

Progress in Influenza control and vaccination

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Overview

Review of 2012/2013 season

Events and outbreaks

Control:
infection control
antivirals

Vaccination

- Recommendations
- Vaccine uptake
- Issues and options

Case definition Influenza A and B

Clinical criteria

Any person with the following clinical syndrome: Influenza-like illness (ILI)

- Sudden onset of symptoms

AND

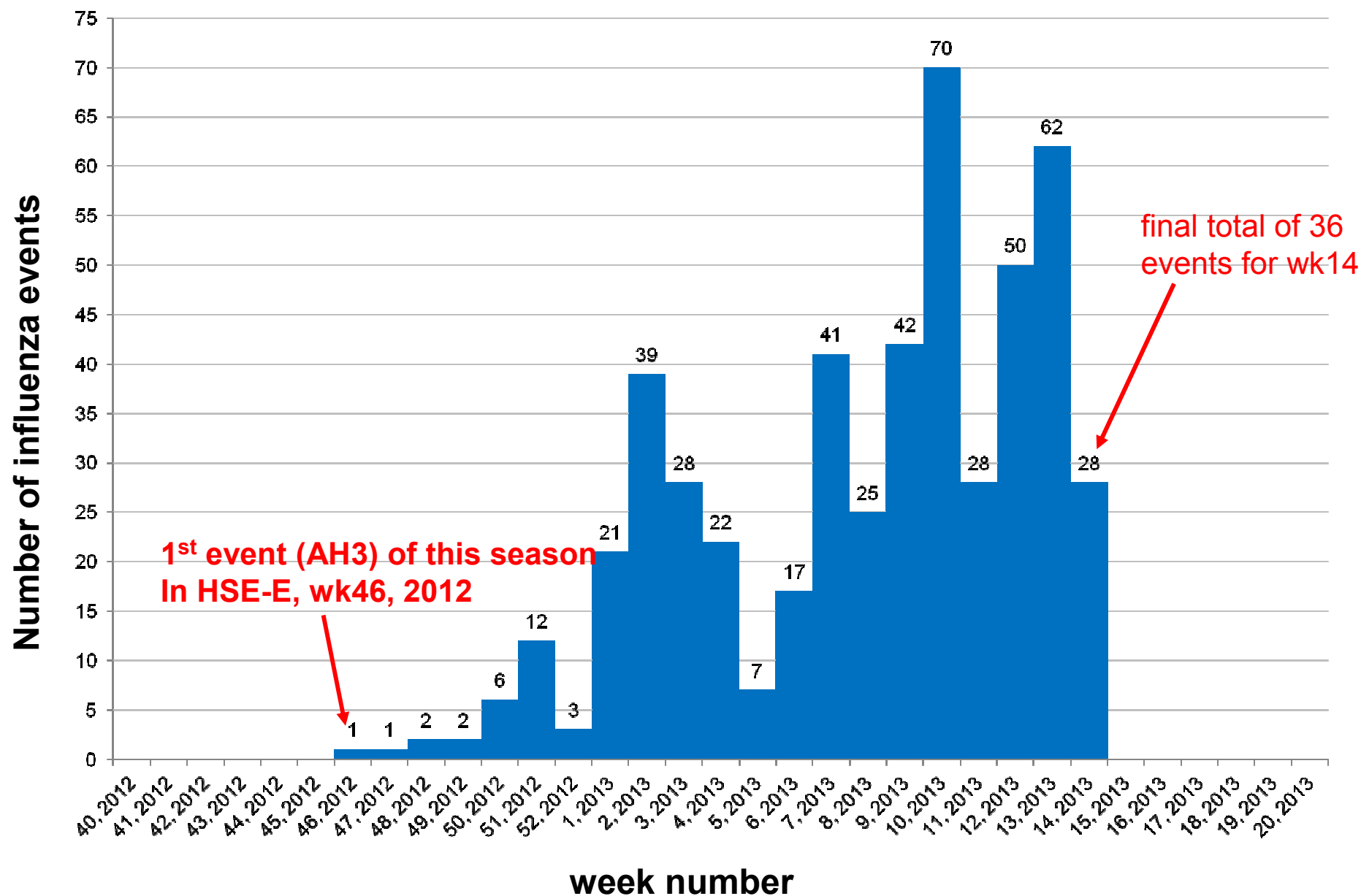
- – at least one of the following four systemic symptoms:
- Fever or feverishness
- Malaise
- Headache
- Myalgia

AND

- – at least one of the following three respiratory symptoms:
- Cough
- Sore throat
- Shortness of breath



