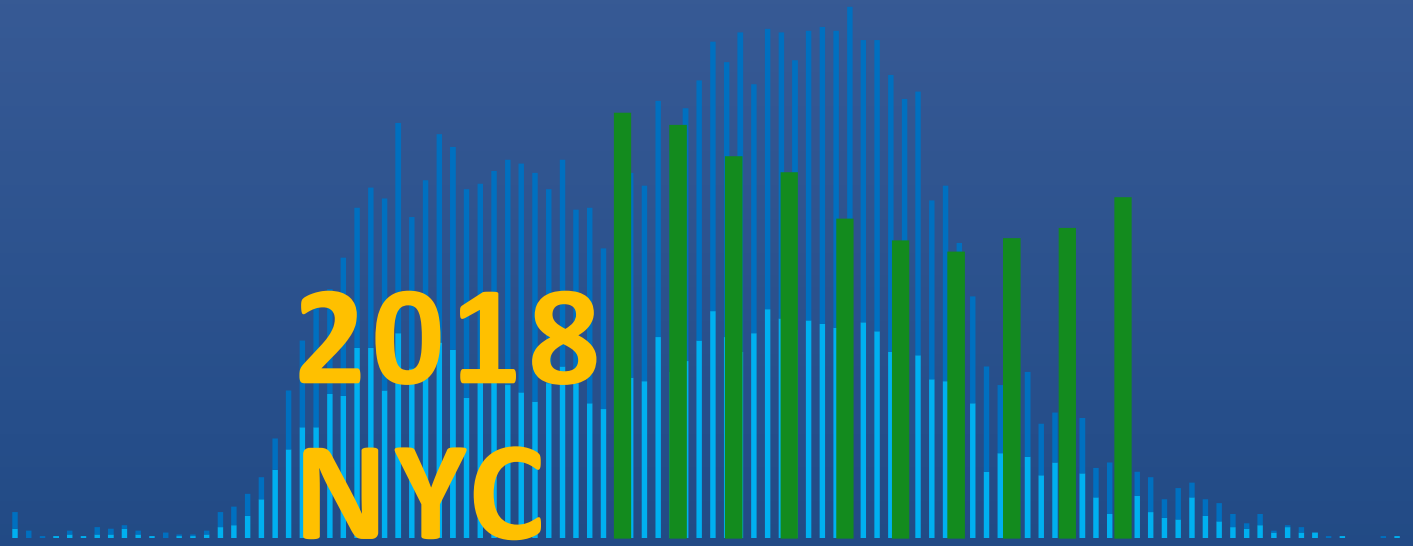

2018 NYC Viral Hepatitis Research Symposium

Pregnancy Reporting by Laboratories for Hepatitis B, New York City

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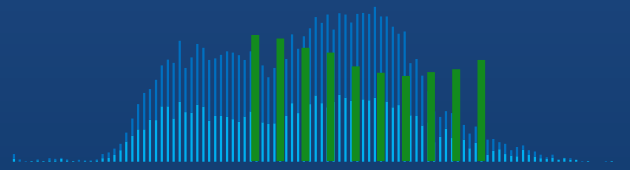
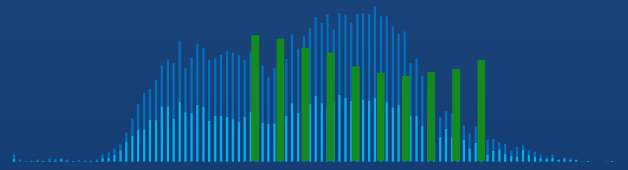


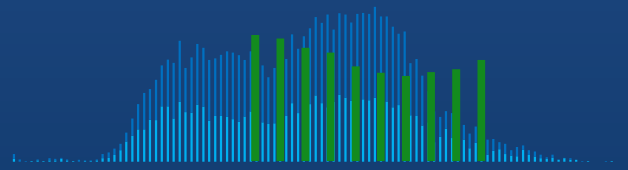
Outline

- Background – Congenital infections and Perinatal Hepatitis B
- Implementation of NYC Health Code Amendment and Pregnancy Reporting by Laboratories
- Methods
- Results
- Summary



