

# Meningococcal Disease Among Men Who Have Sex with Men (MSM)

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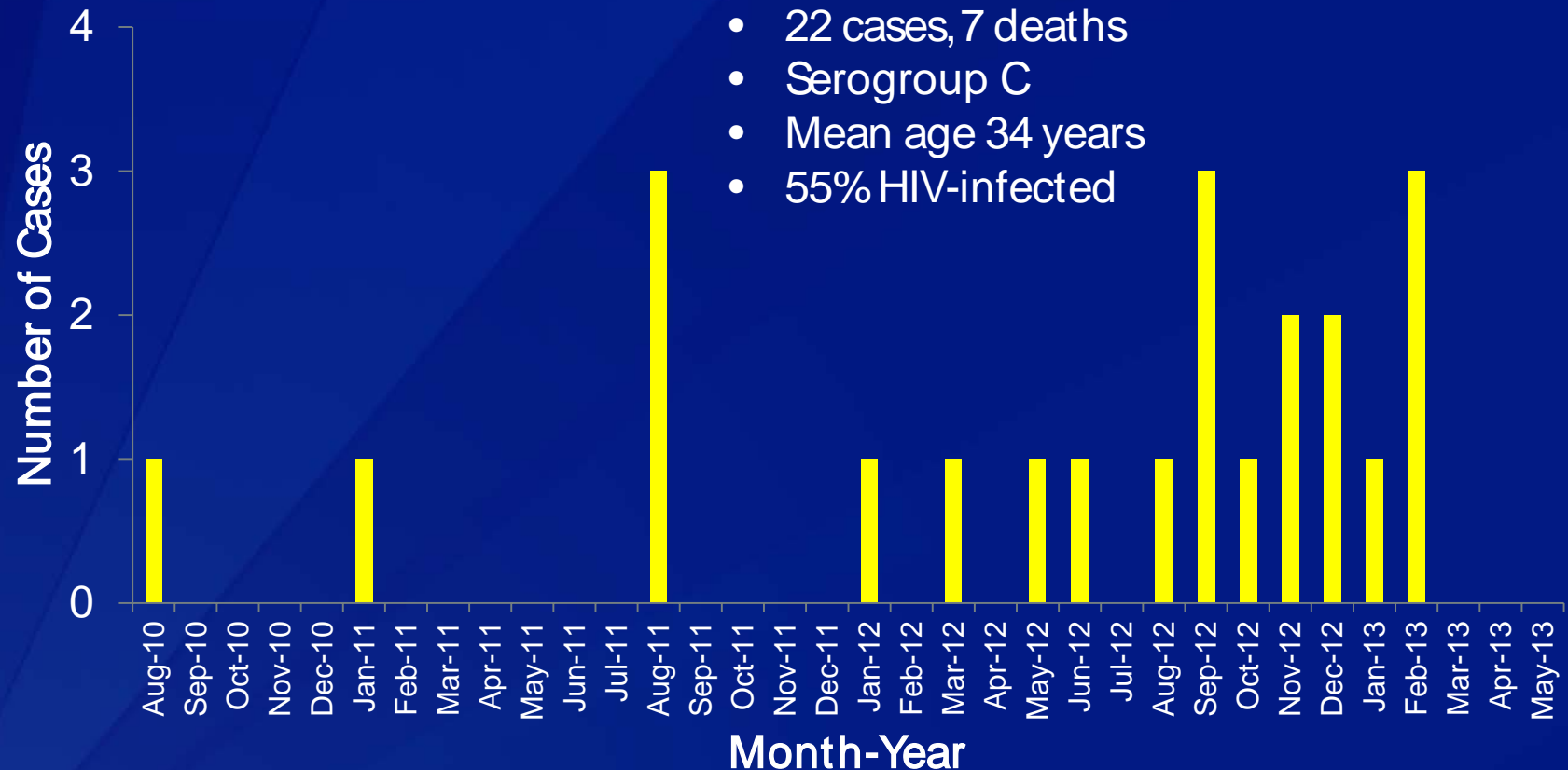
## Acknowledgements

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- ❑ State and Local Health Departments
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# Outbreaks of Meningococcal Disease Among Men Who Have Sex with Men (MSM)

- ❑ First reported outbreak of meningococcal disease among MSM occurred in Toronto in 2001
- ❑ Subsequent outbreaks in the MSM community have occurred in Chicago (2003) and New York City (2012)
- ❑ Outbreaks have been caused by serogroup C (ST-11)
  - Common invasive strain of *Neisseria meningitidis*
  - Frequent cause of outbreak cases
  - PFGE patterns differ for each MSM outbreak

