



Thank you for joining

**The presentation will
begin shortly**



Rise to Immunize® Monthly Webinar

Hepatitis B 101

Avish Nagpal, MD, MPH and Andrea Polkinghorn, BSN, RN-BC, *Sanford Health*

June 20, 2024

Today's Webinar

Campaign Updates

- Campaign Expansion/ Extension
- Resource of the Month
- Data Submission Reminder
- Annual Survey Overview
- RIZE Action Month

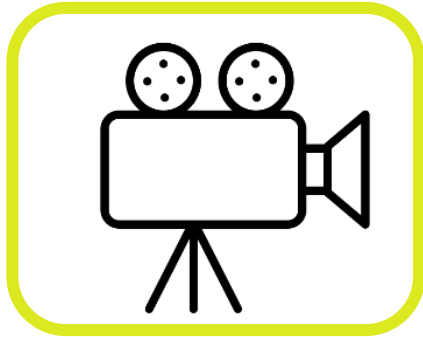
Hepatitis B 101

- Avish Nagpal, MD, MPH, *Sanford Health*
- Andrea Polkinghorn, BSN, RN-BC, *Sanford Health*

Q&A Session



Webinar Reminders



Today's webinar recording will be available the **week of 06/24**

- Will be sent via email
- Will be available on website



Ask questions during the webinar using the **Q&A feature**

- Questions will be answered at the end of the presentation

(RiseToImmunize.org → "Resources" → "Webinars")



**More Vaccines!
More Time!**



Together we can administer
30 million vaccines
by **2027** through
comprehensive & equitable
vaccine initiatives.



How to add new measures:

Use the QR code
to access the **Measure
Upgrade Form**

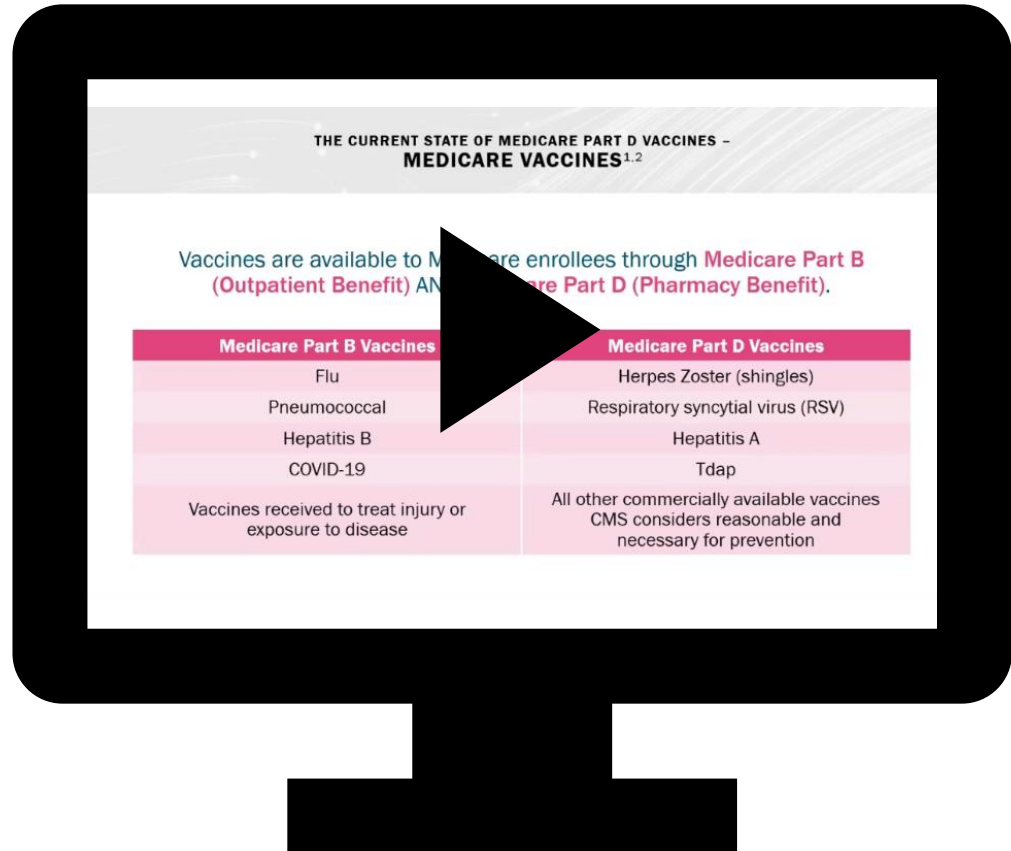


➔ Or email RiseToImmunize@amga.org and we can assist you!

Resource of the Month



“Paving the Way for Medicare Part D Vaccine Administration in Clinics: A Care Journey Roadmap, Benefits and Solutions”