Congenital Infections

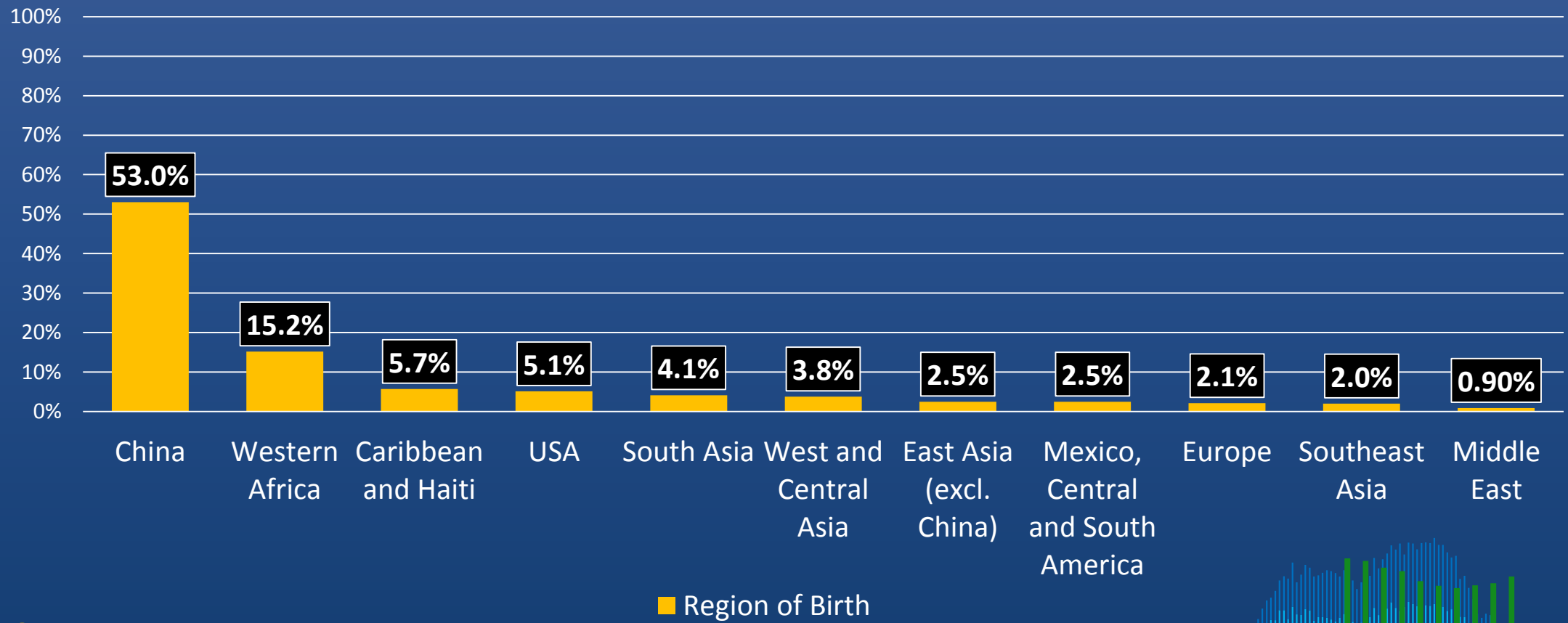
- Preventing congenital infections is a high priority activity for public health
- Identifying maternal infections during the prenatal period provides the best opportunities for prevention
- In NYC, 23% of Hepatitis B (Hep B) cases among pregnant women are not identified prenatally
- NYC Health Code Amendment, 2014 – mandated laboratory reporting of probable pregnancy information
  - Improve identification of prenatal reporting
  - Increase ability to prevent congenital infections



