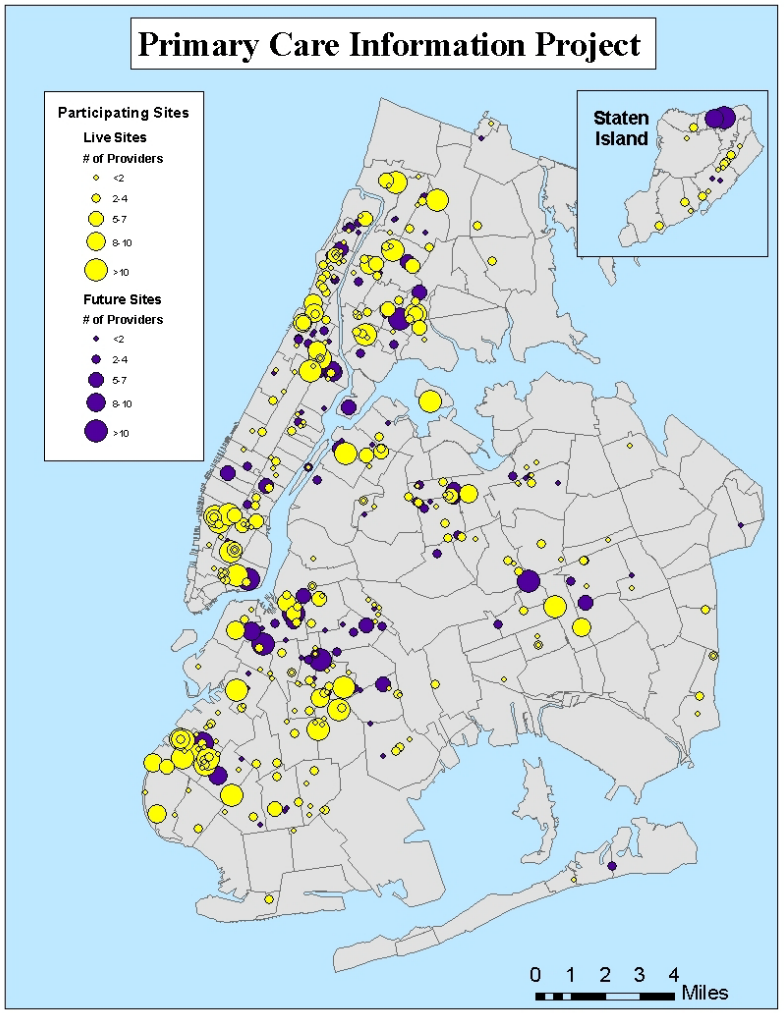
NYC Experience – Influenza Incidence Pilot Project