**CALL FOR
PRESENTATIONS
AMGA 2025
ANNUAL
CONFERENCE**

MARCH 26-29

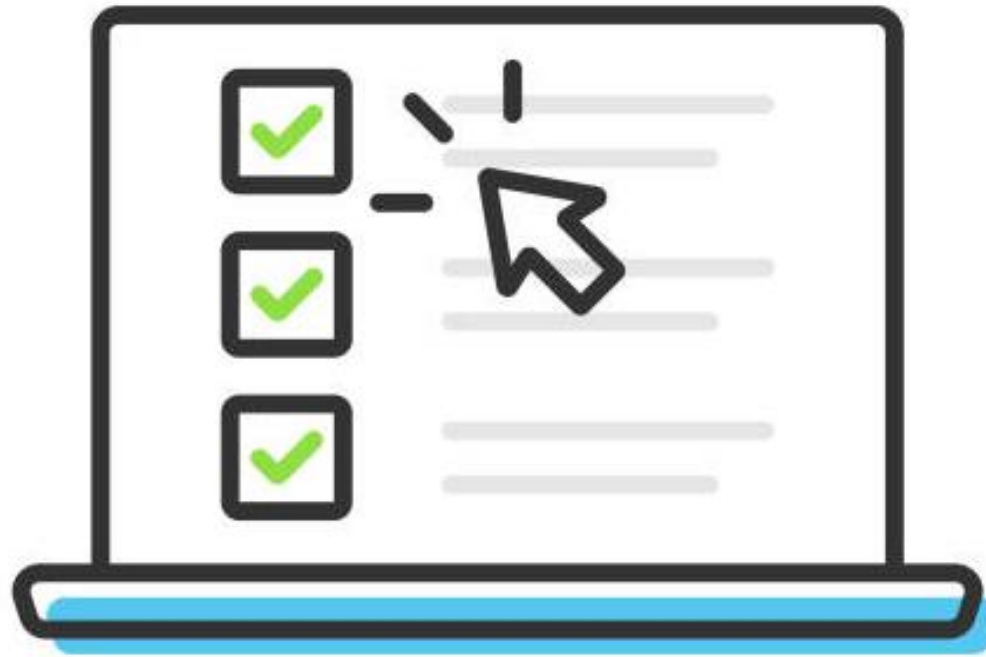
GAYLORD TEXAN | GRAPEVINE, TX



**CONSIDER SPEAKING AT AC25.
SUBMIT YOUR PRESENTATION
PROPOSAL BY WEDNESDAY, JULY 3**

AMGA.ORG/AC25

Data Submission Deadline



**Deadline to
submit:
July 15**



2024 RIZE Survey Results

May 2024



RIZE Annual Survey Results

We heard from **42** RIZE member groups, representing **51%** of campaign participants.

What tactic(s) has your organization implemented that has been most effective to improve flu immunization rates?



Conduct annual provider & staff education to ensure clinic workflows are optimized



Leverage the EHR (BPAs, dashboards, gap reports, etc.)



Utilize immunization champions, specialists, seasonal vaccine clinics, and community partnerships to extend access and care responsibility



Develop marketing campaigns to increase awareness, including; patient portal messages, text reminders, signage in the clinic, mailers, employee email blasts, etc.



Allow self-scheduling of vaccine appointments and/or accept walk-ins

What topics around the expansion measures (RSV, COVID-19, and hepatitis B) would you like to see featured through our programming?

Addressing patient vaccine hesitancy & misconceptions

Materials explaining risk factors

Power of co-administration

Staff education/training resources

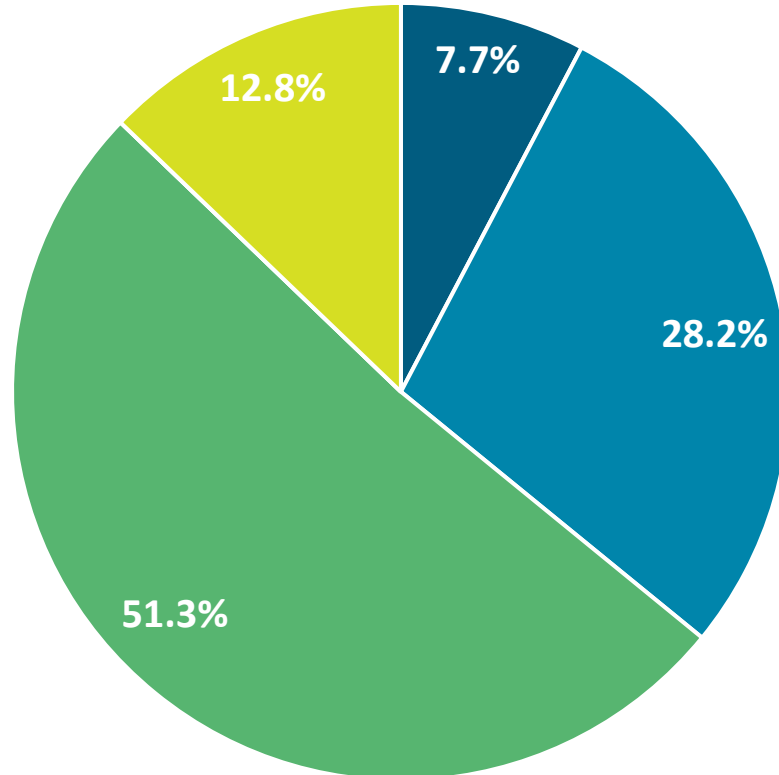
Information on new virus strains

Updates on CDC recommendation changes

Efficient implementation strategies

Navigating insurance coverage

How complete are your adult RSV vaccination data from external sources (e.g. retail pharmacies, state registries, etc.)?



- We capture all adult RSV vaccinations
- We capture most adult RSV vaccinations
- We capture some adult RSV vaccinations
- We don't capture adult RSV vaccinations at all
- I don't know

Campaign plank implementation trends



$\frac{3}{4}$ of groups have established immunization protocols for practice



~ 80% are utilizing immunization registries and data sharing options



Increased number groups planning to implement advanced marketing tactics



Majority of groups are expanding opportunities to administer vaccines

RIZE

Action Month

August 2024

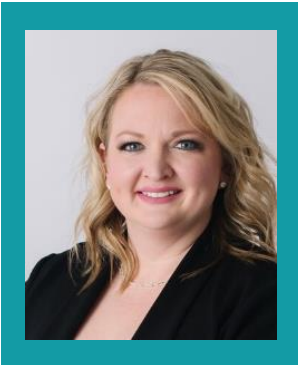
Visit RiseToImmunize.org/ActionMonth



Today's Speakers



Avish Nagpal, MD, MPH, Infectious Disease Specialist, *Sanford Health*



Andrea Polkinghorn, BSN, RN-BC, Immunization Strategy Leader, *Sanford Health*



Hepatitis B 101

Rise to Immunize ®

June 20, 2024



What is Hepatitis?

