Enforcing implementation of vaccines against respiratory infections

Hanna Nohynek
18.9.2019
Lasten ja nuorten rokotusohjelma on yksi maailman laajimmista

Adults Td every 20 yr until 65y, influenza in pregnancy and risk groups
Adults 65+ Td every 10 yr, influenza
Maternal pertussis vaccination in Finland? No

- Streamlining testing practices among children
- Completed KAP of maternal immunization
- ECDC coordinated NITAG network topic#1
DTaP-IPV-Hib coverage 98,6 % among children born 2016
PCV10 coverage 96% among those born 2016
Register based impact analysis
Influenza vaccination programme in Finland

- Coverage xx% @6 mo – 6 yrs
- Coverage XX % @65+

SEASON 2018-19 IVE AGAINST INFLUENZA A
CHILDREN 6 MO–6 YRS

IVE 47 %
95%CI 41-52

Epidemic = AH1N1->AH3N2, multiple variants? Egg adaptation?

N= 118 026 vaccinated / 344 240
N= 1978 laboratory confirmed

SEASON 2018-19 IVE AGAINST INFLUENZA A
AMONG ADULTS 65-100 YRS

IVE 20%
95%CI 15-24%

N= 588 596 vaccinated / ~1,2 mi
N= ~4 800 laboratory confirmed
Influenza vaccination coverage among HCW

<table>
<thead>
<tr>
<th>Season</th>
<th>2014/15</th>
<th>2017/18</th>
<th>2018/19</th>
</tr>
</thead>
<tbody>
<tr>
<td>% coverage</td>
<td>41</td>
<td>84</td>
<td>91*</td>
</tr>
</tbody>
</table>

Communicable diseases Act § 48

It is the responsibility of the employer to see to it that in assigning staff to taking care of vulnerable patients, s/he uses only social and health care personnel which is protected against: influenza, measles, pertussis*, and varicella. To allow for preparations at work places, this law came into effect one year after the Communicable Diseases act was changed, i.e. starting 3/2018

* When taking care of children <1 year of age
Backups

Hanna Nohynek
18.9.2019

Finland / ESCMID Panel
SEASON 2018-19 IVE AGAINST INFLUENZA A VIRUS QIV CHILDREN 6 MO – 6 YRS

Inactivated influenza vaccine against laboratory confirmed influenza type A
Children aged 6 months to 6 years

(c) THL 2019-05-25

N= 56334 vaccinated / 344 240
N= 1747 laboratory confirmed

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SEASON 2018-19 IVE AGAINST INFLUENZA A VIRUS LAIV CHILDREN 2 – 6 YRS

Live attenuated influenza vaccine against laboratory confirmed influenza type A
Children aged 2 to 6 years

(c) THL 2019-05-25

\[ N = 59398 \text{ vacc+} / 273709 \]
\[ N = 1480 \text{ laboratory confirmed} \]
There is no compulsory vaccination in Australia

Terry Nolan
University of Melbourne and Murdoch Children’s Research Institute

ESCMID, Bilbao 2019
The Australian free National Immunisation Program (NIP) in healthy and at-risk populations:

- It endorses the importance of vaccination.
- It provides vaccines at no cost.
- It pays for vaccine administration.
'No jab, no pay' threat prompts an extra 174,000 children to be vaccinated in one year

By political reporter Matthew Doran

Posted Sun at 1:55am

A threat to cut family tax benefits for Australians who did not vaccinate their children has resulted in an increase of 174,000 children being immunised over the last year.

Families of 350,000 children were told last financial year that they risked losing payments, worth up to $29 a fortnight for each child, if they did not get their vaccinations up to date.
Family Tax Benefit Part A

Family Tax Benefit (FTB) is paid to eligible families to help with the cost of raising children. Here is what you need to know about Family Tax Benefit Part A.

What is Family Tax Benefit Part A?