2009-2010

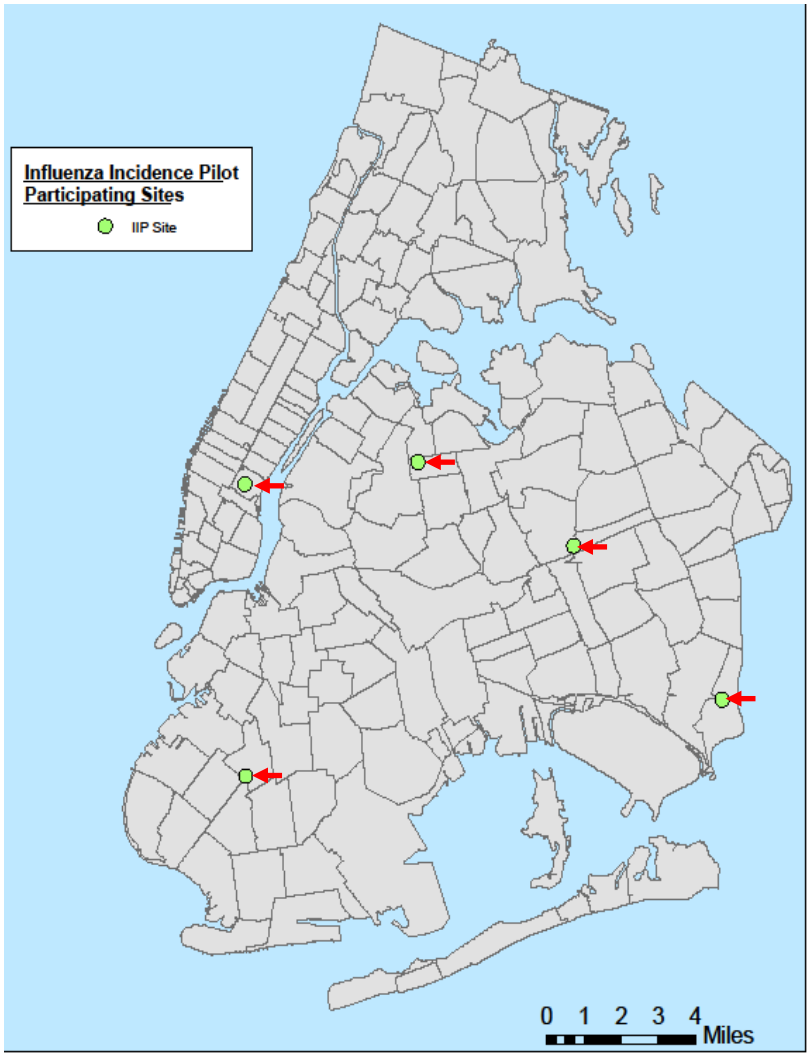
Overview of Methods

- Recruitment
  - Volunteers from Primary Care Information Project
    - EHR extension project
    - Primary care focus
    - Serving Medicaid/uninsured
    - >2000 providers, >400 practices currently live
    - Regularly send aggregate quality and surveillance data
  - Contacted via email and telephone
  - Incentive: 1add't yr EHR support/maintenance



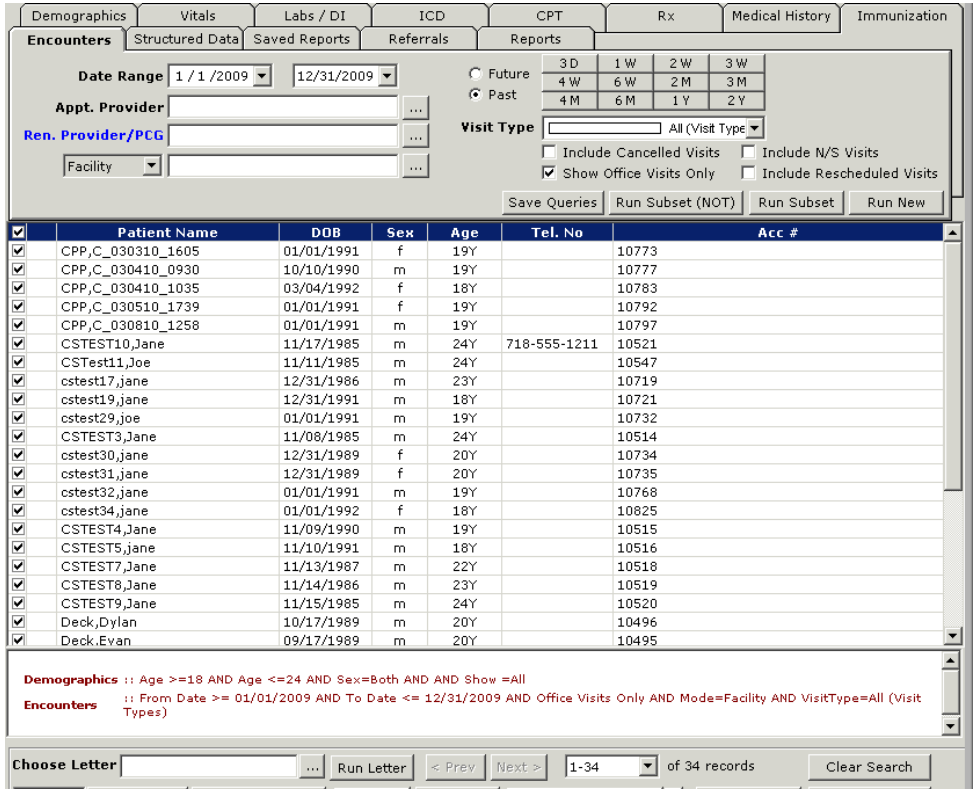
Overview of Methods

- Providers recruited
  - 2 general pediatricians
  - 1 internal medicine
  - 3 family medicine
- Geographic coverage
  - 3 out of 5 boros
  - Brooklyn, Manhattan, Queens
- Variety of patient mix
  - Medicaid population: 6%-70%