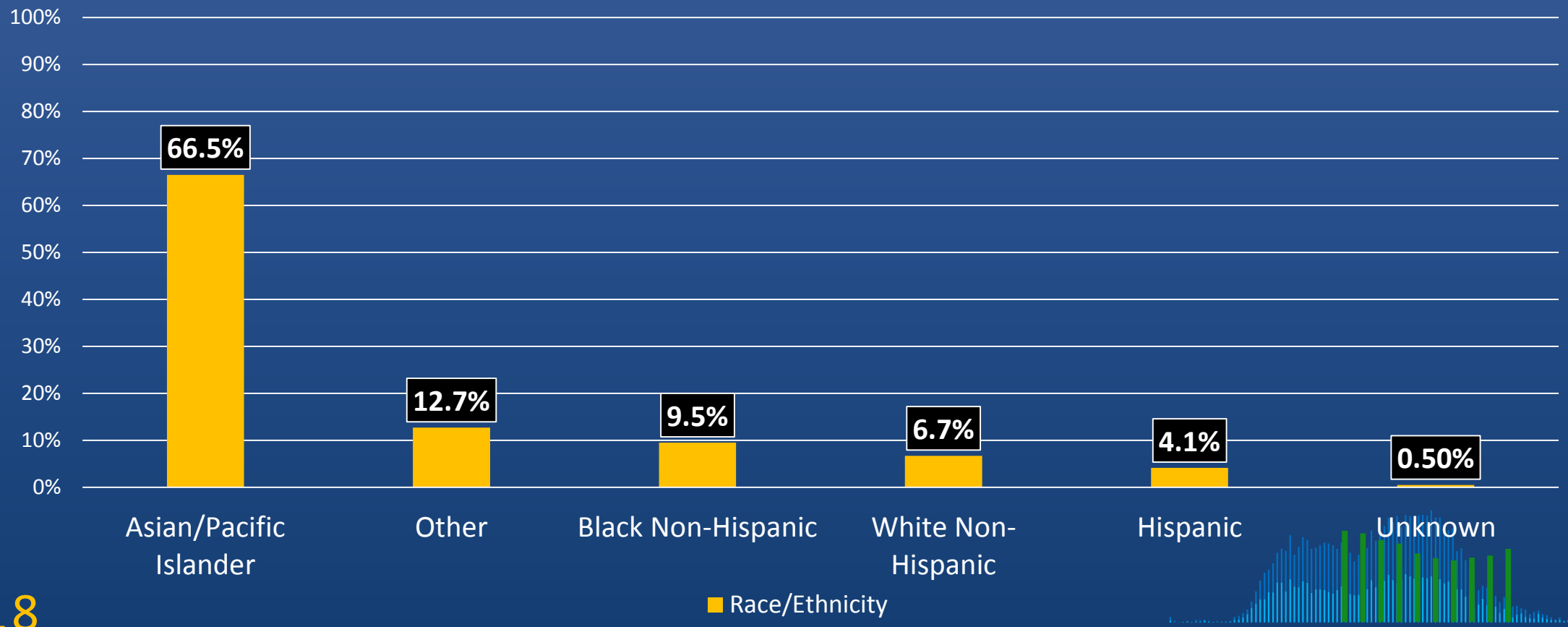
Perinatal Hepatitis B (PHB)

- May be transmitted from infected mother to baby during pregnancy and childbirth
- Up to 90% of infants infected at birth develop chronic infection, 25% of whom will die prematurely
- Post-exposure prophylaxis of the newborn within 12 hours of birth and completion of the Hep B vaccine series prevents 90-95% of PHB infections
- Treating Hep B-infected mothers who have high viral load during pregnancy prevents ~ 70% of breakthrough infections

