

Hepatitis B, Past, Present, Future Inaugural Canadian Hepatitis B Community Forum

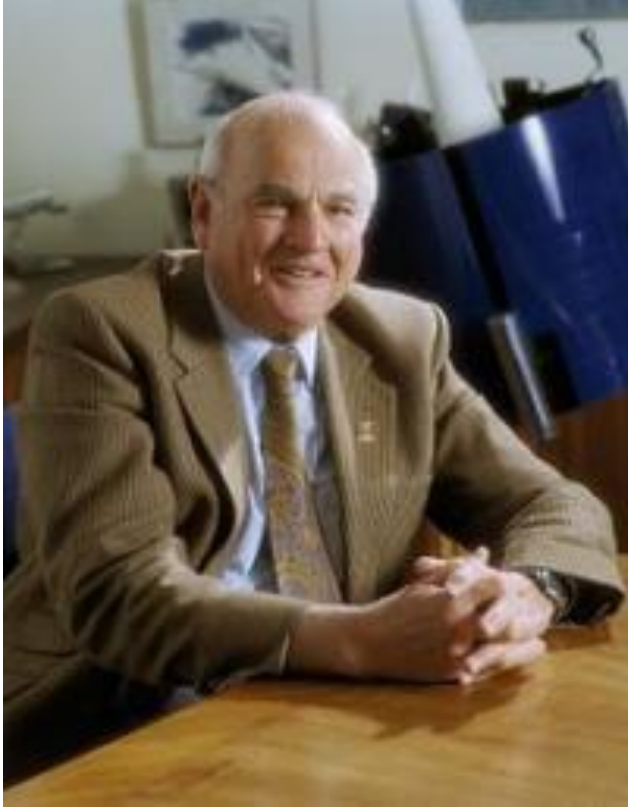
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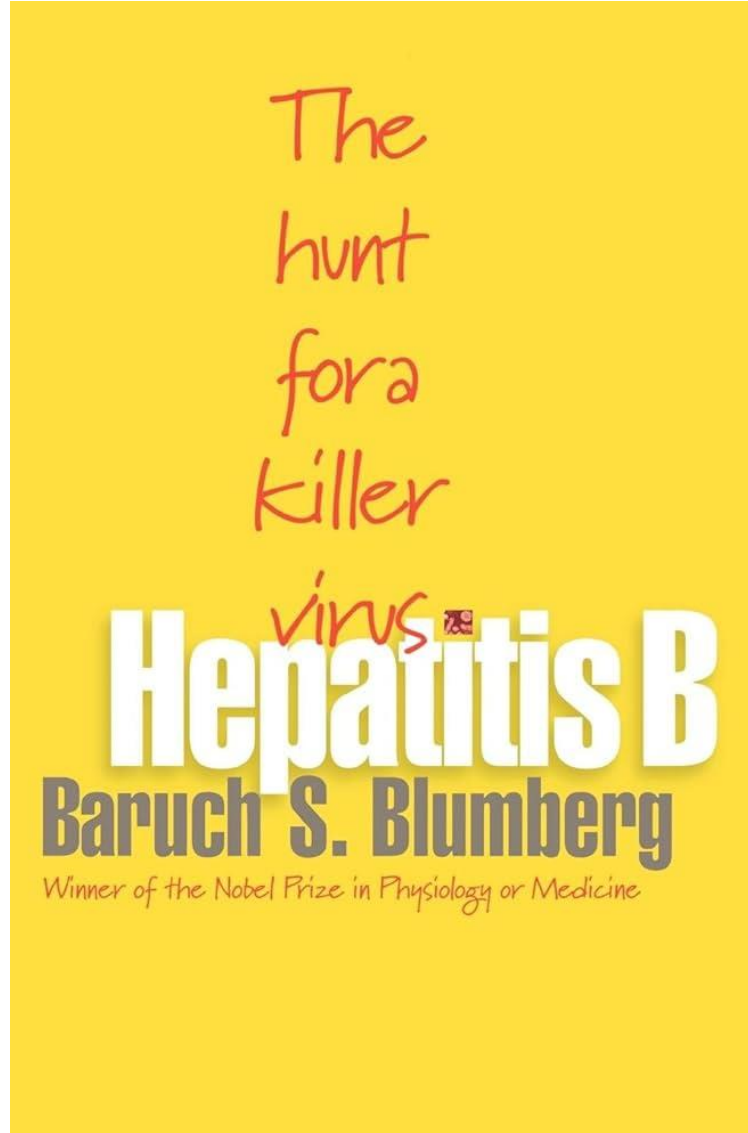
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The Past

