

Subnational immunization programmes in Belgium - Focus on hepatitis B

Ingrid Morales - French community of Belgium

VHBP country meeting

Brussels, 7th november 2017



Immunization: Background

- Children's (0-18yrs) immunization programs are managed in Belgium by the Flemish and French Communities. The German community established an agreement with the latter.
- The immunization programmes follow advices of the National Immunization Technical Advisory Group (NITAG) - Superior Health Council
- With multiple supply sources of equal quality vaccines available in Belgium, competitive bidding is used as procurement mechanism.
- Until 2014, the federal government co-financed vaccines procurement. The 6th state reform transferred this resource to the Communities.
- A 1958 federal legislation makes polio vaccination the only mandatory in infants
- in the French community, immunizations for 7 diseases (DTPa-IPV+Hib ; MMR) are required to attend child-care centers.

French community imm. schedule

CALENDRIER DE VACCINATION 2018

Recommandé par la Fédération Wallonie-Bruxelles

	Nourrissons					Enfants et adolescents				Adultes		
	8 sem. 2 mois	12 sem. 3 mois	16 sem. 4 mois	12 mois	15 mois	5-6 ans	11-12 ans	13-14 ans	15-16 ans	♀	tous les 10 ans	65 ans
Polio	●	●	●		●	●			●	●		
Diphtérie	●	●	●		●				●	●	▲	
Tétanos	●	●	●		●				●	●	▲	
Coqueluche	●	●	●		●				●	●		
<i>Haemophilus influenzae</i> de type b	●	●	●		●				●	●		
Hépatite B	●	●	●		●				●	●		
Rougeole				●			●					
Rubéole				●			●					
Oreillons				●			●					
Méningocoque C					●							
Pneumocoque	●		●	●								▲
Rotavirus (vaccin oral)	▲	▲	(▲)									
Papillomavirus (HPV)								✖				
Grippe (Influenza)												▲

Ce calendrier est susceptible d'être modifié au fil des ans. Votre médecin pourra éventuellement l'adapter à votre enfant, n'hésitez pas à discuter vaccinations avec lui.

Certains de ces vaccins peuvent être conseillés à d'autres âges, en fonction de l'état de santé individuel.

- Recommandé à tous et gratuit
- ▲ Recommandé à tous, remboursé mais pas gratuit
- Vaccin combiné (une seule injection)
- ✖ Recommandé aux jeunes filles et gratuit (2 doses)
- ♀ Femmes enceintes entre 24 et 32 semaines de grossesse



Legal framework

- The Office of Birth and Childhood (ONE), is a public institution that develops and implements mother and child health policies in the French community,
-
- ONE is responsible for the immunization program of children, students and also the pertussis immunization of pregnant women following the 6th Belgian State Reform (Law of January 6th 2014, coming into effect from January 2015) .
- The school health promotion is regulated by two (2001 and 2002) decrees that define its missions, in particular immunization. School medicine is also organized by ONE.

Main vaccinators

- The **ONE Well baby clinics** offer free of charge immunizations, preventive medicine and children's development follow-up.
- **School health services (SHS)** - offer free of charge immunizations and preventive medicine.
- **Antenatal consultations**, doctors, midwives and nurses administer pregnant women pertussis immunization, free of charge, within ONE's antenatal consultations.
- **Private physicians** can order the program's vaccines. Vaccines are free of charge but consultation fees should be paid.
- **Miscellaneous:** Hospitals, institutions, can also order vaccines free of charge through the immunization program supply system (e-vax).
- **Mobile ONE baby clinics** reach remote areas of the French community .

Notice

A vaccination board with representatives of all vaccinators support implementation

The vaccines supply system is linked to a vaccination registry : **e-vax.be** (FR)

Hepatitis B immunization in Belgium

1996 - Recommended and partially funded for children under 13 yr.

1999 (September) – Universal, free-of-charge vaccination

-monovalent vaccine

-two cohorts programme :

- infants → from 3m: 2 doses 1st year of life + 1 dose 2nd year
- preadolescents → 10-13 years catch-up

