織圖

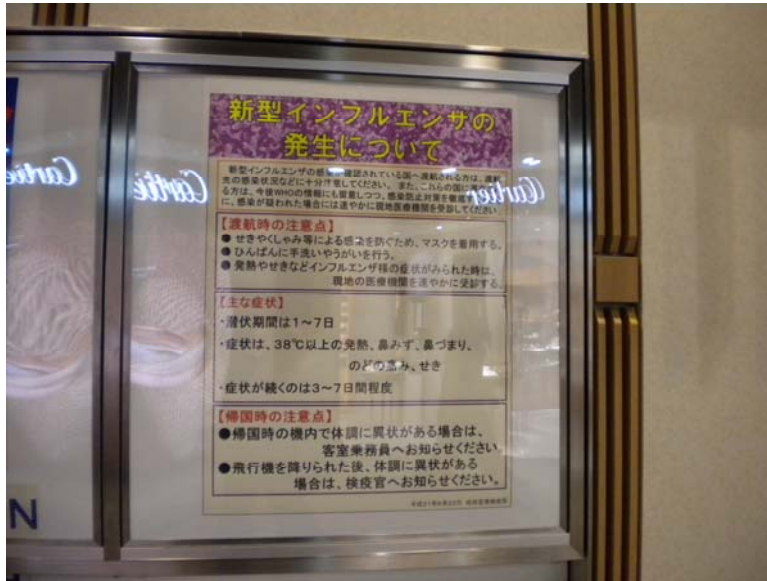


三、機場檢疫措施

由於全球目前進行的是疫苗施打的政策，因此在本次旅程中的各地機場(除桃園機場)都已不再設置有發燒篩檢的關卡，但若要在日本入境的旅客仍是需填寫健康申明書等類似證件，日本成田機場並設置有傳染病相關參考室，便利過境旅客前往瀏覽或索取相關資訊。



赴美國瞭解其流感疫情及疫苗接種現況並進行 國際港埠對流感疫情監測與控制措施之交流研習報告



四、綜合討論

此次研習，深刻體會到美國聯邦制度政府下，兩個中西部州政府的疫苗政策操作模式，也感受到聯邦和州的明顯差距。絕對的「地方自治」，使得當地衛生局有很高的決策權，甚至可以不完全依照 CDC 建議。此外，本次參訪有兩點印象非常深刻，尤其是在目前媒體至上的時代，可為後續作為的參考

1. 『社區減害』(community mitigation)：

當地州政府在統籌各種資源時，不忘深入社區，並相當重視所謂『社區減害』(community mitigation)工作，而且始終是當地流感策略的重要支柱之一，和病毒疫情監測、抗病毒藥物、疫苗、公眾溝通等，角色被視為是同等重要。負責的同仁要花很多時間去跟社區組織、學校、照顧機構等單位，一起開會進行溝通和繼續教育。以堪薩斯州為例，他們的成員來自各個團體，檢附如下：

Community Mitigation Team Members

- Cyndi Treaster, Director, Farm Worker, Migrant and Refugee Programs
- Jon K. Anderson, Public Health Capacity Development Manager, Office of Local and Rural Health
- Karl Milhon, Director, Policy and Planning, Bureau of Disease Control and Prevention
- Mary Murphy, Director, Compliance and Regulation Development Unit, Child Care Licensing and Registration Program
- Brenda Nickel, Child and School Nurse Consultant, Bureau of Family Health
- Cait Purinton-Day, Contingency Planner, Bureau of Public Health Preparedness
- Jane Shirley, Program Manager, Coordinated School Health, Office of Health Promotion
- Elizabeth Lawlor, Epidemiologist, Office of Disease Surveillance and Epidemiology



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而在七月到十二月的新流感作戰期間，持續不間斷的進行許多觀念的澄清、政策的溝通和資源的整合，甚至是指引的制定，讓每一個環節的人都有代表可以有機會了解真相，並回去該群體內進行內化的宣導和細部的溝通，這也使得當後續政策真正被實行時，更能為該群體所接受，也免除旁人對政策有霧裡看花、閉門造車之疑慮。

