



# NATIONAL « INFLUENZA PANDEMIC » PREVENTION AND RESPONSE PLAN

*Document to aid the authorities with  
preparation and decision-making processes*



No. 850/SGDSN/PSE/PSN October 2011

This plan revokes and replaces national plan No. 150/SGDN/PSE/PPS of February 20th, 2009

# PREFACE

*Drawing lessons from the handling of the pandemic episode of 2009 and the feedback and evaluations that were carried out, the Government undertook an in-depth reform of the “Influenza Pandemic” national prevention and response plan.*

*This plan describes the Government’s response strategy, putting the emphasis on flexibility and adaptation to the characteristics of the pandemic. It includes a preparation phase so that all of the people in their various sectors of responsibility will be ready to handle the crisis when the day comes. Beyond the Government, the “Influenza Pandemic” plan involves all the local authorities, health care professionals, and other socio-economic professionals who take part in the response to the pandemic situation.*

*Elected officials from all local authorities will be closely involved, particularly mayors who, drawing on their services and mobilizing associations if necessary, will monitor the situation of vulnerable people and general hygiene rules and will guarantee the proper functioning of the local services that are essential for our fellow citizens. But a pandemic is firstly a health crisis and the response to it will mobilize health care professionals working in hospitals, in private practice, in residential or teaching establishments, in companies, and in pharmacies. Local medical care is of major importance for the treatment of patients. Health care professionals will naturally be involved in the main decisions that must be made when the plan is implemented.*

*Managers of companies, including small and medium-sized companies, may find that their business activity is affected by the pandemic and they must therefore ensure its continuity. Lastly, all citizens have a role to play. They can contribute to limiting the effects of the pandemic through the observance of rules of hygiene, through their solidarity with isolated people and through their action for the continuity of social life.*

*In light of the ever-present risk of an influenza pandemic, the national plan and the accompanying documents constitute a guide for help with decision-making for all professionals and to assist them in their respective missions.*

# SOMMAIRE

## INTRODUCTION

PAGE 4

## PART I :

### DEFINITIONS, PREPARATION AND RESPONSE STRATEGY AND PRINCIPLES

PAGE 6

<b>1. GENERAL FRAMEWORK</b>	<b>P.8</b>
1.1. Seasonal influenza and pandemic influenza	P.8
1.2. How to qualify the impact of the epidemic	P.9
1.3. From the international context with the WHO phases to the national context of the 4 stages of the epidemic	P.10
<b>2. PREPARATION : THE ON-GOING ACTIONS</b>	<b>P.12</b>
<b>3. IN A PANDEMIC SITUATION</b>	<b>P.14</b>
3.1. Organisation of the crisis management	P.14
3.2. Multi-sector response strategy	P.16
3.3. Health strategy	P.18
3.4. Continuity of social and economic life - solidarity	P.21
3.5. International and European framework	P.23
3.6. Elements of communication strategy	P.26

## PART TWO :

### DECISION-MAKING GUIDE

PAGE 27

<b>1. RECOMMENDATIONS AND USE OF THE GUIDE</b>	<b>P.29</b>
<b>2. HELP WITH DECISION-MAKING IN THE MAIN STAGES OF THE EPIDEMIC</b>	<b>P.30</b>
- INITIAL ALERT: The first measures	P.31
- Stade1: Slow down the introduction of the virus into the territory	P.37
- Stade2: Slow down the propagation of the virus in the territory	P.45
- Stade3: Attenuate the effects of the epidemic wave	P.53
- Stade4: Return to the former situation and prepare for the possible next wave	P.63
<b>3. TRANSVERSE MEASURES</b>	<b>P.69</b>
- Vaccination: taking the strategic decisions	P.70
- Communication: it accompanies each measure	P.73