2002/2004 – schedule amendment

- from 2 months of age

- catch up in 4-11 years in case of incomplete immunization

2004- introduction of hexavalent combination vaccine

-schedule: 2,3,4 and 15 months and catch up for old cohorts at 10-13y

Infants immunization coverage - French community

		Wallon Region			Brussels
Study conducted in		2009	2012	2015	2012
Birth Year		2007	2010	2013	2010
Age at interview		18-24 months			
Number interviewed		660	660	715	600
Infants Vaccines	DTPa-Polio (4 doses)	90.4 (87.9-93.0)	90.4 (87.8-92.9)	92.9 (90.7-95.0)	91.1 (88.7-93.5)
	Hib (4 doses)	90.2 (87.7-92.8)	89.4 (86.8-92.1)	92.7 (90.5-94.9)	90.1 (87.6-92.7)
	HBV (full schedule)	90.4 (87.9-93.0)	89.2 (86.5-91.9)	92.3 (90.1-94.5)	89.6 (87.0-92.2)
	Pnc (3 doses)	80.7 (76.9-84.4)	89.2 (86.5-91.9)	92.9 (90.7-95.0)	90.1 (87.6-92.7)
	MMR (1 dose)	92.4 (90.2-94.6)	94.4 (92.4-96.4)	95.6 (93.9-96.4)	94.1 (92.1-96.1)
	MenC (1 dose)	91.2 (88.7-93.7)	89.6 (87.0-92.2)	91.2 (88.8-93.6)	89.4 (87.0-92.2)
	Rotavirus (2 doses)	77.3 (77.3-81.0)	80.2 (76.7-83.6)	87.2 (84.4-90.0)	72.7 (68.9-76.4)

School age immunization coverage – French community

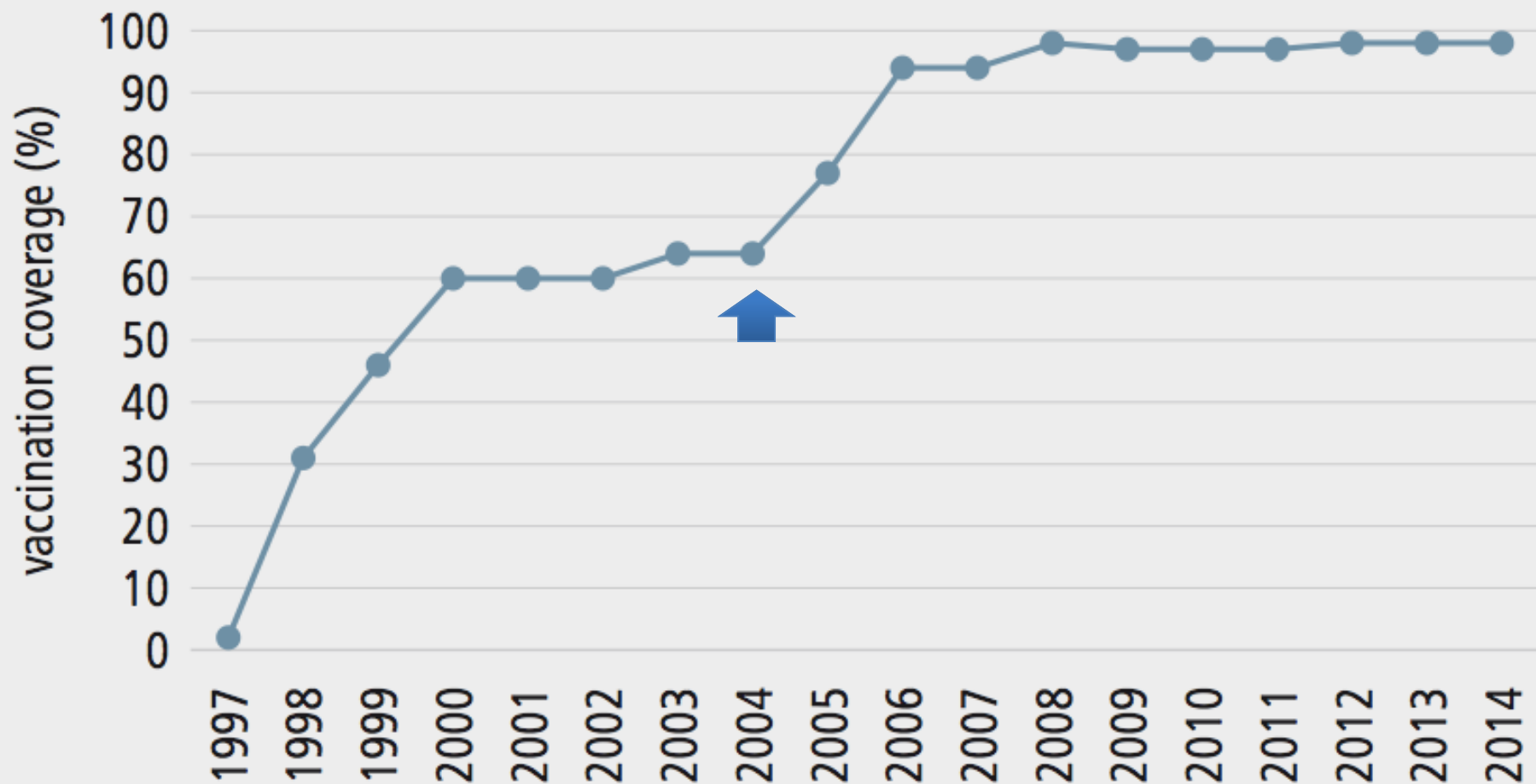
French speaking community (Wallonia and Brussels)									
Study conducted in		2013-2014		2014-2015		2015-2016		2016-2017	
Age at interview		15-16 years		7-8 years		11-12 years		13-14 years	
Number interviewed		7500		4794		5300		Not yet published	
School Age Boosters	Polio (5-6 years)	Not measured	X	73.3 (72.1-74.5)		X	X		
	DT/DTPa (5-6 years)	X		73.3 (72.1-74.5)		X	X		
	MMR 2 (11-12 years)	X		X	75.0 (73.8-76.2)		Not yet published		
	HPV (13-14 years)	25.9 (24.5-27.3)		X			X	Not yet published	
	dTap (15-16 years)	53.4 (52.3-54.5)		X			X	X	