Region of Birth of Infected Mothers with Live Births, 2017

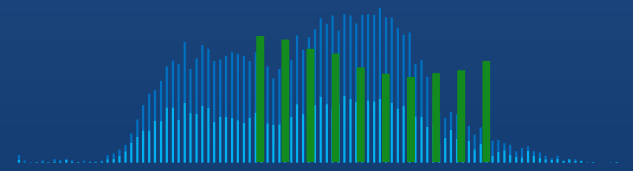


Race/Ethnicity of Infected Mothers with Live Births, 2017



Testing and Reporting Requirements in Pregnancy for Hep B

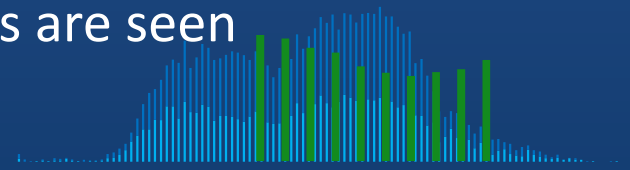
- NYS Public Health Law mandates prenatal testing, provider reporting, and laboratory reporting for Hep B
- In 2008, NYC Health Code §13.03(a) was amended to require laboratories to report confirmed pregnancy status
- In July 2014, the health code was amended again to require laboratories to report pregnancy status (confirmed or probable)
- Applies to any disease that can lead to a congenital infection



Guidance to Laboratories
Identification/Reporting Probable Pregnancy

Insert the text “pregnant” or “prenatal” into the [Relevant Clinical Information] field of the HL7 message (OBR-13 field) for any of the following:

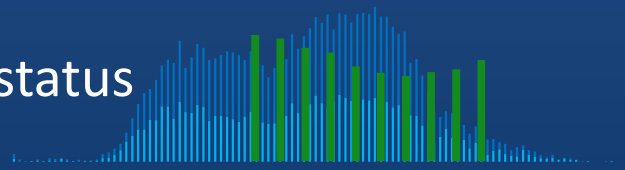
1. Prenatal panel or individual panel test ordered by providers
2. Pregnancy related diagnostic code (ICD-10) or pregnancy status indicated on requisition
3. Specimen sent (stat) from the Labor and Delivery Unit of the hospital or specimen indicates “mother/delivery”
4. Specimen submitted by a free-standing birthing center or prenatal/obstetric clinic where only pregnant patients are seen



Laboratory Reporting Process

Methods

- Retrospective analysis of the NYC DOHMH surveillance database system (Maven)
  - Maven is comprised of data from laboratory reports, provider reports, vaccination records and case investigations
- Cases of Hep B among pregnant women reported to NYC DOHMH with pregnancy dates between July 2014 and December 2017
- Statistical analysis:
  - Laboratory compliance with the health code amendment
  - Positive predictive value of the pregnancy indicator for Hep B reports
  - Assessment of laboratory reporting of pregnancy status

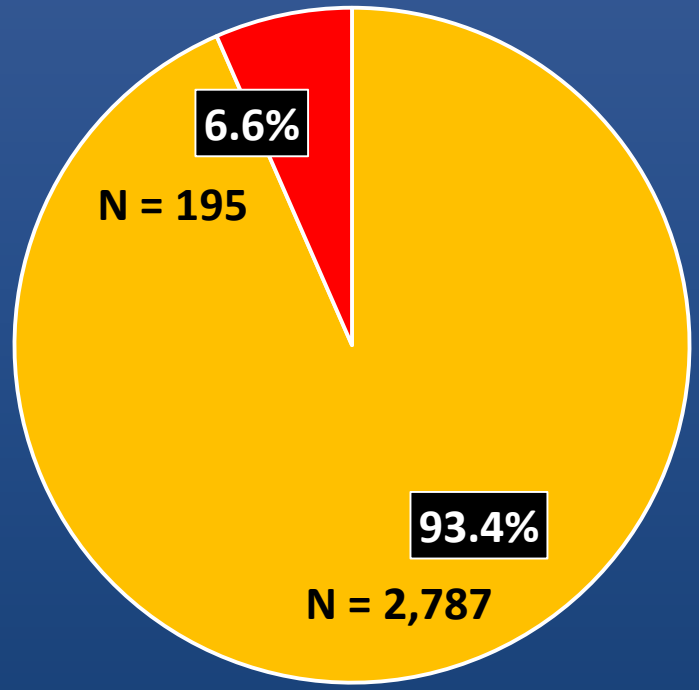


Results: Laboratory Compliance

- 43 laboratories were identified that conduct testing for HepB and have ever reported the NYC DOHMH
- 34 (79%) indicate pregnancy status, if known, as confirmed or probable
  - Mayo Medical Laboratories, LabCorp, Quest, Bioreference, Bayside Laboratories, Shiel, Empire City, Lenco, Enzo, Sunrise and ARUP
- 9 (21%) labs non-compliant with reporting pregnancy
  - 5 testing
  - 3 awaiting interface modification
  - 1 has no source of pregnancy status
- IT staff enforces compliance

