International Health Regulations
U.S.A. Experience

Katrin S. Kohl, MD, PhD, MPH/DTM

Division of Global Migration and Quarantine

National Center for Preparedness, Detection, and Control of Infectious Diseases

Era of the IHR (2005)

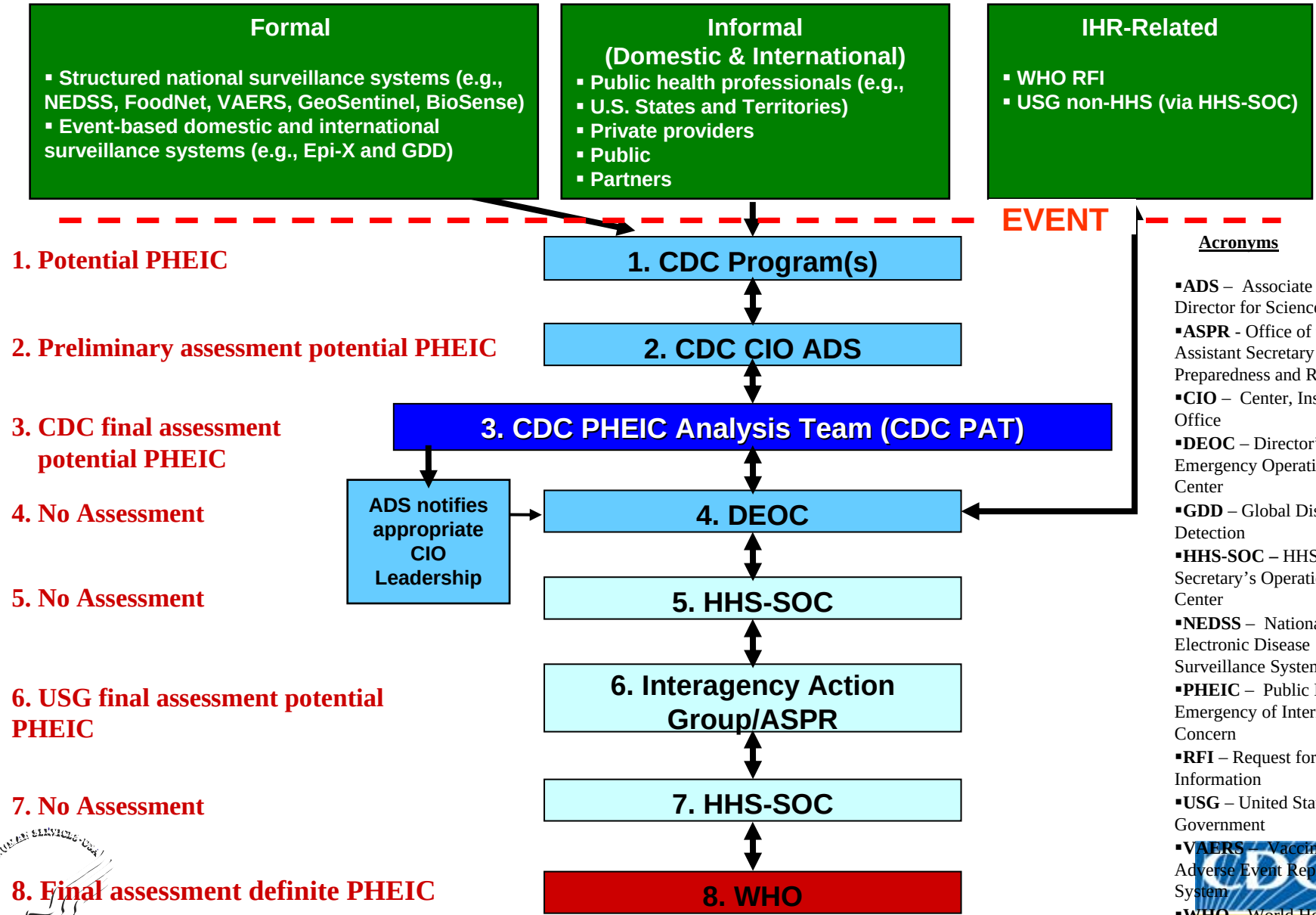
- Transparency
- Process for global engagement and interaction
- Coordinated response

4/24 WHO acknowledges U.S. and Mexico for proactive reporting and collaboration

Information & Public Health Response (IHR Part II, Articles 5-14)

- Surveillance – ongoing
  - Navy base and U.S./Mexican border surveillance
- Notification – April 18
  - First two cases of pandemic H1N1 reported to WHO/IHR via NFP
- Information sharing
  - Regular international conference calls (ECDC, PAHO, Mexico, Canada, others)
  - Regular updates on surveillance, epidemiology, response, including daily case counts to PAHO via NFP (start 4/20)
- Determination – April 25
  - Director-General in consultation with U.S.G and Emergency Committee
- Public Health Response – ongoing
  - Including assessment of severity and support