The Family Tax Benefit is made up of two parts:

- Part A — a payment made per child, depending on the family's circumstances
- Part B — a payment made per family to give extra help to families that need it

Family Tax Benefit Part A pays a maximum of $186.20 per fortnight for children up to 12, and $242.20 per fortnight for children up to 19, if they are eligible. The payments can either be made fortnightly or as a lump sum at the end of the financial year to your bank, credit union or building society. Payments are made to a parent, guardian or an approved care organisation.

To receive the payment, the child must also meet early childhood immunisation requirements and have a health check if they are turning 4.
No Jab No Play

No Jab No Play – information for parents

All parents/guardians planning to enrol their child at childcare or kindergarten in Victoria must provide the service with:

- a current Immunisation History Statement from the Australian Immunisation Register (AIR); AND
- the statement must show that the child is up to date with all vaccinations that are due for their age, or that they are able to receive.
Pertussis vaccination of pregnant women in Victoria (Australia) increased during 2015–17 from 38% to 82%. The overall rate of influenza vaccination was 39%. GP-led care was associated with higher rates of vaccination than obstetrician-led care – GPs expertise in delivering a range of vaccines. But also indicates attitudinal, system (not a routine part of antenatal care), logistic or other barriers to obstetricians offering vaccines.

Maternal vaccination remains the most effective strategy for preventing influenza and pertussis in pregnant women and their infants, and embedding its delivery into antenatal care pathways should be a priority.

Enforcing implementation of vaccines against respiratory infections

Dr Daniel Lévy-Bruhl
The French National Public Health Agency
ESCMID, Bilbao, 06/09/2019

No conflict of interest to declare
### IMMUNISATION COVERAGE AT 2 YEARS IN FRANCE
#### 2017 DATA– SANTÉ PUBLIQUE FRANCE

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Status</th>
<th>Vaccine coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphtheria</td>
<td>Mandatory</td>
<td>99 % (2 doses)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>96 % (+ booster)</td>
</tr>
<tr>
<td>Pertussis</td>
<td>Recommended, always combined with mandatory vaccines</td>
<td>99 % (2 doses)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>96% (+ booster)</td>
</tr>
<tr>
<td>Pneumococcal diseases</td>
<td>Recommended – Simultaneously avec mandatory vaccines</td>
<td>92 %</td>
</tr>
<tr>
<td></td>
<td>Mandatory since 01/2018</td>
<td></td>
</tr>
<tr>
<td>Measles – 1(^{st}) dose</td>
<td>Recommended</td>
<td>90 %</td>
</tr>
<tr>
<td>Measles – 2(^{nd}) dose</td>
<td>Recommended</td>
<td>80 %</td>
</tr>
</tbody>
</table>
MANDATORY VACCINATIONS IN 2018

Are your vaccinations up to date?

Mandatory vaccinations for infants born from 1st January 2019 onwards

Appropriate age: 1 month

- BCG
- Diphtheria-tetanus-poliohepatitis
- Whooping cough
- Haemophilus influenzae type b (HIB)
- Hepatitis B
- Pneumococcus
- Meningococcus C
- Measles-Mumps-rubella
- Human papillomavirus (HPV)
- Influenza
- Zoster

2019 simplified vaccination schedule

Every 10 years
Every year
CONTEXT OF EXTENSION OF VACCINATION MANDATES

• Based on conclusions of the Steering Committee of the Citizen Consultation on vaccination
• Extension of infant vaccination mandates only one of the recommendations ("temporarily until confidence is restored")
• Main other recommendations
  • Increased transparency of data / expertise
  • Increased communication on vaccines (www.vaccination-info-service.fr) : > 6 millions visitors since mars 2017
  • Simplified access to vaccines
  • Implementation of electronic vaccination records
  • Permanent availability of vaccines
  • Improved basic and in-services training of health professionals
  • Increase research on vaccines and vaccinology
### Impact of Infant Vaccination Mandates on Vaccination Coverage of Infants Born January - May 2018

