



European Centre for Disease Prevention and Control

Présentation d'outils de restitution de données à l'échelle européenne

Gaetan Guyodo, ECDC

Rencontres Santé Publique France, Paris, 29 Mai 2018

Conflit d'intérêt / Conflict of interest



Cette intervention est faite en toute indépendance vis-à-vis de l'organisateur de la manifestation.

Je n'ai pas de lien d'intérêts avec le sujet traité.

**This presentation is done in total independence from the event organizer.
I have no link of interest to declare with the topic presented.**



Surveillance des maladies infectieuses

- EWRS (detection de situation d'urgence, échanges, alertes),
- EPIS (epidemic intelligence), and
- TESSy (surveillance des maladies et données statistiques)

Programmes

- De Anthrax a Zika...

Formation

- Programmes de formation (EUPHEM, EPIET)

Communication

- Publications
- Campagnes en sante publique
- Support des Etats Membres

Pourquoi et comment restituer des indicateurs de sante publique ?



Pourquoi ?

⇒ épidémiologistes, « decision makers »...

Comment ?

⇒ Gestionnaire de données, analyste de données, expert communication, web designer...

Focus :

**... comment restituer des indicateurs de sante publique ?
avec une vision Européenne**

Représentation « fixe » des indicateurs de santé publique



Formats fixes

- PDF
- Page web

Avantages :

- Dissemination
 - ✓ Papier
 - ✓ Email
 - ✓ Téléchargement
- Historique

Inconvénients :

- Figé

• *Annual Epidemiological Report*

• *Zoonoses report (joint EFSA – ECDC report)*

• *Tuberculosis surveillance report*

• *HIV/AIDS surveillance report*

• *Influenza weekly bulletin*

• *Standard automated reports: quarterly reports for salmonellosis and campylobacteriosis*

• *Etc.*



Représentation « dynamique » des indicateurs de santé publique



Rapports dynamiques – paramétrables

Tableau de bord (dashboard)

Visualisation améliorée

Accessibilité aux données

Point unique d'accès à un éventail de données

Utilisabilité

Confort / simplicité d'utilisation

...