U.S. PHEIC Assessment and Reporting Protocol



Acronyms

- **ADS** – Associate Director for Science
- **ASPR** - Office of the Assistant Secretary for Preparedness and Response
- **CIO** – Center, Institute, Office
- **DEOC** – Director's Emergency Operations Center
- **GDD** – Global Disease Detection
- **HHS-SOC** – HHS Secretary's Operations Center
- **NEDSS** – National Electronic Disease Surveillance System
- **PHEIC** – Public Health Emergency of International Concern
- **RFI** – Request for Information
- **USG** – United States Government
- **VAERS** – Vaccine Adverse Event Reporting System
- **WHO** – World Health Organization

USG IHR Report Form

Appendix 4 – USG IHR PHEIC Report Form

U.S. Government International Health Regulation (IHR) Public Health Emergency of International Concern (PHEIC) Report Form

---

Date/Time _____ Event _____
Location _____
Source of Report *(for internal USG use only)* _____

Step 1: **Indicate why this event may be a potential Public Health Emergency of International Concern (PHEIC)***

☐ **A. Disease is one of the following:** SARS, polio, smallpox, human influenza caused by a new subtype (e.g., H5N1)

Skip to Step 2 if checkbox A is checked. For each of the <u>four</u> major PHEIC criteria listed below, fill in the <u>circle</u> next to any sub-item that applies. If any circle is filled in, check the corresponding criterion <u>checkbox</u>.

☐ **B. Event (biological, chemical or radiological) meets the following criteria:**

1. Serious Impact on Public Health

- ○ there is high or potentially high morbidity and/or mortality
- ○ the geographic scope is large or spreading over a large area (e.g. multi-state or regional); is in area of high population density
- ○ the agent is highly transmissible/pathogenic
- ○ the event has compromised containment or control efforts
- ○ therapeutic/prophylactic agents are unavailable, absent, or ineffective (e.g., XDR-TB)
- ○ cases occurring among health care staff
- ○ the event has compromised containment or control efforts
- ○ other: _____

☐ **2. Unusual or Unexpected Event**

- ○ the disease-causing agent(s) is yet unknown or a new (emergent) pathogen
- ○ the population affected is highly susceptible
- ○ the event is unusual for the season, locality or host
- ○ there is a suspicion that this may have been an intentional act
- ○ other: _____

☐ **3. Significant risk for international spread**

- ○ epidemiologic link to a similar event outside the U.S.
- ○ potential cross-border movement of pathogen/agent/host
- ○ conducive transmission vehicles: air, water, food or environmental
- ○ other: _____

☐ **4. Risk for trade or travel restrictions**

- ○ there is a history of similar events in the past that have resulted in restrictions
- ○ the event is associated with an international gathering or a tourist area
- ○ the event is or has gained significant government or media attention
- ○ there is a zoonotic disease or the potential for an epizootic event
- ○ other: _____

*see Annex 2, International Health Regulations (2005)

Continue with Step 2 <u>if at least two</u> checkboxes (1 – 4) are checked; else, this event does not meet the requirements of a potential PHEIC.

Step 2: **Are there human cases of illness associated with the event?**

***<u>If yes</u>**, fill out BOX 1, paying particular attention to report the items listed in BOX 1.*

***<u>If no</u>**, fill out BOX 2, paying particular attention to report the items listed for BOX 2.*

Complete the appropriate boxes as best as possible, and include any other event- related information.

BOX 1. HUMAN DISEASE / SYNDROME

PROVIDE AVAILABLE INFORMATION FOR THE FOLLOWING:
Name of pathogen/agent (etiology), if known; clinical signs and symptoms; new or emerging pathogen/agent; case definition; vector or reservoir; cases and deaths; population at risk; laboratory test results and location/name of lab performing analyses; scale— local or widespread; control measures implemented; association with international travel; therapy or containment compromise; infrastructure strain; intentional or unintentional; unusual/atypical conditions

BOX 2. ENVIRONMENTAL/FOOD CONTAMINATION OR ANIMAL INFECTIONS

PROVIDE AVAILABLE INFORMATION FOR THE FOLLOWING:
Agent/pathogen; source; vehicle/mode of dispersion; population at risk; laboratory test results and location/name of lab performing analyses; distribution of agent/product/animals; control measures implemented; scale-local or widespread; intentional or unintentional; potential for human exposure to toxic or infectious agent

IHR Notification Pandemic H1N1

U.S. Government International Health Regulation (IHR)
Public Health Emergency of International Concern (PHEIC) Report Form

Event Tracking Number
Date/Time April 17, 2009 **Event** Swine influenza A (H1N1) in a child
Location San Diego, California, U.S.
Source of Report *(for internal USG use only)*

U.S. Government International Health Regulation (IHR)
Public Health Emergency of International Concern (PHEIC) Report Form

Event Tracking Number
Date/Time April 17, 2009 **Event** Swine influenza A (H1N1) in a child
Location Imperial County, California, U.S.
Source of Report *(for internal USG use only)*

Step 1: **Indicate why this event may be a potential Public Health Emergency of International Concern (PHEIC)***

☑ **A. Disease is one of the following:** SARS, polio, smallpox, human influenza caused by a new subtype (e.g., H5N1)

Skip to Step (2) if checkbox A is checked. For each of the four major PHEIC criteria listed below, check the box next to any sub-item that applies. If any box is checked, check the corresponding criterion checkbox.