Hepatitis B Vaccine coverage in the French speaking community

		Wallon Region				Brussels		
Study conducted in		2003	2006	2009	2012	2015	2006	2012
Birth Year		2001	2004	2007	2010	2013	2004	2010
Age at interview		18-24 months						
Number interviewed		935	660	660	660	715	650	600
Infants Vaccines	Hepatitis B (I)	80.2 (75.5-84.8)	97.6 (96.2-98.9)	98.8 (97.6-99.8)	98.1 (96.9-99.3)	99.1 (98.3-99.9)	97.6 (96.3-99.0)	96.7 (95.1-98.3)
	Hepatitis B (II)	77.4 (72.7-82.8)	97.2 (95.7-98.6)	98.8 (97.6-99.8)	97.2 (96.2-98.8)	98.7 (97.7-99.7)	97.6 (96.3-99.0)	96.8 (95.4-98.3)
	Hepatitis B (III)	64.8 (60.2-69.3)	97.0 (95.4-98.5)	96.9 (95.4-98.4)	97.2 (96.2-98.8)	98.2 (97.0-99.3)	96.7 (95.1-98.2)	96.3 (94.7-97.9)
	Hepatitis B (IV)	Not recommended at the time	92.7 (90.2-94.8)	90.4 (87.9-93.0)	89.2 (86.5-91.9)	92.3 (90.1-94.5)	88.4 (85.6-91.2)	89.6 (87-92.2)