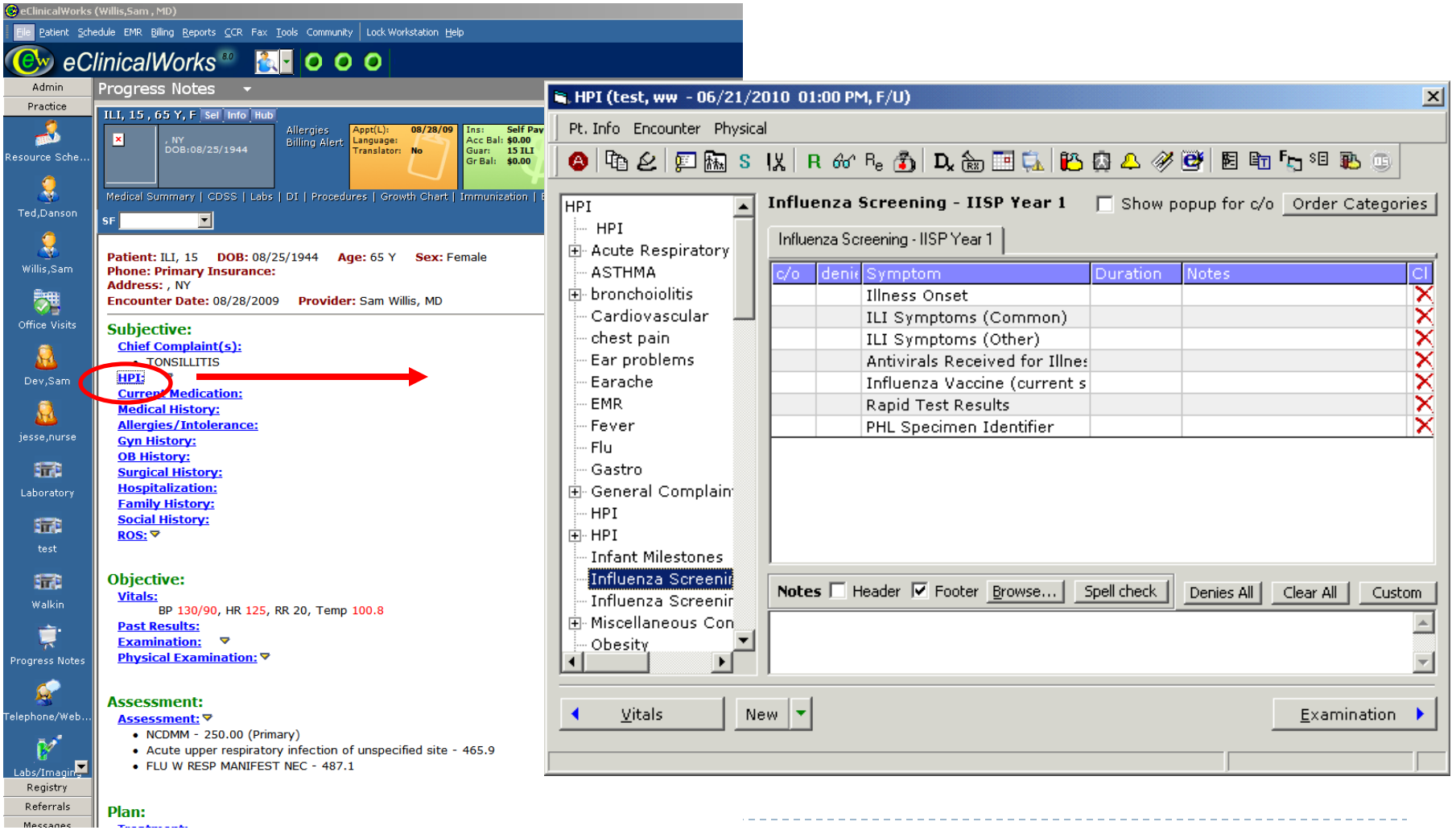
Overview of Methods

- Ascertainment of Patient Population
  - Initial Outreach: Examined syndromic surveillance data to confirm adequate volume
  - Average yearly patients served: EHR database queries looking at all prior encounters from available data