April 18, 2009

CDC Quarantine and Migration Health

USG IHR Notifications to WHO of Potential PHEICs

August 2007:
- *Clostridium botulinum*-contaminated chili
- Measles at in international Little League game

September 2007:
- MDR-TB on an international flight

December 2007:
- MDR-TB on an international flight

March 2008:
- MDR-TB on an international flight
- Contaminated heparin products

July 2008:
- *Salmonella* Saintpaul outbreak

January 2009:
- *Salmonella* Tymphimurium outbreak

March 2009:
- Influenza A H1N1 (swine flu)
- MDR-TB on an international flight

18 April 2009:
- Influenza A H1N1 (swine flu)
- Influenza A H1N1 (swine flu)

PHEIC 25 April

May 2009
- Influenza A H1N1 (swine flu)

June 2009
- E.coli 157 outbreak

Possible Recommendations – Persons/Goods (IHR Part III, Articles 15 – 18)

- Implement Isolation
- Implement Contact Tracing
- Review travel history from affected areas

- Require medical examination
- Implement Quarantine
- Implement Entry/Exit Screening
- Refuse Entry

CDC
Quarantine and Migration Health

WHO Declares Pandemic Phase 4 April 27

- Laboratory-confirmed cases from Mexico, U.S., Canada, Spain
- WHO makes temporary recommendations
  - no restriction of regular travel or closure of borders
  - delayed international travel for persons who are ill
  - persons who develop symptoms following international travel seek medical guidance
  - hand hygiene and the need to seek medical attention for ILI
  - no risk of infection from consumption of well-cooked pork and pork products

WHO Declares Pandemic Phase 5 April 29

- WHO hosts teleconference with more than 100 participants from WHO regions to gain better understanding of situation in affected countries and identify knowledge gaps

WHO Declares Pandemic Phase 6 June 11

Margaret Chan:

- **“I have conferred with leading influenza experts, virologists, and public health officials. In line with procedures set out in the International Health Regulations, I have sought guidance and advice from an Emergency Committee established for this purpose”**

WHO Entry and Exit Screening

"Countries that adopt measures that significantly interfere with international traffic (e.g. delaying an airplane passenger for more than 24 hours, or refusing country entry or departure to a traveler) must provide WHO with the public health reasoning and evidence for their actions. WHO will follow up with all of its Member countries on such matters."

April 29:

"SARS experience did not show need for exit screening "

USG Border/ POE Responses

Border Closures - No

Active Entry Screening - No

Active Exit Screening - No

Travel Advisories- Yes, Early

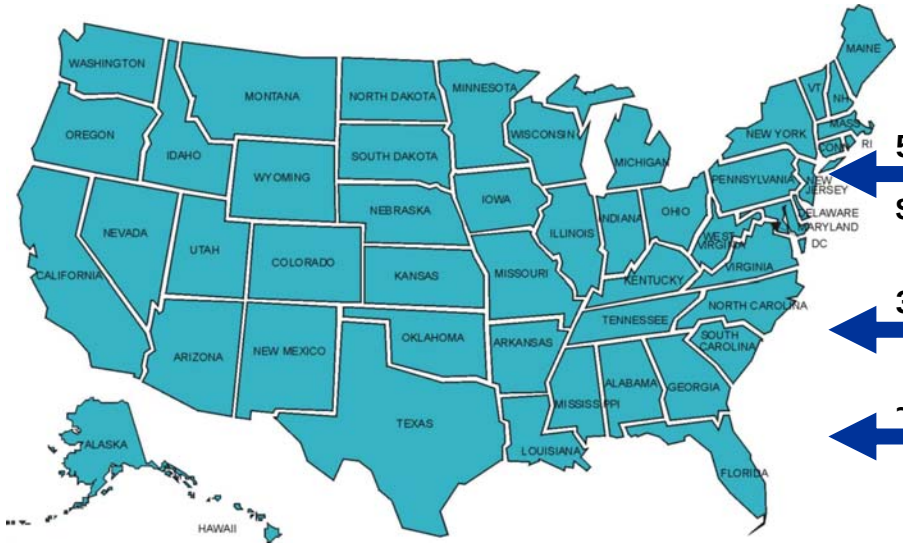
Level 4, 3 - Alert & Precaution Mexico,

Level 2 Outbreak Notices, US

Enhanced Passive Disease Surveillance - Yes

Active Educational Efforts - Yes

Health Security in a Globalized World: Context for the IHR



56 million tourists

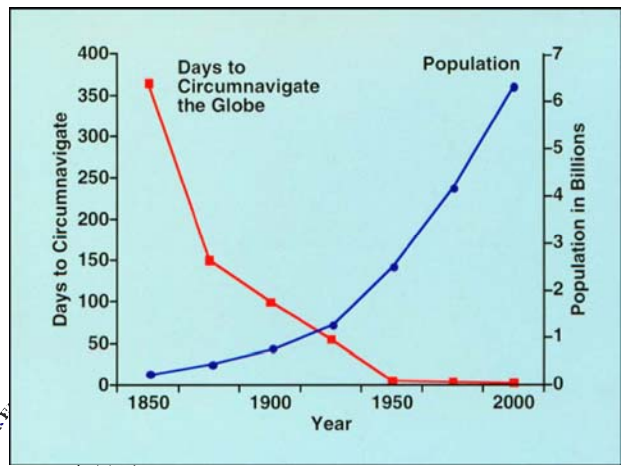
$97 billion

380,000 birds/mammals

~15% of US food

903 million tourists

$856 billion



Air travel rapidly connects distant geographies:

- **NYC to Beijing, China - 20 hrs**
- **NYC to Sydney, Australia - 22 hrs**
- **NYC to Kinshasa, DRC - 30 hrs**

http://tinet.ita.doc.gov/view/f-2000-99-001/Forecast/Outlook_International_Travel_US.pdf; Bureau of Transportation Statistics, U.S. Department of Transportation; Graph from Murphy and Nathanson. *Semin. Virol.* 5, 87, 1994.

CDC Quarantine and Migration Health

Number of Persons Entering the United States, 2005

Port	Daily	Annual (millions)
Air	219,000	80
Sea	71,000	26
Land	874,000	319
Total	1,164,000	425

Source: Securing America's Borders at Ports of Entry; Office of Field Operations Strategic Plan FY 2007-2011; Customs and Border Protection. Accessed at: www.cbp.goc

CDC Quarantine and Migration Health

U.S. Exit Screening – Decision Briefing May 15

- US travel associated with ~ 5% of international cases outside of Canada and Mexico to date

- March 28* - May 11, ~6,477,377 passengers departed the US for countries other than Mexico and Canada

*Symptom onset of first suspect case U.S.; CDC received specimen on April 17

Rate per Million Travelers May 15

Confirmed International Cases Associated with Travel from North America (March 28 to May 11, 2009)

Country	# of Cases (%) N=315 (53% of International Cases)	Rate per million travelers
Mexico	220 (70%)	504
US	16 (5%)	2.5*
Canada	3 (1%)	9.4
No travel	76 (24%)	

*** 3200 travel-related cases in the U.S. would be needed to match the rate seen in Mexico**

Exit Screening in U.S. May 15?

33 countries had reported cases

- **Screening of all 8.4 million outbound U.S. travelers in May 2009**
  - ⟶ **129 true positive**
  - **84,227 false positives**

- **Test: 99% sensitive and 99% specific**

International Public Health Measures*
156 countries - June 29 –
55 countries with 70,893 confirmed cases

- 104 (67%) countries screening travellers for ILI
  - Thermal scanners used by 48/104 countries
    - 5/48 (10%) departing travelers
    - 21/48 (44%) arriving travellers from affected regions
    - 32/48 (67%) arriving travellers from all countries
- 17 (11%) countries cancel trips
- 57 (36%) countries have travel advisories
- 54 (35%) countries impose trade bans
- 38 (24%) countries impose quarantine measures

* Source: Global Public Health Intelligence Network

CDC Quarantine and Migration Health

Health Alert Poster

Health Alert Posters at the El Paso Airport

Quarantine and Migration Health

Health Alert Poster

Purpose: **To provide information about novel H1N1 flu to travelers, including symptoms, what to do if you think you are sick, and how to protect yourself**

Audience: Travelers entering and exiting ports of entry

Details:

- Translated into five languages (English, Spanish, Chinese, Japanese, and Korean)
- Multiple sizes and types (paper and foam)
- 7,000 English and Spanish posters distributed to DHS for TSA and CBP to display
- ≈ 3,500 English and Spanish posters sent to the all quarantine stations
- Currently posted on Traveler's Health website

CDC Quarantine and Migration Health

April 25 - T-HAN Yellow

U.S. 8 confirmed cases

Purpose: **To provide health information to travelers who may have been exposed to novel H1N1 flu during travel**