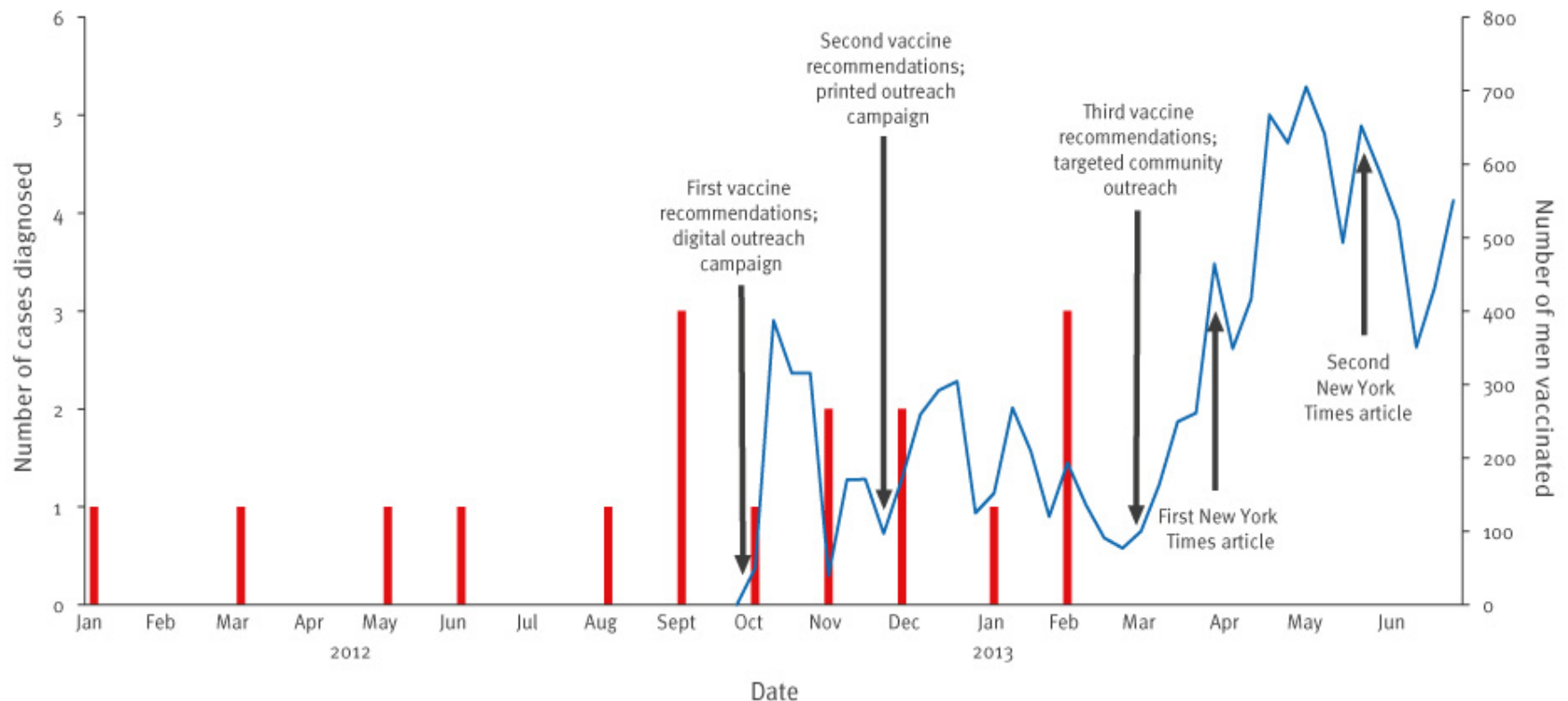
# New York City MSM Outbreak August 2010-February 2013



# New York City Vaccination Recommendations

- ❑ First vaccination recommendations (Oct 2012) targeted HIV-infected MSM who met high-risk criteria
- ❑ Current\* meningococcal vaccination recommendations in NYC include:
  - All HIV-infected MSM
  - MSM, regardless of HIV status, who regularly have close or intimate contact with men met through an online website, digital application (“app”), or at a bar or party

# Meningococcal Cases Among MSM and Estimated Vaccine Doses\*, New York City



**\*19% of MSM population vaccinated as of 2/21/2014**

\*Shown are the number of individuals receiving the first dose of meningococcal vaccine. Numbers include only those public and private providers who agreed to provide weekly dose administration data and reporting is likely to be incomplete. Approximately 19,807 patients vaccinated as of 8/5/2013.

## Meningococcal Cases Among MSM , Los Angeles County



## Understanding the Burden

- ❑ Little is known about the epidemiology of meningococcal disease among MSM
- ❑ Most states do not routinely collect information on MSM status during their case investigations
- ❑ Need to better understand the burden of disease and potential risk factors for meningococcal disease in the MSM population



# Call for Meningococcal Cases Among MSM

## □ Epi-X call for cases posted on May 14, 2013

- States reviewed meningococcal case reports among males  $\geq 16$  years occurring during January 2012 – May 2013 to determine if MSM status was recorded
- Completed questionnaire for cases occurring among MSM (demographic, risk factor, clinical, and laboratory information)

## □ Cases were classified as:

- MSM cases residing in New York City (MSM-NYC)
- MSM cases residing in Los Angeles County (MSM-LAC)
- MSM sporadic cases (all other MSM cases) (MSM-Sporadic)
- Men, not known to be MSM (other men)

## □ MSM population estimated using US census data and published estimates of the proportion MSM in the US<sup>1</sup>

<sup>1</sup>Based on 2012 census data, and published estimates of the proportion of MSM in the U.S.: 3.9% (3.5-4.4)

Purcell, D.W., et al., Estimating the population size of men who have sex with men in the United States to obtain HIV and syphilis rates. Open AIDS J, 2012. 6: p. 98-107.