Discovery of the Hepatitis B Virus



Dr. Baruch Blumberg (1925-2011)
Discovery HBV 1965
Winner Nobel Prize in Medicine



- Collected blood samples from around the world to study genetic traits
- "Accidentally" found a "protein" in the blood of an Australian Indigenous person
- Later identified it to be the "Hepatitis B Virus Surface Antigen" (*Australian Antigen*)
- Invented the 1st Hepatitis B Vaccine in 1969
 - >70% Decreased Rates of Liver Cancer in some Countries

Korean Mummy Found With Hepatitis B Virus

- **Virus discovered in the liver of a South Korean mummy**
 - **500-year-old child**
- **First time HBV ever been found in a mummified body**
- **The virus genome (*strain*) (genotype C) estimated to be 3000 - 10,000 years old**

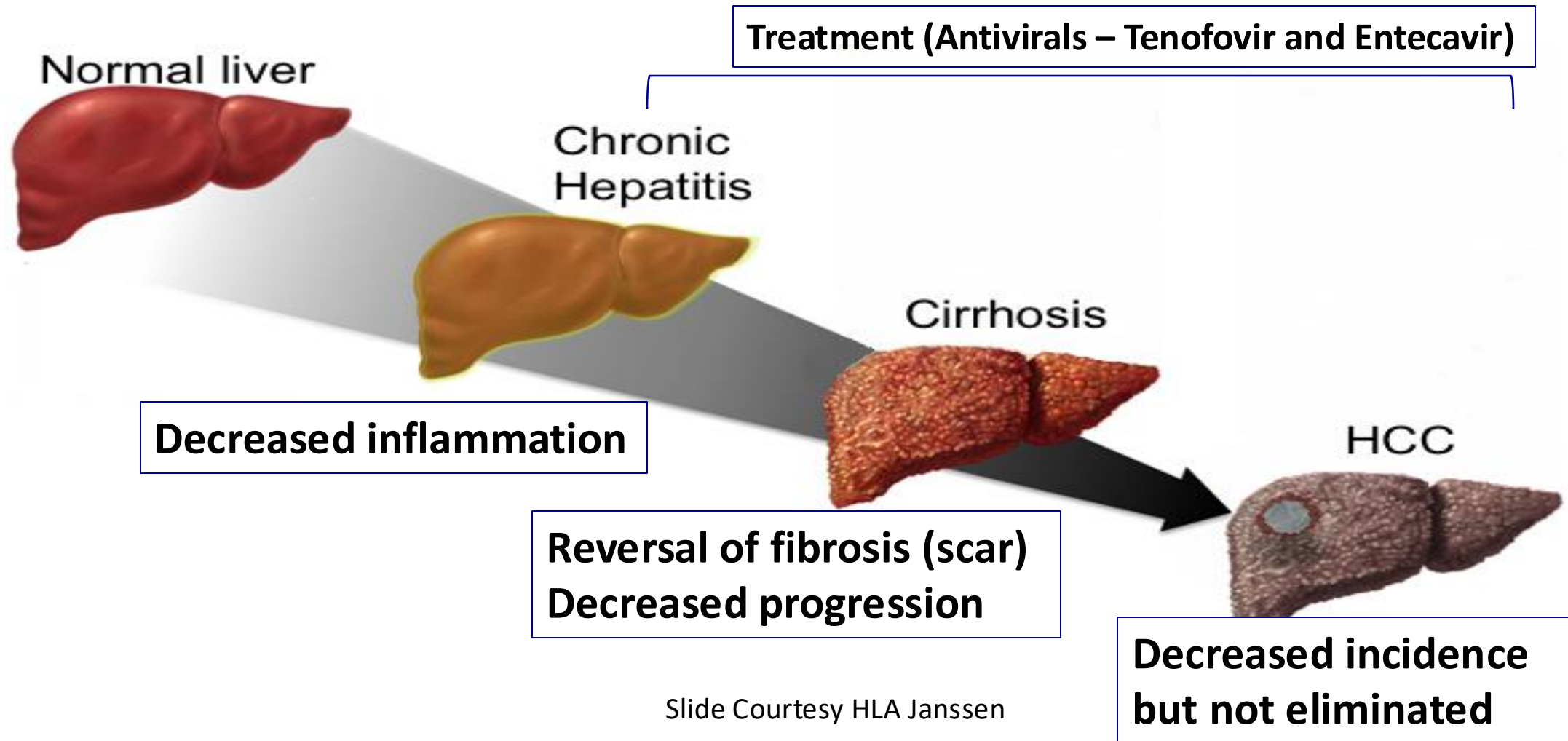




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The Present

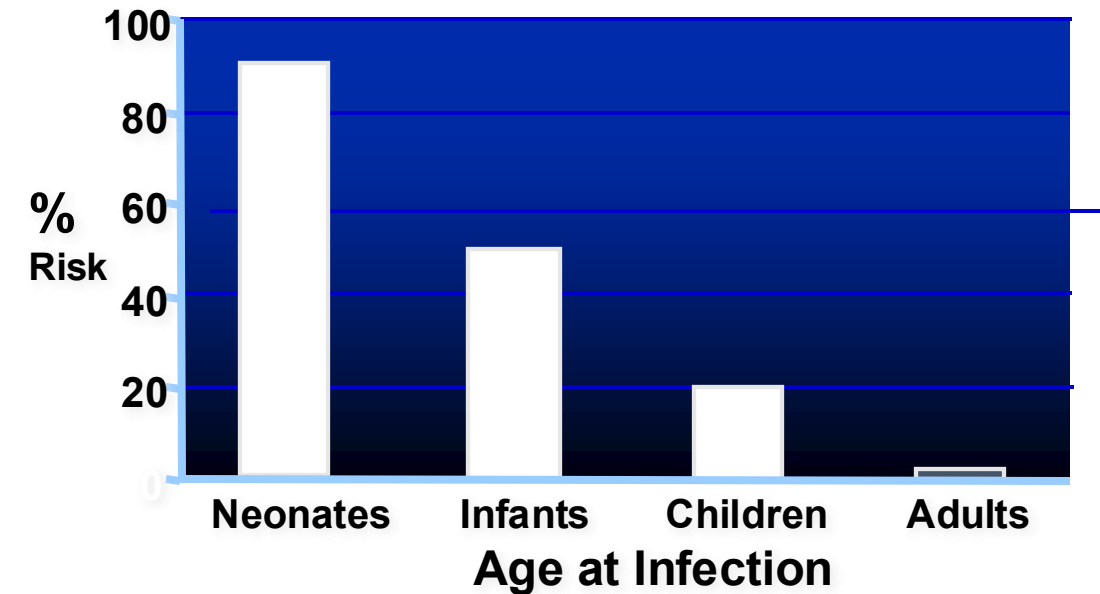
Hepatitis B Virus Can Cause Progressive Liver Disease and Liver Cancer



Slide Courtesy HLA Janssen

The Hepatitis B Vaccine is the 1st Cancer Vaccine and should be given as soon as possible after Birth:

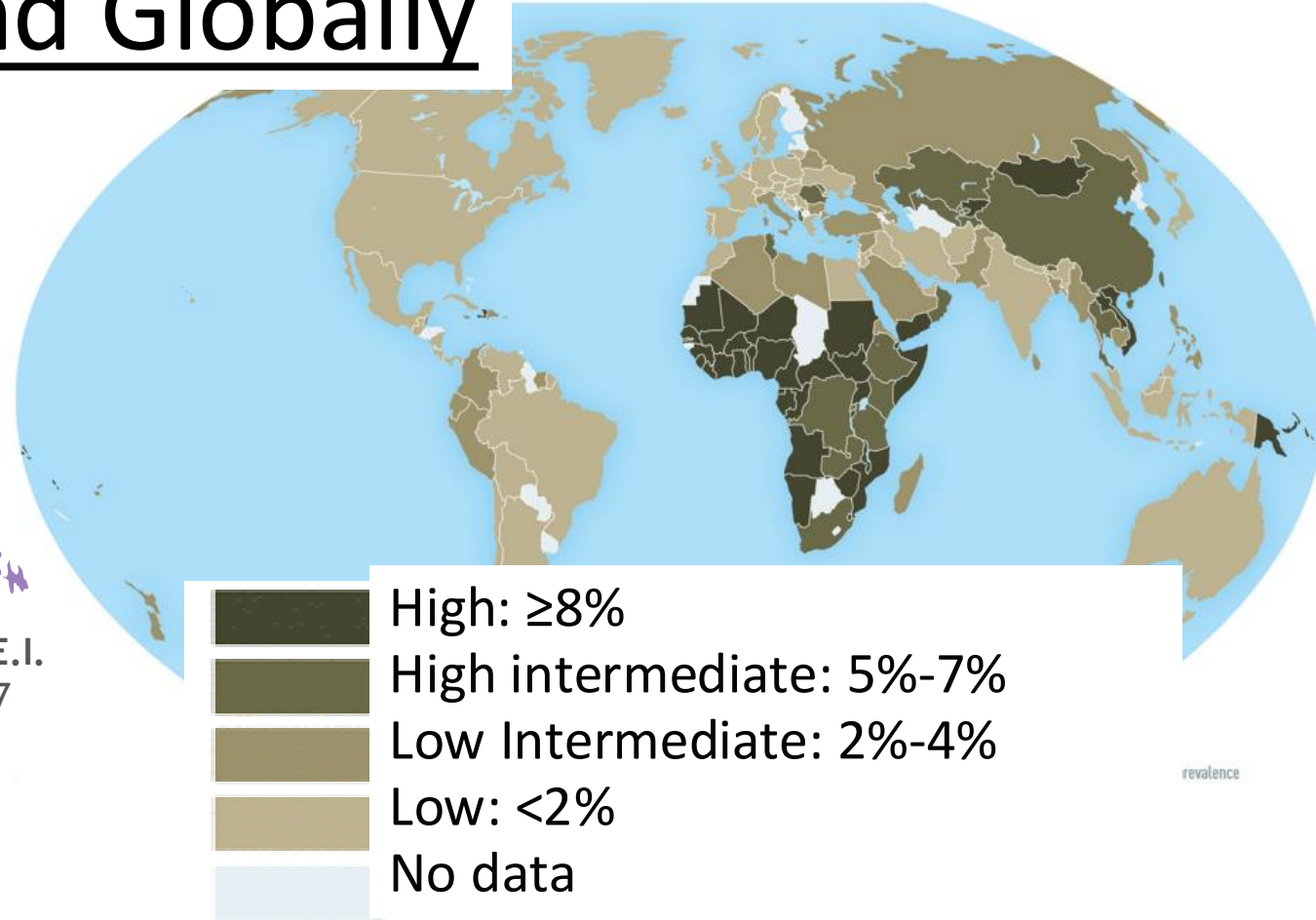
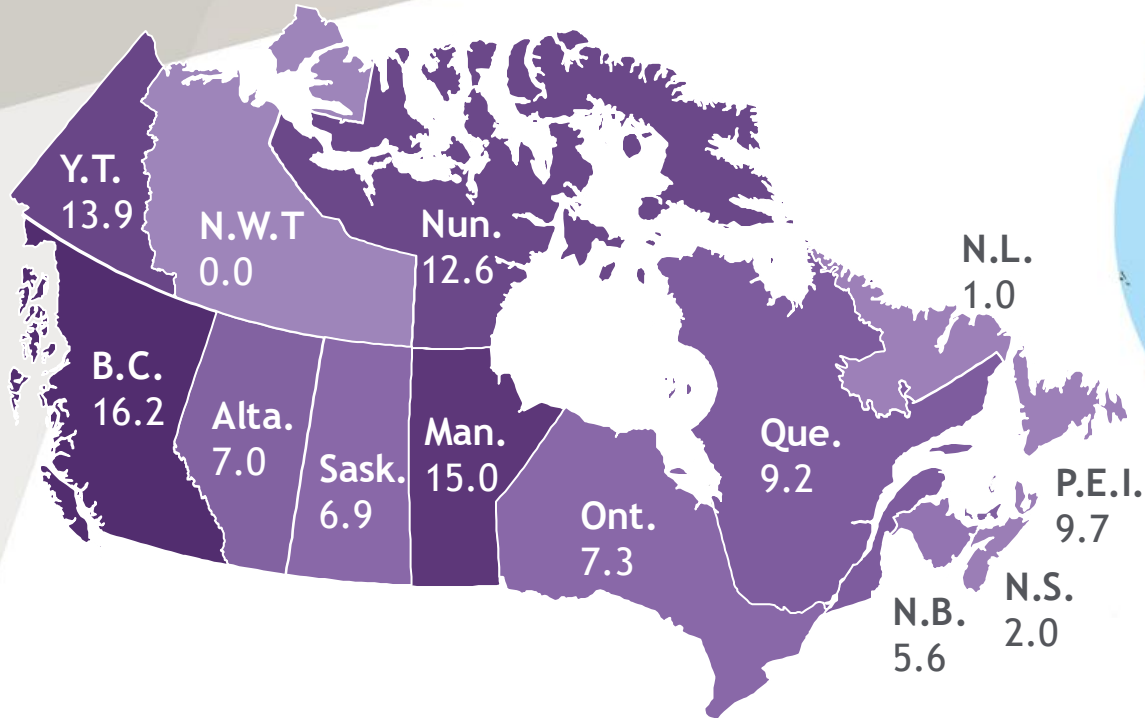
HBV Vaccine Timing in Canada 	Birth ✓	2 months →	Pre-Adolescence X
Province or Territory	NU, NT, NB	BC, AB, QC, PEI, YT	SK, MB, ON, NS, NL