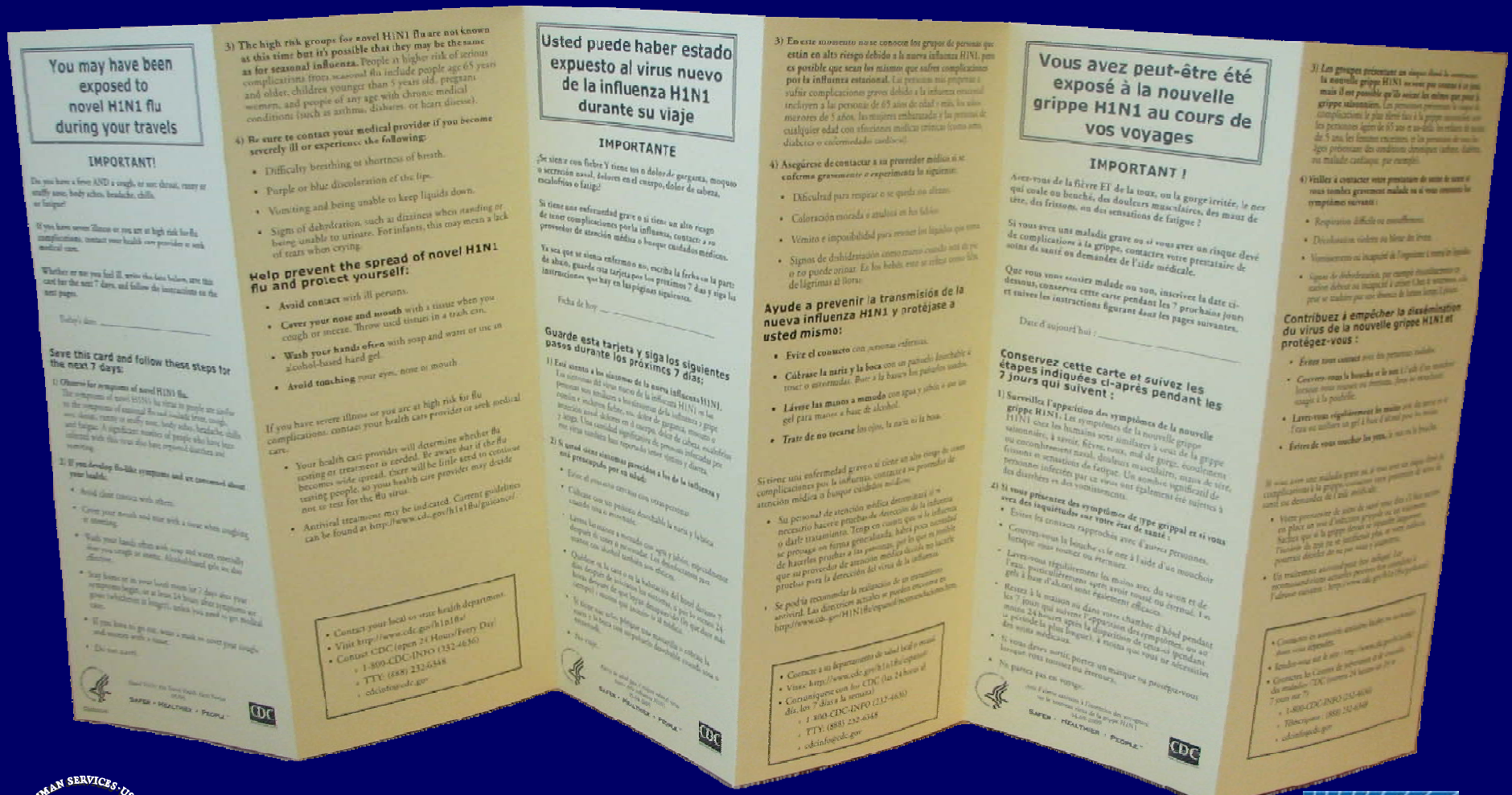
Audience: Travelers exposed during travel

Details:

- Translated in to the 6 WHO languages (English, Spanish, Chinese, French, Arabic, and Russian)
- Print size is 27”w x 11”h and included 6 pages with 5 folds, accordion style (English on top)
- Perforated to allow traveler to keep preferred language
- 27,500 T-HAN Yellow sent to 19 quarantine stations
- 500 sent to headquarters
- Posted on Traveler’s Health website