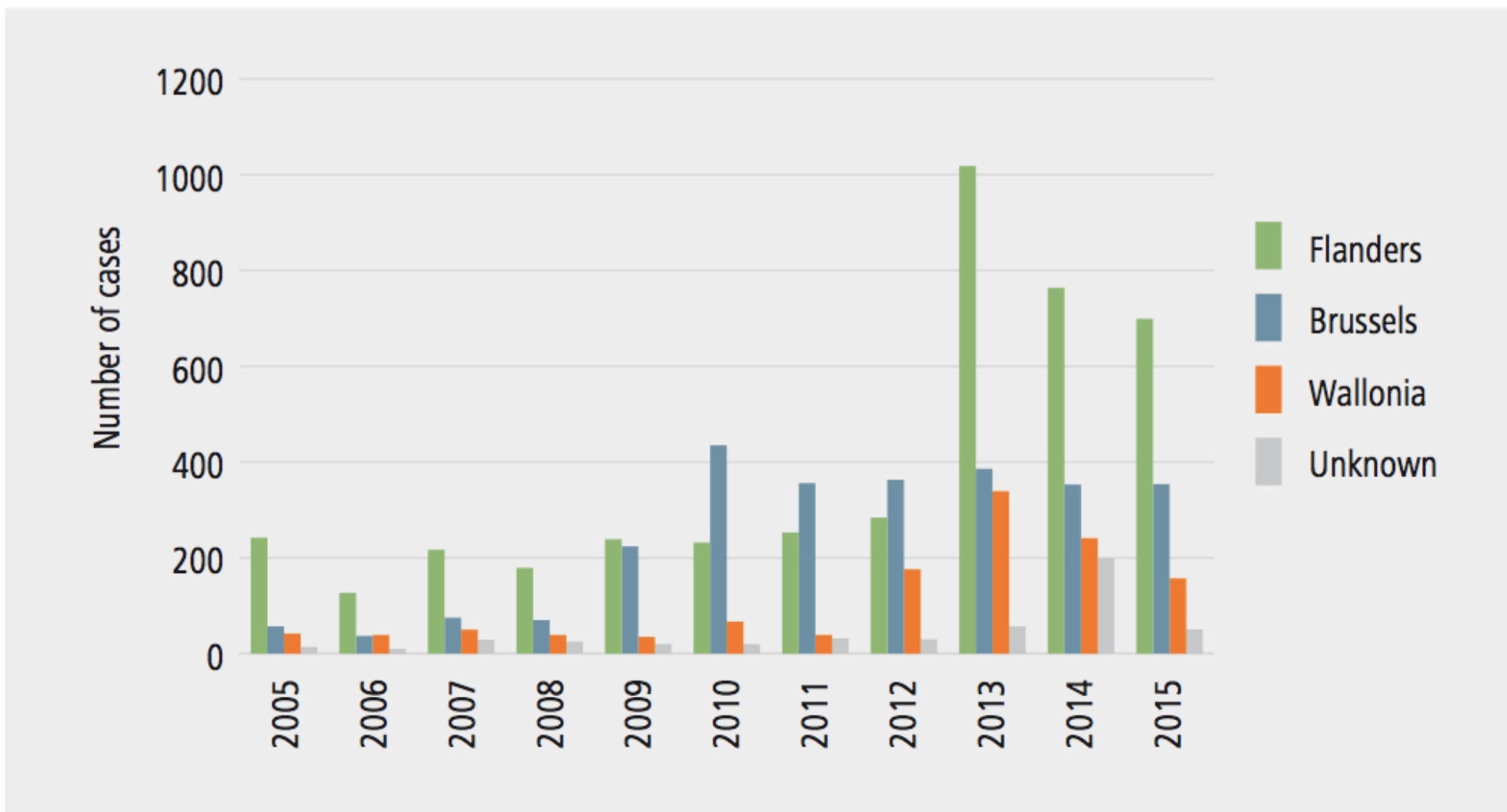
HBV Vaccine coverage evolution (BE)

Figure 4 | Évolution de la couverture vaccinale des nourrissons contre le VHB en Belgique, 1997-2014 [10]



HBV diagnostic cases, surveillance data

Figure 1 | Nombre de diagnostics de VHB enregistrés par le réseau des laboratoires de microbiologie depuis 2005, par région (Laboratoires vigies (WIV-ISP))



Vaccine refusal – Walloon region

Tableau 30. Vaccinations recommandées refusées catégoriquement par les parents (517)

Vaccins cités	n	%
Polio	1	0.2
DTP	1	0.2
HIB	1	0.2
VHB	7	1.3
Méningocoque C	15	2.7
RRO	8	1.4
Pneumo	11	2.0
Total	44	
Rotavirus	14	2.5

Conclusions

- Belgium is a low-endemic country with regional differences.
- Subnational entities implement the universal HBV vaccination.
- Country-wide, free universal HPV vaccination is offered to infants and adolescents (including catch-up).
- The hexavalent combination improved immunization coverage.
- Vaccine refusal is limited but hesitancy is increasing.

Thank you for your attention!



Questions ?

References

- <http://www.one.be/presentation/about-us/>
- <https://www.vaccination-info.be/>
- <https://www.health.belgium.be/en/superior-health-council>
- Swennen B, Robert E . Vaccination coverage in infants in the French community 1989 - 2003. Brussels, Belgium 2016. PROVAC (in french)
- Robert E, Swennen B. Vaccination coverage survey in infants 18-24 months in Wallonia in 2015. Provac, Ecole de santé publique, ULB ; 2015. (in french)
- Robert E, Swennen B. Vaccination coverage survey in infants 18-24 months in Brussels region in 2012 . Provac, Ecole de santé publique, ULB ; 2015. (in french)
- Van Loock F, Rubbens C. Survey of hepatitis B prevalence in the French Community, Belgium. Brussels, Belgium: Scientific Institute of Public Health, 1994.
- Theeten H, Hutse V, Hoppenbrouwers K, Beutels P, VAN Damme P. Universal hepatitis B vaccination in Belgium: impact on serological markers 3 and 7 years after implementation Epidemiol Infect. 2014 Feb;142(2):251-61. Epub 2013 May 21.