34 Community Mitigation Presentations from July 15 – December 8:

1. Quarterly Meeting of Kansas Voluntary Organizations (VOAD)
KSVOAD'S main goal is to increase coordination, cooperation, communication, education and to improve disaster legislation.
2. State School Board of Education Meeting (Dr. Eberthart-Phillips).
3. Quarterly Meeting of State Representatives & other members at large (Dr. Eberthart-Phillips).
4. Kansas Association of School Administrators
5. Child and Adult Care Food Program Annual Conference
6. Community Mitigation Webinar for early childhood organizations, including Head Start
7. Kansas League of Municipalities Annual Conference
8. School Nurses Conference
9. Regional Food Coordinators (Commodities, Food Programs)
10. Community Mitigation Webinar for Local Health Departments
11. United School Administrator Regional Meetings (8 regional meetings)
12. KAMU (Kansas Association for the Medically Underserved) Annual Conference
13. Coordinated School Conference
14. 2009 Annual InterHab Conference (InterHab provides leadership at the local, state and national level to support people with disabilities).
15. Kansas International Educators (KIE) Fall Meeting
16. Nursing Home Surveyor Meeting
17. Kansas Early Childhood Comprehensive Systems statewide meeting
18. Kansas Colleges Conference Call
19. Healthy Start Home Visitor Regional Training: H1N1 and Pregnancy (6 regional training)

20. Four Corners Emergency Management Conference on Friday, Dec. 4. Representatives from Kansas, Missouri, Oklahoma, and Arkansas presented on their state's response to H1N1.

**Note: Two training had regional sites totaling 14 sites.*

細部可參考美國 CDC 網站: <http://www.flu.gov/professional/community/index.html>

2. 疫苗不良反應 (vaccine adverse event) 事件處理：

做為州政府衛生部門的階層，我們其實完全看不到他們的人員在處理個案的問題，尤其是針對疫苗不良反應 (vaccine adverse event) 事件，州政府和地方的層級對於疫苗不良



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反應的個案，若是經由熱線或 e-mail 信箱之通報或詢問醫療部份，一律的回答均為「請你先去看你的家庭醫師，應和他做討論」，縱然在州政府接到疫苗不良反應的通報單之當時或後續，也僅是需要完整收集資料並直接通報給 Vaccine Adverse Event Reporting System (VAERS)，State 或 County level 不需要介入做監測或給予醫療協助或關懷。CDC 方面，也不會去判斷是否與疫苗相關。基本上，中央的監測單位(CDC/FDA)並不會去判定因果關係，而因果關係則是由不同負責單位 HRSA 的 VICP 負責，其獨立於監測體制外，必須要個案主動申請才會被審理，審理的時間通常會很長，甚至可能達數年之久。

上述情形顯然與目前台灣情形不同，然國情不同，東西方民族性顯然亦不同。因此，所有疫苗政策仍須因地制宜，畢竟目前台灣的健康保險制度、人民的就醫習慣、醫師的養成訓練以及醫療體系的運作仍和美國有顯著的不同。但是，仍可見賢思齊，酌予自我期許與勉勵。誠如局務會議所指示：公共衛生關切的應是弱勢族群，此一族群往往是最沒有聲音的。以疫苗政策為例，政府採購的疫苗應主要提供給沒錢買疫苗的人，而非提供給所有人接種，這種集權式採購疫苗的政策可能需檢討修正。

以美國為例，將疫苗的政策推動賦予各地方衛生單位主導的權利，並藉重基層醫師的專業，或許能讓未來面臨重大公衛疫病議題時，能有正面疏導的方向。

建 議

- (1) 持續進行流感監測及疫苗不良反應監測
- (2) 增強各地方衛生局及基層醫師疫苗教育，以期能作為重大疫苗政策推動時的基石



Pandemic influenza A (H1N1) Response

Taiwan Centers for Disease Control

Pillars of Pandemic Planning

Four strategies

Early detection
Interruption of transmission
Antivirals
Influenza vaccine

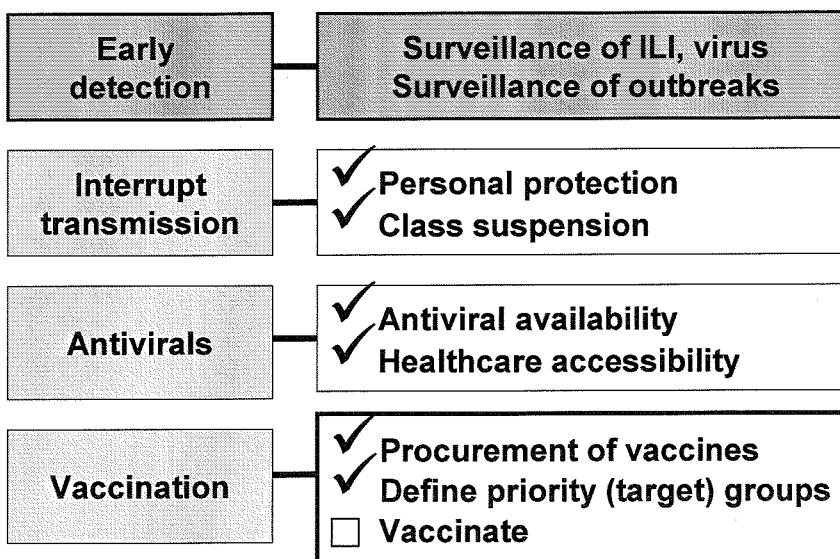
Five lines of defenses

Containment abroad
Border quarantine
Community epidemic control
Maintaining normal medical system functioning
Individual and family protection