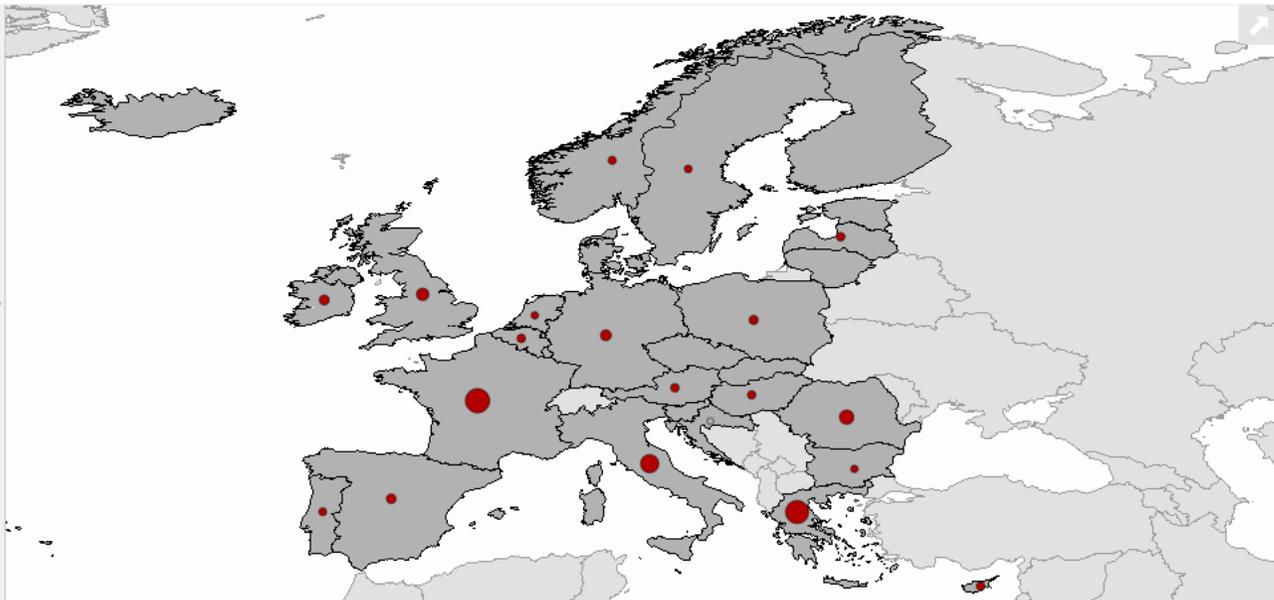
Différents types de technologie

Atlas Européen des maladies infectieuses



<http://atlas.ecdc.europa.eu>

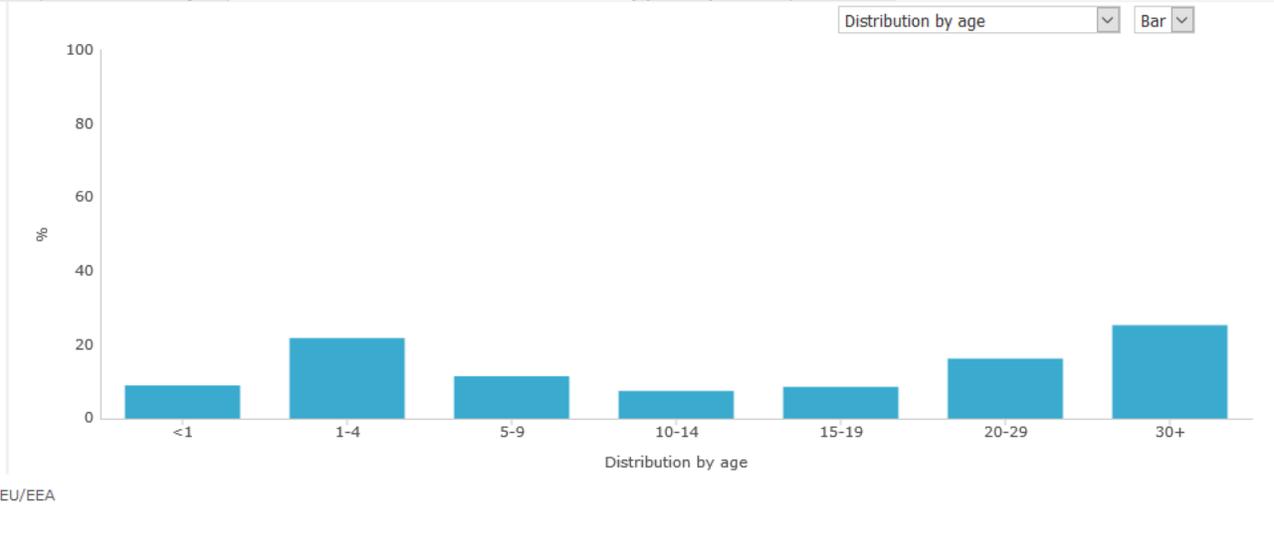
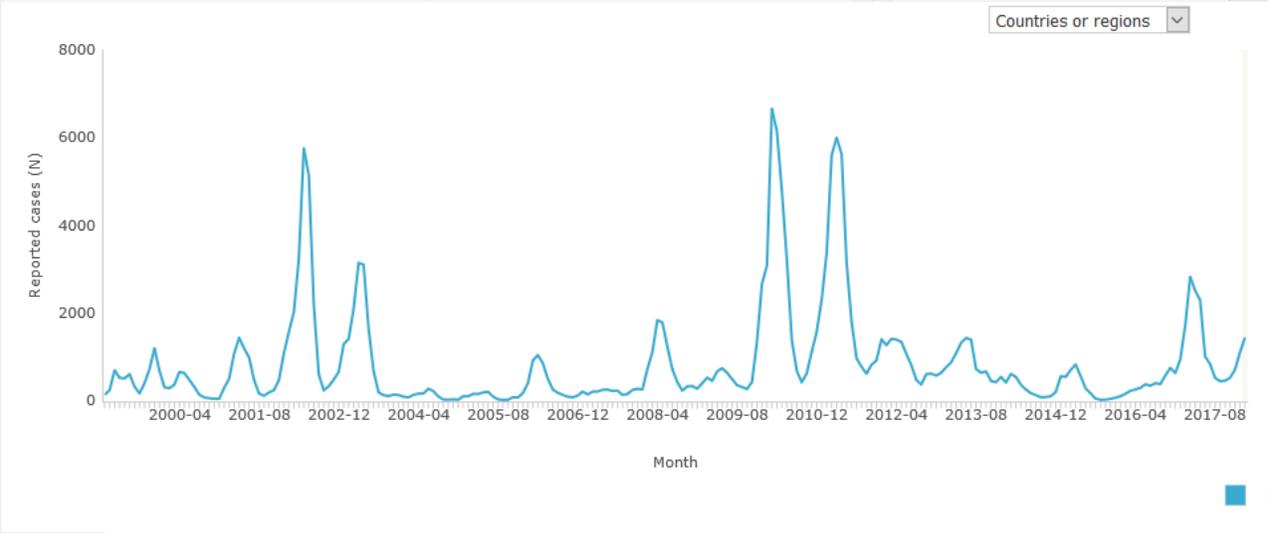
Region	Reported cases (N)
EU/EEA	1456
Austria	6
Belgium	6
Bulgaria	1
Croatia	.
Cyprus	6
Czech Republic	0
Denmark	0
Estonia	0
Finland	0
France	509
Germany	30
Greece	453
Hungary	5
Iceland	0
Ireland	19
Italy	223



Reported cases (N)

Value range: 1 - 5741

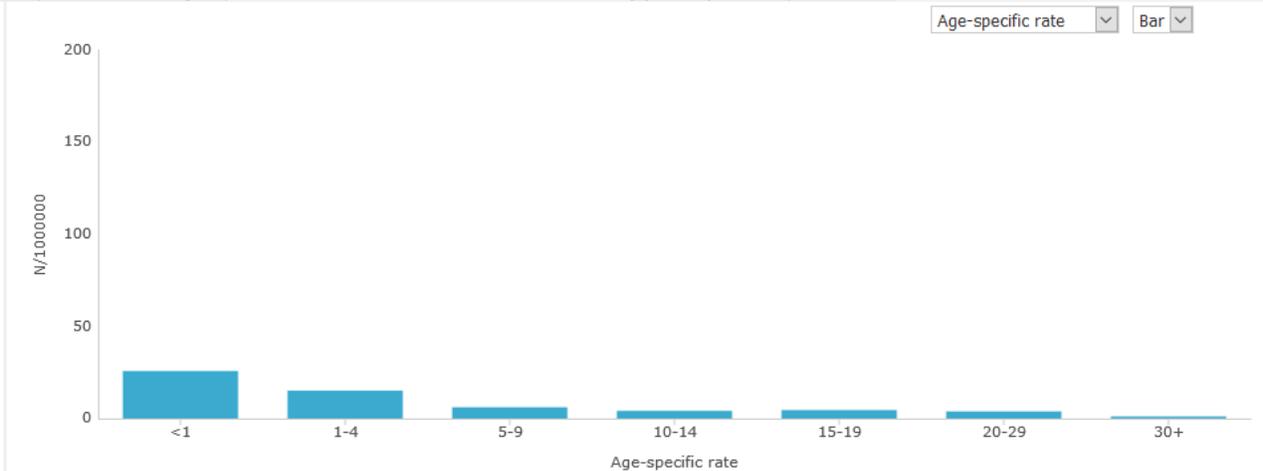
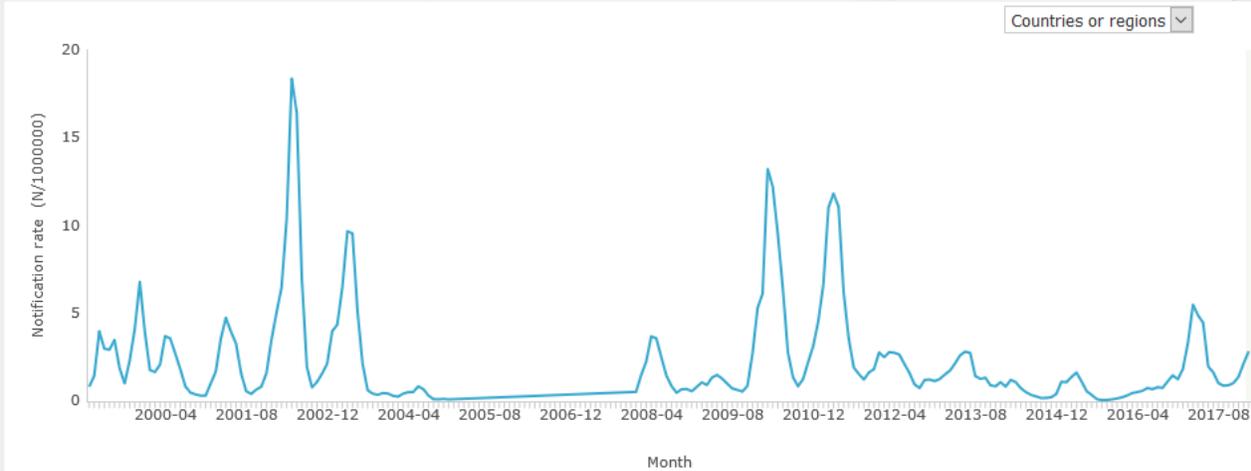
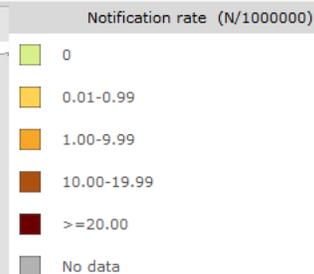
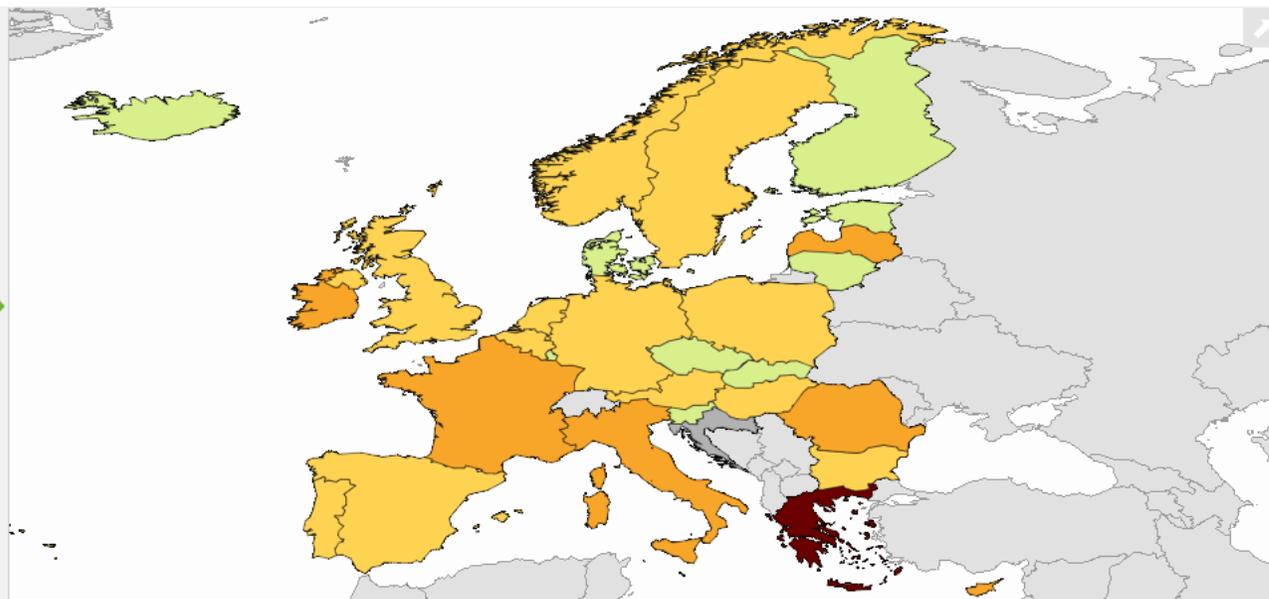
○ No data



