

Surveillance for Acute Hepatitis B in New York City

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Preventing Hepatitis B -1

- Excellent vaccine coverage for NYC children
- Harder to reach the high-risk adults
- Perinatal Hepatitis B Prevention Program:
1,600 HBsAg+ births /year)
- Expansion of NYC needle exchange programs
- Newly funded services for Asian community –
screening, vaccine, treatment

Preventing Hepatitis B -2

- Hepatitis B vaccine at DOHMH STD clinics - 3040 doses/6 months (2nd & 3rd Qtrs 2005)
- Hepatitis B vaccine extended to all 10 DOHMH STD clinics in Oct 2005
- Planning for vaccination at Riker's
- Gratis vaccine program - 2960 doses/2004
- Men's Night Out / Hot Shot - 250 doses/2004

Goals of Acute Hep B Surveillance

- Monitor incidence of new infections, detect outbreaks
- Provide patient education
- Descriptive epidemiology – demographics, modes of transmission
- Prioritize expansion of hepatitis B vaccine sites

History of Acute Hep B Surveillance in NYC

- Until Aug 2003, all HBcIgM + reports were counted as acute cases (600-800/year)
- 2002-2003 Pilot projects
- Since Aug 2003, investigating all HBcIgM reports & using CDC case definition (160/year)

HBcIgM Investigations: Methods- 1

- Reports from laboratories and healthcare providers
- Verify that HBcIgM was really positive
- Check if previously reported (<6 months prior)
- Collect LFTs, clinical information
- Assess for CDC/CSTE surveillance case definition

HBcIgM Investigations: Methods 2

If meets CDC case definition, interview by phone

1. Patient education

- Need for follow up testing

- Avoid transmitting infection to others

2. Ascertain risk factors during exposure period

3. Identify contacts for prophylaxis

HBcIgM Investigations, 2004 NYC: Results

Investigation Status

	Number (%)
Not investigated because:	44 (6%)
Reported > 1 year late	3
Patient resides outside NYC	30
Data entry error	3
Info not available	8
Investigation Completed	660 (94%)

Workload – 660 Investigations

11 Field Staff and their 3 Supervisors	20% of their time
Time required for investigation	Median 27 days
Net time per investigation: on-site chart review needed	3 hours
on-site chart review <u>not</u> needed	1.5-2 hours
Required on-site medical record review	185 of 660 (27.8%)

Investigation Results

	Number (%)
Reporting error (HBcIgM was initially reported as positive, but was not actually positive)	102 (15%)
Case definition met	162 (24%)
Case definition not met	392 (59%)