<table>
<thead>
<tr>
<th></th>
<th>Infants born in January-May 2017 Coverage at 7 mths</th>
<th>Infants born in January-May 2018 Coverage at 7 mths</th>
<th>Différence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pneumococcal at least 1 dose</td>
<td>98,0 %</td>
<td>99,4 %</td>
<td>+ 1,4 %</td>
</tr>
</tbody>
</table>

Source: SNDS-DCIR, treatment Santé publique France – Data updated on 31/12/2018 (31/01/2019 for the hexavalent booster)
VACCINATION COVERAGE (VC) AGAINST RESPIRATORY DISEASES IN ADULTS

- Pneumococcal vaccination VC in individuals with comorbidities (mixed PCV13-PPV23 schedule since 2017) : around 30%

- Influenza vaccination VC
  - In elderly: 51% in 2018-9 season vs 65% in 2008-9 season
  - In < 65 years old with comorbidities: 29% in 2018-9 season

- VC in hospital HCWs: 28% in 2010-11 season

- 2009 national vaccination coverage study

<table>
<thead>
<tr>
<th>Medical doctors</th>
<th>Nurses</th>
<th>Midwifes</th>
<th>Assistant nurses</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>55%</td>
<td>24%</td>
<td>23%</td>
<td>20%</td>
<td>26%</td>
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</tbody>
</table>

- Influenza VC in nursing homes
  - In HCWs in 2018-19: 33%
  - In residents in 2018-19: 87%
FEW THOUGHTS

General population

- Much more an issue of confidence/motivation than of access: free vouchers sent to the target population (excluding pregnant women)
- Limits of the annual promotional campaigns despite comprehensive communication strategies including use of wide range of media
- Promising experience of impact of easy vaccine access during ANC

Health care workers

- Real reluctance of a large part of HCW regarding influenza vaccination
- Positive impact of a multicomponent intervention working simultaneously on accessibility and on knowledge on VC in Lyon university hospital
- Current reflections about making HCW influenza vaccination compulsory
- Recent increase in political commitment (commitment from all medical and paramedical bodies, 2019 decree requiring and funding pilot interventions, integration of influenza VC data in routine hospital quality indicators)
Mandatory vaccination
The French experience

Dr Daniel Lévy-Bruhl
The French National Public Health Agency

Hamburg
23/05/2019
MANDATORY VACCINATIONS IN 2018

Are your vaccinations up to date?

2019 simplified vaccination schedule

<table>
<thead>
<tr>
<th>Appropriate age</th>
<th>1 month</th>
<th>2 months</th>
<th>4 months</th>
<th>5 months</th>
<th>11 months</th>
<th>12 months</th>
<th>18 months</th>
<th>6 years</th>
<th>11-13 years</th>
<th>14 years</th>
<th>15 years</th>
<th>16 years</th>
<th>16 years and +</th>
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<td>BCG</td>
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<td>Diphtheria-tetanus-poliomyelitis</td>
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<td>Whooping cough</td>
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<td>Haemophilus influenzae type b (HIB)</td>
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<td>Hepatitis B</td>
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<td>Pneumococcus</td>
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<tr>
<td>Meningococcus C</td>
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<tr>
<td>Measles-Mumps-rubella</td>
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<tr>
<td>Human papillomavirus (HPV)</td>
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<tr>
<td>Influenza</td>
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<tr>
<td>Zoster</td>
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</tbody>
</table>
• Up to 2017, 3 mandatory vaccines for primo-vaccination and 1st booster: Diphtheria (1938), Tetanus (1940) and Polio (1964)

• Historically, implemented in the spirit of universal and free access more than as a coercitive measure

• Vaccines introduced in the infant schedule since the 80’s as recommended as it was felt that financial, geographical or sociological barriers no longer an issue

• 2015 MP Sandrine Hurel’ report on the Vaccination policy « The statu quo [regarding coexistence of mandatory and recommended vaccination] is no longer possible » => Citizens’ consultation set up with a broad mandate of making propositions to “renovate the vaccination policy” and “restore confidence”
% OF PERSONS WHO DISAGREE WITH THE STATEMENT THAT VACCINES ARE SAFE

Larson et al, EBioMedicine 2016
THE 2016 CITIZENS’ CONSULTATION

• 18-members Steering committee made up of civil society representatives, social scientists, and immunization experts.