# Reported Meningococcal Disease Cases Among Men Aged 18-64 Years—United States, Jan 2012-May 2013

	Health departments reporting cases*	Cases reported (n)
Other Men	45	202
MSM	10	33
MSM-NYC	--	17
MSM-LAC	--	4
MSM-Sporadic	--	12
Total	--	235

\*All 50 states, NYC, LA County, and the District of Columbia responded to CDC's request for information

# Meningococcal Disease Cases Among Men Aged 18-64 Years by Serogroup — United States, Jan 2012-May 2013 (n=235)

Serogroup	NYC Cases (n=17)	LAC Cases (n=4)	Sporadic Cases (n=12)	Other Men (n=202)
B	0	0	0	38
C	17	4	9	37
Y	0	0	1	35
W	0	0	2	14
Nongroupable	0	0	0	8
Other	0	0	0	1
Unknown	0	0	0	69

# Potential Risk Factors for Meningococcal Disease Among MSM — United States, Jan 2012 – May 2013

- ❑ 5 cases (15.2%) traveled within 2 weeks prior to disease onset\*
- ❑ 11 (35%) cases reported current drug use
  - 7/11 were from the MSM-NY Outbreak
- ❑ The prevalence of smoking among MSM cases and cases among other men was similar\*\*
- ❑ Vaccination status of cases largely missing

\*Ohio (2); NY and Philadelphia; LA; Hong Kong and Palm Springs

\*\*Smoking prevalence: MSM-Sporadic (25.0%); MSM-NYC (26.7%); MSM-LAC (25.0%); Other men (29.7%)

# HIV Status of Meningococcal Disease Cases Among MSM and Other Men Aged 18-64 Years— United States, Jan 2012- May 2013

HIV Status	MSM				Other Men	
	NYC Cases (n=17)	%	Sporadic Cases (n=12)	%	ABCs† Cases (n=111)*	%
Positive	10	58.8	3	25.0	5	4.5
Negative	7	41.2	4	33.3	75	67.6
Unknown	0	0.0	5	41.7	31	27.9

Note: no LAC-MSM cases were HIV positive

†Active Bacterial Core surveillance

\*Cumulative data from Jan 2009-May 2013

# Meningococcal Disease Risk Among Men Aged 18-64 years — United States, Jan 2012 - May 2013

	Cases (n)	Estimated annualized rate per 100,000 population (95% CI)*	Rate Ratio (95% CI)
Overall			
Other men	202	0.15 (0.15-0.15)	Ref
MSM	33	0.61 (0.54-0.68)	4.0 (3.6-4.5)
NYC cases			
Other men	7	0.20 (0.19-0.20)	Ref
MSM	17	11.7 (10.3-13.0)	59.8 (52.8-67.0)
LAC cases			
Other men	7	0.16 (0.16-0.16)	Ref
MSM	4	2.3 (2.0-2.5)	14.1 (12.4-15.8)
Sporadic cases			
Other men	188	0.15 (0.15-0.15)	Ref
MSM	12	0.24 (0.21-0.26)	1.6 (1.4-1.8)

\*Based on 2012 census data, and published estimates of the proportion of MSM in the U.S.: 3.9% (3.5-4.4)

Purcell, D.W., et al., Estimating the population size of men who have sex with men in the United States to obtain HIV and syphilis rates. Open AIDSJ, 2012. 6: p. 98-107.

## Analysis Limitations

- ❑ **MSM status not systematically collected during case investigations**
  - The number of meningococcal disease cases occurring among MSM may be underestimated
- ❑ **MSM population denominators were estimated**
  - Population estimates not available for majority of queried jurisdictions
  - MSM denominators may be over- or underestimated for some jurisdictions

## MSM Cases reported since May 2013\*

- ❑ Have continued to request passive reporting of cases occurring among MSM
- ❑ 10 additional cases reported from 7 states
  - 6 NmC, 3 NmB, 1 NmY
- ❑ No state has met the current outbreak definition



## Conclusions

- ❑ Outbreaks of meningococcal disease do occur among MSM
  - Small increased risk identified among MSM-sporadic cases, burden of disease is low
  - High proportion of MSM-sporadic cases were HIV-infected
- ❑ The Work Group does not propose recommendations for vaccination of MSM in the United States at this time
- ❑ CDC supports state and local health department recommendations for vaccinating during identified outbreaks
- ❑ Continued study needed to better understand transmission and risk factors for this population

# Thank you