## GLOSSARY

PAGE 75

### ABBREVIATIONS

ARS	agence régionale de santé/regional health agency
ARS Z	regional health agency of the main city of the zone
CCA	crisis coordination arrangements (European Union)
CCE	economic continuity unit
CIC	inter-ministerial crisis cell
COGI C	operational inter-ministerial crisis management center
DGS	direction générale de la santé/Directorate General for Health
DILGA	Inter-ministerial delegation for the fight against avian influenza
ECMO	ExtraCorporeal Membrane Oxygenation
EMA	European Medication Agency

InVS	institut de veille sanitaire/Health Watch Institute
MAEE	ministère des affaires étrangères et européennes/Ministry of Foreign and European Affairs
WHO	World Health Organization
NGO	non-governmental organization
PCA	plan de continuité d'activité/activity continuity plan
IHR	International Health Regulations
SGDSN	General Secretariat for Defense and National Security
SIG	service d'information du gouvernement/government information service
EU	European Union



# INTRODUCTION

## “INFLUENZA PANDEMIC” NATIONAL PREVENTION AND RESPONSE PLAN

*Document for aid in preparation and decision-making*

### 1./ 1. The influenza pandemic: an ever-present risk

The appearance of pandemic influenza viruses remains a major concern. No one can be sure that the next influenza pandemic will be relatively moderate, like the one in 2009. In addition to its health impact, an influenza pandemic can cause disorganization of the health system, and also disturbances in social and economic life. The response to it involves not simply a health care approach, but also an **inter-sector** approach.

### 2./ The “Influenza Pandemic” national prevention and response plan

#### What is its purpose?

The plan is both a reference document for preparation and a guide for decision-making in pandemic situations.

#### The objectives of the plan:

- **Protecting the population, i.e. as much as possible, reducing the number** of victims of the pandemic in Mainland France and overseas, and among French citizens living abroad,
- **Preserving the functioning of society and economic activities.**

**Before the epidemic**, it offers a reminder of the preparation actions to be taken.

**During the pandemic**, it is a decision-making guide. As it is impossible to predict all of the scenarios, it indicates the essential elements of which decision-makers and all of the professionals involved must be aware and to which they must adapt as the situation changes. It is intended to facilitate decision-making, rational use of resources, coordination of actors and management of communication.

**After the pandemic**, it should guide the actions of the Government, health care professionals, actors in socio-economic life and the population itself to allow for a return to a life that is as normal as possible, taking into account the possibility of a new wave of the epidemic.

#### Who is it intended for?

The plan is intended first for **decision-makers** and public authorities in charge of preventing and fighting against the effects of the pandemic. It is also intended for **all people in positions of responsibility**, especially **health care professionals**, so that they are familiar with the general framework of their action and their place within the system. It is also intended for **the general population**, who must be aware of the risk to be able to prevent it and avoid its spreading, and also play a role of solidarity with their neighbours which is essential for **limiting its consequences**.

#### The development of the plan: a cross ministerial project

The work was supervised by the General Secretariat for Defence and National Security (SGDSN), with the inter-ministerial delegate for the fight against avian influenza (DILGA), the Minister in charge of health, the Minister of the Interior and the government information service (SIG). All ministerial departments were involved.

#### A plan accessible to the general public

The principle chosen was to allow everyone to freely consult the plan. Every citizen can discover the bases on which the authorities develop their decisions and thereby gain a better understanding of their choices.

### 3./ Uncertainty

By their nature, crises involve uncertainty. While it is possible to reduce it, it can never be totally eliminated. This uncertainty is particularly high in health crises. During an epidemic, a mutation that makes the virus more virulent is always possible, for example.

It is necessary to accept that there are many unknowns and to learn to deal with the crisis in a very uncertain context.

The response plans, which are drawn up without knowing the scenario that is coming, must therefore be flexible.

The plan is the “fixed part of the system”. It is written in advance and cannot describe the infinite number of possible scenarios, although it aims to have a generic value.

