Hepatitis B immunization in WHO European Region

Viral Hepatitis Prevention Board

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WHO Regional Office for Europe
Hepatitis B burden in WHO European Region

- 13 mln people live with chronic hepatitis B\(^1\)
- 60,000 people die due to hepatitis B infection annually\(^2\)

\(^1\)V.D. Hope et al. / Epidemiol. Infect (2013) 1-17
\(^2\)Global Disease Burden Estimate 2010, 2012
Deaths due to selected vaccine preventable diseases, WHO European Region, 2012*

- Hepatitis B: 3281
- Cervical cancer: 8600
- Streptococcus pneumoniae: 15100
- Haemophilus influenzae: 27984
- Rotavirus: 600878
- Pertussis: 326
- Tetanus: 39

*Hepatitis B deaths - 2010
WHO position on Hepatitis B vaccine (2009)

- In all regions of the world, all infants should receive the first dose of HepB as soon as possible (<24 hours) after birth. This should be followed by two or three doses to complete the series.

- Timely delivery of HepB birth dose (<24 hours) should be performance measure for all immunization programmes.
Hepatitis B immunization policy, WHO European region

- Universal newborns (26 countries)
- Universal infants (18 countries)
- Universal children/adolescents (3 countries)
- Selective newborns and/or risk groups (6 countries)

Source: 2013 JRF
HepB-3 coverage, WHO European Region, 2013

>90%
80-90%
<80%
No universal immunization / no reports

Source: 2013 JRF
Hepatitis birth dose coverage, 2013

Source: 2013 JRF
Unfinished agenda: universal vaccination

• 6 countries with low endemicity vaccinate high risk groups only

• Issues with risk group vaccinations:
  – substantial part of risk groups individuals are not reached; or reached when already infected
  – changing hepatitis B epidemiology due to migration – increasing horizontal or sexual transmission

Challenges: prevention of parenteral transmission

- 21 countries implement universal children vaccination:
  - Lack of evidence on completeness of screening of pregnant women
  - Unclear follow-up immunization of infants (2-nd and 3-d doses)
Challenges: Hepatitis B vaccine coverage

• Most countries in the European region have achieved >90% immunisation coverage, BUT...
  – Timely provision of immunisation is a problem in several countries
  – Discrepancies between reported and survey data exist
  – National data often hides under-performing districts and low coverage in vaccine hesitant and hard to reach populations
JRF versus DHS coverage
KGZ and TJK, 2012

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<td>DTP 3</td>
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<td>Hep B birth dose</td>
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“A European Region free of vaccine-preventable diseases, where all countries provide equitable access to high-quality, safe, affordable vaccines and immunization services throughout the life course.”
European Vaccine Action Plan: Goals

- Sustaining polio-free status
- Eliminating measles and rubella
- Controlling hepatitis B
- Meeting regional vaccination coverage targets
- Making evidence-based decisions on introduction of new vaccines.
- Achieving financial sustainability of national immunization programmes.
European Vaccine Action Plan: Objectives

- All countries commit immunization as a priority
- Individuals understand the value of immunization services and vaccines and demand vaccination
- The benefits of immunization are equitably extended to all people through tailored, innovative strategies
- Strong immunization systems are an integral part of a well-functioning health system
- Immunization programmes have sustainable access to predictable funding and high-quality supply
2009 WHO position statement

- All regions/associated counties should develop goals for HBV control appropriate to their epidemiologic situations.

- Control goals essential for regions and countries with intermediate/high endemicity of HBV infection or significant subpopulations with these levels of infection.

- Serologic surveys of HBsAg serve as primary tool to measure impact of immunization and achievement of the control goals supplemented by acute disease surveillance and mortality data.
Regional hepatitis B control goals

WHO Western Pacific Region

- **2005**: reducing chronic HBV infection rates (as measures by HBsAg seroprevalence) among children aged five years to less than 2% by 2012

WHO Eastern-Mediterranean Region

- **2009**: reduction in prevalence of chronic hepatitis B virus infection to less than 1% among children below 5 years of age by 2015, if they have not yet done so
WHO EURO Working Group on Establishment of Regional Hepatitis B Control Goal

Members

• Pierre Van Damme
• Mark Kane
• Daniel Shouval
• Selim Badur
• Paolo Bonanni
• Liudmila Mosina

Meetings

• 3 October 2014
• February 2015
EUROPEAN HEPATITIS B CONTROL VISION:

All children in the WHO European region will be hepatitis B free
European Regional Hepatitis B Control Goal 2016-2020

• First Milestone: Prevalence of HBsAg in children 5-10 yrs 0.5% or lower by serosurvey by 2020

• Universal sustainable immunization in all countries with 95% HB-3 coverage at national level

• Universal newborn immunization (<24 hours of birth) or effective universal screening of pregnant women and post exposure prophylaxis of carrier children
Conclusion

• Significant progress achieved in prevention of HBV transmission through universal immunization, however challenges remain

• European Vaccine Action Plan provides opportunities and strategies to:
  – increase / sustain high hepatitis B coverage
  – establish regional hepatitis B control goal and verify its achievement