2012 to 2013 season: influenza events, HSE-E

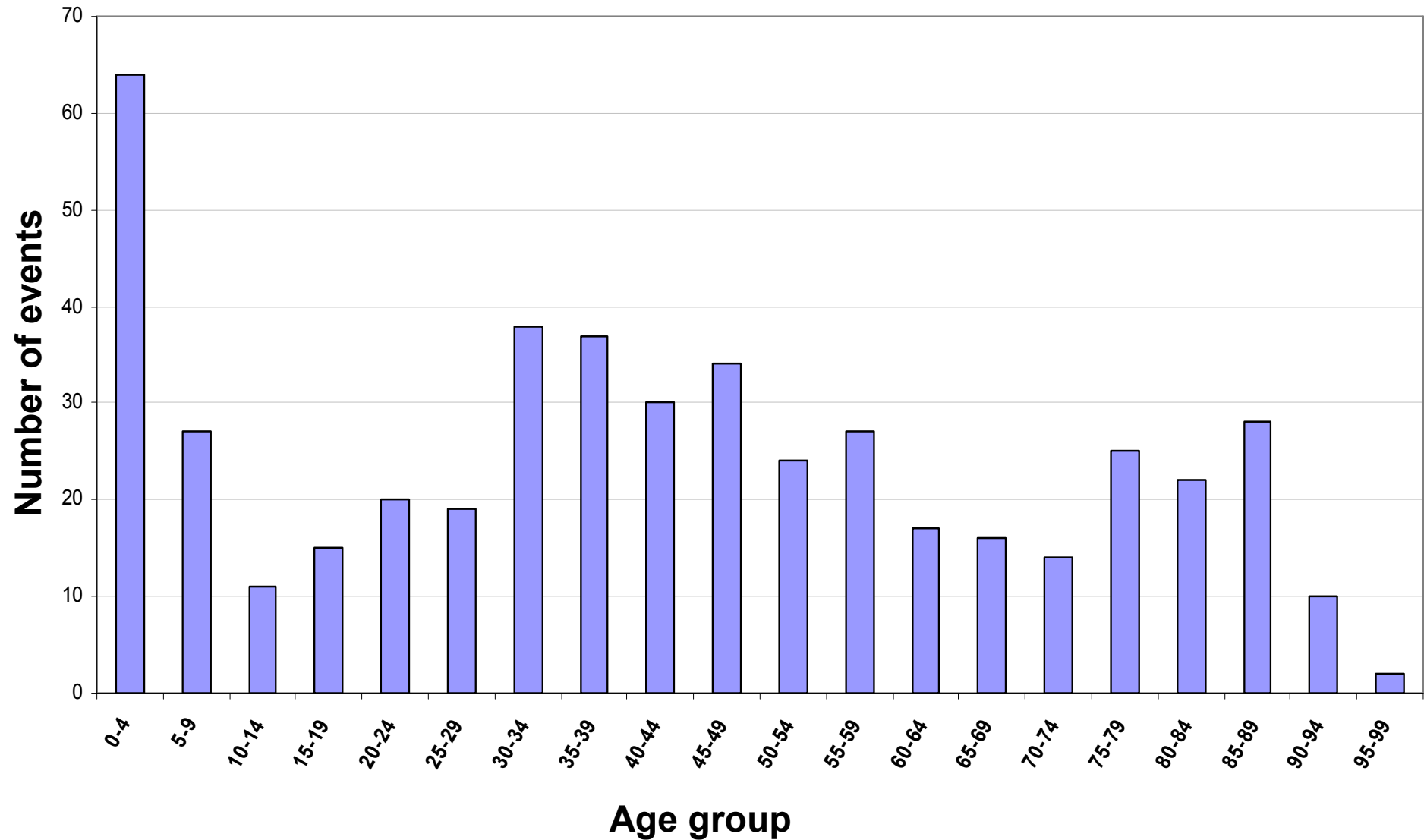


Influenza strains circulating 2012/13

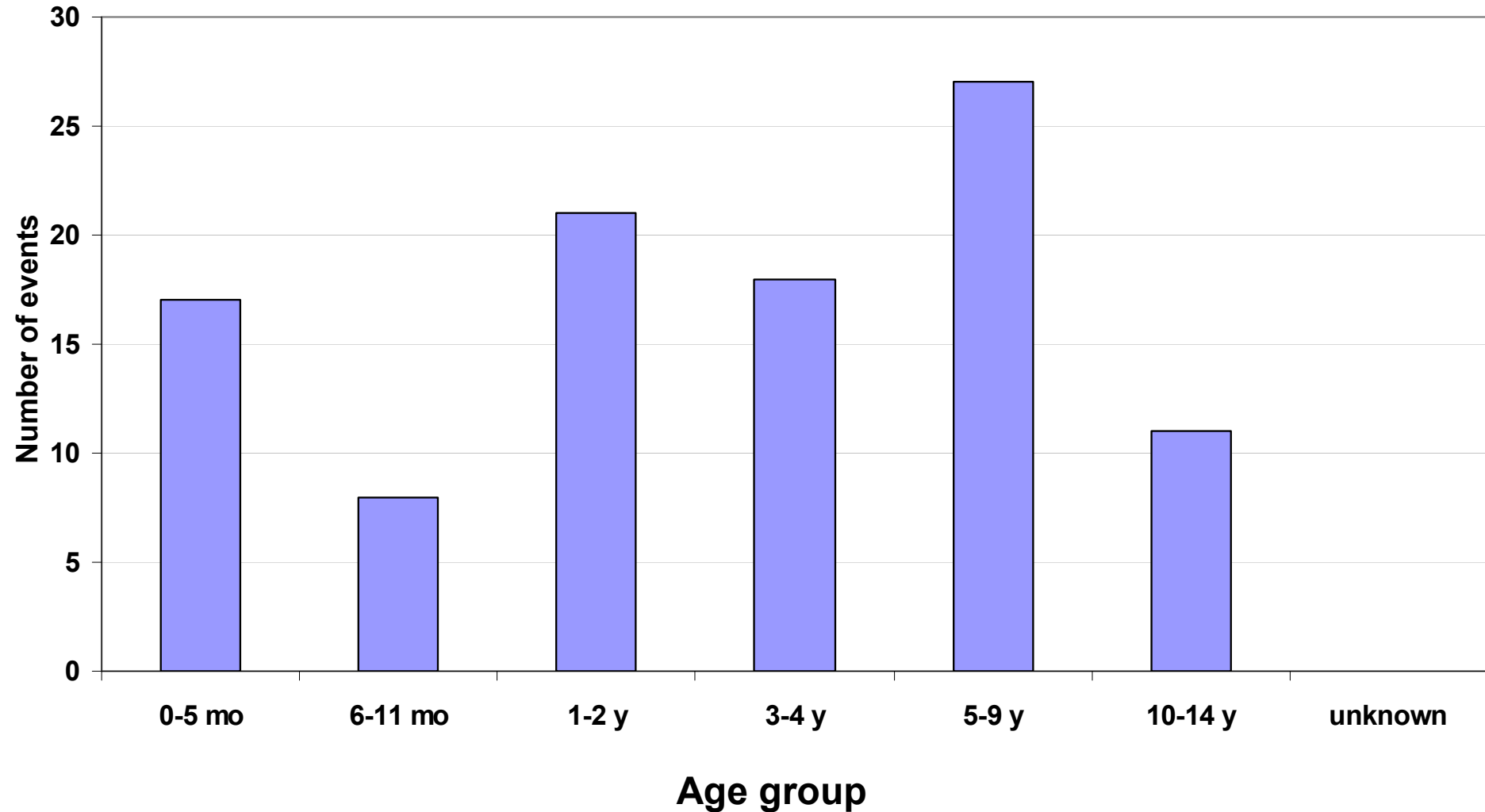
Strain of influenza	Wk40 2012 to wk20,2013
influenza B	230
influenza AH3	120
influenza A(H1N1)v	75
influenza A	53
influenza A blank or unsubtypable	2
possible influenza	2
Total no. of events	482

Influenza B = 48 %

Influenza events, by age group, 2012-2013 season



Influenza <15 years by age group, 2012-2013 season, HSE-E



Influenza events by hospitalisation status, HSE-E 2012-13 season

Care status	<15 years	All age groups
GP patient	18	108
In-patient	61	93
outpatient	1	7
A&E	5	7
hospital day patient	0	2
unknown	17	265
Total	102	482

In-patient <15 years = 71.8%

Overall In-patient = 42.9%

Deaths in 2012-13 influenza season

wk40 2012 to wk20 2013 cases that died	event date	strain	age	gender	patient status	vaccination status	comments
E427775	04/03/2013	AH1N1	3 mo	M	inpatient	unvaccinated	premature baby,
E424096	17/01/2013	B	2 mo	F	inpatient	blank	chronic/congenital heart disease
E423242	09/01/2013	B	4 y	M	inpatient	blank	chronic/congenital heart disease
E423083	08/01/2013	B	40 y	M	inpatient	unknown	chronic liver disease*

Outbreaks in HSE-E

Case Definition of outbreak

Three or more cases of (ILI) or influenza or serious illness suggestive of influenza arising within the **same 72 hour** period in the settings (e.g. schools, residential care facilities for the elderly, prisons, hospitals, special needs schools,) which meet the same clinical case definition and where an epidemiological link can be established

- **28 outbreaks**
- **Mix of A & B**
- **Residential care units for the elderly**

Control

1. Vaccination

2. Infection Control

3. Antiviral Treatment

4. Antiviral Chemoprophylaxis

HPSC midseason vaccination review

- 171 Long Term Care Facilities
- 47% response rate

- | | |
|--------------------------------------|------------|
| • Health & Social Care Professionals | 30% |
| • Management & Administration | 26% |
| • General Support Staff | 19% |
| • Medical & Dental | 19% |
| • Nursing | 15% |
| • Other Patient & Client Care | 14% |

Standard & Respiratory Precautions



No Visitors



Antiviral Rx

Antiviral Rx is recommended asap for any patient with suspected/confirmed influenza:

- Hospitalised
- Severe complications/progressive disease
- Higher risk flu complications
- Can be considered for previously healthy outpatient on basis clinical judgement
- Ideally Rx should start within 48 hours.