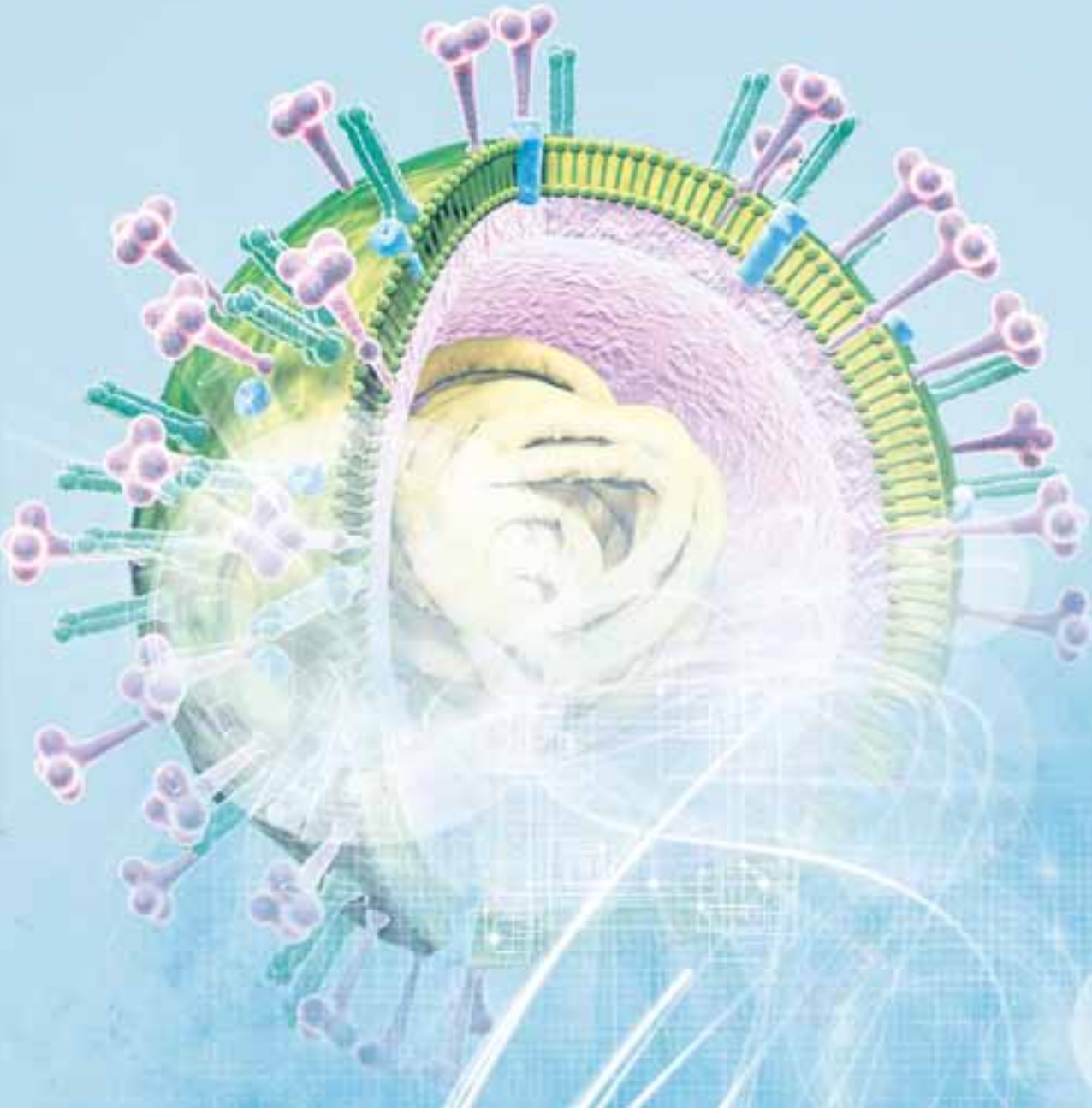
The role of the decision-maker is then to adapt the provisions of the plan to the concrete situation encountered.