- Inflammation of the liver cells
- Causes
 - Medications
 - Alcohol
 - Toxins
 - Infections
 - Viral
 - Bacterial
 - Fungal

Hepatitis Viruses

	Family	DNA / RNA	Envelope	Transmission	Disease
Hepatitis A	Picornaviridae	RNA	No	Feco-oral, Sexual MSM	Acute
Hepatitis B	Hepadnaviridae	DNA	Yes	Parenteral, Vertical, Sexual	Chronic
Hepatitis C	Flaviviridae	RNA	Yes	Parenteral, Vertical	Chronic
Hepatitis D	Deltaviridae	RNA	Yes	Superinfection	Chronic
Hepatitis E	Hepeviridae	RNA	No	Feco-oral	Acute

Hepatitis B

Typical symptoms of infection



Fever.



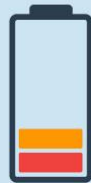
Loss of appetite.



Nausea and vomiting.



Abdominal pain.



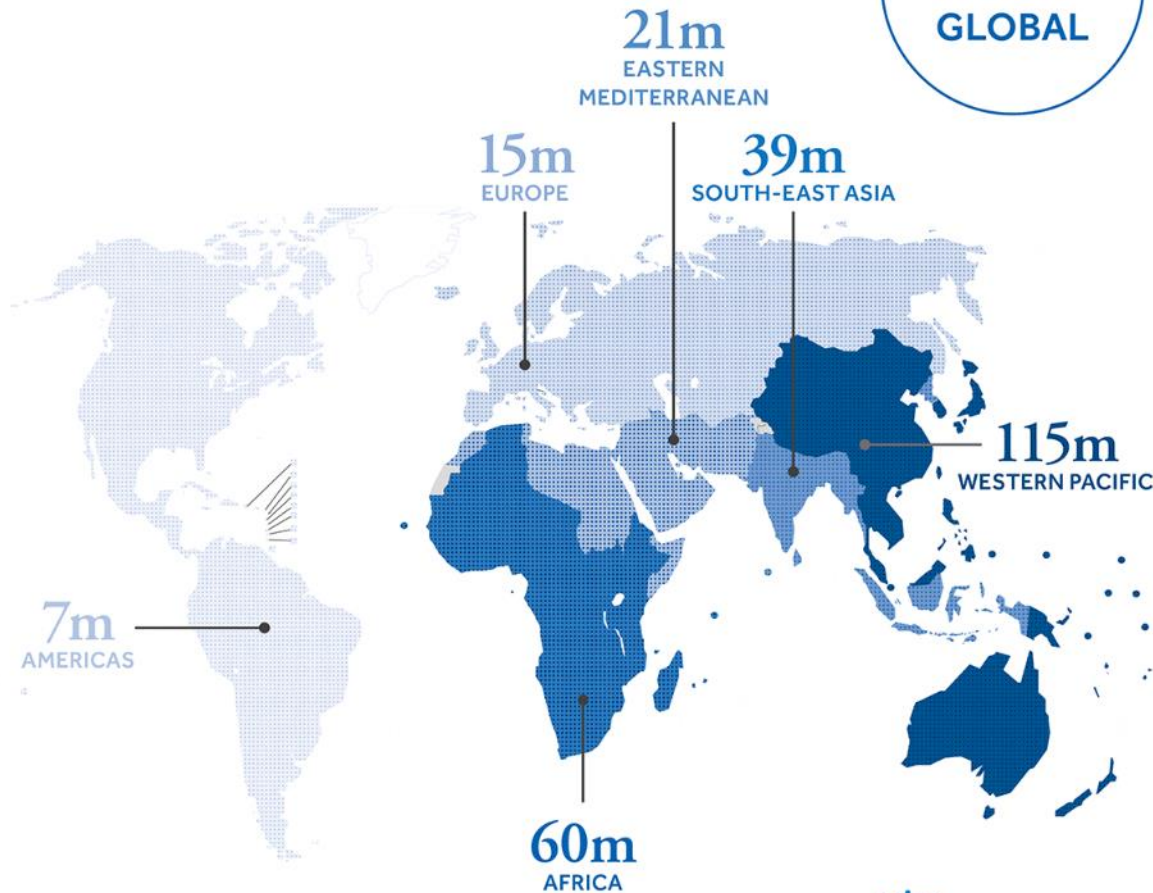
Weakness and fatigue.



Joint pain.

VIRAL HEPATITIS B IN THE WORLD

257m
GLOBAL



Hepatitis B in US

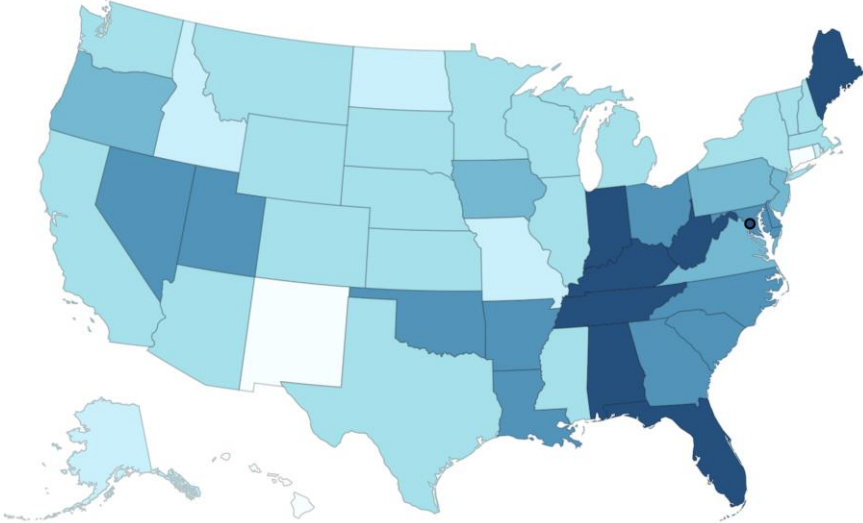
- Hepatitis B vaccine introduced in 1982
- Steady decline in cases
 - 26,654 reported cases in 1985 to 2,791 in 2014
 - 3,192 cases in 2019 (reported. Estimated 20,700 acute cases)
- Estimated Prevalence: 880,000 chronic infections
 - ? Real Prevalence 1.89 million
- Most new cases now in adults > 30 years of age