← → Measles ▾ All cases ▾ Notification rate ▾ ▶ ◀▶▶ 2018-02 ▶▶▶ ⋮



Region	Notification rate (N/1000000)
EU/EEA	2.85
Austria	0.69
Belgium	0.53
Bulgaria	0.14
Croatia	.
Cyprus	7.07
Czech Republic	0.00
Denmark	0.00
Estonia	0.00
Finland	0.00
France	7.62
Germany	0.37
Greece	42.01
Hungary	0.51
Iceland	0.00
Ireland	4.02
Italy	3.68



■ EU/EEA

Reported cases ▾ ▶ ◀◀

Reported cas

(N)

1456

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6

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Information about the data



Information about the data



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Annex 1. Surveillance systems overview, 2016

Country	Data source	Compulsory (Cp), voluntary (V), other(O)	Comprehensive (Co), sentinel (Se), other(O)	Active (A), passive (P)	Case-based (C), aggregated (A)	Data reported	
						Laboratories	Physicians
Austria	AT-Epidemiegesetz	Cp	Co	P	C	Y	Y
Belgium	BE-PEDI_NRC_FLA_FRA	Cp	Co	A	C	Y	Y
Bulgaria	BG-NATIONAL_SURVEILLANCE	Cp	Co	P	C	Y	Y
Croatia	HR-CNIPH	Cp	Co	P	C	Y	Y
Cyprus	CY-NOTIFIED_DISEASES	Cp	Co	P	C	N	Y
Czech Republic	CZ-EPIDAT	Cp	Co	A	C	Y	Y
Denmark	DK-MIS	Cp	Co	P	C	N	Y
Estonia	EE-MEASLES_POLIO	Cp	Co	P	C	Y	Y
Finland	FI-NIDR	Cp	Co	P	C	Y	Y
France	FR-MANDATORY_INFECTIOUS_DISEASES	Cp	Co	P	C	Y	Y
Germany	DE-SURVNET@RKI-7.1/6	Cp	Co	P	C	Y	Y
Greece	EL-NOTIFIABLE_DISEASES	Cp	Co	P	C	Y	Y
Hungary	HU-EFRIR	Cp	Co	P	C	Y	Y
Iceland	IS-SUBJECT_TO_REGISTRATION	Cp	Co	P	C	Y	Y
Ireland	IE-CIDR	Cp	Co	P	C	Y	Y
Italy	IT-MEASLES-RUBELLA	Cp	Co	P	C	N	Y
Latvia	LV-BSN	Cp	Co	P	C	.	Y
Lithuania	LT-COMMUNICABLE_DISEASES	Cp	Co	P	C	Y	Y
Luxembourg	LU-SYSTEM1	Cp	Co	P	C	N	Y
Malta	MT-DISEASE_SURVEILLANCE	Cp	Co	P	C	Y	Y
Netherlands	NL-OSIRIS	Cp	Co	P	C	Y	Y
Norway	NO-MSIS_A	Cp	Co	P	C	Y	Y
Poland	PL-NATIONAL_SURVEILLANCE	Cp	Co	P	C	Y	Y
Portugal	PT-MEASLES	Cp	Co	P	C	Y	Y
Romania	RO-RNSSy	Cp	Co	P	C	N	N
Slovakia	SK-EPIS	Cp	Co	A	C	Y	Y
Slovenia	SI-SURVIVAL	Cp	Co	P	C	Y	Y
Spain	ES-STATUTORY_DISEASES	Cp	Co	P	C	N	Y
Sweden	SE-SMINET	Cp	Co	P	C	Y	Y
United Kingdom	UK-MEASLES	O	Co	P	C	Y	N

Algorithme	Catégorie	Exemple
Compte	Indicateur quantitatif	Nombre de cas
Compte, cumulatif	Indicateur quantitatif	Nombre de cas cumules
Proportion	Indicateur quantitatif	% de cas pulmonaires
Taux	Indicateur quantitatif	Taux de notification
Ratio	Indicateur quantitatif	CRF
Catégorique	Distribution	Sexe
Catégorique, cumulatif	Distribution	Sexe, cumulatif
Numérique	Distribution	Groupes d'âge
Numérique, cumulatif	Distribution	Cumul des cas de décès
Booléen	Indicateur qualitatif	Region affectée
Catégorie	Indicateur qualitatif	Souche grippale principale
Catégorie, cumulatif	Indicateur qualitatif	WNF Region affectée saison précédente
Date	Indicateur qualitatif	Début de la saison

Avantages

- Outil unique pour représentation générique de multiples maladies
- Moderne, simple, puissant...

Problèmes

- Epidémiologiques... ex: hétérogénéité des données sources ?
- Comment représenter la qualité des données ?
- Access aux versions précédentes des données ?
- Lien vers un résultat d'intérêt particulier ?
- Même représentation de maladies rares et de maladies endémiques ?
- Quelle information est présentée (origine, date, système de collecte, ...) ?
- ...