### 4./ An adapted planning system which involves various decision-making tools with:

- The **national plan** which defines the general preparation and response framework, and the measures of a strategic nature which can be decided on at various stages of the pandemic,
- A **set of sheets describing the procedure of the response measures**, with their gradation as a function of the impact of the pandemic,
- A **guide to the departmental adaptation** of the plan,
- A **guide for the organization of an exceptional vaccination campaign** and a **“distribution of health care products” guide**, intended for the departmental levels,
- A **guide for drawing up activity continuity plans**, for government agencies, local authorities and companies.

In light of the uncertainties that are inevitable in an epidemic situation, the purpose of this system is to formalize the lessons learned from past experiences and to provide assistance to decision-makers in the main choices that they must make.

The national plan and the accompanying documents useful to those who are involved in the prevention of and the response to the pandemic, including the general public, are put on line on the site <http://www.risques.gouv.fr>, as they are drawn up.



**PART**  
**01**

# DEFINITIONS, PREPARATION AND RESPONSE STRATEGY AND PRINCIPLES

- 1./ General framework
- 2./ Preparation:  
the on-going actions
- 3./ In a pandemic situation





# 1./ GENERAL FRAMEWORK

## 1.1. - Seasonal influenza and pandemic influenza

### A./ Seasonal influenza and pandemic influenza

Influenza is an acute, contagious respiratory infection of viral origin.

**Seasonal influenza** epidemics reappear on an annual basis. They are caused by viruses that vary little from year to year and the population has immune defences to them.

However, for several categories of people at risk, **vaccination against seasonal influenza every year is recommended.**

**Pandemic influenza** is characterized by the appearance all over the planet of a new influenza virus against which the defences of most of the population are weak or non-existent.

### B./ Characteristics of the influenza pandemic

- A **very large number of people affected by the virus** (on the order of 7.7 to 14.7 million people in 2009 in Mainland France, mostly in the young age ranges, versus 3 to 6 million for a seasonal influenza)<sup>1</sup>,
- A development **outside of the usual influenza season**, particularly in summer in the Northern hemisphere,
- A **large number of influenza cases with complications**, very serious forms of which, without treatment, are often fatal,

- Serious forms and deaths **affecting mostly adults under the age of 60 on average**, while the average age of death from seasonal influenza is 82<sup>2</sup>,

Even a moderate impact can lead to a large number of years of life lost (difference between the age of death and the age corresponding to the average life expectancy of the person)

- **Successive waves**, each one lasting from 8 to 12 weeks, separated by a few weeks, a few months or more, and more rarely a single wave.

### C./ A complex infectious context

Influenza epidemics generally occur at the same time as epidemics due to other respiratory viruses, leading to:

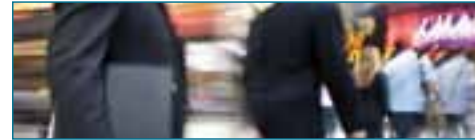
- Aggravated results;
- Epidemic outbreaks of which the origin is sometimes difficult to determine.

<sup>1</sup> VAUX S. et al., Bulletin épidémiologique hebdomadaire of June 29th, 2010, n°24-25-26, InVS

<sup>2</sup> VICENTE P. et al., Bulletin épidémiologique hebdomadaire of January 11th, 2011, n°1, InVS



# 1.2. - How to qualify the impact of the epidemic



Historical pandemics allow us to grasp the diversity of the health impact and the social impact of a pandemic (with the number of deaths in France).