Major events

April 25	"Swine flu" first identified in Mexico and the United States
April 28	Central Epidemic Command Center (CECC) established
April 29	Begin quarantine for H1N1 passengers
May 20	First confirmed case found in Taiwan; stop quarantine
June 1	CECC begins vaccine procurement
July 2	First community outbreak found

Strategies

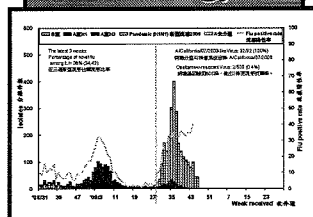


Surveillance system

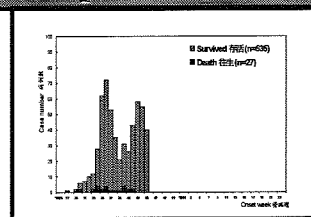
- Influenza-like illness (ILI) surveillance
 - Real-time Outbreak and Disease Surveillance (RODS)
- Virologic Surveillance
 - Antigenic characterization and antiviral resistance
- Influenza infection with severe complications
 - Category 4 notifiable disease
- Pneumonia and influenza (P & I) mortality

Surveillance systems

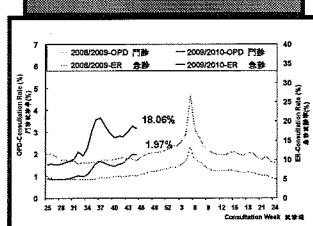
Virology



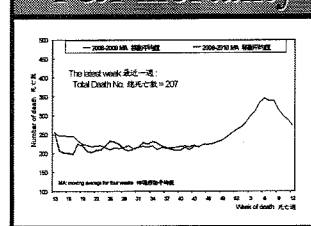
Hospitalized cases



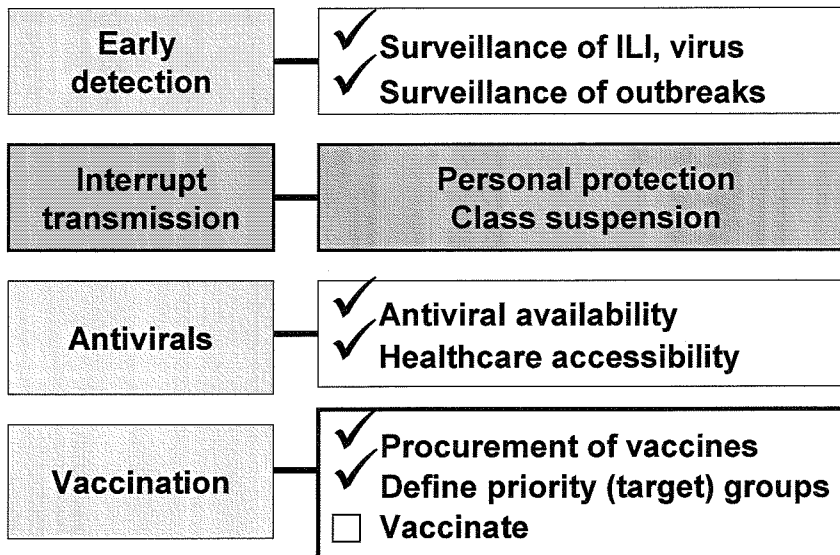
ILI



P&I mortality



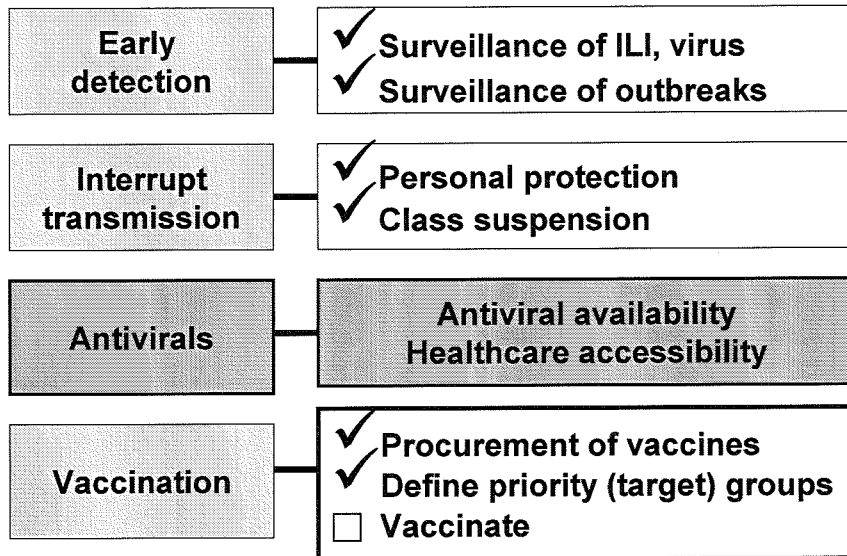
Strategies



Control measures in schools

- Children & school students are very susceptible to this new virus and school may serve as amplification point for viral spread
- Sick Children should