Rates* of reported cases† of acute hepatitis B, by state or jurisdiction — United States, 2022

[Print](#)

◀ Figure 2.2

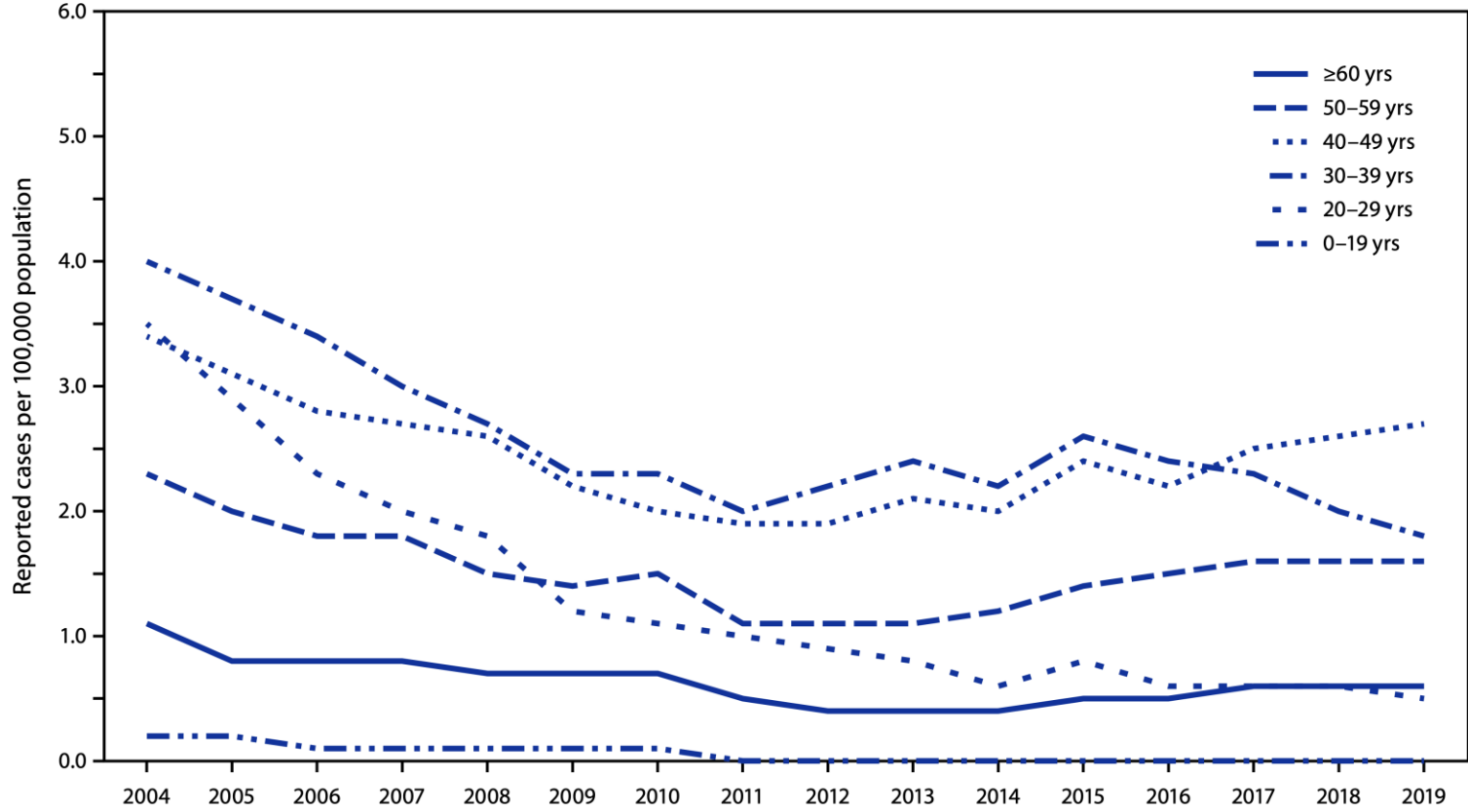
Figure 2.4 ▶



Cases per 100,000 population

- No reported cases (N)
- 0.0-0.1
- 0.2-0.3
- 0.4-0.5
- 0.6-1.1
- 1.2-3.0

FIGURE. Rates of reported acute hepatitis B virus infection, by age group — United States, 2004–2019



HOW SOMEONE CAN GET HEPATITIS B:

BLOOD

DIRECT BLOOD TO BLOOD CONTACT



Mother to child during birth



Tattoos, piercings, barbers, scarification, circumcision practices



Sharing needles

SEX

DIRECT CONTACT WITH SEXUAL FLUIDS



Household contact

Sharing hygiene equipment (razors, toothbrushes, earrings etc.)