Overview of Methods

Method of documentation/data collection for ILI encounters

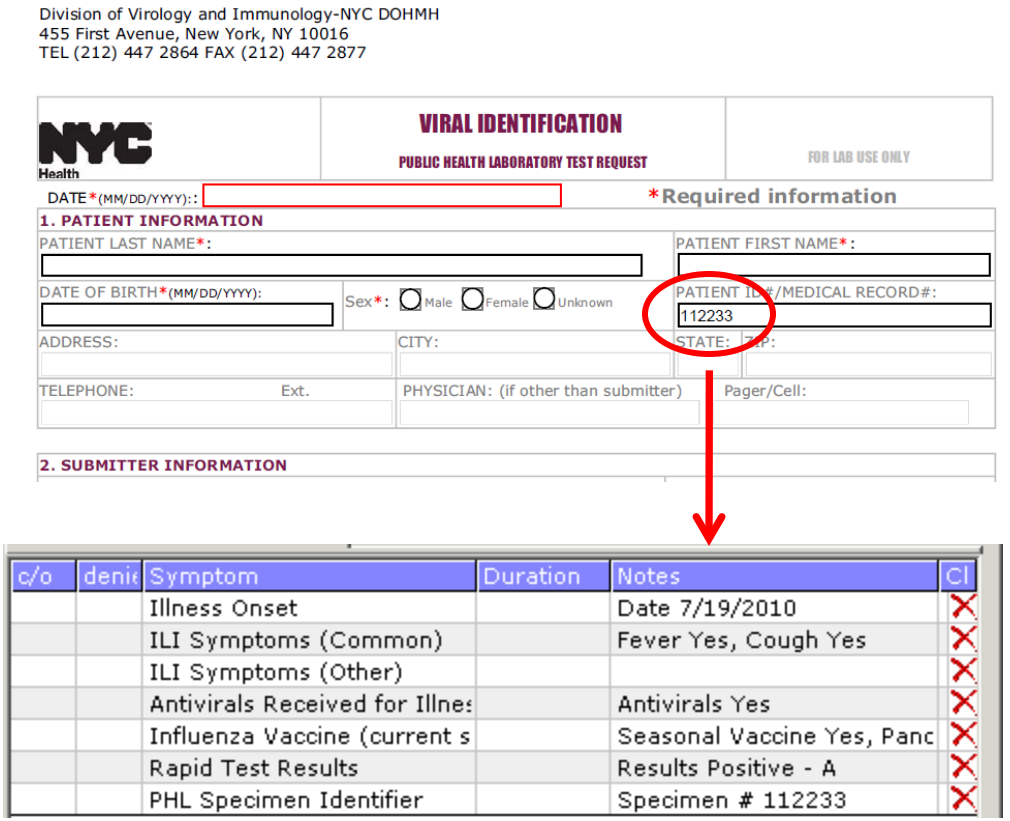


Overview of Methods

- Specimen Delivery
  - 72 hour delivery window
  - Biweekly schedule arranged
    - Wednesday PM, Friday PM
    - Data for project sent daily from EHRs via automated queries
  - Delivery arranged when new specimen logged
  - $40/delivery with $25 cold surcharge
- Weekly Report Data
  - Weekly count data calculated by EHR via pre-programmed queries and sent via secure FTP
  - Data parsed/formatted/submitted to internal staff and CDC

Linkage of epi data to laboratory results

- Epi data received electronically on weekly basis – including specimen identifier – as line list data (no direct patient identifiers included)
- Reconciled with Public Health lab result using unique specimen identifier



Division of Virology and Immunology-NYC DOHMH
455 First Avenue, New York, NY 10016
TEL (212) 447 2864 FAX (212) 447 2877

NYC Health

VIRAL IDENTIFICATION

PUBLIC HEALTH LABORATORY TEST REQUEST

FOR LAB USE ONLY

DATE*(MM/DD/YYYY)::

*Required information

1. PATIENT INFORMATION

PATIENT LAST NAME*:

PATIENT FIRST NAME*:

DATE OF BIRTH*(MM/DD/YYYY):

Sex*: Male Female Unknown

PATIENT ID#/MEDICAL RECORD#: 112233

ADDRESS:

CITY:

STATE:

ZIP:

TELEPHONE: Ext.

PHYSICIAN: (if other than submitter)

Pager/Cell:

2. SUBMITTER INFORMATION

c/o	denie	Symptom	Duration	Notes	Cl
		Illness Onset		Date 7/19/2010	
		ILI Symptoms (Common)		Fever Yes, Cough Yes	
		ILI Symptoms (Other)			
		Antivirals Received for Illnes		Antivirals Yes	
		Influenza Vaccine (current s		Seasonal Vaccine Yes, Panc	
		Rapid Test Results		Results Positive - A	
		PHL Specimen Identifier		Specimen # 112233	

IRB/MOAs

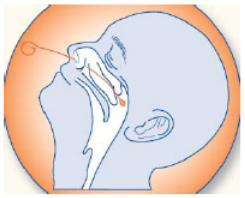
Consent to Participate in a Research Study - Influenza Surveillance Project

WHAT IS THE PURPOSE OF THIS STUDY?

- The New York City Department of Health is offering **FREE laboratory testing** that will confirm if you have influenza (flu) and identify if you have H1N1 influenza (swine flu)
- The results of testing will also be used to determine the number of people in New York City sick with influenza

WHAT WILL YOU BE ASKED TO DO?