• Conclusions based on 44 hearings, an internet platform that collected contributions of the public, a survey on vaccine perception and the reports of two juries (health professionals and representatives of the general population) (http://concertation-vaccination.fr)
ÉTAPE 2 : JURYS
THE CITIZENS’ CONSULTATION REGARDING MANDATES

- 18-members Steering committee made up of civil society representatives, social scientists, and immunization experts.

- Conclusions based on 44 hearings, an internet platform that collected contributions of the public, a survey on vaccine perception and the reports of two juries (health professionals and members of the general population) (http://concertation-vaccination.fr).

- 13 recommendations including: « the Committee recommends…a temporary extension of the immunization obligation…until the conditions are met for a lifting…”

- Option of extension preferred over complete lifting largely based on epidemiological / sociological data
## Infant Immunisation Coverage 2017 Data – Santé Publique France

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Status</th>
<th>Vaccine Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT Polio</td>
<td>Mandatory</td>
<td>96% (3 doses)</td>
</tr>
<tr>
<td>Pertussis</td>
<td>Recommended, always combined with mandatory vaccines</td>
<td>96% (3 doses)</td>
</tr>
<tr>
<td>Haemophilus influenza b</td>
<td>Recommended, almost always combined with mandatory vaccines</td>
<td>95% (3 doses)</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>Recommended, generally combined with mandatory vaccines</td>
<td>90%</td>
</tr>
<tr>
<td>Pneumococcal diseases</td>
<td>Recommended – non combined but simultaneously avec mandatory</td>
<td>92%</td>
</tr>
<tr>
<td>MMR - 1st dose</td>
<td>Recommended – non simultaneous</td>
<td>90%</td>
</tr>
<tr>
<td>MMR – 2nd dose</td>
<td>Recommended – non simultaneous</td>
<td>80%</td>
</tr>
<tr>
<td>Méningococcal C</td>
<td>Recommended – non simultaneous</td>
<td>73%</td>
</tr>
</tbody>
</table>
MEASLES VACCINATION COVERAGE AT 2 YEARS BY DEPARTMENT (2 DOSES), FRANCE 2017

Source: Drees, Remontées des services de PMI – Certificat de santé du 24e mois. Traitement Santé publique France.
ND: no data
Total notified cases > 28 000
Hospitalized pneumonia > 1650
Encéphalitis, myélitis: 40
Deaths: 24 including 11 immunocompromised
DISTRUST AND VACCINE HESITANCY INCREASE AMONG THE GENERAL POPULATION

Health Barometers SPF - 18-75 years old

© ESCMID eLibrary by author
WOULD IMMUNIZE HIS/HER CHILD IF DTP VACCINE WAS NO LONGER MANDATORY

Definitely Yes: 31%
Probably Yes: 9%
Probably No: 4%
Definitely No: 1%
Ukn: 13%

=> Choice in favour of extension over discontinuation of infant vaccination mandates

Health Barometer 2016: parents of at least one child 1-15 years old
MODALITIES OF IMPLEMENTATION

- Law extending vaccination mandates to all routine immunizations for children < 2 years passed on December 2017

- Applies to all children born since 1st of January 2018, with no retroactive effect on older children

- No exemption other than medical contra-indication retained as the obligation is justified by a Public Health imperative

- Removal of all sanctions for absence of mandatory vaccination (theoretically 3750 € fine and 6 months imprisonment)

- However, potential criminal sanction for harm to child health

- Proof of vaccination required for child registration in any form of social life as of June 2018
### EVOLUTION OF VACCINATION COVERAGE BETWEEN 2016 AND 2018 - VACCINES ADMINISTERED BEYOND/AFTER 1 YEAR