Defined Risk Groups for Antivirals

- Children aged < 2 years and ≥ 65
- Pregnant women (up to 2 weeks post partum)
- Severely obese people ($\text{BMI} \geq 40$)
- Children with any condition (e.g. cognitive dysfunction, spinal cord injury, seizure disorder or other neuromuscular disorder) that may compromise respiratory function, especially those attending special schools/day centres

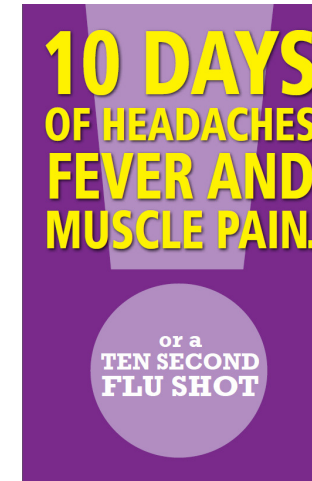
Those with:

- Chronic respiratory disease (e.g. medication for asthma)
- Chronic heart, kidney, liver or neurological disease
- Immunosuppression (whether due to disease or treatment)
- Diabetes Mellitus
- Haemoglobinopathies

(influenza subgroup of the scientific advisory committee of the HPSC).

Seasonal influenza vaccination programme

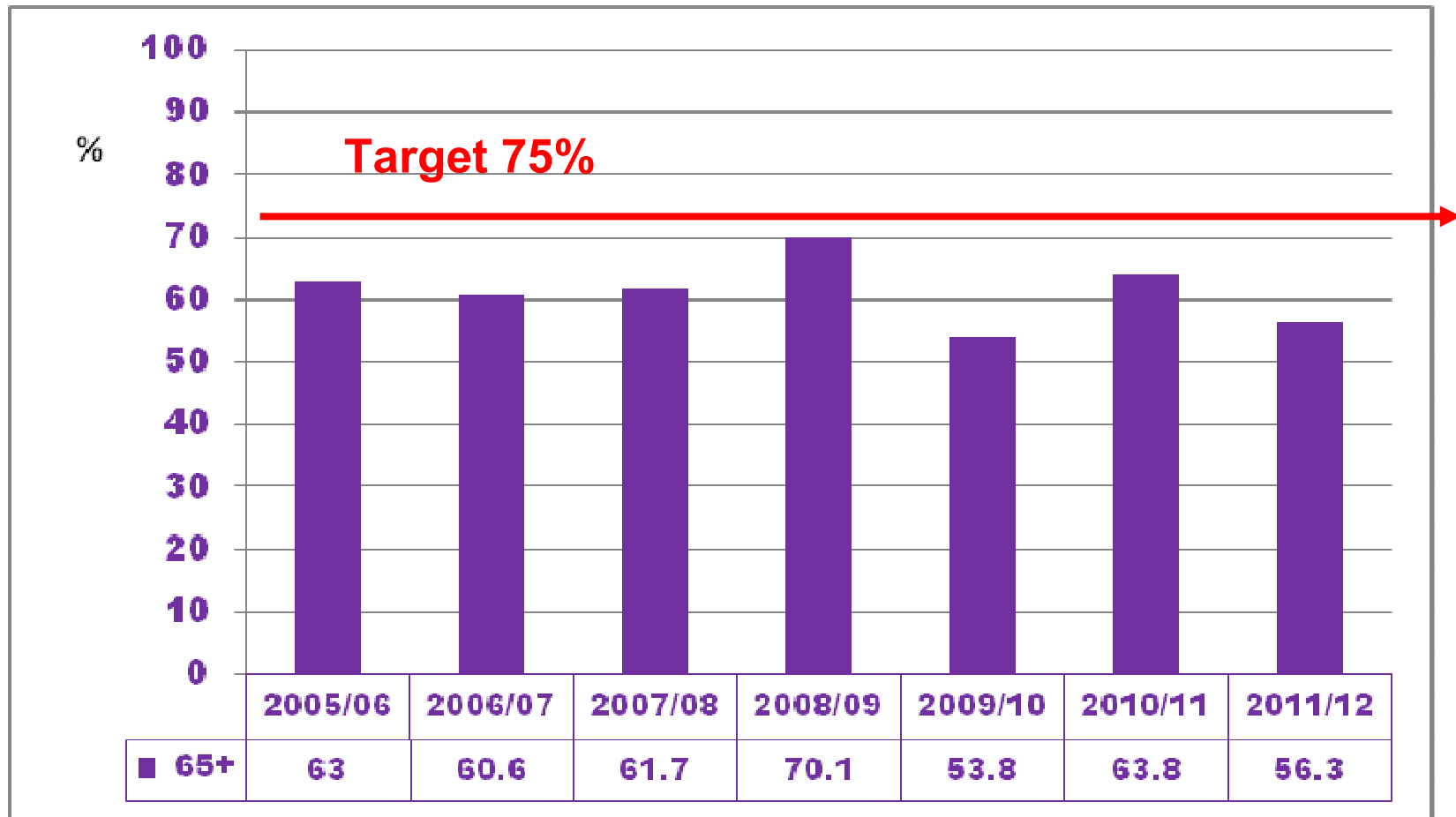
- Annual campaign
- No change in at risk groups since 2011/2012
 - those aged 65 and older
 - those aged 6 months to 65 years
(at increased risk of complications)
 - long term illness requiring regular follow up
 - immunosuppressed
 - morbid obesity
 - pregnant women
 - residents of long stay facilities
 - health care workers
 - carers
 - close regular contact with pigs, poultry or water fowl
- Season continues until end of April