- Your provider will **collect two (2) samples** by placing a swab into your nose and rubbing the back of your nose and throat (see Picture)
- The first sample will be used for an in-office Rapid Influenza test
- The second sample will be sent to the New York City Public Health Laboratory for PCR confirmatory testing
- The results of PCR testing will be sent to your doctor
- The following information will also be sent to help track the spread and treatment of influenza:
  - Age
  - Gender
  - Date of this visit
  - Date you became sick
  - Your exact symptoms
  - If you were treated with medications today
  - If you received an influenza vaccine in the past
  - Results of rapid influenza testing if performed



THE MOST COMMON RISKS ASSOCIATED WITH TESTING ARE:

- Slight discomfort and feeling like you will throw up when the sample is taken

BENEFITS TO BEING IN THIS STUDY

- You will receive **FREE** influenza testing to confirm if you have influenza, including H1N1 influenza
- This information will help public health officials track the spread of influenza in New York City and assist in making recommendations to the medical providers and the general public
- There is no payment for taking part in this study

DO YOU HAVE TO TAKE PART IN THIS STUDY?

- No, participation in this study is **VOLUNTARY**
- If you do not wish to participate in the study but still want to be tested for influenza, you can ask your doctor to be tested through a commercial laboratory

WILL INFORMATION ABOUT YOU BE CONFIDENTIAL?

- We will keep all your information private to the extent allowed by law
- Your personal information (name, address) will never be released to the general public

WHAT IF YOU HAVE ANY QUESTIONS REGARDING THIS STUDY OR ARE INJURED AS PART OF THIS STUDY?
You may contact the study coordinator, Dr. Winfred Wu, at the New York City Department of Health and Mental Hygiene (DOHMH) by phone (212-442-2670). If you have any questions regarding your rights as a research participant, you may contact the DOHMH Institutional Review Board by phone (212-788-4483).

CONSENT
I have reviewed the consent form. I have had the opportunity to ask questions. I have been given a copy of this form. I consent to participate in this study.

_____ _____
Signature of participant (or legal guardian if participant is a minor) Date

_____
Printed name of participant (or legal guardian if participant is a minor)

_____
Name of person obtaining consent

AGREEMENT

TO PARTICIPATE IN

SYNDROMIC SURVEILLANCE PROJECT

This **AGREEMENT** ("Agreement") is made as of _____, 2009, by _____, having a principal office at the following address: _____

_____ ("Practice"), and the City of New York, acting through its Department of Health and Mental Hygiene, having an office at 125 Worth Street, New York, New York 10013 ("DOHMH" or the "Department").

WHEREAS, Practice is a participating practice in the Primary Care Information Project ("PCIP"), having adopted a prevention-focused Electronic Health Record ("EHR") that enables health care providers to electronically document, access and submit patient health information as required and allowed by law; and

WHEREAS, PCIP is a program operated by the DOHMH that subsidizes the adoption and use of EHR systems for primary care providers in New York City pursuant to the terms of a Participation Agreement ("PA") between Practice and DOHMH; and

WHEREAS, one of the primary missions of DOHMH is to track and respond to communicable disease within the City of New York: and

WHEREAS, DOHMH is conducting a study funded by the Council for State and Territorial Epidemiologists ("CSTE"), which will enable it to conduct a surveillance system that allows for the calculation of the incidence of influenza and the incidence of outpatient visits for influenza-like illness, based on data to be collected and reported to DOHMH by the Practice and laboratory testing of samples collected from patients, and the analysis of specimens collected from such patients by the Practice; and