There is no cure for
Hepatitis B
“An Ounce of Prevention
is Worth a Pound of
Cure”

- **Greatest Risk in Infants and young children**
 - 80-90% < 1 year
 - 30-50% < 6 y
 - <5% otherwise healthy teens or adults (maybe even <1%)

Hepatitis B in Canada and Globally



- 250,000 Canadians



1.5 million new HBV infections per year
260 million people infected
2 billion people are anti-HBc positive
<10% treated

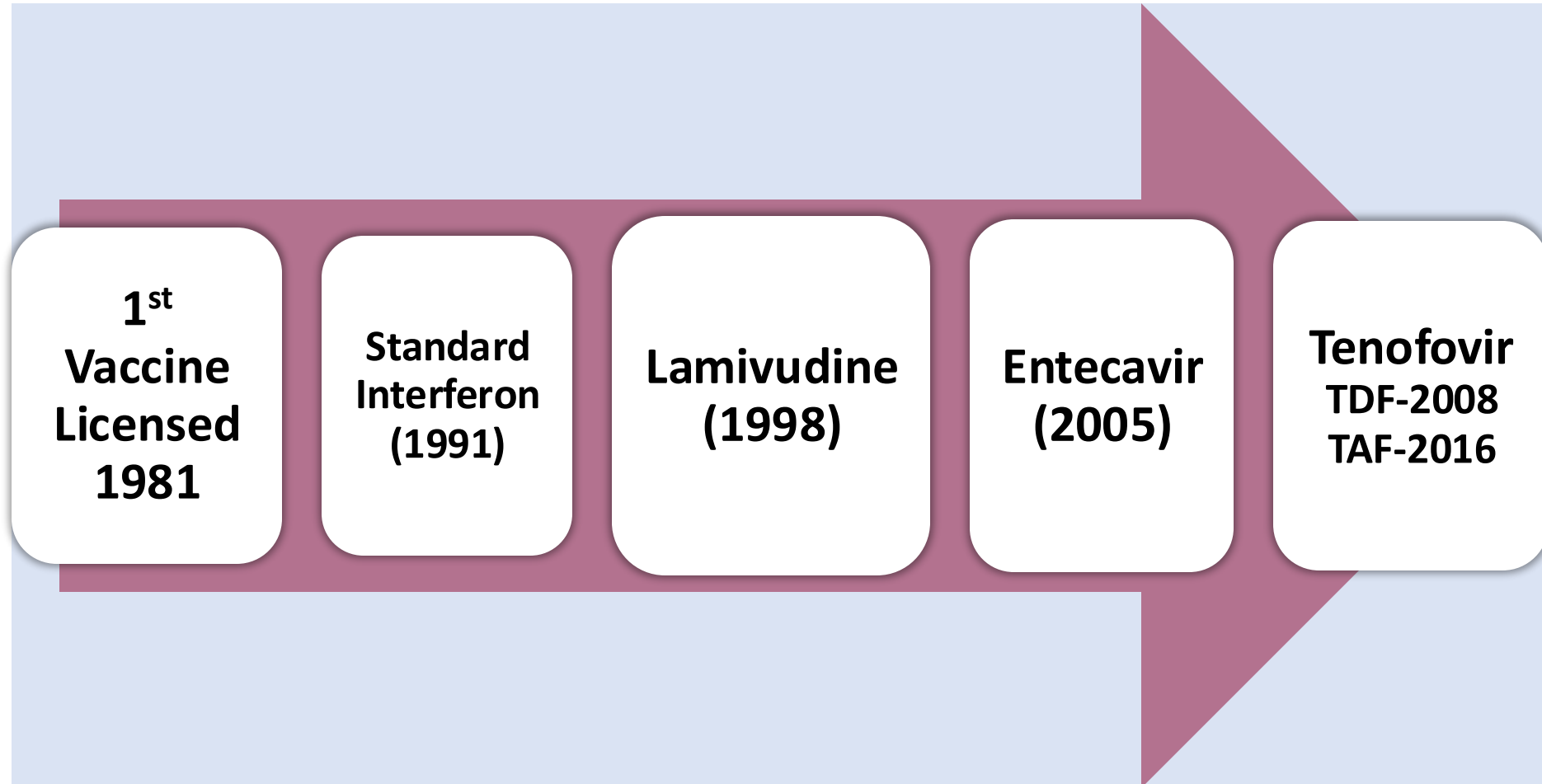
Argument for Universal HBV Screening:

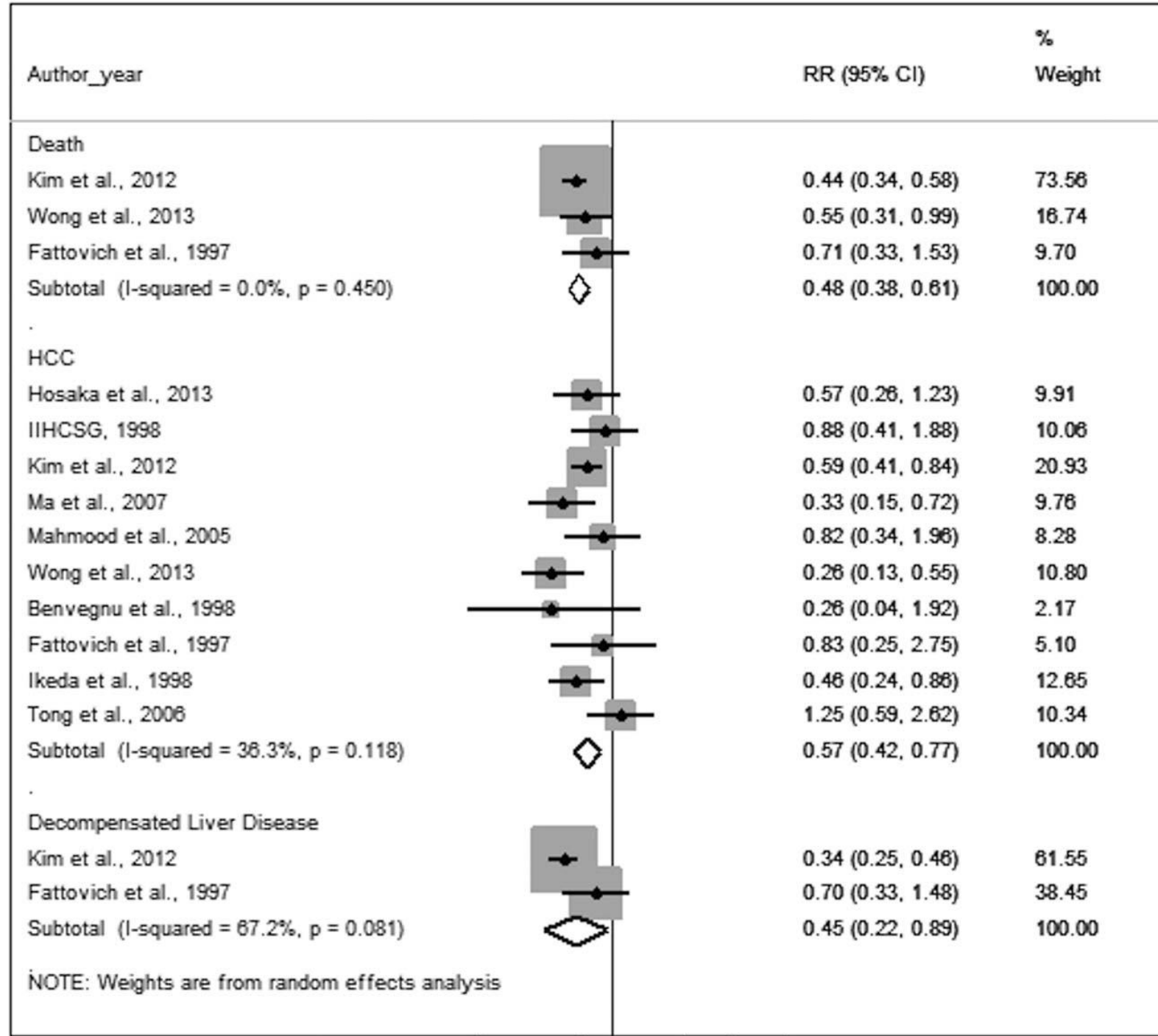
- Up to 30% of people with HBV do not fall into known risk groups
- Current screening guidelines are not always followed due to complexity
- 40% of Canadians are living with HBV and don't know it