<table>
<thead>
<tr>
<th></th>
<th>Infants born in January May 2017</th>
<th>Infants born in January May 2018</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pneumococcal at least 1 dose</td>
<td>98,0 %</td>
<td>99,4 %</td>
<td>+ 1,4 %</td>
</tr>
<tr>
<td>Meningococcal C 1st dose</td>
<td>39,3 %</td>
<td>75,7 %</td>
<td>+ 36,4 %</td>
</tr>
<tr>
<td>Hépatitis B at least 1 dose</td>
<td>92 %</td>
<td>98 %</td>
<td>+ 6 %</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>12 months in 2016</th>
<th>12 months in 2017</th>
<th>12 months in 2018</th>
<th>Gain in coverage 2016-2017</th>
<th>Gain in coverage 2017-2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMR 1st dose</td>
<td>84,9 %</td>
<td>85,0 %</td>
<td>87,2 %</td>
<td>+ 0,1 %</td>
<td>+ 2,2 %</td>
</tr>
<tr>
<td>Meningococcal 2nd dose</td>
<td>55,8 %</td>
<td>59,3 %</td>
<td>65,0 %</td>
<td>+ 3,6 %</td>
<td>+ 5,7 %</td>
</tr>
</tbody>
</table>

Source SNDS-DCIR, treatment Santé publique France
NUMBER OF HPV VACCINES REIMBURSED BY MONTH
FRANCE, 2015-18

Source SNDS/SpF
INCIDENCE OF INVASIVE MENINGOCOCCAL INFECTIONS IN INFANTS IN FRANCE – 2006-2018

Introduction of the 5 month infant dose

Mandatory vaccination

# cases / 100 000 inhabitants (<1 year)

# cases / 100 000 inhabitants (≥1 year)
STRENGTHENING OF COMMUNICATION AROUND VACCINATION

• Proactive strategy directed towards classical media to explain the justify the rationale of the law
• Videos on You tube by very popular You tubers
• Q & A on vaccination posted by several popular parent bloggers
• Educational/informational/promotional materials developed by Ministry of Health and Public Health France
• Support tools for local non medical staff in charge of the control of vaccination status of children
• TV vaccination campaign during 2019 European Immunization week
• Development of a governmental website dedicated to vaccination
GOVERNEMENTAL WEBSITE ON VACCINATIONS FOR THE GENERAL PUBLIC

> 6 millions visits since 2017
• Decision of the Constitutional Council on 20/03/2015, confirming the constitutionality of vaccination obligation after a parent claim.


• Decision of the Council of State on 08/02/2017: « The Council of State… enjoins [the Ministry] accordingly, within a period of six months, and unless the law evolves by widening the scope of compulsory vaccinations, to take measures… to make available vaccines only corresponding to vaccination mandates »

• Decree includes compulsory annual assessment of impact of the law (coverage and perception data + pharmacovigilance data).
SOME (PERSONNAL) CONCLUDING REMARKS

• Beyond the coercion, strong symbolic effect of the 2017 law

• Reflecting the very high level of commitment in favor of vaccination (Minister of Health and Prime Minister)

• Has benefited from the very large support from the vast majority of learning societies involved in vaccination

• And from simultaneous implementation of promotion actions and training materials to support professionals and general public

• Encouraging results from the 2018 Vaccine Confidence Project: % French participants disagreeing with affirmation that vaccines are safe decreased from 41% in 2015 to 23.7%

• Extension of mandates to 11 vaccinations “only” enlargement of rules and habits implemented for the 3 already mandatory ones
ACKNOWLEDGMENTS

Direction of Infectious Diseases
- Anne-Sophie Barret
- Laure Fonteneau
- Sophie Vaux

Direction of Health Prevention and Promotion
- Isabelle Bonmarin
- Colette Ménard
- Sylvie Quelet
- Sandrine Randriamampanina