CDC Quarantine and Migration Health

THAN Yellow



USG Border/ POE Responses

Border Closures - No

Active Entry Screening - No

Active Exit Screening - No

Travel Advisories- Yes, Early

Level 4, 3 - Alert & Precaution Mexico,

Level 2 Outbreak Notices, US

Enhanced Passive Disease Surveillance - Yes

Active Educational Efforts - Yes

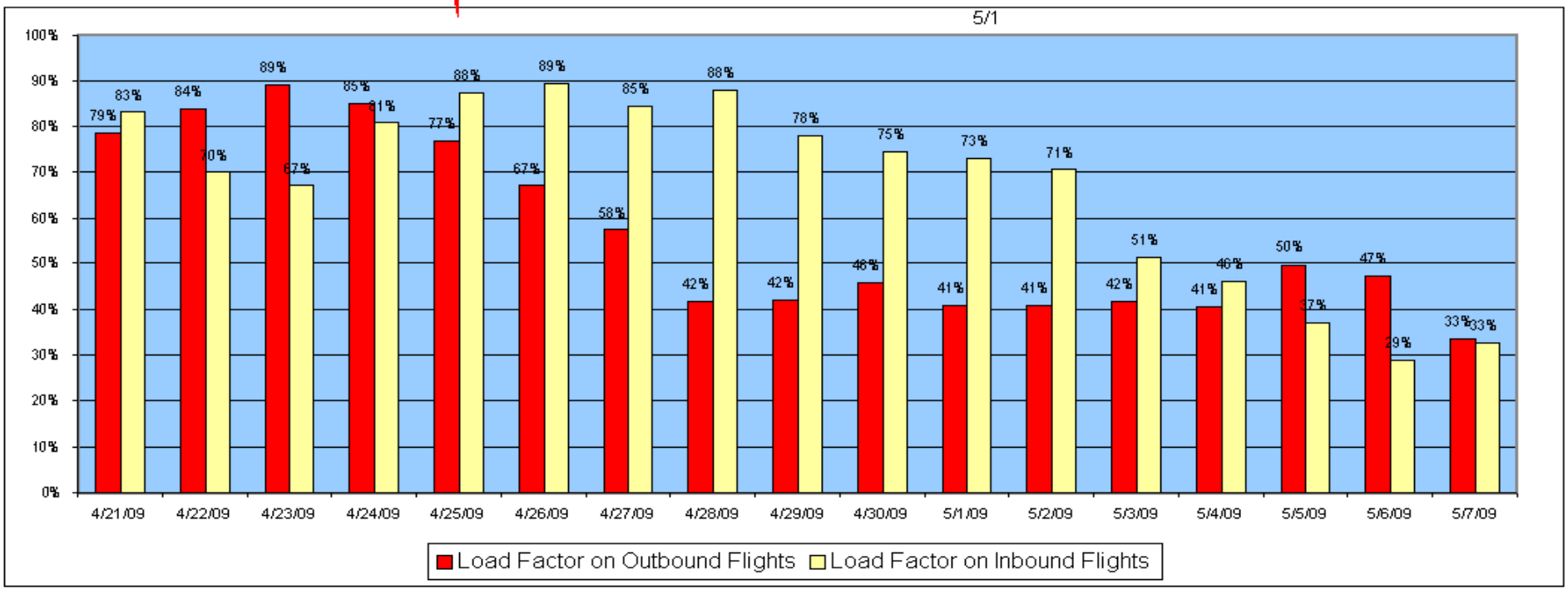
Load Factor on Scheduled Commercial Flights from Mexico to the US and from the US to Mexico (4-21 to 5-7)

4/25: WHO declares the outbreak as a public health emergency of international concern