PANDEMIC	MORTALITY IN FRANCE	SOCIAL IMPACT
1918-1920 Spanish flu	About 200,000 deaths <b>very severe</b>	<b>Major</b> social impact (major disturbances in economic and social life)
1957-1958 Asian flu	About 30,000 deaths <b>severe</b>	<b>Moderate</b> social impact (disturbances due to absenteeism at work)
1968-1970 Hong-Kong flu	Excess mortality observed 30,000 deaths <b>severe</b>	Limited social impact
2009 Type A influenza (H1N1)	About 350 deaths <sup>3</sup> recorded in 2009, Mostly young adults (More complete evaluation probably on the order of one thousand) <b>average</b>	<b>Moderate</b> social impact (Social debate on choices regarding vaccination)

*These qualifiers do not correspond to normative thresholds. They are used here as indicator references.*

## A./ Health impact

**This depends on:**

- The **virus** (transmissibility and virulence),
- The **vulnerability of the population** (pre-existing immunity, health condition of some populations, etc.);
- The **climatic and health context**: cold spell, other viruses circulating, saturation of the health care system.

**For a given period, this is reflected in:**

- The **mortality**: number of deaths within the population,
- The **morbidity**: number of people sick in a population,
- If applicable, a **disorganization of the health care system** due to the saturation of the health care services.

## B./ Social impact (socio-economic)

**A pandemic can cause:**

- **Difficulties linked to discontinuities** of social life and activities of vital importance for society and for the Government,
- **Economic losses**. Absenteeism is thought to be one of the major reasons. The World Bank calculated that the cost of a pandemic today would be 2,000 billion euros, which would be as severe as the Spanish flu<sup>4</sup>,
- **Disturbances of public order**, particularly as a function of the perception of the severity of the pandemic. However, this type of impact has very rarely been observed in past pandemics,
- The **isolation of vulnerable people**, requiring the development of solidarity among neighbours.

<sup>3</sup> Evaluation based on the word "influenza" on the death certificate. The real number could be 3 to 8 times greater than this figure (P. Vicente et al., Bulletin épidémiologique hebdomadaire of the InVS, n°1 2011).

<sup>4</sup> Evaluating the Economic Consequences of Avian Influenza, Andrew Burns, Dominique van der Mensbrugge, Hans Timmer, World Bank, 9/2008

# 1.3. - From the international context with the WHO phases...



The nomenclature of the phases of an influenza pandemic, adopted by the World Health Organization (WHO) in 2008, can be used for an evaluation of an average situation over the whole world.

## WHO PHASES

<b>PHASE 1</b>	No new animal influenza virus circulating among humans.
<b>PHASE 2</b>	An animal virus, known to have caused infections in humans, has been identified in wild and domesticated animals.
<b>PHASE 3</b>	An animal influenza virus or animal-human hybrid is causing sporadic infections of small clusters in humans, without inter-human transmission.
<b>PHASE 4</b>	Effective inter-human transmission.
<b>PHASE 5</b> <b>PHASE 6</b>	Geographic extension of the inter-human transmission of an animal influenza virus or animal-human hybrid.
<b>PHASES</b>	<ul style="list-style-type: none"> <li>- <b>post-peak</b> (end of pandemic wave): decrease in the number of cases in most countries. Possibility of a new pandemic wave;</li> <li>- <b>post-pandemic</b>: the number of cases corresponds to a seasonal influenza.</li> </ul>