Unsterile healthcare practices



Sexual transmission

There is a risk during any type of sexual contact

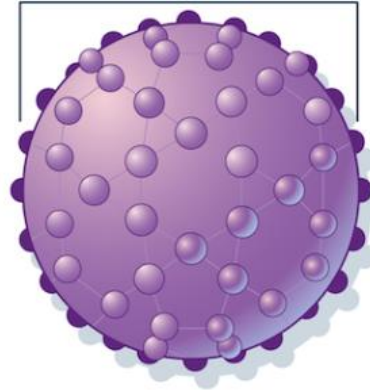
Risk of transmission

- Following a needlestick injury

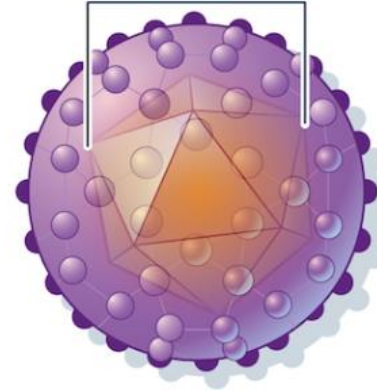
Pathogen	Risk of transmission
HBV	6 – 30% * Depending on source * Highest for HBsAg+ & HBeAg +
HCV	1.8%
HIV	0.3%

Intact Hepatitis B Virion (Dane Particle)

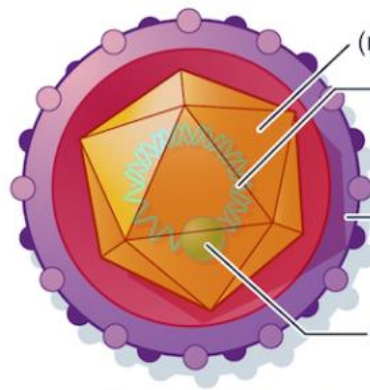
View of Outer Surface
Diameter = 42 nm



Transparent View of Core
Diameter = 28 nm



Exposed View of Core



Internal Cross-Sectional View

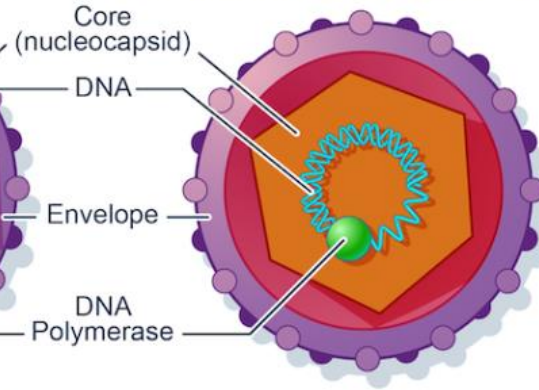
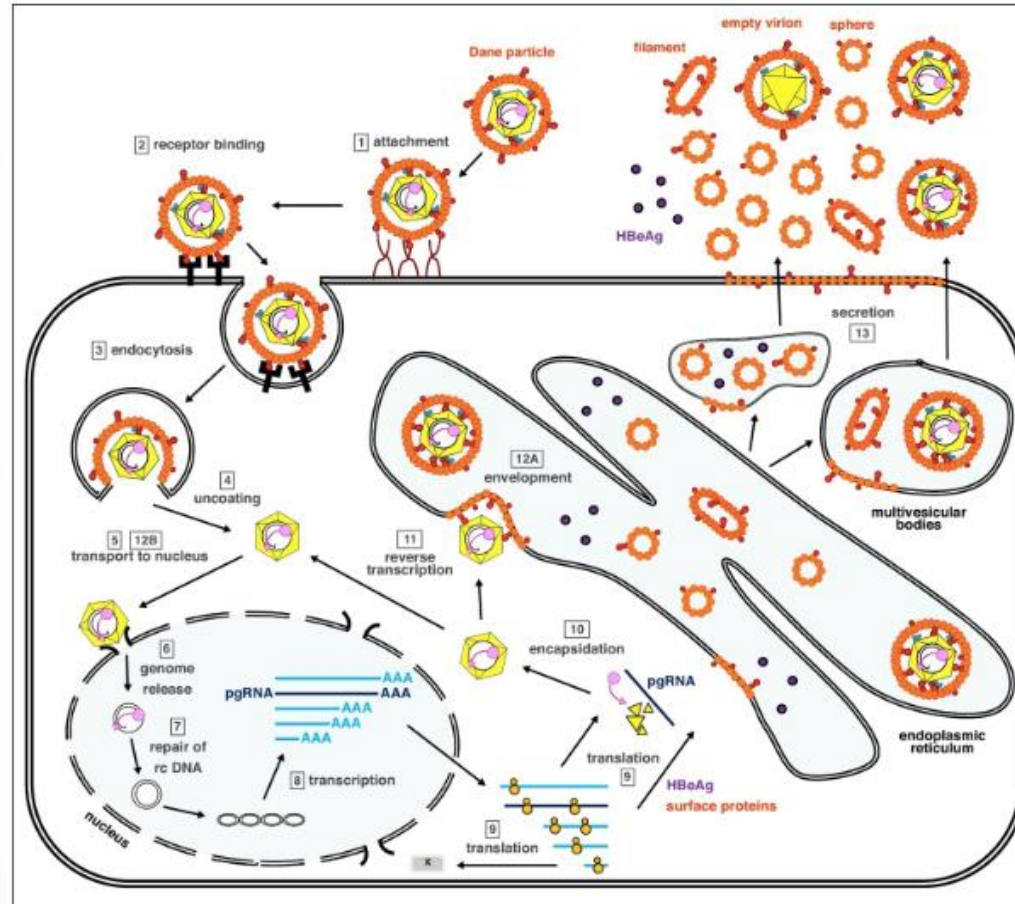