Direction of Data and Analysis Support
- Arnaud Gautier
Semi-structured group interviews (12 groups of ≈10 persons)

« Results: The recommended nature of a vaccine gives it an optional dimension, with a questioning in terms of usefulness, effectiveness and safety. The compulsory nature of a vaccination seems to have a positive effect on its perception. »

« It is very useful the obligation (...) both for public and individual health, so let’s vaccinate! Anyway it is a mandatory vaccine so we do not ask the question because we have to do it, it reinforces me in the idea that I will do them because there is still a risk and the diseases are very serious » (Nature / bio / écolos, CSP+, Paris)

« If it's not mandatory then why is not it? If it's a protection for children why is not it automatic? This is a concern, may be it is not mandatory because it is a product that can have side effects or we are not sure that it will work? » (parents of young children, CSP+, Paris)

Source: BEH, octobre 2017
Historique 2016

12 janvier
Présentation du plan d'action pour la rénovation de la politique vaccinale
Présenté le 12 janvier 2016, ce plan d'action prévoit l'organisation de la concertation citoyenne.

7 avril
Installation du comité d'orientation
Il est présidé par le Pr. Alain FRANCONI et co-présidé par Mme. Claire P. RENAUDAUD.

1er juillet
Présentation des enquêtes d'opinion au comité
Deux enquêtes qualitatives ont été réalisées : une auprès d'usagers, une auprès de professionnels de santé.

8-10 juillet
Première session des jurys

21 juillet
Présentation de la cartographie des controverses au comité

14 septembre
Lancement de la consultation en ligne
Du 14 septembre au 14 octobre 2016, un espace participatif en ligne permet de recueillir les contributions des internautes.

16-18 septembre
Deuxième session des jurys

21 octobre
Restitution des avis des jurys
Les jurys présentent leurs avis respectifs devant le comité d'orientation.

30 novembre
Présentation des proposition du comité d'orientation
Le comité d'orientation rend publics les résultats de la concertation et présente les conclusions de son rapport.
Les 7 outils de la concertation

La méthodologie de la concertation citoyenne est éprouvée par trente ans d'expériences internationales reconnues. Sa richesse tient dans la complémentarité des étapes qui ont été conduites pour mieux comprendre les attentes et les interrogations des citoyens.

1. Un comité d'orientation pluridisciplinaire et indépendant
2. Une cartographie des controverses
3. 39 auditions devant le comité d'orientation
4. Une consultation en ligne
5. Des jeux de citoyens et de professionnels
6. Une restitution publique des propositions du comité
7. 13 propositions
LES 13 PROPOSITIONS (1/2)

Axe 1 - Trouver des réponses à l’exigence de transparence des citoyens
Proposition 1  La transparence des experts
Proposition 2  L’accès aux données

Axe 2 - S’engager dans un effort d’information et de communication
Proposition 3  L’information
Proposition 4  La place de l’école
Proposition 5  La communication

Axe 3 - Simplifier le parcours vaccinal
Proposition 6  L’accessibilité
Proposition 7  Le suivi des vaccinations et le carnet électronique
Proposition 8  La disponibilité des vaccins
Axe 4 - Compléter la formation des professionnels de santé
Proposition 9  La formation des professionnels de santé

Axe 5 - Accompagner les questionnements de la société avec la recherche
Proposition 10  La recherche sur la vaccination, de la biologie aux sciences humaines et sociales

Axe 6 - Élargir à titre temporaire et sous certaines conditions le caractère obligatoire de la vaccination
Proposition 11  La vaccination des enfants et les conditions associées
Proposition 12  Le vaccin contre les papillomavirus (HPV)
Proposition 13  La vaccination des professionnels de santé
« IF IT'S NOT MANDATORY THEN WHY IS NOT IT? IF IT'S A PROTECTION FOR CHILDREN WHY IS NOT IT AUTOMATIC? THIS IS A CONCERN, MAY BE IT IS NOT MANDATORY BECAUSE IT IS A PRODUCT THAT CAN HAVE SIDE EFFECTS OR WE ARE NOT SURE THAT IT WILL WORK? »
VACCINATION AGAINST MENINGOCOCCAL C DISEASES