Positive Predictive Value of Pregnancy Status in Hep B Reports
(July 2014 – December 2017)

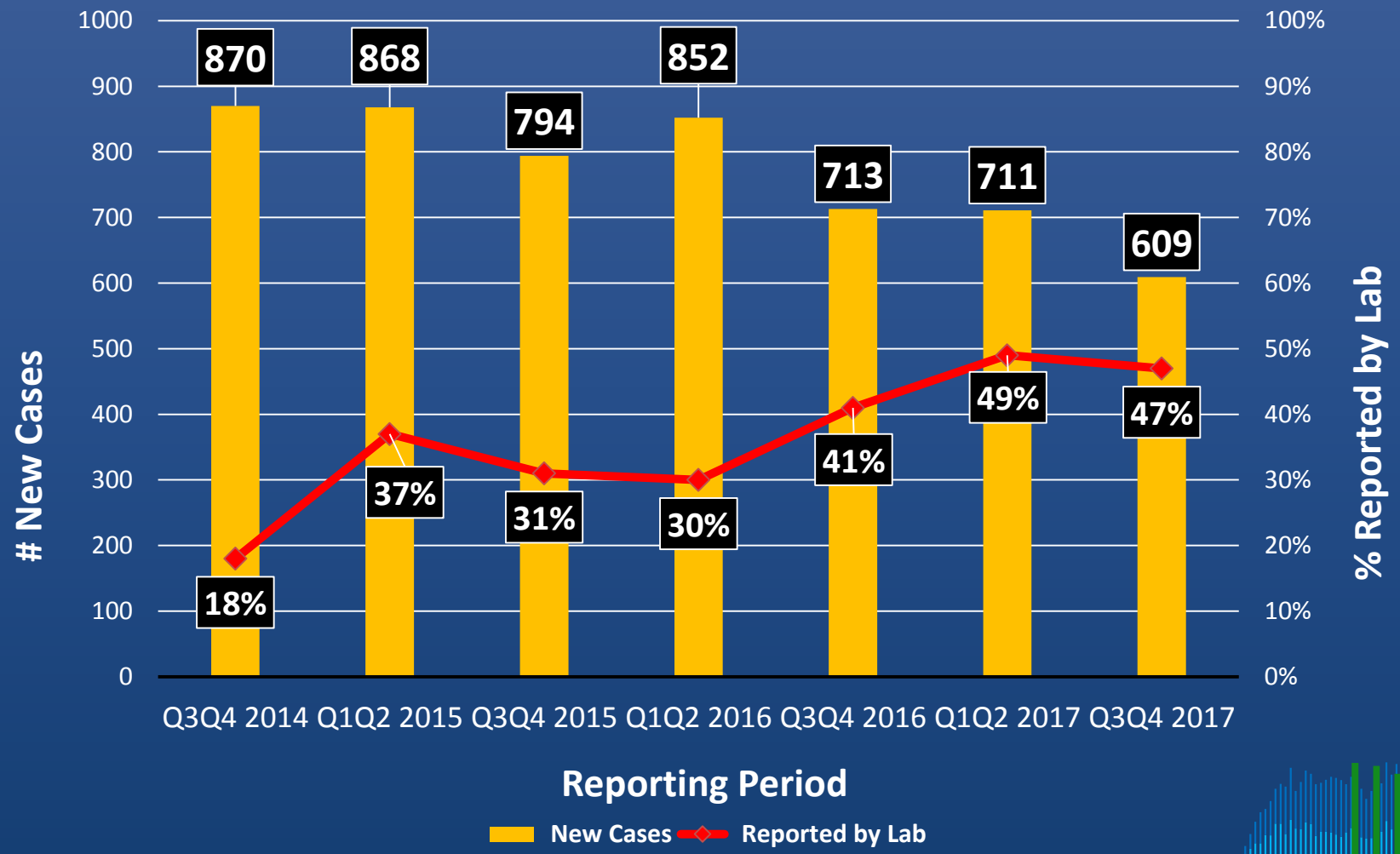
N = 2,983



Confirmed Pregnant by DOHMH Staff

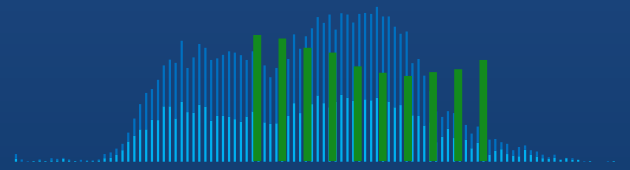
Confirmed Not Pregnant by DOHMH Staff

Number of Hep B-Infected Pregnant Women and Proportion Reported as Pregnant by Laboratory



Challenges to Implementation

- Onboarding of laboratories
  - Dedicated health department staff
  - Collaboration with disease surveillance programs
- Laboratory staff time and financial resources
  - Plan, test and implement updates to lab requisition and lab reporting systems
- Pregnancy data may not be available
  - Labs may not offer prenatal panels or may not receive ICD-10 code data
  - Providers must order prenatal panels or include ICD-10 codes
- Disease registries need to be updated

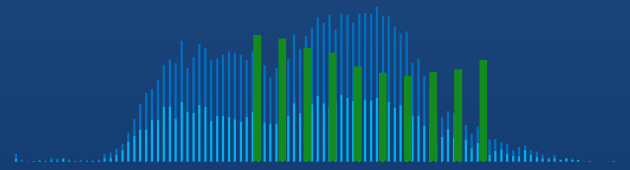


Summary

- Health code amendment requiring laboratory reporting of pregnancy for Hep B have greatly improved program outcomes
  - Rates of laboratory reporting have increased
  - Case management efficiency has improved
  - Accuracy of pregnancy status on laboratory reports is greater than 90%
- As more laboratories become compliant, it is expected that the proportion of Hep B laboratory reports with pregnancy status will increase