Grippe : FluNewsEurope



<http://flunewseurope.org>

✉ [Subscribe to our email alerts](#)

Flu News Europe

Joint ECDC–WHO/Europe weekly influenza update



World Health Organization
REGIONAL OFFICE FOR Europe

[Summary](#) | [Primary care data](#) | [Severity](#) | [Virus characteristics](#) | [By country](#) ▾ | [System](#) | [Archives](#)

Week 19/2018 (7 - 13 May 2018)

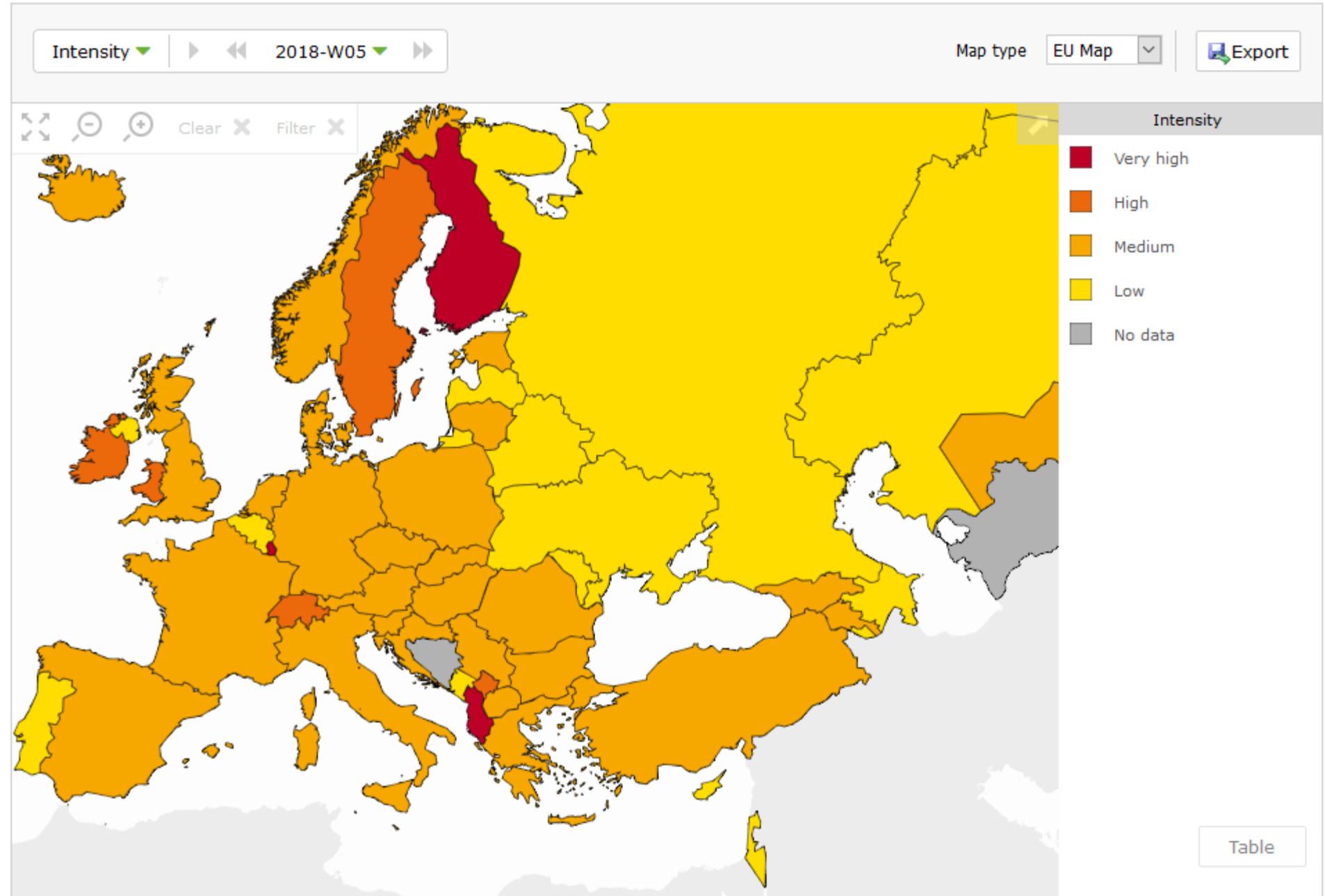
- Influenza activity had returned to inter-season levels in most of the countries in the Region.
- 10% of the individuals sampled from primary healthcare settings tested positive for influenza viruses (compared to 6% in the previous week).