Introduced in 2010 in the vaccination schedule

Recommended at 12 months with a catch-up up to 24 years

Objective: Individual protection + herd immunity in order to protect infants without having to vaccinate them with 3 doses

Requires high vaccine coverage

<table>
<thead>
<tr>
<th></th>
<th>24 mths</th>
<th>2-4 yrs</th>
<th>5-9 yrs</th>
<th>10-14 yrs</th>
<th>15-19 yrs</th>
<th>20-24 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>31/12/2017</td>
<td>73 %</td>
<td>72 %</td>
<td>65 %</td>
<td>40 %</td>
<td>28 %</td>
<td>15 %</td>
</tr>
</tbody>
</table>
INVASIVE MENINGOCOCCAL C DISEASES NOTIFICATION RATE, FRANCE, 2006-2017

Since 2011 (Source: mandatory notification)

More than 800 cases and 100 deaths, most of them preventable

About one third through direct protection (1-24 yrs) and two thirds through herd immunity
Since 2011 (Source: mandatory notification)

More than 800 cases and 100 deaths, most of them preventable

About one third through direct protection (1-24 yrs) and two thirds through herd immunity

Introduction of meningococcal C vaccination (1-24 years)
First estimations of vaccination coverage through analysis of the National Health Reimbursement Database covering virtually the whole French population

Including correction for few percentages of infants benefiting of free vaccines delivered in Maternal and Child Health Clinics

Survey on a representative sample of 1002 parents of children under two in February 2019 (quota method)

Data on paediatricians perceptions: on line survey by ambulatory paediatricians learning society (AFPA) in March 2019 (615 answers)

Data for GPs perceptions: on line survey done by the College of General Practitioners (CMG) in February-March 2019 (758 answers)
PROPORTION OF INFANTS RECEIVING AN HEPATITIS B CONTAINING VACCINE FOR PRIMO-VACCINATION, 2015-2018

Month of delivery

<table>
<thead>
<tr>
<th>Month</th>
<th>Infants born in January-May 2017</th>
<th>Infants born in January-May 2018</th>
<th>Différence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mrz 15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mai 15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sep 15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nov 15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan 16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mrz 16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mai 16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul 16</td>
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<td>Sep 16</td>
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<td></td>
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<tr>
<td>Nov 16</td>
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<tr>
<td>Jan 17</td>
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<tr>
<td>Mrz 17</td>
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<tr>
<td>Mai 17</td>
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<tr>
<td>Jul 17</td>
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<tr>
<td>Sep 17</td>
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<tr>
<td>Nov 17</td>
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<td></td>
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<tr>
<td>Jan 18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mrz 18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mai 18</td>
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<tr>
<td>Jul 18</td>
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<td></td>
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<tr>
<td>Sep 18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nov 18</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hexavalent vaccine (% use) | 93,1 % | 98,6 % | + 5,5%
Hépatite B at least 1 dose | 92 %    | 98 %    |

Source: SNDS-DCIR, traitement Santé publique France
<table>
<thead>
<tr>
<th></th>
<th>Infants born in January-May 2017 Coverage at 7 mths</th>
<th>Infants born in January-May 2018 Coverage at 7 mths</th>
<th>Différence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pneumococcal at least 1 dose</td>
<td>98,0 %</td>
<td>99,4 %</td>
<td>+ 1,4 %</td>
</tr>
<tr>
<td>Méningococcal 1st dose</td>
<td>39,3 %</td>
<td>75,7 %</td>
<td>+ 36,4 %</td>
</tr>
<tr>
<td>Hexavalent booster</td>
<td>74,7 %</td>
<td>79,7%</td>
<td>+ 5 %</td>
</tr>
</tbody>
</table>

Source SNDS-DCIR, treatment Santé publique France – Data updated on 31/12/2018 (31/01/2019 for the hexavalent booster)
**ADHERENCE OF PARENTS OF CHILDREN UNDER 2 YEARS TO THE NEW VACCINE MANDATES**

Are you very, rather, rather not or not at all favorable to the extension from 3 to 11 mandatory vaccinations for infants born since 1st January 2018?