**NB**

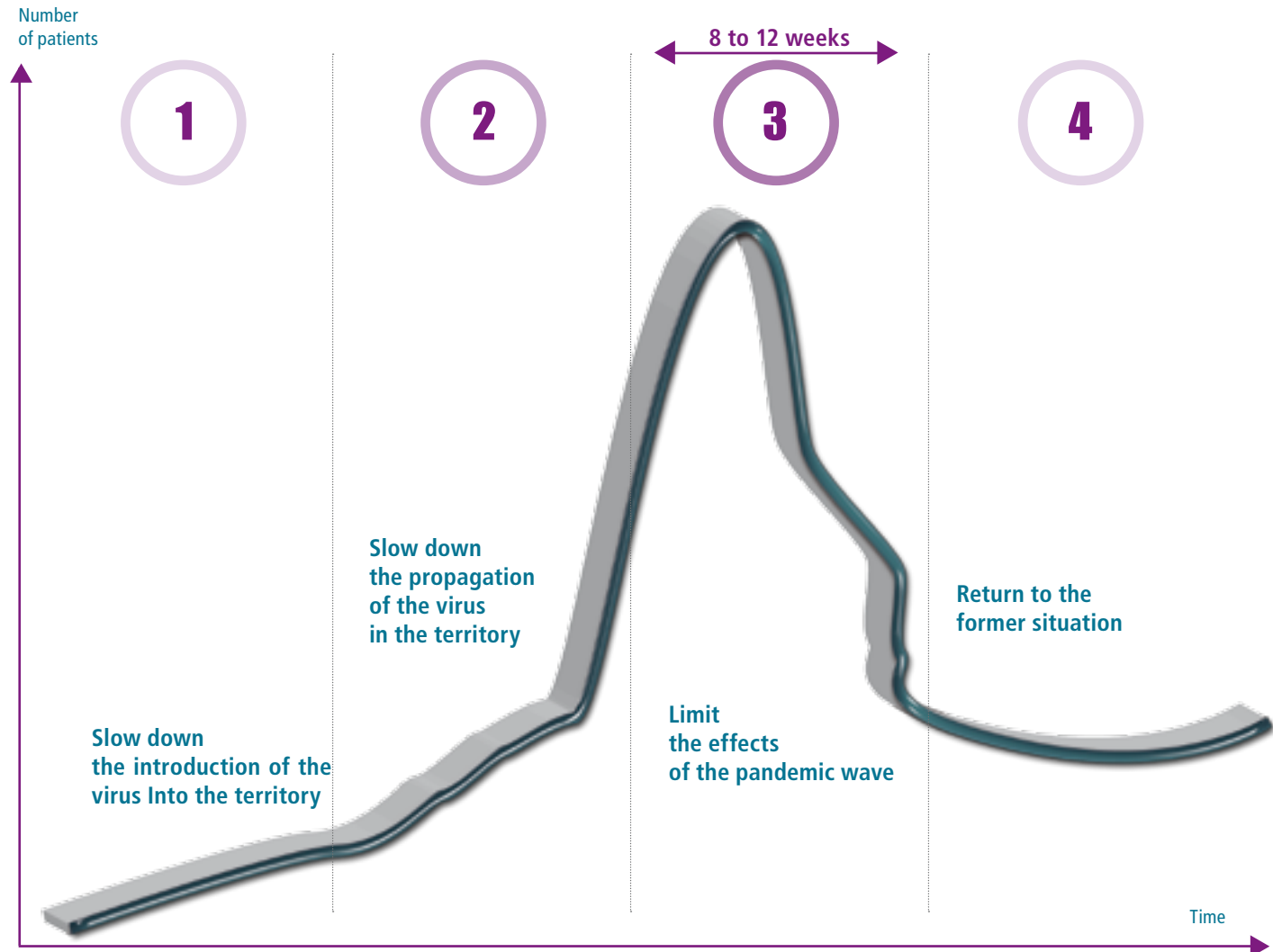
The WHO phase declared does not necessarily correspond to the situation within the country, because the propagation of the virus and the pandemic waves are not simultaneous over the entire globe. The situation can also differ very substantially between Mainland France and overseas.



# ... to the national context of the 4 stages of the epidemic



The limits of the WHO nomenclature led to the definition of 4 stages, reflecting the progression of the epidemic in the territory in question and corresponding to 4 crisis management objectives for the application of the French plan. These can be used to take into account different situations in Mainland France and in a given overseas territory.



Beyond the "wave" of stage 3 of the facing diagram, other "pandemic waves" can follow several weeks, several months, or even one, two or three years later. They are sometimes more severe than the initial wave.



# 2./ PREPARATION

## The on-going actions

The preparation aims to mobilize the means to protect people, preserve social and economic life, and guarantee a rapid return to normal in the face of a pandemic of which the scope, the speed and the unexpected aspects can exhaust the usual capacities. It consists of developing plans and procedures, specifying everyone's roles, organizing personnel reinforcements in advance and mobilizing the necessary means.