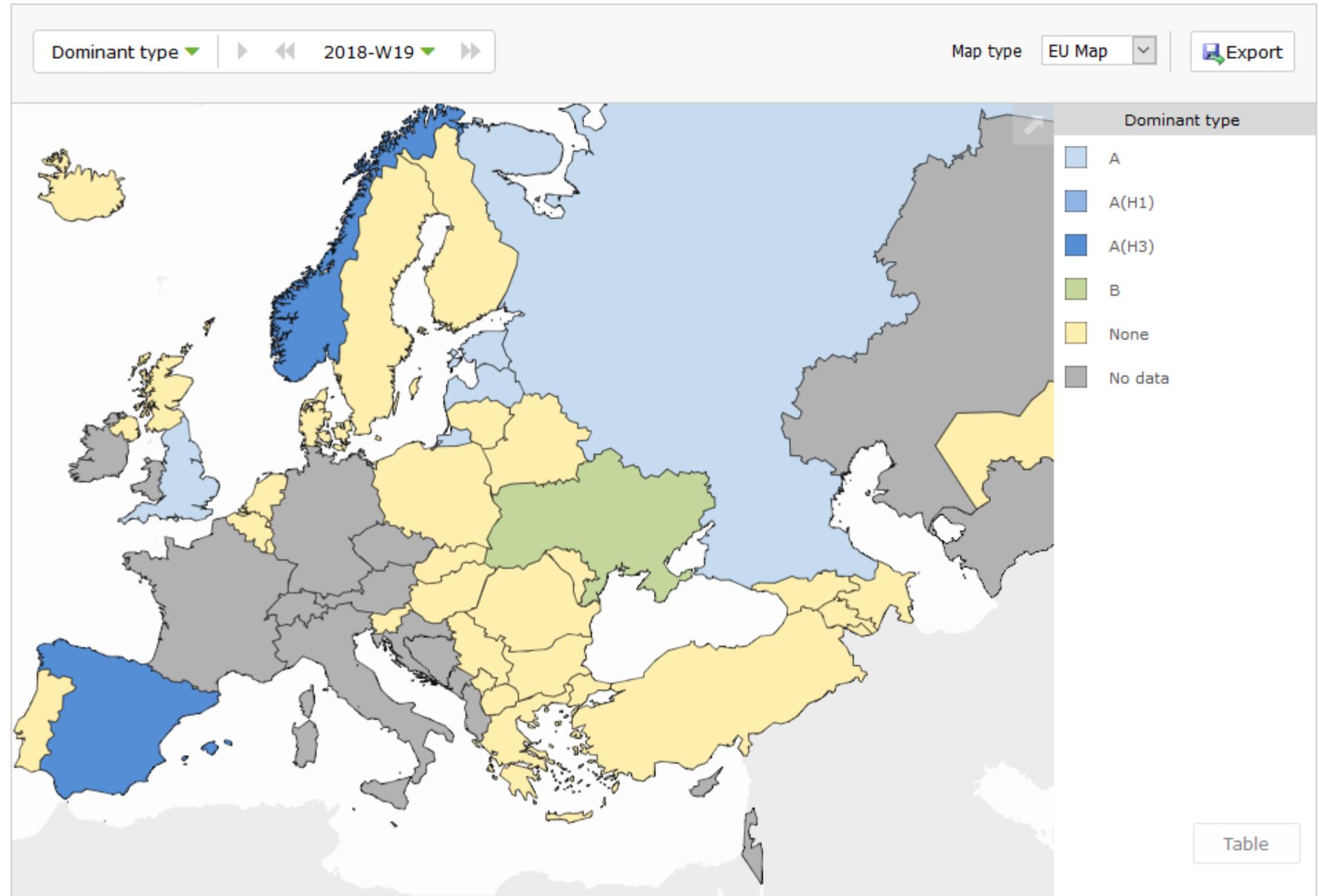
2017/18 season overview

- Influenza viruses circulated at high levels in the Region between weeks 52/2017 and 12/2018 (based on increased proportions - 40% and above - of sentinel specimens testing positive for influenza viruses). This is longer than in recent seasons and may have contributed to the severity of this season.
- The majority of influenza viruses detected were type B, representing a high level of circulation of influenza B viruses compared to recent seasons. B/Yamagata lineage viruses have greatly outnumbered those of the B/Victoria lineage.
- Different patterns of dominant type and A subtypes were observed between the countries of the Region.
- While low in numbers, characterized A(H3N2) viruses fell mainly in clade 3C.2a (57%) and subclade 3C.2a1 (42%), while 43% of B/Victoria lineage viruses fell in a subclade of clade 1A viruses that are antigenically distinct from the current trivalent vaccine component.
- The majority of severe cases reported this season were due to influenza virus type B infection and have mostly occurred in persons older than 15 years.
- Mortality from all causes now appears to have returned to normal expected levels in all 20 participating countries and regions that report to EuroMOMO.
- Interim results from 5 European studies indicate 25 to 52% vaccine effectiveness against any influenza.

Grippe

Influenza intensity, spread and dominant virus type/subtype





Grippe : FluNewsEurope

Virus detections by (sub)type

Season 2017 - 2018 Season

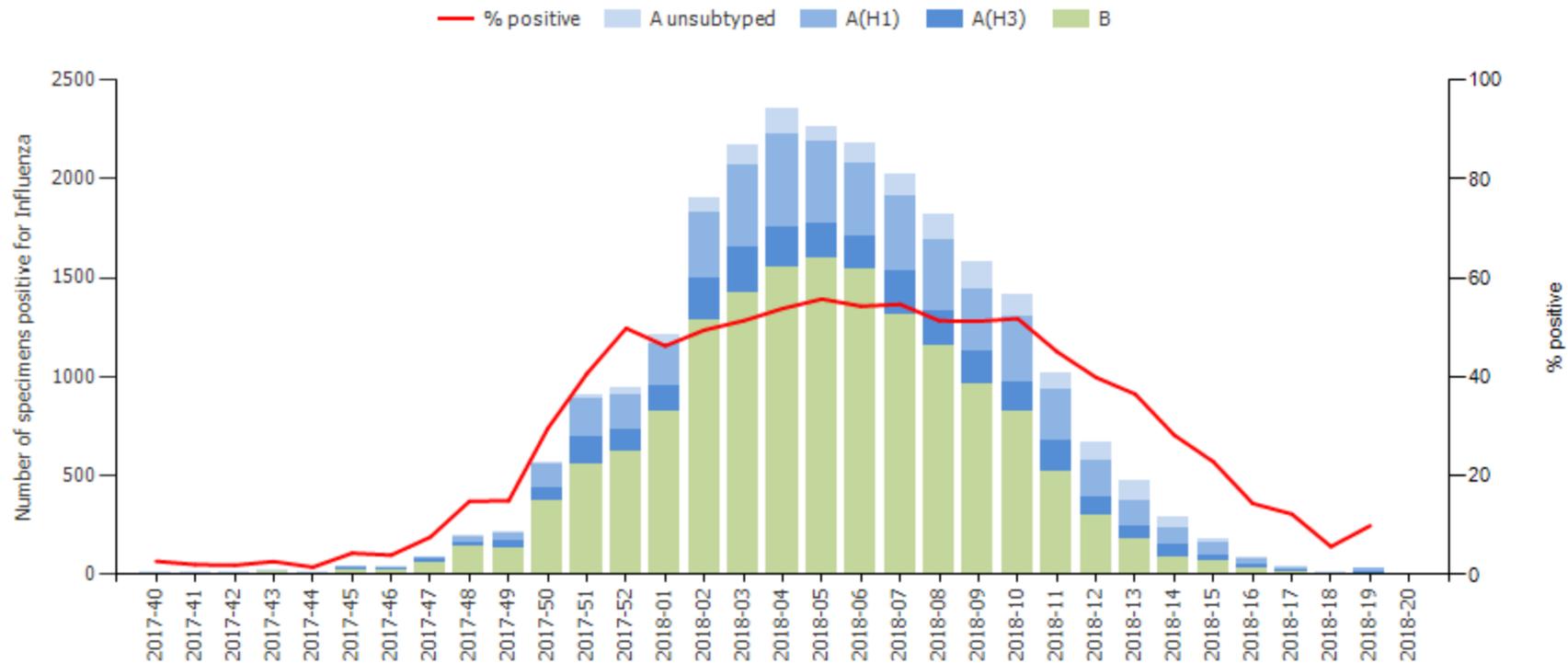
Country All countries

Update



Export

Source Sentinel



Epidemic Influenza — Responding to the Expected but Unpredictable

Joseph Bresee, M.D., and Frederick G. Hayden, M.D; New England Journal of Medicine (<https://www.nejm.org/doi/full/10.1056/NEJMp1300375?query=TOC>)