Testing is the only way to identify *all* with asymptomatic infection that might benefit from treatment to reduce liver disease and liver Cancer



Timeline in Hepatitis B Care 1981-Present





Benefits of Long-Term Antiviral Therapy:

Clinical outcomes for observational studies comparing treatment vs. no treatment in 59,201 with “immune active” HBV infection:

Lower death, liver cancer and decompensated liver disease

-Generic HBV drugs cost about \$2200 per year! With Alberta blue cross co-pay \$1200 per / year
(Only \$200/year other countries)

Message from the Chair “Canada relies on a confusing patchwork of over 100 public prescription drug plans and over 100,000 private plans—with a variety of premiums, copayments, deductibles and annual limits”

Dr. Eric Hoskins



cmajOPEN

Research

Variable access to antiviral treatment of chronic hepatitis B in Canada: a descriptive study

Stephen E. Congly MD MSc, Mayur Brahmania MD MPH

Tenofovir and Entecavir not covered

 Government of Canada / Gouvernement du Canada

A PRESCRIPTION FOR CANADA: ACHIEVING PHARMACARE FOR ALL

Final Report of the Advisory Council on the
Implementation of National Pharmacare

June 2019



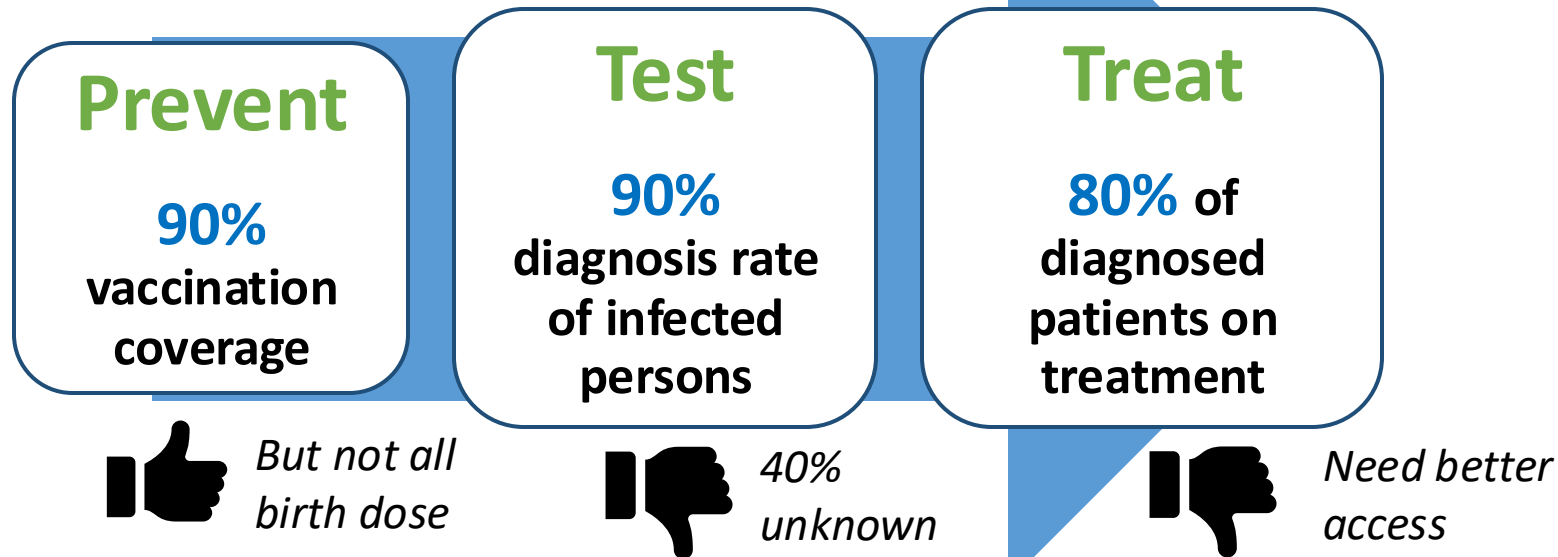
 Canada



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The Future

World Health Organization HBV Elimination Goals



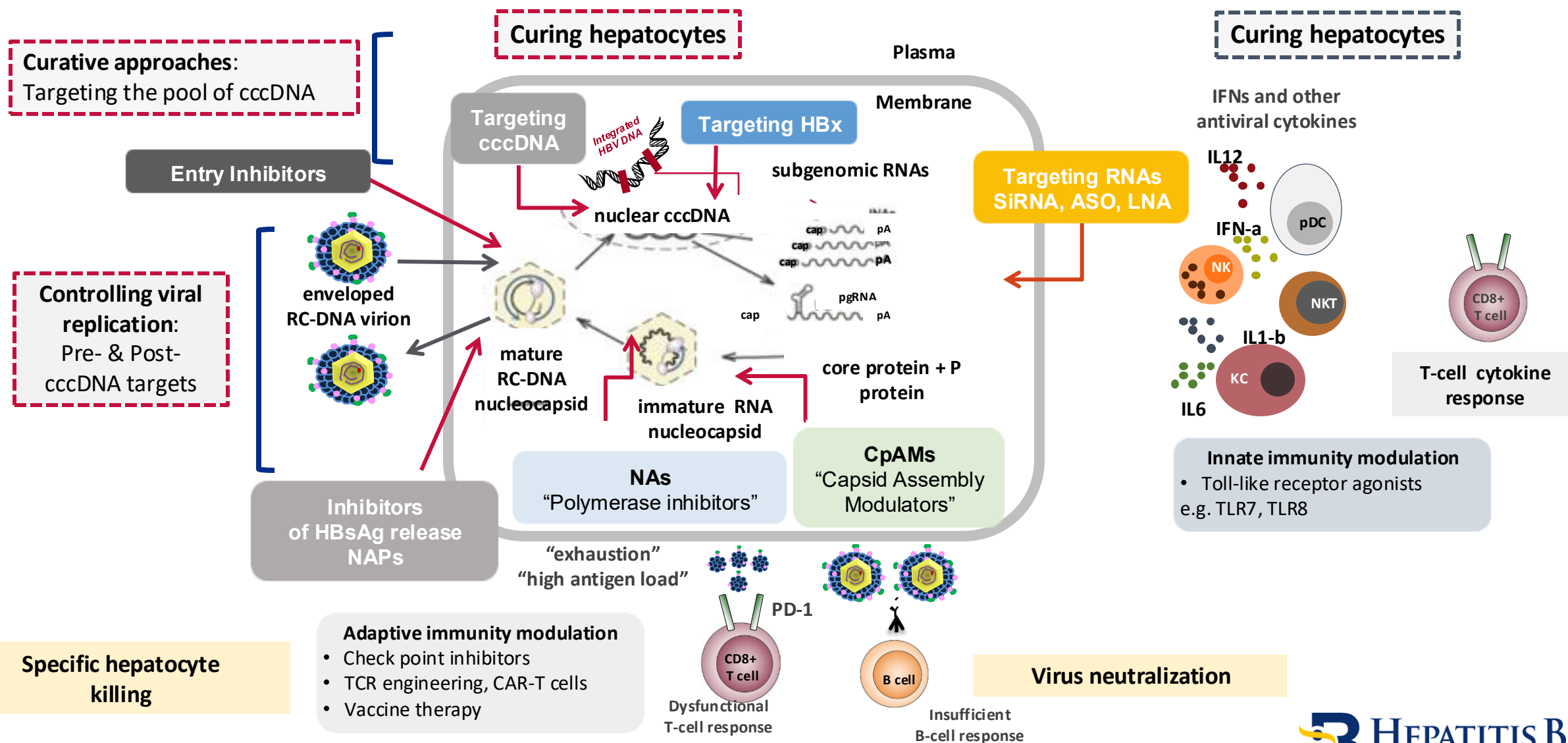
World Health Organization (WHO) Goals for HBV Elimination by 2030

- Reduce **new infections** by **90%**
- Reduce **mortality** by **65%**

Clinical Trials: Timelines for HBV Cure?



Emerging Treatment Targets for HBV – Stay Tuned



Conclusion – Hepatitis B Past, Present and Future

- Hepatitis B IS a Major Global Health Problem and in Canada
- WHO Global Targets:
 - Universal birth dose HBV vaccination – *The 1st shot is the most timely*
 - Increase screening, linkage to care – *You should know if you have hepatitis B*
 - Culturally appropriate public education and awareness
- Safe and effective therapies reduce liver disease risk and cancer
 - **Need to improve access to life-saving treatments**

THERE is HOPE for a Hepatitis B Cure

Thank you!