4/24: CDC: Outbreak alert notice for travelers to Mexico

4/27: CDC: Avoid non-essential to Mexico

Mexico Travel Precaution: May 15
Global H1N1 outbreak notice: June 17

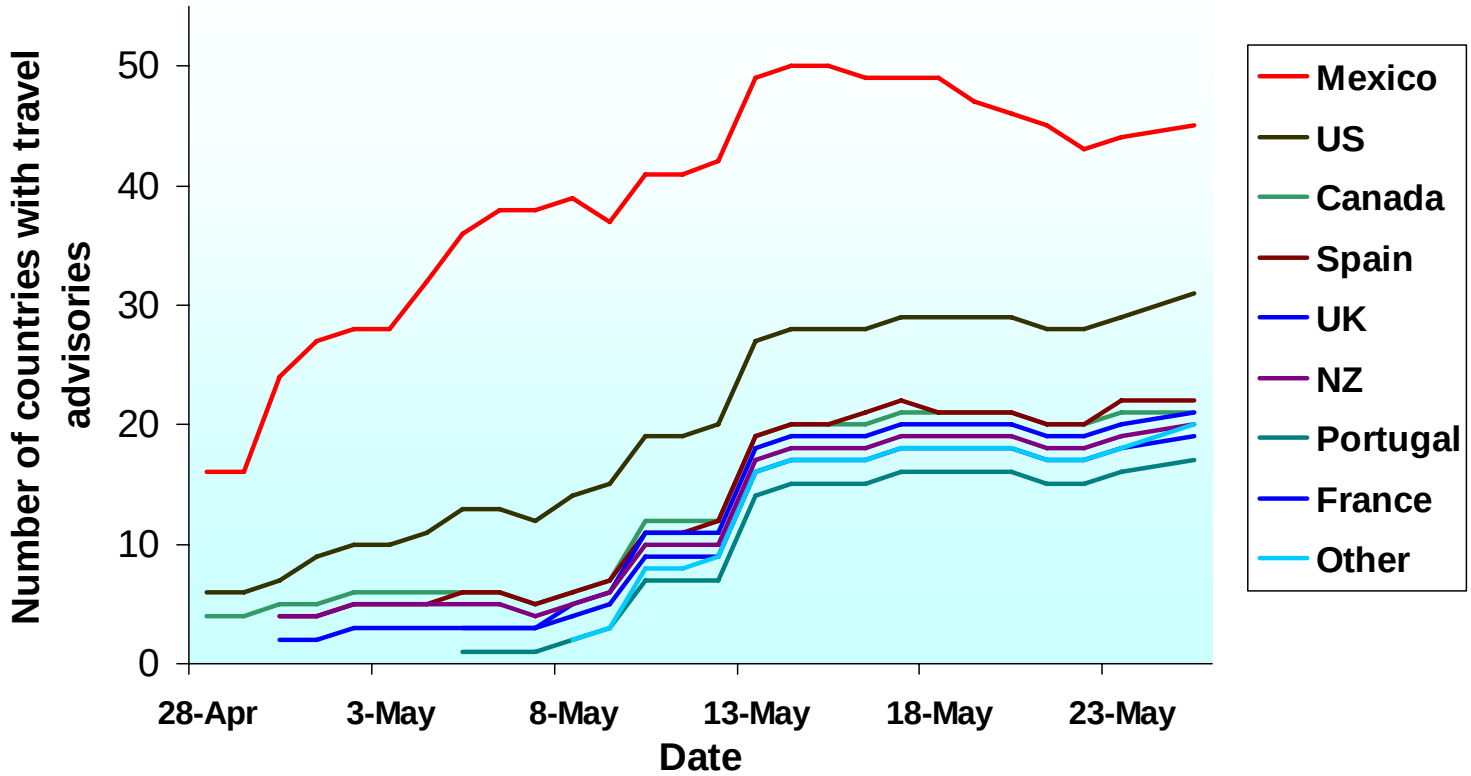


Developed from data provided by CBP and OAG

Quarantine and Migration Health

Number of Countries with Travel Advisories against Listed Countries*

4/28: 25 countries **6/29: 104 countries**



*Source: Global Public Health Intelligence Network

CDC Quarantine and Migration Health

Travel Advisories - Internationally June 29, 2009

- 45 countries for Mexico
- 33 countries for the USA
- 23 countries for Canada

USG Border/ POE Responses

Border Closures - No

Active Entry Screening - No

Active Exit Screening - No

Travel Advisories- Yes, Early

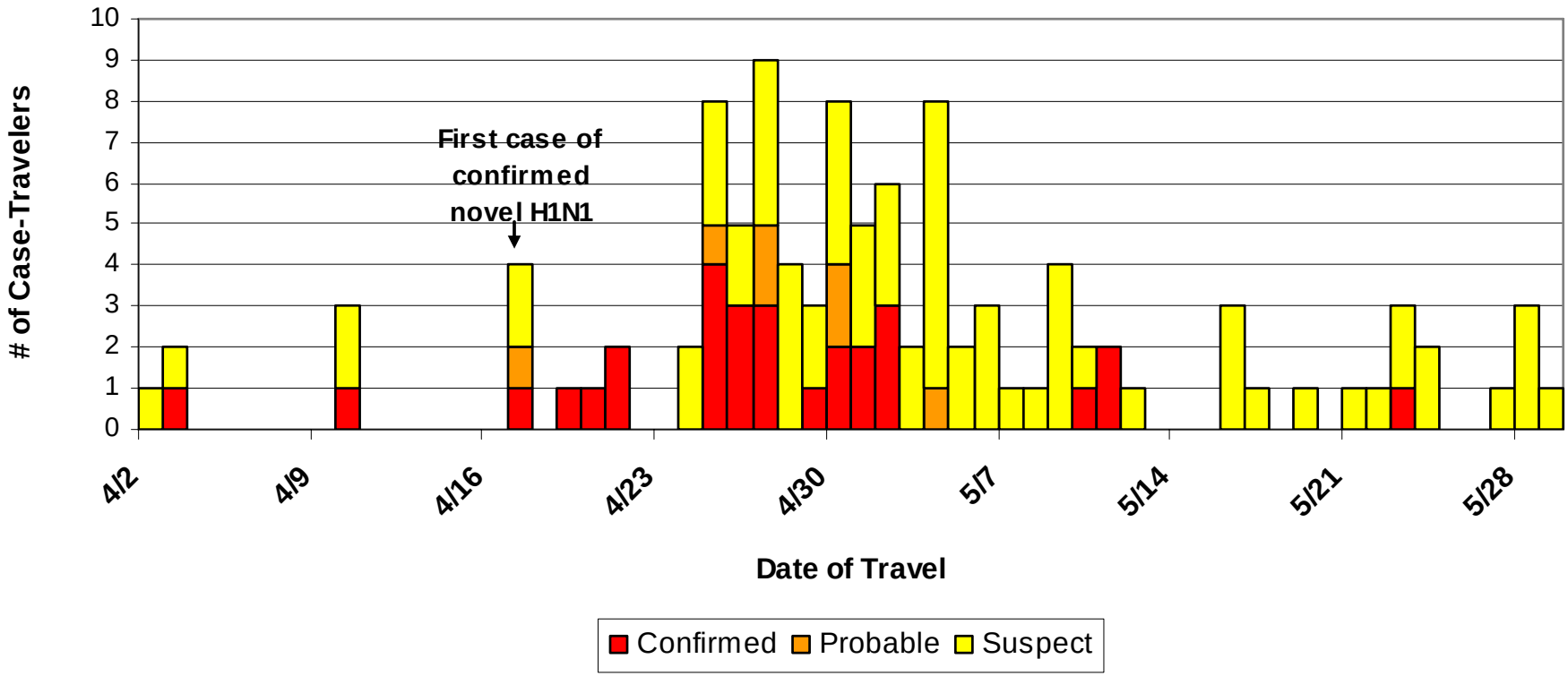
Level 4, 3 - Alert & Precaution Mexico,

Level 2 Outbreak Notices, US

Enhanced Passive Disease Surveillance - Yes

Active Educational Efforts - Yes

Date of Travel for Pandemic H1N1 Case-Travelers Among International and Domestic Travelers, Reported to the Quarantine Activity Reporting System, April 1 - May 31, 2009 (n=107)