Vaccine efficacy/ effectiveness

- Depends on
 - circulating strains
 - age
 - clinical condition
- If good match ~70-90% in those <65 years
- Less in those ≥ 65 but improves if given high dose formulation (licensed in US in 2010)
- Improves if immunosuppressed given 2nd dose and ? if given adjuvanted vaccine

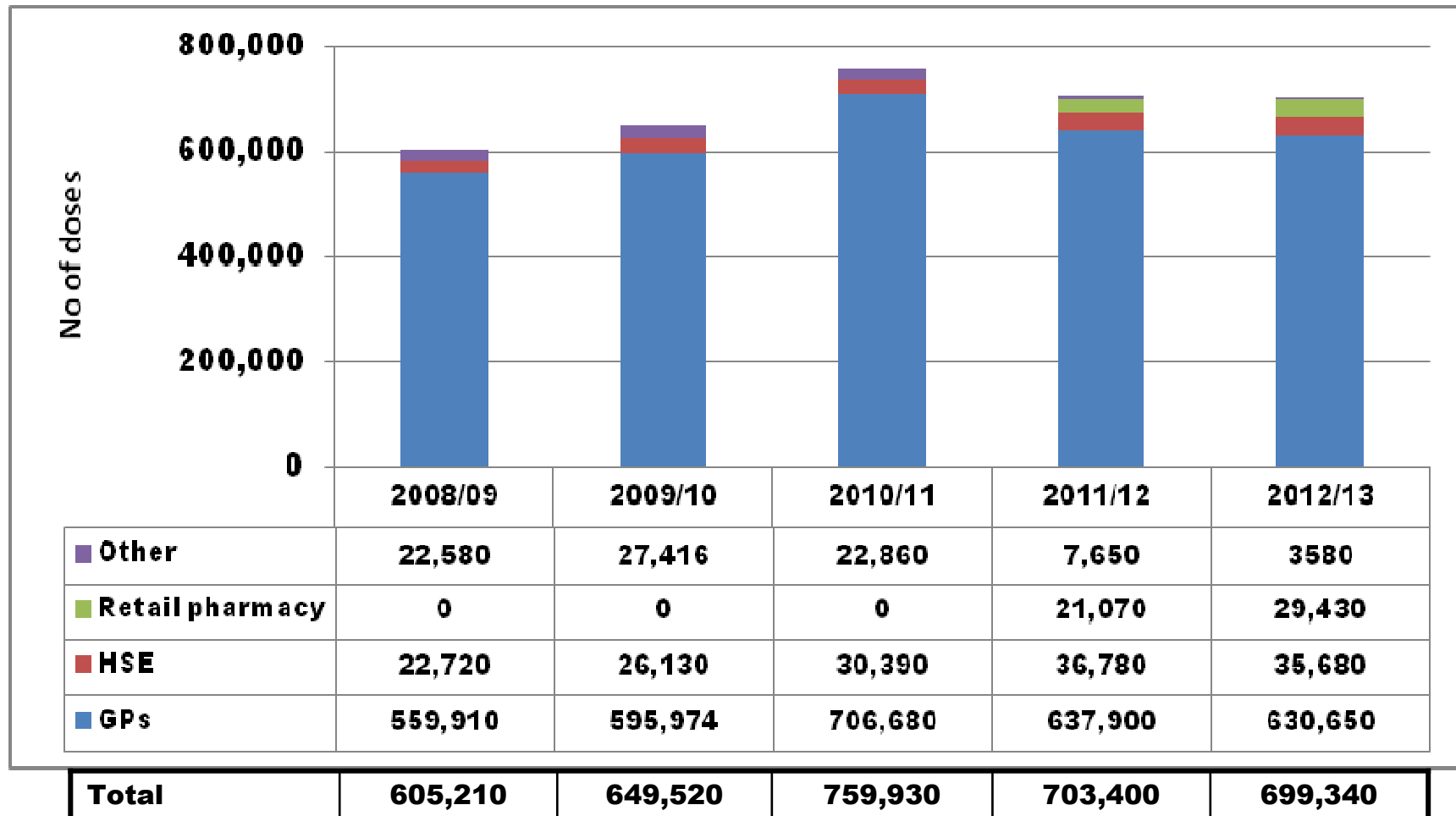
Vaccine uptake for 65 years and older (with GMS or doctor only card) 2005 - 2011