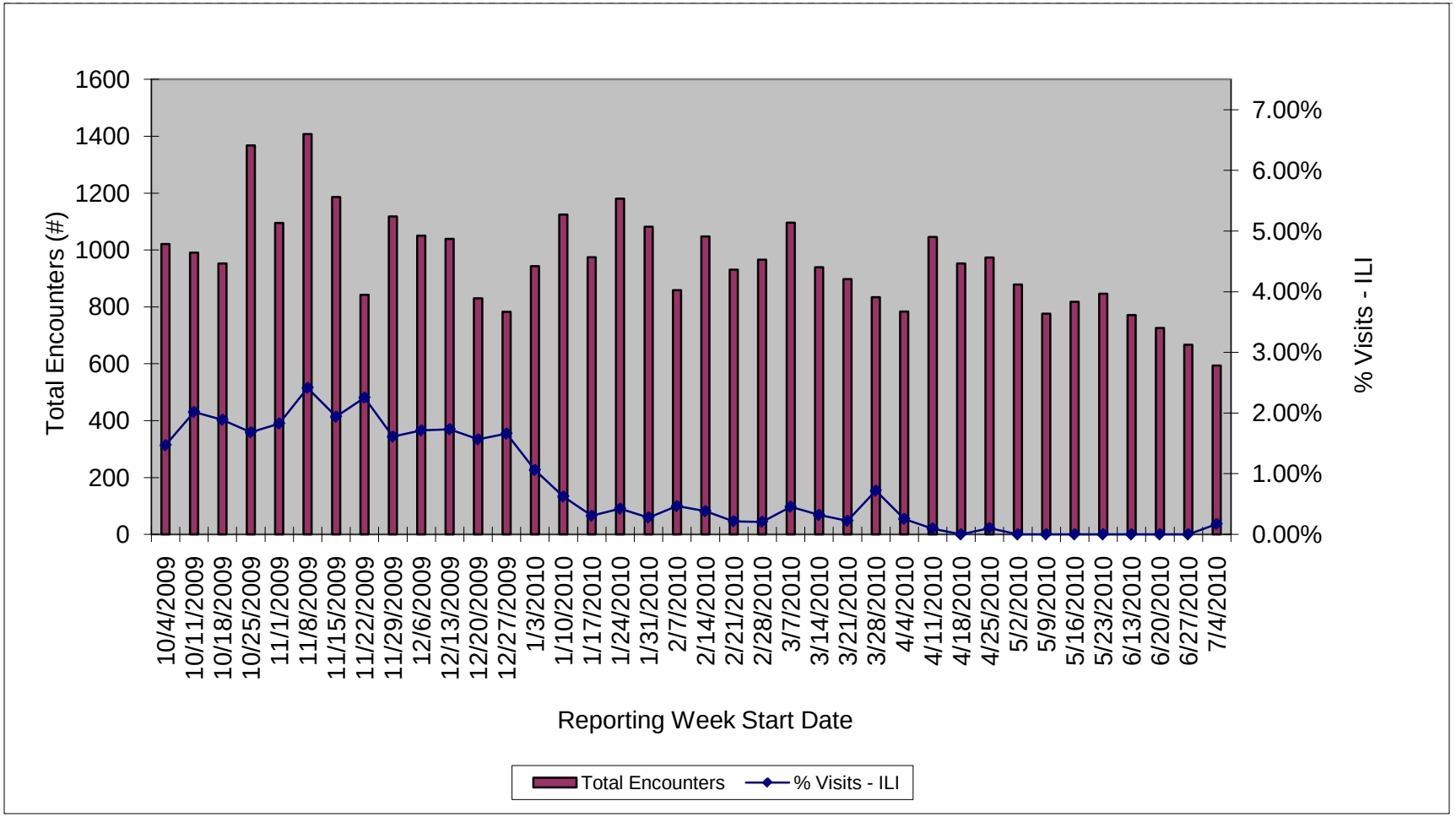
WHEREAS, the Practice desires to participate in such study, providing DOHMH with analysis and data as part of such study upon the terms and conditions set forth in this Agreement.

NOW, THEREFORE, the Parties agree as follows:

1. **General Agreement**

(a) **General Provisions**. The parties hereto agree that the Practice will participate in a syndromic surveillance project for a study being conducted by DOHMH and funded by CSTE. The Practice will adhere to defined protocols as approved by the NYC DOHMH Institutional Review Board, as the same may be amended from time to time during the course of such study. In consideration for participation in this study, the Fund for the Public Health in New York, Inc. ("FPHNY") has agreed to enter into an agreement with the Practice, under which the Practice will receive an additional year of maintenance pursuant to the terms set forth in the agreement between the Practice and the ("FPHNY Agreement").