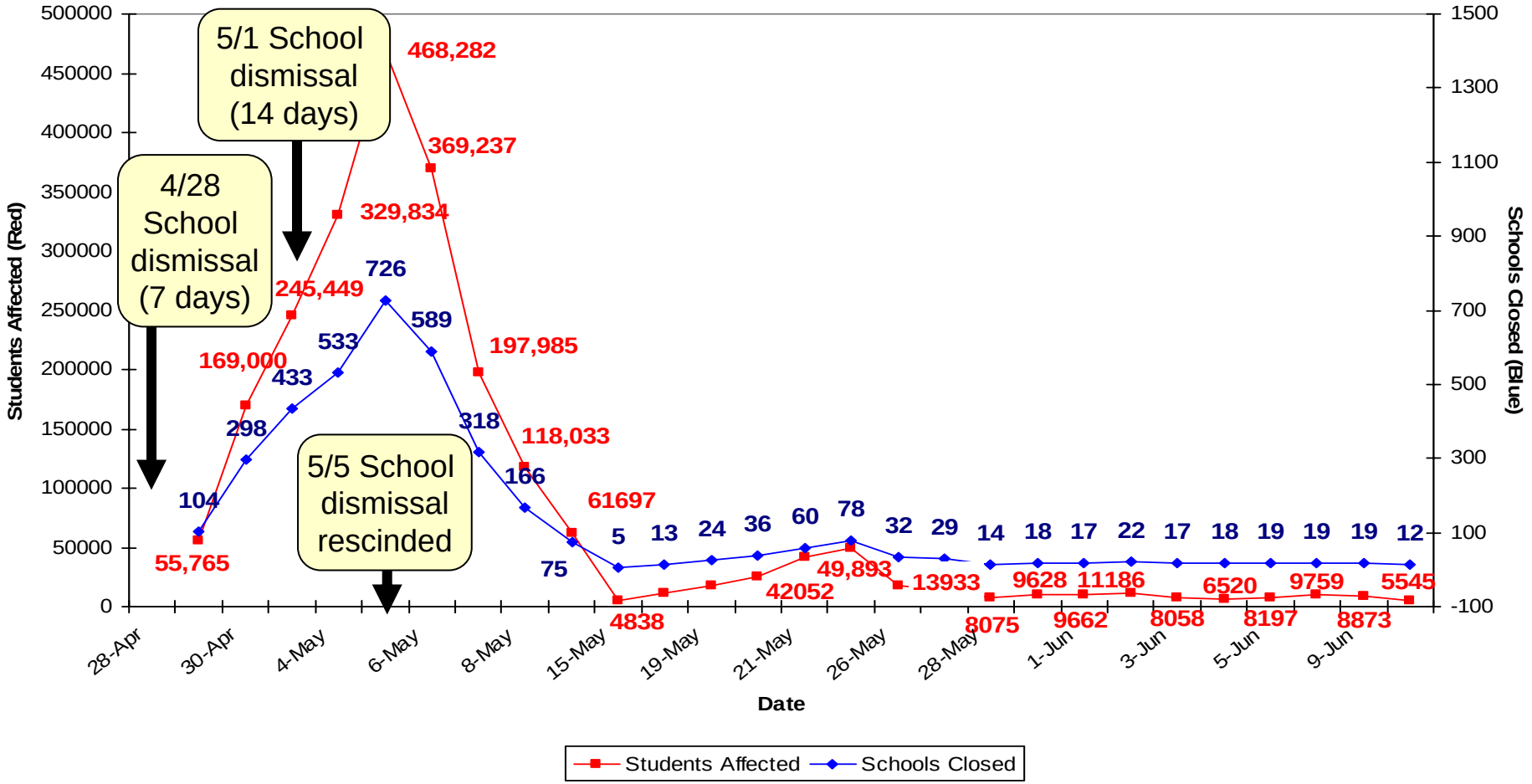
CDC Quarantine and Migration Health

WHO Re-issues Temporary Recommendations – June 11

"Countries should not close borders or restrict international traffic and trade"

"Countries should assess their specific situation and make a timely transition from focusing national efforts on containment to focusing on mitigation measures, including appropriate non-pharmaceutical interventions"

School Dismissal, U.S., 4/29 – 6/10, 2009



CDC Communication in Response to the Novel H1N1 Influenza Virus:

Health Marketing and Risk Communication Make a Huge Difference

CDC Quarantine and Migration Health

U.S. Activities in Spirit of IHR

- Assess event
  - epidemiology, virology, surveillance, severity
- Respond domestically – globally
  - Domestic focus: most affected areas, populations
  - Rapid Information sharing – regular calls with international partners, regular updates to PAHO, WHO seeks active engagement by affected countries (e.g., WHA May 18)
  - Virus sharing
  - Assist in overseas response