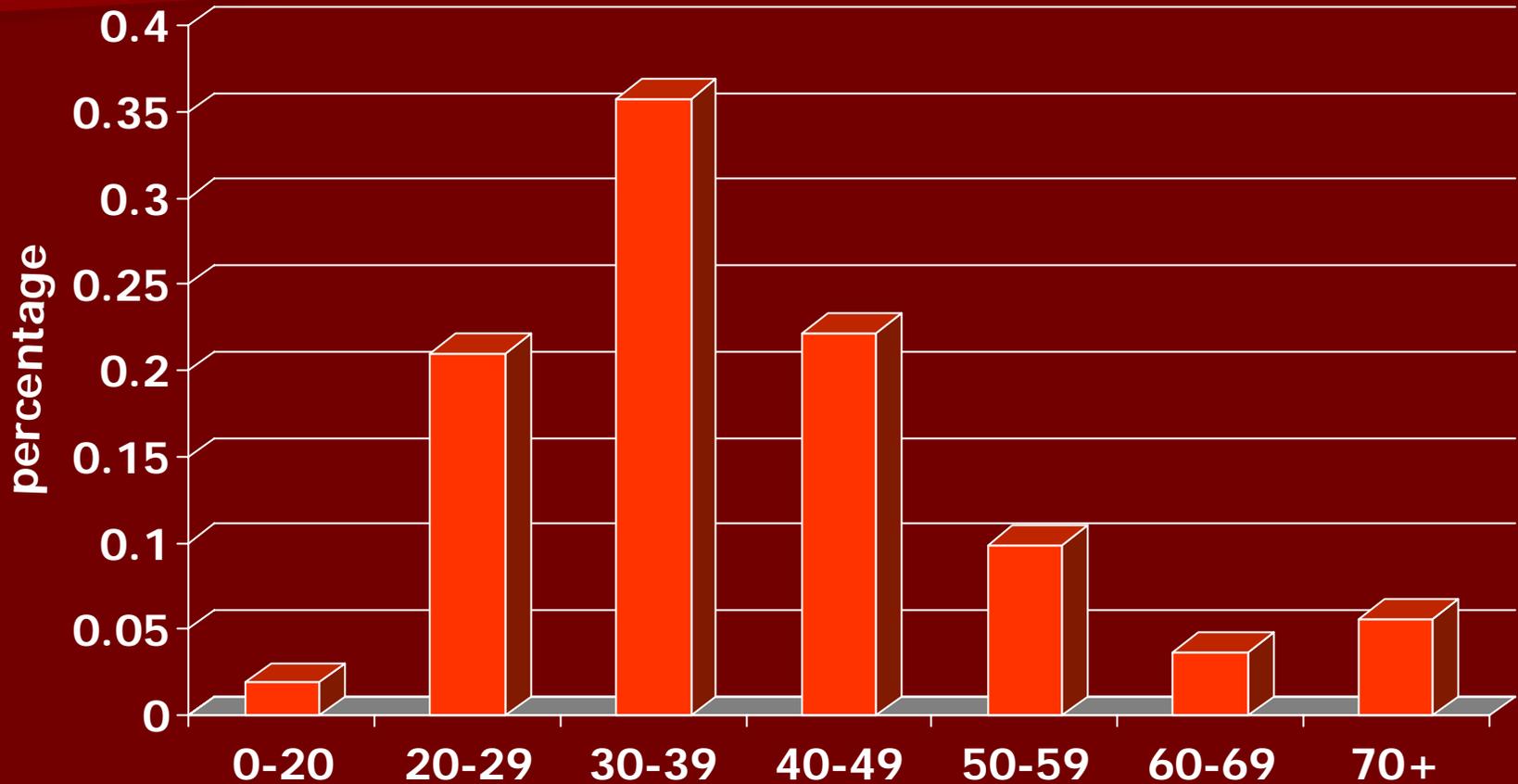
Response to Reporting Errors

- Educate reporters by phone
- Memo to reporters
- Hepatitis A B C serology “cheat sheet”
- Revisions to reporting forms (paper & electronic)