 - Stay home unless they need to seek medical care
 - Stay away from schools
- “3-2-5” standard
 - 3 days
 - ≥ 2 cases
 - 5 days of class suspension

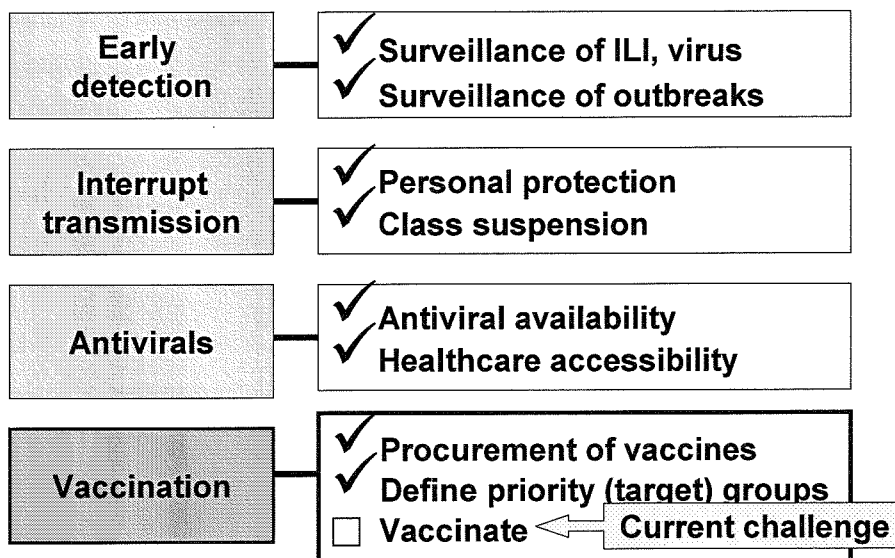
Strategies



Prescribing antivirals

- Stockpile
 - Oseltamivir: 30% of the population
 - Zanamivir: 600,000 5-day courses
- Goal: decrease mortality and morbidity
- Flu clinics

Strategies



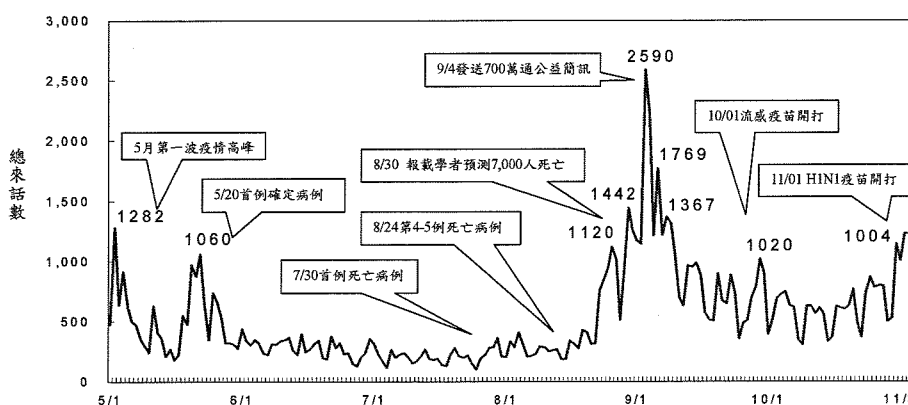
Vaccination

Vaccination priority group	Scheduled Date	Actual Date	Place
Residents affected by Typhoon Morakot	11/1	11/1	emergency shelters
Healthcare and public health workers	11/2	11/2	contracted hospitals
Infants aged 6-11 months	11/9	11/9	contracted hospitals
Pregnant women	11/16	11/16	contracted hospitals
Children aged 1- 6 years	11/16	11/16	contracted hospitals
People with severe illnesses/injuries	11/16	11/16	contracted hospitals
Elementary school students	12/1	11/16	School
Middle school students	12/1	11/23	School
High school students	12/1	11/30	School
Adults aged 19-24 years	1/1 2010	12/1	contracted hospitals
People with specific chronic diseases	2/1 2010	12/7	contracted hospitals
All others	3/1 2010	12/12	contracted hospitals