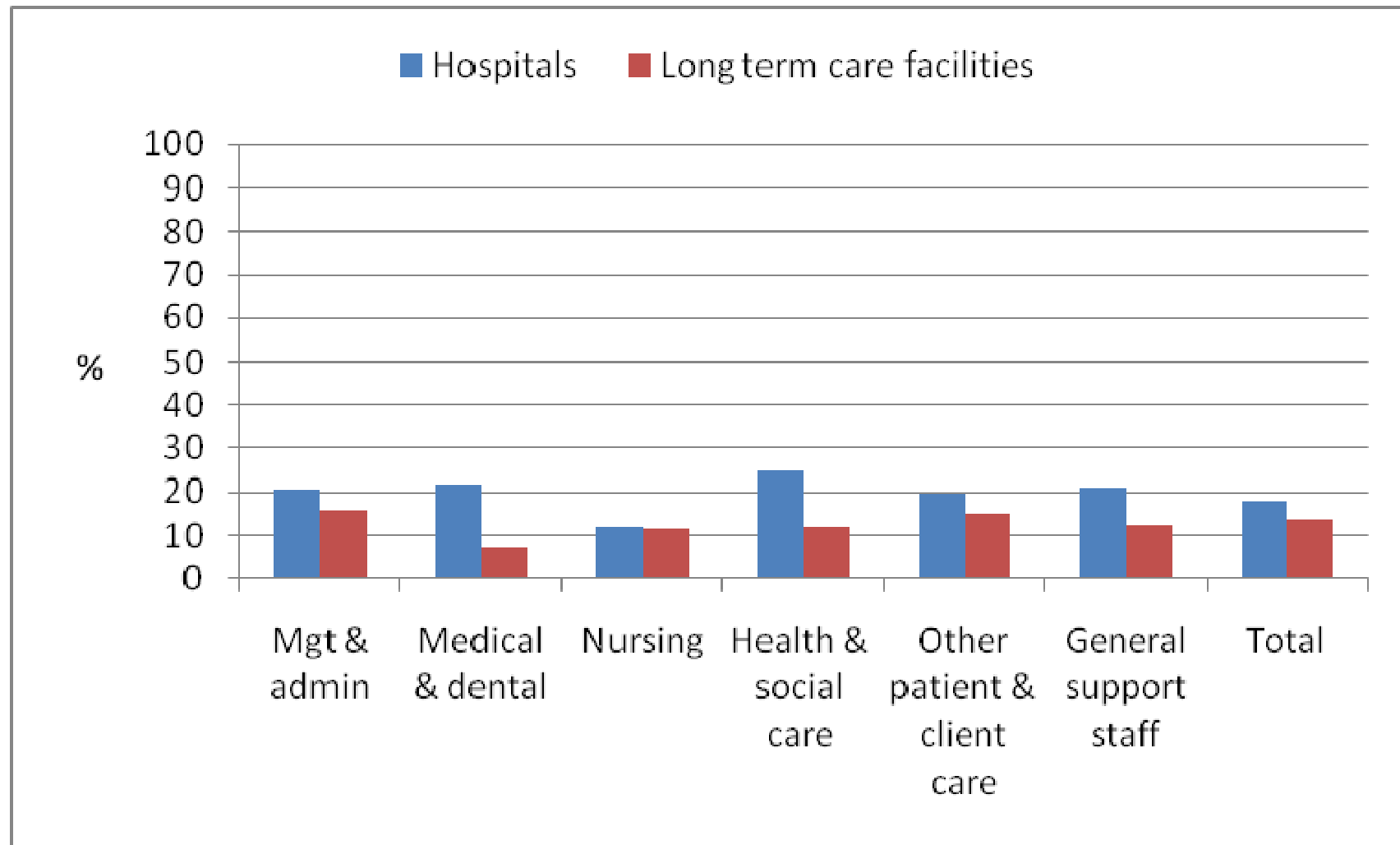
Mean number of vaccinations 255,000

Source: HPSC

Distribution of vaccine by site 2008 - 2012

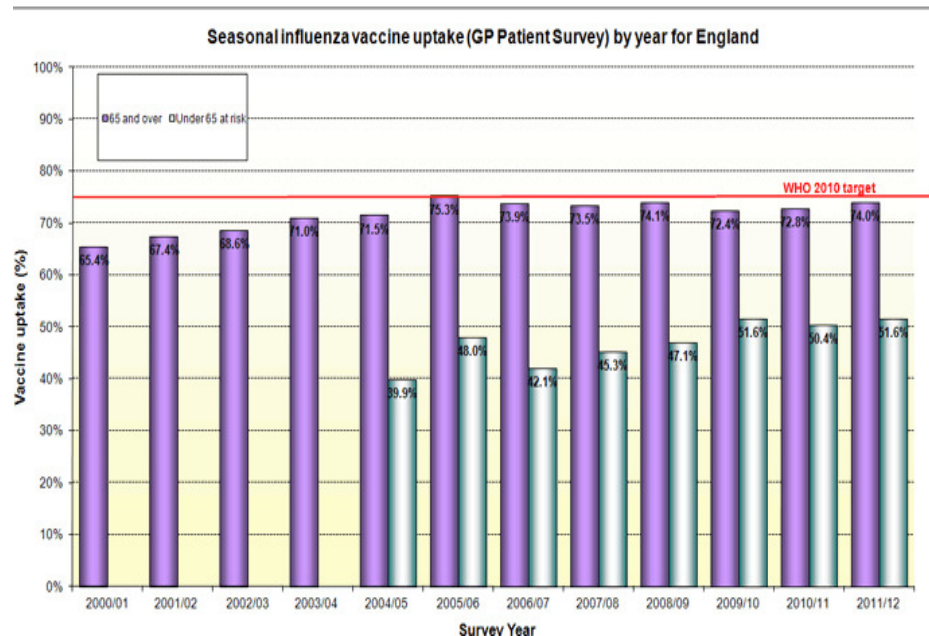


Vaccination uptake in health care staff 2011/2012



Source: HPSC

Vaccine uptake - UK



2011/2012

65 and older 74%

Clinical risk group 52%

Pregnant women

healthy 26%

with risk factor 51%

HCWs 45%

(to end Jan 2013) 46%

(11-100%)

http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1195733756886

http://media.dh.gov.uk/network/211/files/2013/02/SeasonalFluData_HCWs_Jan13_acc.pdf