Figure 1 - HBV Intact Virion and HBV Antigens

Life Cycle



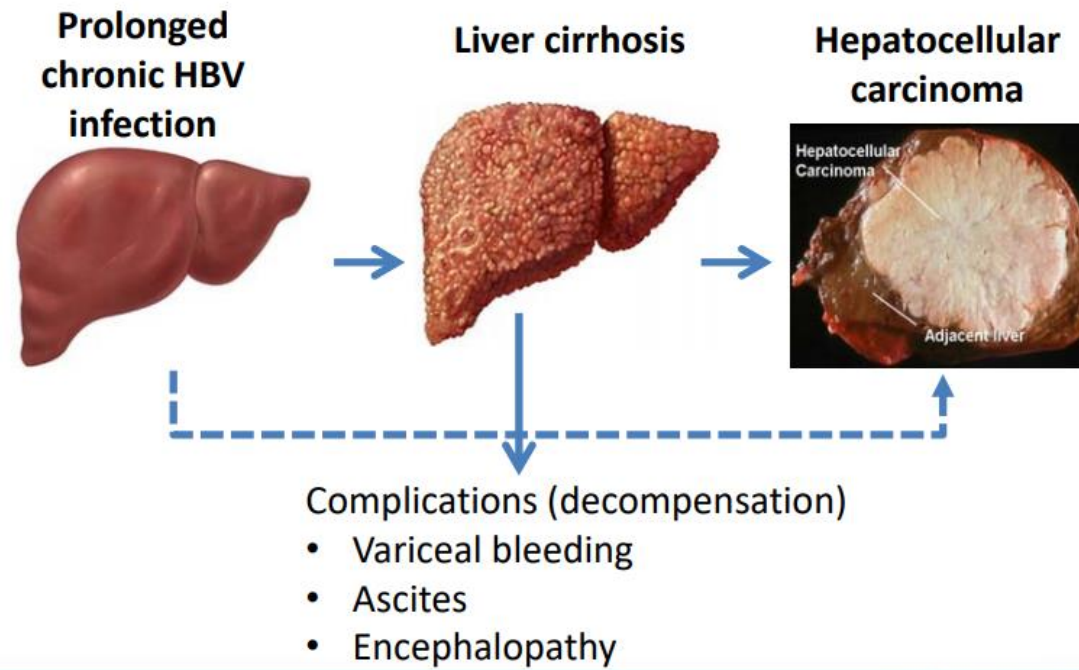
Establishment of Infection

- Removal of covalently linked polymerase
- Completion of positive DNA strand
- Formation of circular covalently closed DNA
- Association with histone and non-histone proteins to form a minichromosome

Clinical Features

- Acute Infection
 - Jaundice; RUQ Pain; Fever
 - Fulminant < 1%
- Chronic infection
 - Mostly asymptomatic
 - Congenital infection – high likelihood of chronic infection: 90%
 - Acquired infections in adult: 5%

Natural history of chronic hepatitis



Risk Factors for HCC

- Host Factors

- Cirrhosis
- Older Age
- Male Sex
- Family History of HCC
- Smoking
- Alcohol consumption
- DM
- Obesity
- Exposure to Aflatoxin

- Viral Factors

- High HBV DNA
- HBV genotypes C and B
- Positive HBeAg
- HBV mutations
- High HBsAg level
- Co-infection with HCV, HDV or HIV