The main preparation tasks to be carried out are the following<sup>5</sup>, with the ones involving the territorial authorities being specified in the plan application guide drawn up by the Ministry of the Interior:

### Organization and planning

- Definition and periodic revision of the preparation and response **strategy**. Adaptation of the national plan (SGDSN)
- Updating of the plans to **fight against animal influenza** and monitoring of the circulation of the viruses (Agriculture)
- Preparation and updating of the **guide for the departmental application of the national plan** (Interior)
- Preparation and periodic adaptation of the **zonal and department applications** (Prefects, with the help of territorial authorities)
- Preparation of the **services of the Departmental Councils** for the support of fragile people in pandemics. Preparation of the blue plans and their "influenza pandemic" appendices from the medical-social establishments (departmental councils)
- Preparation of **municipal services** for support of the population in pandemics (local authorities)

- Carrying out of **exercises** (SGDSN, Interior, Health, all public and private actors)
- Preparation for **recourse to volunteers** in the event of a pandemic (Social cohesion, Interior, all territorial authorities)
- **Building up of reserves** and preparation of the procedures for calling up reservists (Interior, Health, Defence)
- **Consciousness-raising and coordination with the professionnals** of all levels to prepare the response to the pandemic (All ministries)
- Forming of an analysis group bringing together **researchers in social and human sciences**, who could be mobilized in crisis situations (Research)

### Activity continuity

- Drawing up and updating of the **Activity Continuity Plans** (PCA), with "influenza pandemic" appendix, administrations, territorial authorities and companies. (All ministries, local authorities and companies, with the SGDSN guide)
- Preparation of the measures and technical means (teleworking, teleconferencing, etc.) (All ministries, local authorities and companies, with the SGDSN guide)
- Preparation of **operators of vital importance** for the pandemic situation (monitored by the SGDSN and the overseeing ministries)

<sup>5</sup> The leading ministries or organizations appear in parentheses

## Preparation of the health system

- **Monitoring and health evaluation of the situation** (Health)
  - Preparation of the health monitoring systems reinforced in the event of a pandemic
  - Development of capacities of anticipation of the epidemiological situation
- Organization of **influenza diagnostic laboratories** for the detection of cases (Health)
- Preparation of **the hospital and out-patient care system** for the cases and their contacts (personnel needs, reinforcement of medical teams SAMU-Centres 15, providing hospitals with specific means, etc.)(Health)
- Preparation of **the procedures for care of particular categories of the population** (children, pregnant women, disabled people, elderly people, marginalised populations, etc.)(Health with overseeing ministries, territorial authorities)
- Definition of **a strategy for the development and acquisition of health care products and medical systems** - definition of the specifications for use. Verification of **availabilities** (list from the agency in charge of the safety of health care products). Preparation of the **“logistic scheme for distribution of health care products and equipment”** (Health)
- Preparation of **stockpiles of masks** (Health, all ministries, companies)
- Updating of plans for the **protection and securing of establishments for the production and storage** of means of protection and health care products (Interior)
- Reinforcement of **consciousness-raising for health care professionals** regarding influenza (Health)
- Consciousness-raising for the public regarding **rules of hygiene** (Health). Implementation of the corresponding equipment (all organizations)

## Vaccination

- Preparation of the **guide for the organization of exceptional vaccination campaigns**. Definition or updating of vaccination strategies. Definition of an indicative order of priority (Health)

- Reservation, if necessary, of **pandemic vaccine** (Health)
- Reinforcement of the **initial and continuing education of health care professionals in vaccinology** (Health)
- **Mobilization of the general public and health care professionals for vaccination** (Health)

## Evaluation, research and development

- **Preparation of mobilization of research** in pandemic situations (Health, Research)
- Definition of **indicators of preparation** and organization of collection circuits (all ministries and territorial authorities)
- **Reinforcement of scientific watch** on animal influenza and human influenza (Health, Agriculture, Research)