Next Steps

- Continue monitoring pregnancy reporting by laboratories and enforce laboratory compliance
- Work more closely with labs to improve capture of pregnancy data from providers
- Educate providers about ICD 10 codes for pregnancy on laboratory requisitions and using prenatal panels
- Assess impact of lab reporting on case identification and prenatal reporting



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  - Eileen Jacobs

Thank You!

- Questions?
- Contact Information:
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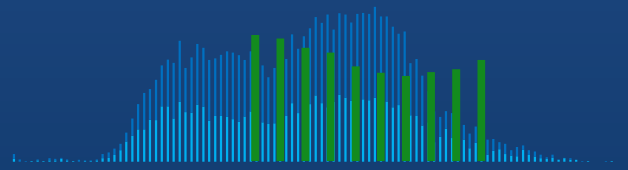
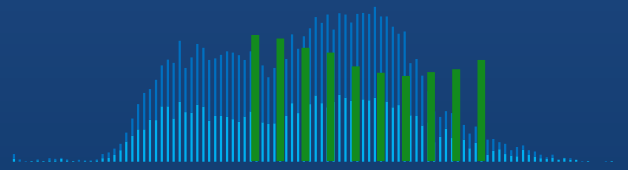
  - Email: ahashmi@healthy.nyc.gov



Extra Slides



NYC Health Code Amendment for Hepatitis B in Pregnancy

- "…..paragraph (1) of Health Code §13.03(a) currently requires the pregnancy status to be indicated if known and if clinically relevant (e.g., for hepatitis B and syphilis) … Although the laboratory may not know the patient's pregnancy status based on information provided by the requesting health care provider, the laboratory would know that a pre-natal panel of laboratory tests was ordered. **Therefore, this provision only applies to situations in which pregnancy status is known and indicated or when pregnancy is probable** (e.g., a pre-natal panel is ordered)."