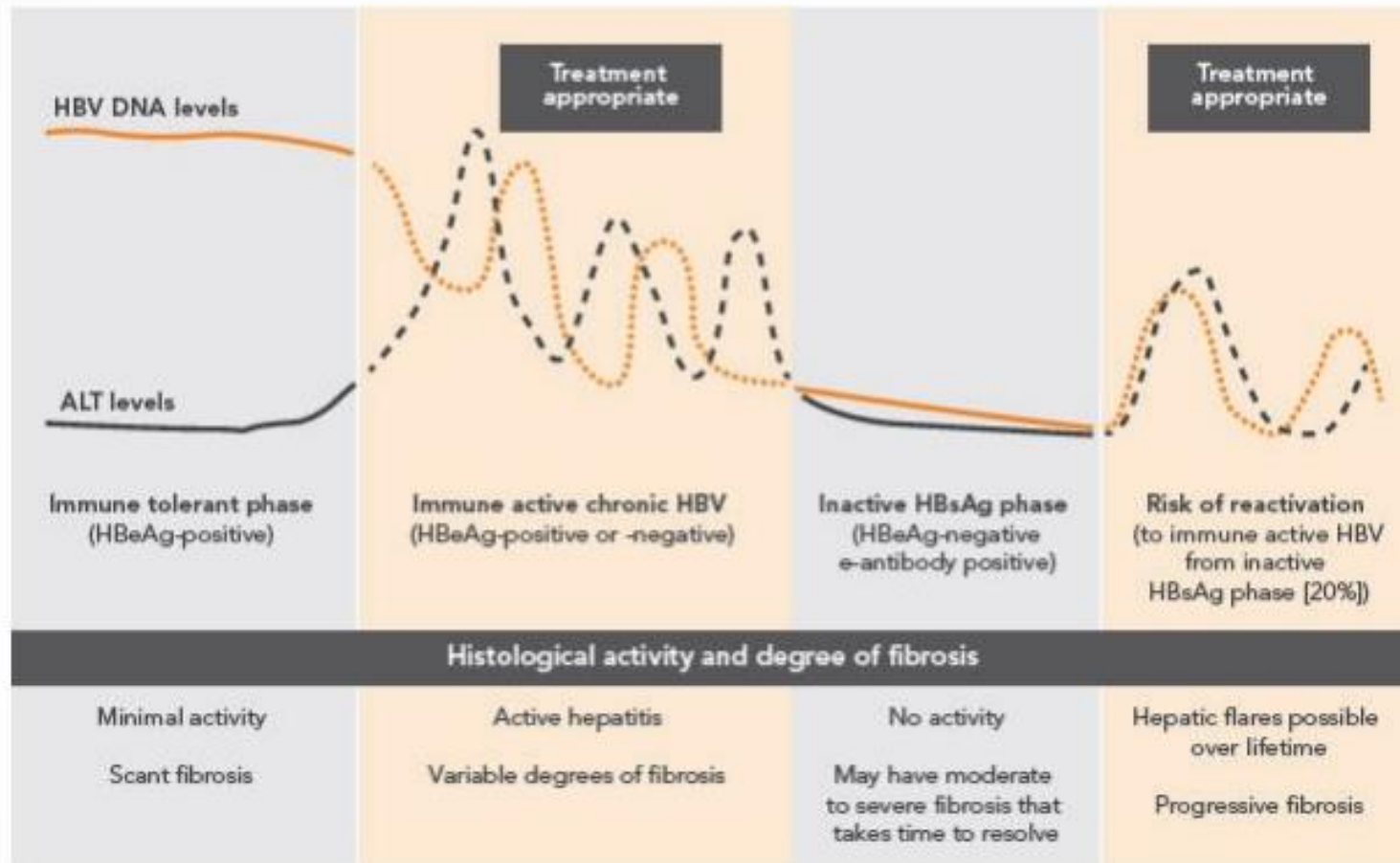
Serology Interpretation

HBsAg	Anti-HBs	IgM Anti-HBc	Total Anti-HBc	Interpretation
Negative	Negative	Negative	Negative	
Negative	Positive	Negative	Negative	
Negative	Positive	Negative	Positive	
Positive	Positive	Negative	Positive	
Positive	Negative	Positive	Positive	
Negative	Negative	Negative	Positive	

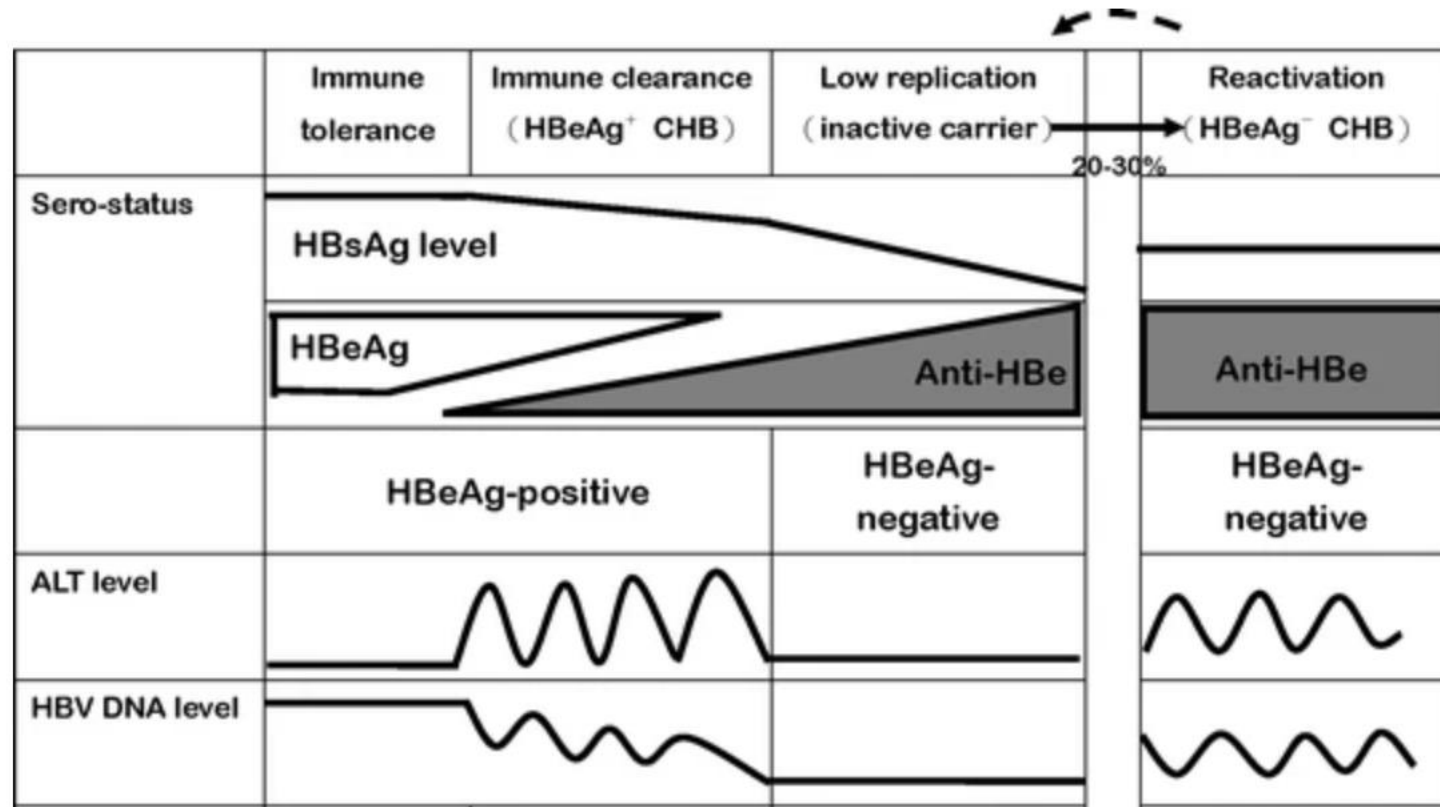
Natural History of Chronic Infection

Phase	Description	HBeAg	HBV DNA	HBsAg Level	ALT
Immune tolerance	<ul style="list-style-type: none"> • Vertical transmission • Immature immunity • High viral replication • Limited Liver injury 	+	Very high	High	Normal
Immune Clearance	<ul style="list-style-type: none"> • Usually in 3rd – 5th decade • Severity & Duration variable • Prolonged liver injury • Progressive fibrosis 	+	High	Moderate - High	Elevated

Phase	Description	HBeAg	HBV DNA	HBsAg Level	ALT
Inactive HBs Ag carrier state	<ul style="list-style-type: none"> • Inactive disease by immune control • Usually Good prognosis 	-	Low	Low - negative	Normal
Reactivation	<ul style="list-style-type: none"> • Significant viral load despite e Ag conversion • Immune control less likely • Prolonged liver injury 	- Rarely reverts to +	Moderate-High	Moderate	Elevated