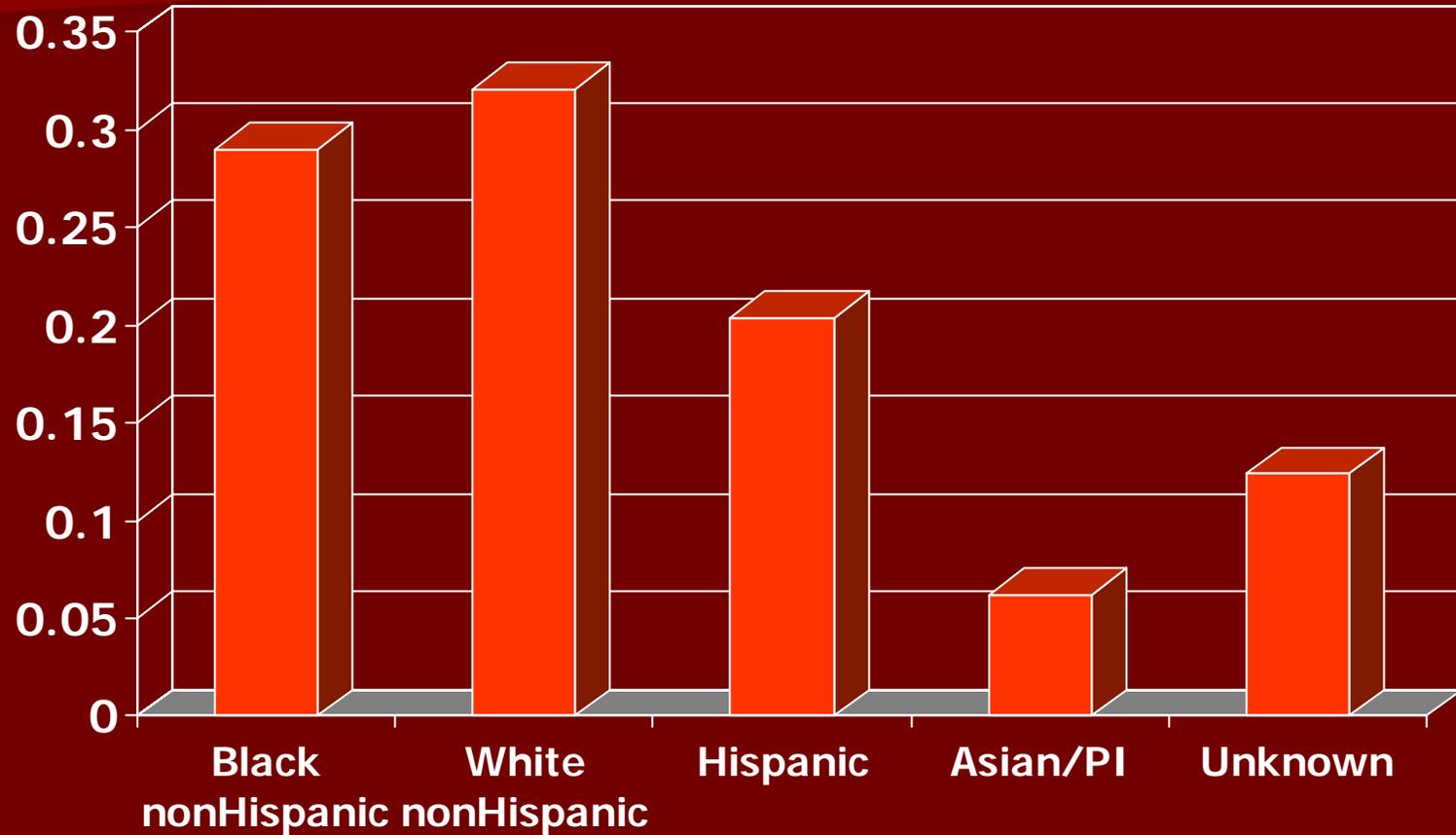
Confirmed Acute Hepatitis B Cases

- 162 cases
- Incidence 2.0 per 100,000
- 68% men
- Median age 37 years (range, 12 to 91)

Confirmed Cases - Age Distribution



Confirmed Cases Race-ethnicity



Confirmed Cases- Clinical Findings

- 49 (26%) hospitalized (median 4.5 days)
- 126 (78%) jaundiced
- Median peak ALT 2261 (range 24-8200).
- 3 died (1.8% case fatality rate)

Confirmed Cases - Interviews

- 111 of 162 (69%) were interviewed
- Generally by telephone
- Median 54 days after the diagnosis date (range, 4 days to 255 days)
- 102 (93.6%) - healthcare provider informed them about their hepatitis B
- 98 (89.9%) - healthcare provider explained it
- 47 (44%) of the patients accepted written info

Confirmed Cases- Risk Factors

Household contact with a person known to have hepatitis B	2 (1.2%)
Heterosexual	83 (51%)
1 partner during exposure period	42
2 partners “ “	14
>2 partners “ ”	16
Unknown # of partners “ “	11
Men who have sex with men	32 (20%)
IV drug users	3 (2%)
Possible healthcare-related	12 (7%)
Other	9 (6%)
Unknown	35 (22%)

Summary

- CDC/CSTE case definition: labor intensive
- More accurate surveillance data
- High frequency of HBcIgM reporting errors > need to educate reporters
- High frequency of false positives HBcIgM in patients without clinical indication for testing > need to educate physicians, laboratorians

Future Directions

- Assess completeness of reporting
- Collecting extra information for CDC EIP
 - Reason for testing
 - History of incarceration, visits to STD clinics
- Formalizing the protocol
- New efforts to obtain risk factors
- Sera to CDC for molecular studies