Grippe US 1997- 2013

INTERACTIVE GRAPHIC | Influenza in the United States, 1997-2013

Number of positive tests reported to CDC

Percentage of tests that were positive

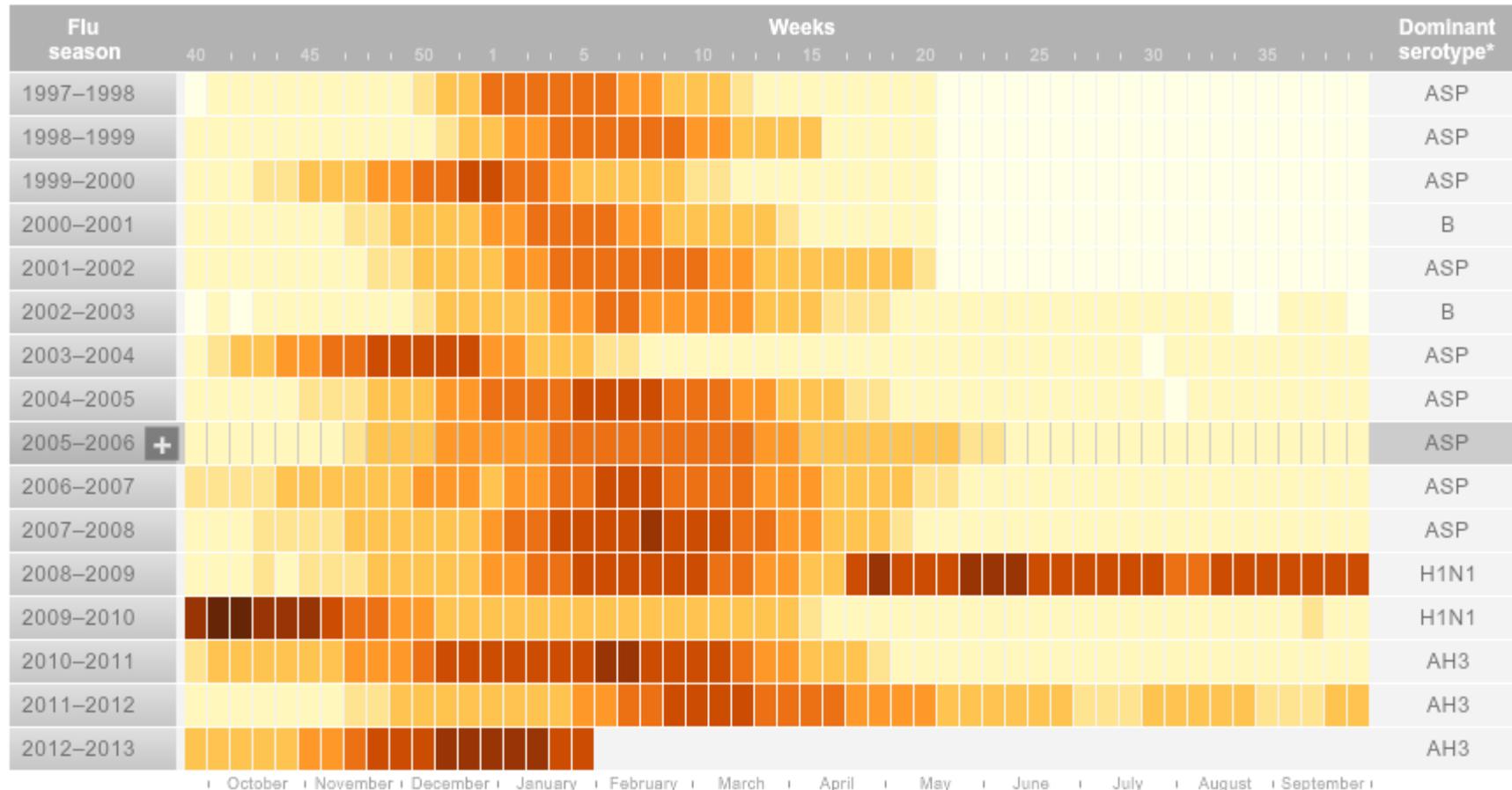
Percentage of outpatient visits for influenza-like illness (ILI)



- National
- Pacific
- Mountain
- West North Central
- West South Central

- East North Central
- East South Central
- New England
- Middle Atlantic
- South Atlantic

Positive Tests



Last updated on 02-13-2013

* ASP denotes influenza A (subtyping not performed).

Grippe US 2008- 2009

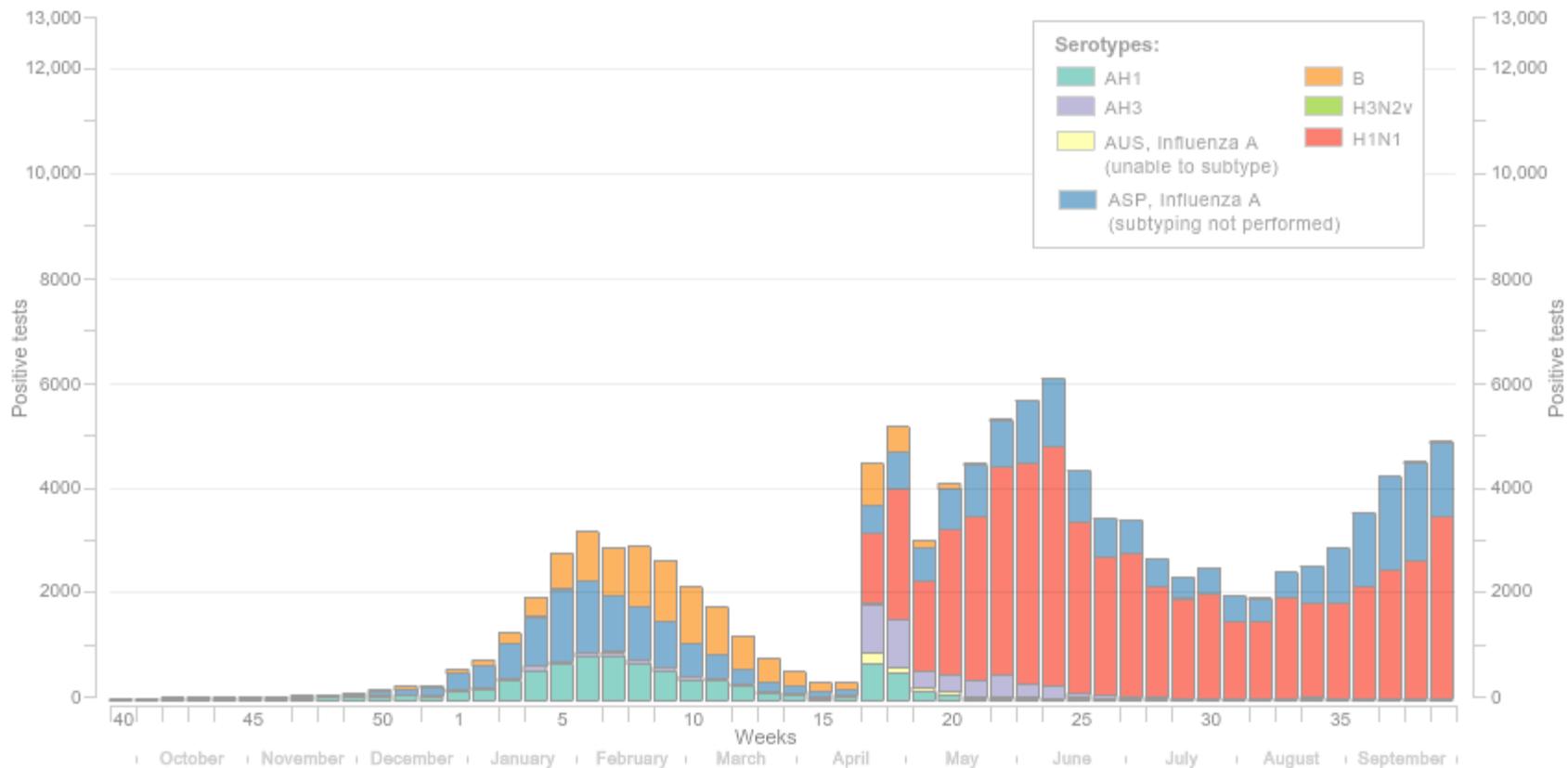
INTERACTIVE GRAPHIC | Influenza in the United States, 1997-2013



- National
- Pacific
- Mountain
- West North Central
- West South Central
- East North Central
- East South Central
- New England
- Middle Atlantic
- South Atlantic

2008-2009 Flu Season | Total number of cases for each serotype

Close X



Last updated on 02-13-2013

ECDC Guidelines for presentation of surveillance data

(https://ecdc.europa.eu/sites/portal/files/documents/Guidelines%20for%20presentation%20of%20surveillance%20data-final-with-cover-for-we..._0.pdf)

Quel type de visualisation utiliser ?