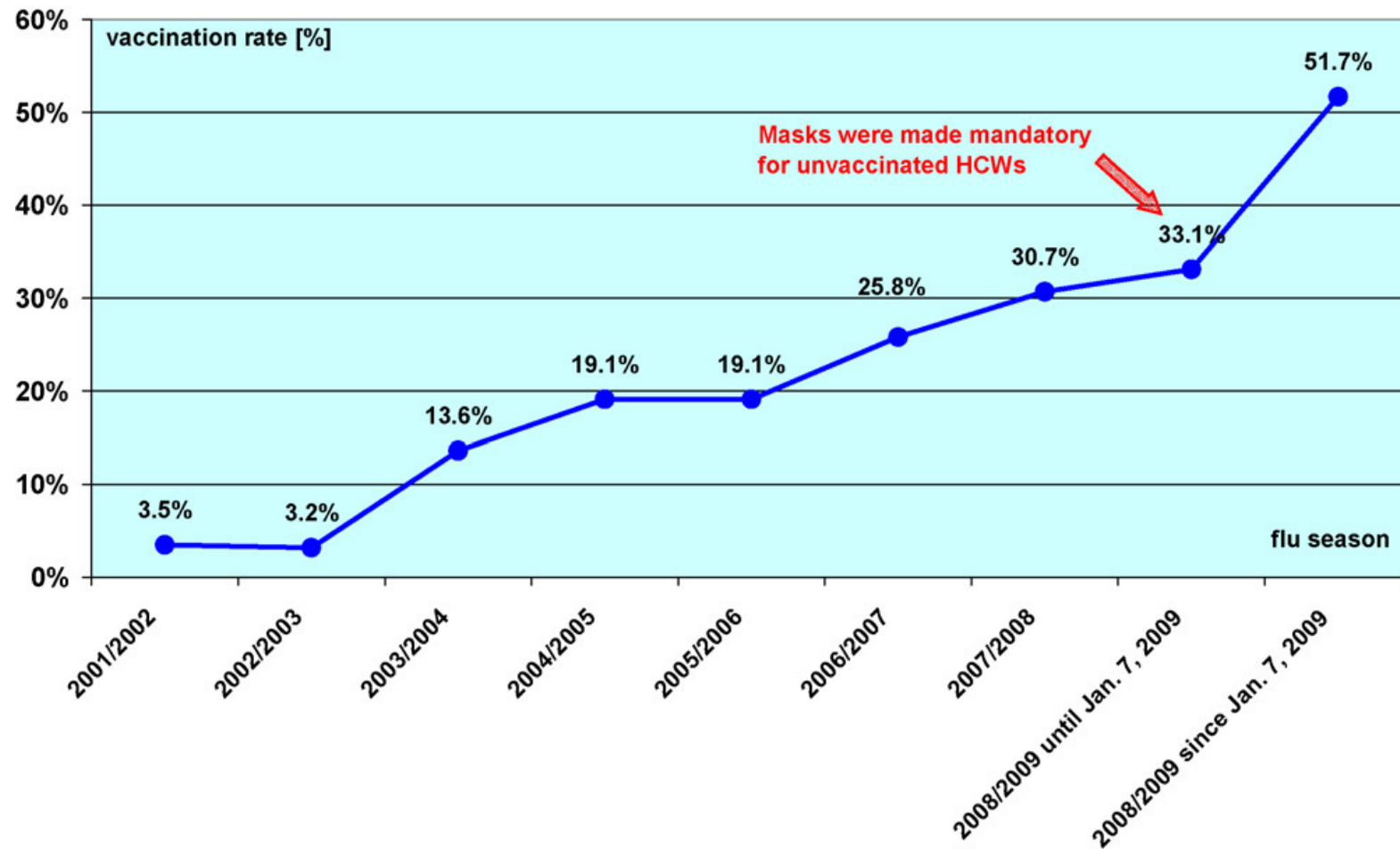
Issues

- Monitoring of vaccine uptake
 - those aged 65 and older without GMS or doctor only cards
 - clinically at risk groups
 - pregnant women
- Health care workers
 - how to improve uptake?

Options

- National IT system
- Returns for all vaccine distributed
- Health care workers
 - Include as performance indicator
 - Written declination statement
 - Mandatory vaccination
 - Exclusion
 - Face masks

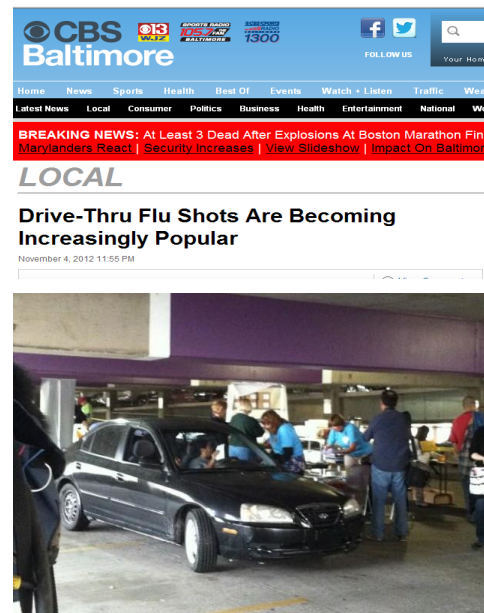
Improving vaccine uptake in HCWs - Germany



Wicker S Vaccine 27 (2009) 2631–2632

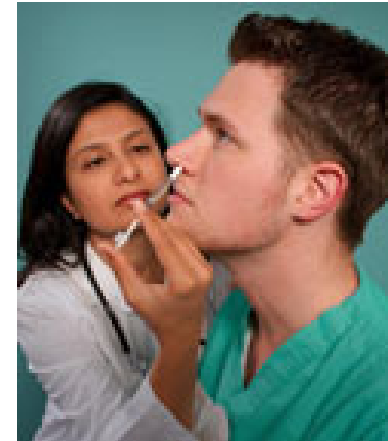
Options

- Improve knowledge
- Timely reminders
- Incentives
- Accessibility



Options

- Better vaccine
 - live attenuated influenza vaccine (nasal spray)
 - quadrivalent vaccine
 - 2A & 2B strains)
 - licensed in US in 2012
 - licensed in UK and Germany in 2013
 - universal vaccine



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Scientists Move Closer to a Lasting Flu Vaccine

By CARL ZIMMER
Published: October 29, 2012

Summary

- 2012/2013 season started earlier
- 48% cases B strain
- still ongoing outbreaks in long stay institutions
- antivirals recommended for at risk
- vaccine best protection
 - safe and efficacious
 - potential to prevent significant morbidity & mortality
- need to improve vaccine uptake and monitoring in all at risk groups