Results – Aggregate Data



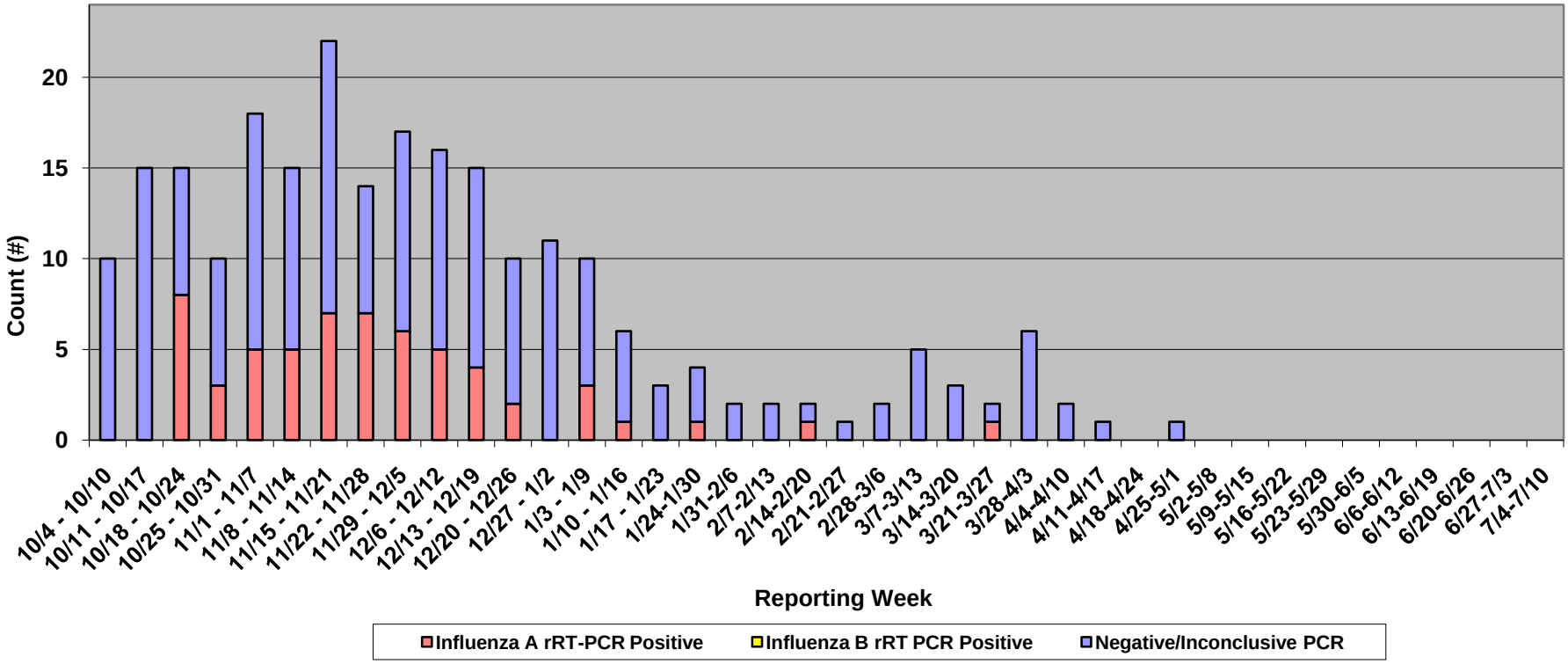
Total Encounters – Avg/Wk: 958 Range: 594-1408 | Total ILI – Avg/Wk: 8 Range: 0-34

%ILI visits with specimens submitted for testing: 80% (n=251) – 11 unable to test

Results – Age distribution-PCR testing

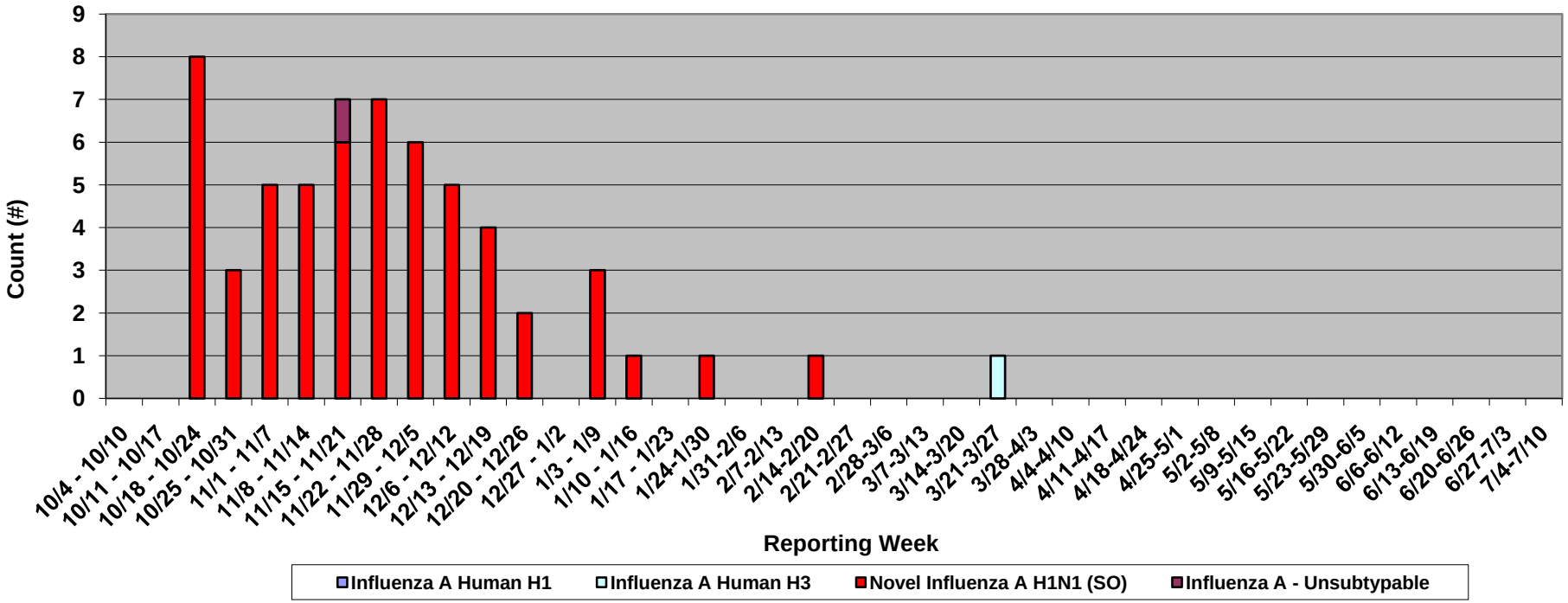
Age Group	Frequency	Percent
0-1Y	12	5
1-2Y	13	5
2-4Y	24	10
5-11Y	25	10
12-16Y	14	6
17-44Y	135	56
45-64Y	14	6
65+Y	3	1