(histogramme, ligne, cumulatif...)

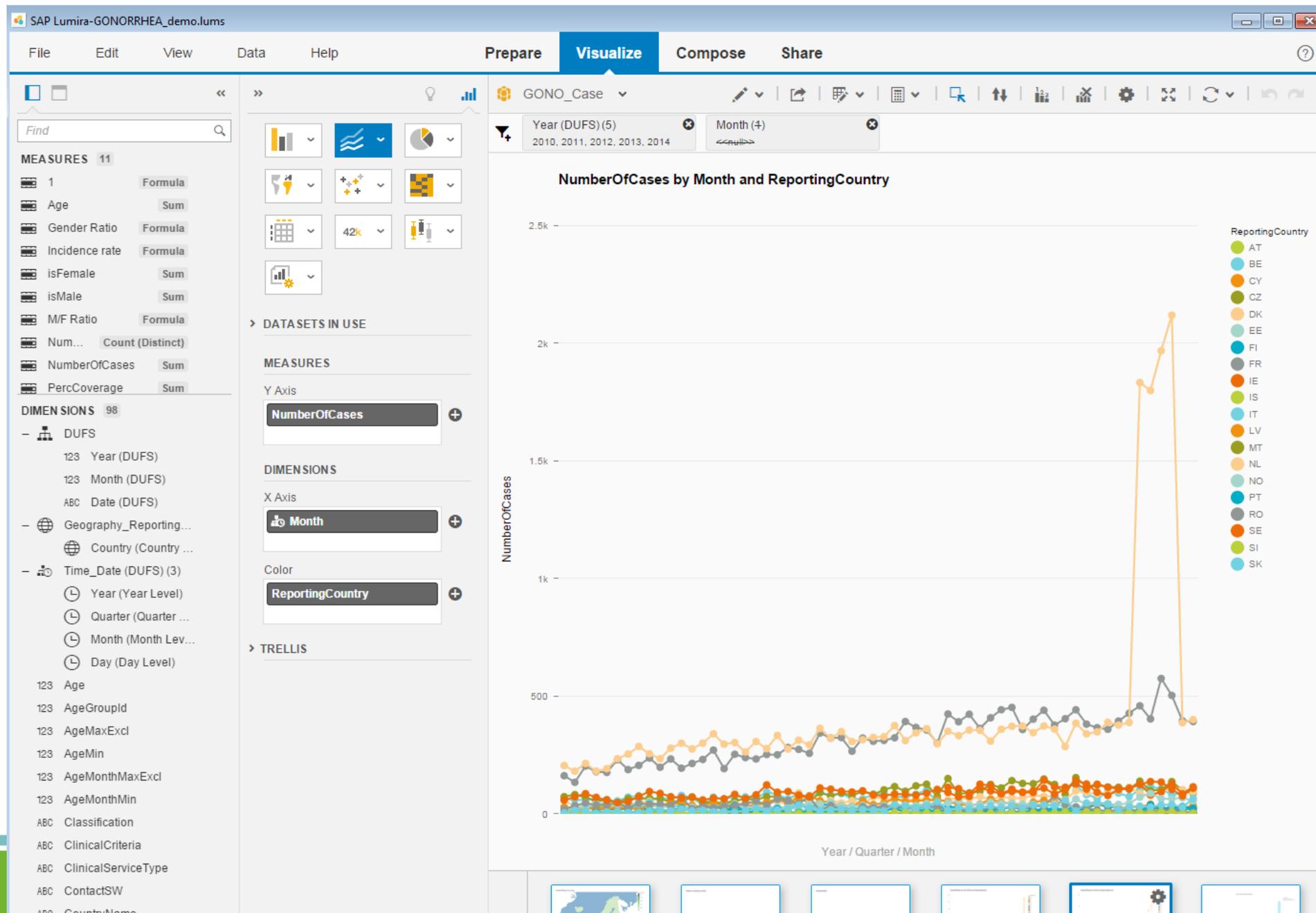
pour quel type de données ?

(surveillance, épidémie, 1 / n series...)

et pour quel objectif ?

(comparaison, evolution, impact...)

Exploration des données...



Exploration des données...

NumberOfCases by ReportingCountry and Year



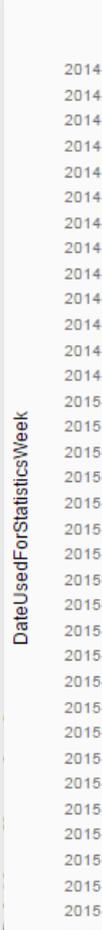
Incidence rate by Year (DUFs) and ReportingCountry



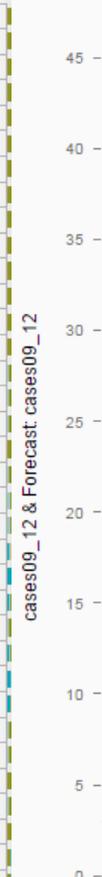
ILI_Rate by DateUsedForStatisticsWeek and ReportingCountry