Nationwide H1N1 vaccination campaign - December 12, 2009



1922 疫情通報及諮詢專線 Communicable Disease Reporting and Consultation Hotline



2009 Monovalent H1N1 Vaccine Safety Surveillance

- The Central Epidemic Command Center (CECC) is monitoring all adverse events following immunization (AEFI) to the H1N1v and will be providing weekly updates on the monitoring activities

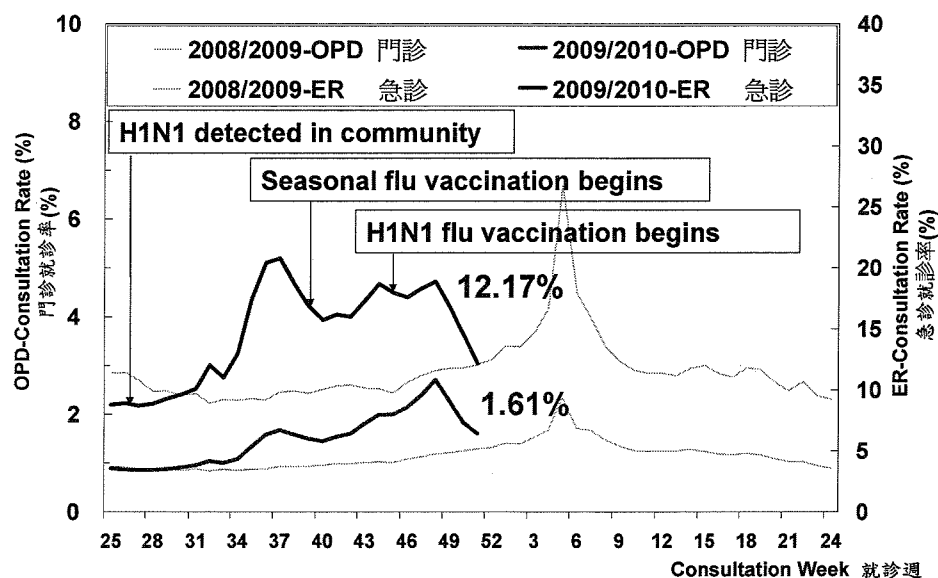
The following information summarizes reports of adverse events after H1N1v.

Number of doses administered	4.12 million	
	All reports	Serious* reports
Number of reports received	331	64
Reporting rate (per 100,000 doses)	8.0	1.6

*The internationally accepted definitions for postmarketing AEFI surveillance define serious adverse events as those involving deaths, life-threatening, hospitalization, prolongation of hospitalization, permanent disability, or congenital anomaly.

Updated: 2009/12/20

Influenza-like illness surveillance



中央流行疫情指揮中心
Central Epidemic Command Center

Home Site Map 繁體中文

Category

- Press Releases
- Surveillance >
- Preparedness Plan
- Health Education & Promotion
- Infection Control
- FAQs
- Interim Guidance for Clinicians & Public Health Professionals
- Links

News

Mass immunization campaign against pandemic influenza A (H1N1) at almost 200 elementary schools in nation begins on November 16, 2009 2009-11-13

The Central Epidemic Command Center (CECC) announced that elementary school students are scheduled to receive the pandemic influenza A (H1N1) vaccine beginning November 16, 2009. The immunization camp..... Full Story

Adimmune donates 1,000 doses of influenza A (H1N1) vaccine to Central Epidemic Command Center 2009-11-11

Taiwan CDC establishes accelerated inspection mechanism for influenza A (H1N1) products 2009-11-11

Central Epidemic Command Center says influenza A (H1N1) infection in pigs does not alter H1N1 vaccination priority 2009-11-09

Number of classes suspended for pandemic influenza A (H1N1) reduced; Central Epidemic Command Center urges continued vigilance 2009-11-05

Commanders of Local Epidemic Command Centers to receive pandemic influenza A (H1N1) vaccine according to priority list 2009-11-04

Results for clinical trial of Adimmune's H1N1 vaccine show effectiveness 2009-10-29

Taiwan CDC uses video competition and social media to promote pandemic influenza A (H1N1) message 2009-10-27

DOH
R.O.C(Taiwan)

www.h1n1.gov.tw or flu.cdc.gov.tw

Thank you