Results – Influenza PCR Testing



Total tested: 240 specimens – 59 influenza A positive (24%)

Results – Influenza Subtype



57 nH1N1 subtype (97%)
1 seasonal H3 (1%)
1 unsubtypeable (1%)

Results

Rapid test by PCR test result

		PCR – Influenza A	
		Negative	Positive
Rapid Test	Negative	178	35
	Positive	1	24

Sensitivity: 41% (24/59)
Specificity: 99% (178/179)

Age distribution by nH1N1 status

		0-1	1-2	2-4	5-11	12-16	17-44	45-64	65+
nH1N1	Neg	12 (7%)	13 (7%)	17 (9%)	17 (9%)	11 (6%)	98 (54%)	12 (7%)	3 (2%)
	Pos	0 (0%)	0 (0%)	7 (12%)	8 (14%)	3 (5%)	37 (65%)	2 (3%)	0 (0%)

p=0.11

Results

Gender by nH1N1 status

		Male	Female
nH1N1	Neg	85 (47%)	97 (53%)
	Pos	23 (40%)	34 (60%)

p=0.40

Symptoms by nH1N1 status

		Fever		Cough		Sore Throat	
		No	Yes	No	Yes	No	Yes
nH1N1	Neg	6 (3%)	174 (97%)	40 (22%)	140 (59%)	44 (25%)	134 (75%)
	Pos	3 (5%)	54 (95%)	2 (4%)	54 (96%)	18 (32%)	38 (68%)
		p=0.51		p<0.05		p<0.27	

Results

Symptoms by nH1N1 status

		Rhinorrhea		Myalgia	
		No	Yes	No	Yes
nH1N1	Neg	44 (25%)	135 (75%)	28 (16%)	148 (84%)
	Pos	10 (18%)	46 (82%)	6 (10%)	50 (90%)
		p=0.30		P=0.33	

Vaccination status by nH1N1 status

		H1N1 Vaccinated		Seasonal Flu Vaccinated	
		No	Yes	No	Yes
nH1N1	Neg	174 (95%)	9 (5%)	162 (89%)	21 (11%)
	Pos	57 (100%)	0 (0%)	51 (89%)	6 (11%)
		p=0.09		P=0.84	

Results

Days ill since illness onset by nH1N1 status

		0-2 days	3 days	4 days	5 days	>5 days
nH1N1	Neg	98 (61%)	21 (13%)	14 (9%)	8 (5%)	21 (13%)
	Pos	34 (67%)	7 (14%)	9 (18%)	0 (0%)	1* (2%)

*14 days

What worked

- Documentation integrated directly into encounter record
  - Facilitated workflow
- Automated reporting
  - Minimized provider burden
- Specimen delivery process
  - Contained cost
  - Delivery remained timely

What Didn't/Efforts to Address Challenges

- Low volume of ILI encountered by some providers
- Legibility of specimens submitted to labs
- Occasional variance from ILI case definition in submitted samples