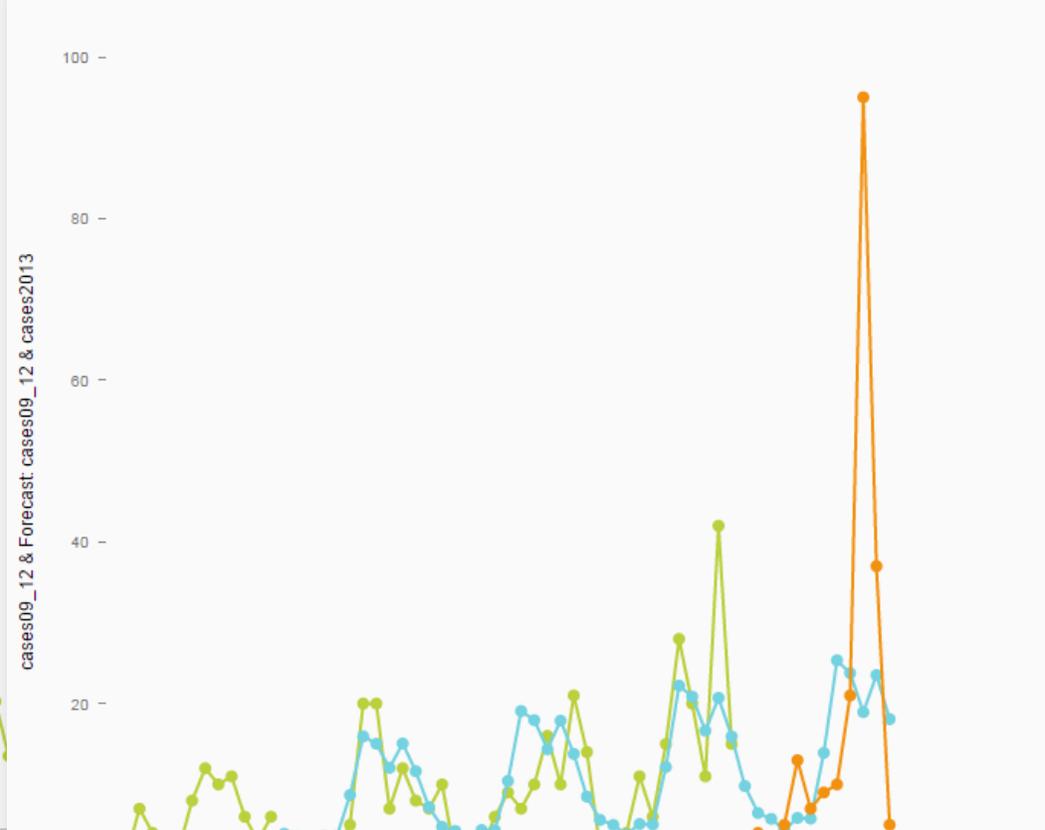
ILI_Rate by DateUsedForStatisticsWeek and ReportingCountry



cases09_12 and Forecast: cases09_12 by Month



cases09_12, Forecast: cases09_12 and cases2013 by Month



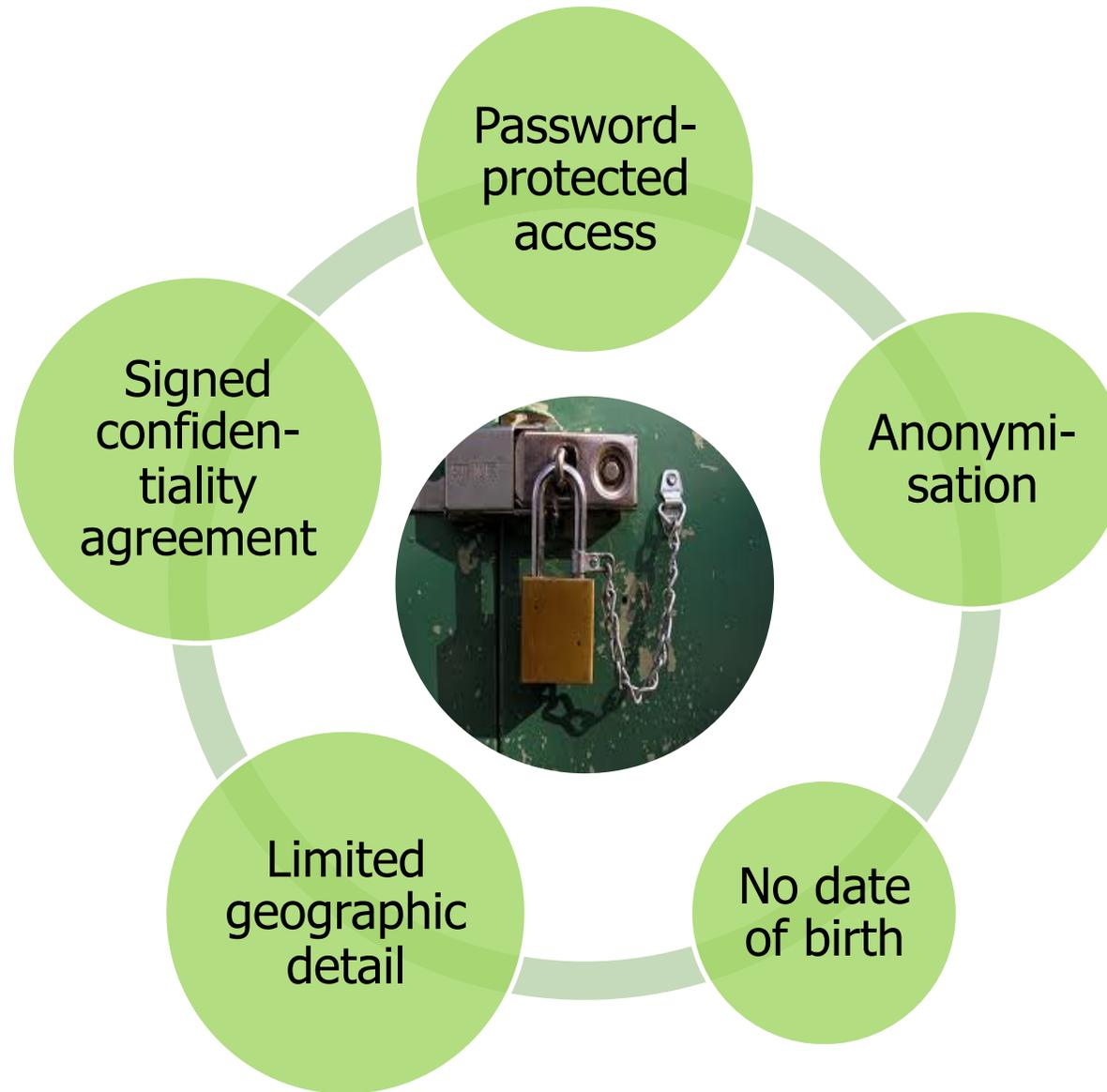
Recommandations complémentaires



Permettre l'accès aux données sous-jacentes (tableau des données)

Accessibilité aux données « par la machine » (recommandations W3C)

Securite des données



Questions ?

Data and tools



Atlas of Infectious Diseases

A surveillance tool that interacts with the latest available data on infectious diseases and allows users to produce tables and maps.

[Explore the Atlas >](#)



Vaccine Schedule

The Vaccine Schedule is an interactive platform of



European Test Finder

Want to get tested for HIV, hepatitis or other sexually transmitted infections? Find out which is the nearest testing location where in Europe

[European Test Finder >](#)

<http://ecdc.europa.eu>

➤ **Data & Tools**



ECDC Virtual Academy (EVA)

An online training platform in the area of disease prevention and control, with open and restricted courses, webinars and video lectures

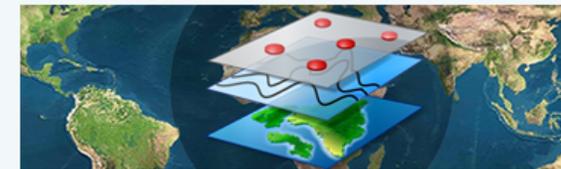
[Check out available courses >](#)



Threats Report App

A new and practical way to get information about infectious disease threats on the go. Get the latest news on disease outbreaks and ECDC risk assessments

[Download the app >](#)



EMMA Map Maker

A user-friendly mapping application to support epidemiologists and public health professionals. You can use EMMA without any GIS software and without manually processing complex geo-spatial data.

[Sign in or register >](#)