Source: World Health Organization



Treatment

- Goal
 - Prevent cirrhosis / HCC / liver related mortality
- Target groups
 - Immune clearance: e Ag + / High DNA / High ALT
 - Reactivation: e Ag - / High DNA / High ALT
 - Cirrhosis / High DNA
 - Decompensation

Screening for HCC

- Risk groups
 - Cirrhosis
 - Asian males > 40
 - Asian females > 50
 - Family history of HCC
 - African / North American Blacks
- USG q 6 months

Prevention

State of Adult HepB Vaccination

- Vaccine coverage among adults with risk factors is suboptimal.
 - 33.0% among adults with chronic liver disease,
 - 38.9% among travelers to countries with endemic HBV,
 - 33.0% among adults with diabetes aged 19–59 years,
 - 67.2% among health care personnel
- Most commonly cited barriers to adult HepB vaccination:
 - 68% of physicians cited patients' nondisclosure of risk factors,
 - 44% felt there was inadequate time to routinely assess risk factors

Risk based screening

- Time consuming
- Poorly performed
- Underestimates real prevalence
- Fear of discrimination / legal retribution

Boudova et al. Open Forum Infectious Disease 2018; 5(3): ofy043
Waruingi et al. J Neonatal Perinatal Med 2015; 8(4): 371-8

Universal Hepatitis B Vaccination in Adults Aged 19–59 Years: Updated Recommendations of the Advisory Committee on Immunization Practices — United States, 2022

Mark K. Weng, MD¹; Mona Doshani, MD¹; Mohammed A. Khan, PhD¹; Sharon Frey, MD²; Kevin Ault, MD³; Kelly L. Moore, MD⁴; Eric W. Hall, PhD⁵; Rebecca L. Morgan, PhD⁶; Doug Campos-Outcalt, MD⁷; Carolyn Wester, MD¹; Noele P. Nelson, MD, PhD¹

"all adults aged 19–59 years should receive HepB vaccines"

Interventions

Applied Lessons from COVID-19 Vaccine Rollout



Marketing and Communications

Internal (staff) and external (general public) education



Broad awareness of Immunization Strategy Department



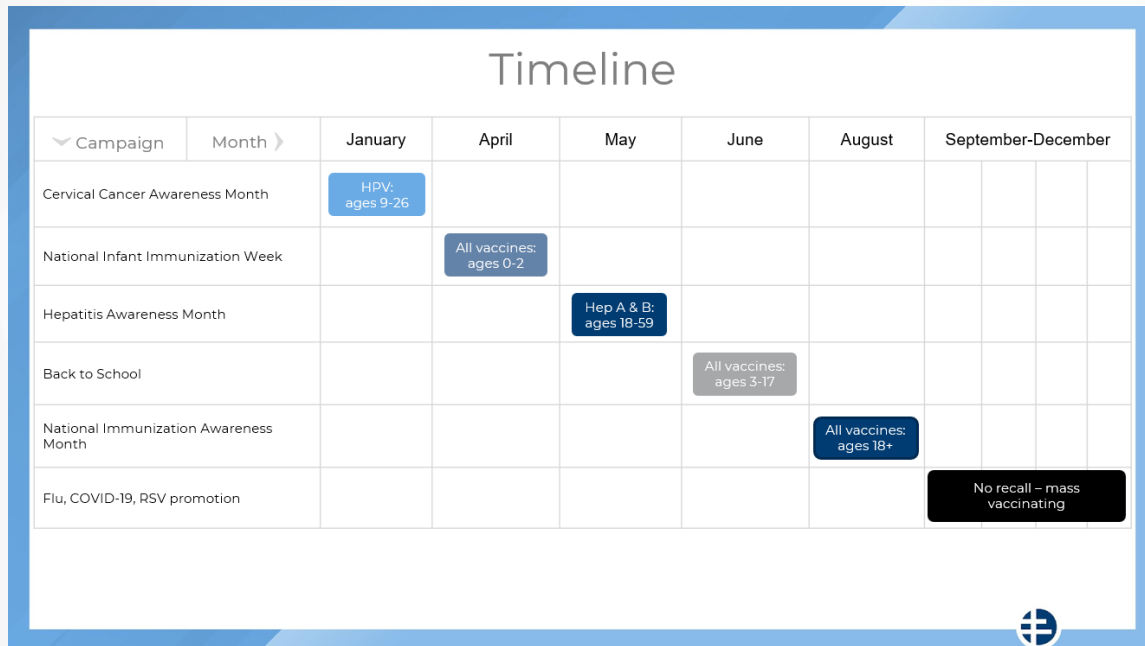
Close collaboration with executive leadership

Chief Physician and Nurse
Department VPs

Staff Education and Training

- Strong recommendation from provider – greatest motivator for vaccine acceptance
- Presumptive recommendation
 - “Seems like we’re tricking them.”
 - Personal Bias
 - Compare to other care they are recommending presumptively
 - “I ask all of my patients if they want their flu vaccine.”

Annual Reminder Process



- Explain barriers to improve immunization rates vs. other quality metrics
 - Lack of knowledge about low immunization rates
 - Mammo/Colorectal cancer screening not needed as frequently
 - Coordinated opposition
 - Myths and misconceptions
 - Comparing how many patients are overdue for vaccines vs. other quality metrics
 - Lack of notification when vaccines are overdue

National Hepatitis B Immunization Rates

Population	Immunization Rate
Adults 19 years and older with ≥ 3 doses	30%
Adults aged 19-49 years with ≥ 3 doses	40.3%
Adults 50 years and older with ≥ 3 doses	19.1%

Data as of 2018

July

Questions

Upcoming Webinar



Topic: COVID-19 101



Date/ Time: Thursday, July 18 at 2pm ET



Presenters: May Ann Yehl, DO, MBA, *AtlantiCare*

Questions?



Submit your questions using the **Q&A feature** at the bottom of the screen