<table>
<thead>
<tr>
<th>Opinion</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very favorable</td>
<td>21%</td>
</tr>
<tr>
<td>Rather favorable</td>
<td>46%</td>
</tr>
<tr>
<td>Rather not favorable</td>
<td>23%</td>
</tr>
<tr>
<td>Not favorable at all</td>
<td>10%</td>
</tr>
</tbody>
</table>

67%
### PRACTITIONNERS ATTITUDE TOWARDS NEW VACCINATION MANDATES

<table>
<thead>
<tr>
<th>Do you consider the decision regarding the extension of vaccination mandates for children born since 1st of January 2018 as...</th>
<th>GPs</th>
<th>Paediatricians</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>75%</td>
<td>96%</td>
</tr>
<tr>
<td>Bad</td>
<td>8%</td>
<td>2%</td>
</tr>
<tr>
<td>No opinion/answer</td>
<td>16%</td>
<td>2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What consequences this decision have had on your relationship with the parents of infants?</th>
<th>GPs</th>
<th>Paediatricians</th>
</tr>
</thead>
<tbody>
<tr>
<td>No or little impact</td>
<td>46%</td>
<td>19%</td>
</tr>
<tr>
<td>It has simplified it</td>
<td>41%</td>
<td>77%</td>
</tr>
<tr>
<td>It has complicated it</td>
<td>10%</td>
<td>3%</td>
</tr>
<tr>
<td>No opinion/answer</td>
<td>4%</td>
<td>1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Following the extension of vaccination mandates, how do you perceive the evolution of reluctance from certain parents to vaccines?</th>
<th>GPs</th>
<th>Paediatricians</th>
</tr>
</thead>
<tbody>
<tr>
<td>No change</td>
<td>45%</td>
<td>22%</td>
</tr>
<tr>
<td>Increase</td>
<td>15%</td>
<td>6%</td>
</tr>
<tr>
<td>Decrease</td>
<td>28%</td>
<td>69%</td>
</tr>
<tr>
<td>No opinion/answer</td>
<td>11%</td>
<td>3%</td>
</tr>
</tbody>
</table>
CONFIANCE DANS CERTAINES SOURCES POUR DONNER DES INFORMATIONS FIABLES

- Médecins: 95% (parents enfants de 1 à 15 ans), 90% (65-75 ans)
- Pharmaciens: 80% (parents enfants de 1 à 15 ans), 73% (65-75 ans)
- Ministère de la santé: 71% (parents enfants de 1 à 15 ans), 56% (65-75 ans)
- L'industrie pharmaceutique: 43% (parents enfants de 1 à 15 ans), 33% (65-75 ans)
GRAND PUBLIC (FOCUS FUTURS PARENTS ET PARENTS D’ENFANTS DE MOINS DE 2 ANS)

Exemples d’outils

8 dépliants « 5 bonnes raisons de se faire vacciner »

Brochure « Comprendre la vaccination »

Affiche et carte postale du calendrier vaccinal

Flyer accessible sur les obligations vaccinales

Affiche promotion du site

Vidéos vaccination autour de la grossesse/ rôle des adjuvants
Broadcast on Medical TV Channel
EXAMPLES OF TOOLS FOR HEALTH PROFESSIONALS
Support tools for local non medical staff in charge of the control of vaccination status of children

1) Information sheet for parents

2) Check-up document for registration of children for entry into a community

3) Q&A for staff in charge of the control of fulfilment of obligation