## International aspects

- Implementation of international **health regulations** in the territory - Definition of the **health control principles and measures at borders**. Designation and equipment of airport platforms dedicated to the receiving of aircraft coming from heavily affected zones (Health, Transport)
- **Preparation, on the European and international levels, of coordinated actions**, particularly in terms of the purchasing of vaccines and the common definition of health care indicators (Health)
- For **French citizens abroad**, organization of a network of medical advisors for the embassies and information for companies employing expatriates (Foreign Affairs)

# 3./ IN A PANDEMIC SITUATION

## 3.1. - Organisation of the crisis management



### A./ Political management of governmental action and operational management

The organization of the governmental management of the crisis is specified in the circular of January 2<sup>nd</sup> 2012<sup>6</sup>.

### B./ Management of the crisis on the territorial level

The rules of territorial management of the crisis are specified in the [guide to the departmental application of the "Influenza Pandemic" plan](#), developed under the auspices of the Ministry of the Interior.

The departmental crisis management is adapted to the inter-sector and inter-ministerial nature of the threat. When facing a very severe pandemic, all of the national and local stakeholders will be mobilized, from citizens to the decentralized services of the Government, the territorial authorities and the economic and social actors.

The departmental system of the prefects constitutes the backbone of the preparation for and the management of the crisis. It guarantees the coherency of the measures and the observance of the response strategy.

The [prefects of defence and security zones](#)<sup>7</sup> draw on all of the decentralized administrations and on the Regional Zone Health Agencies (ARSZ) to coordinate the planning work of the departmental prefects. Every year, they organize at least one exercise for the implementation of the plan's measures.

The [departmental and defence and security zones prefects](#) encourage the departmental authorities to prepare themselves, especially for the continuity of their essential activities and services (through

the carrying out of the activity continuity plans). These authorities have a major role in providing local assistance to people who are ill and to isolated people. Special attention is paid to economic actors and solidarity actors by the departmental authorities and the Government.

#### In a crisis situation:

The [zone prefects](#) coordinate the measures and are the privileged contact persons of the inter-ministerial crisis cell (CIC). They synthesize the information coming from the departments and send it to the health crisis centre of the Ministry of Health and to the CIC or, if it is not active, to the inter-ministerial operational crisis management centre (COGIC). They draw on the ARSZ. The epidemiological data of the ARS is accessible to the ARSZ for the preparation of syntheses. The zone and departmental prefects coordinate the organization of the care, drawing on the ARS.

The [departmental prefects](#) can implement the extended standard plans. They draw on the ARS which monitor the evolution of the out-patient care facilities.

They oversee the inventorying of the premises that can be requisitioned for use as intermediate reception facilities for patients who would be isolated if they remained at home, but whose condition does not justify hospitalization; they make sure that these can be made available and outfitted rapidly. They organize the use of the reserve health corps.

The [regional and departmental councils](#) contribute, in conjunction with the prefects and the municipalities, to the definition of the local policies and the implementation of the necessary means; they finance and supervise the public transport networks on the regional scale, and the networks for assistance to people; they lead the local solidarity policy and play a major role in consciousness-raising. They are involved in the planning of the response to the crisis.

<sup>6</sup> Circular of the Prime minister

<sup>7</sup> France is divided into 7 defense and security zones for Mainland France and 5 for the Overseas areas.

The department prefect and the mayor draw on the national plan and its measure sheets to:

- Limit the risks of contagion,
- Ensure the continuity of activities, especially public services.

Their essential tasks involve:

- The administrative policy: closing of teaching establishments and day care centres, adaptation of the circulation of public transport
- The maintaining of the social and health link with the population: inventory of needs of people, coordination of volunteers, encouraging solidarity among neighbours, etc.
- The maintaining of the missions essential to collective life: public records, garbage collection, water production and the food supply, waste water treatment, maintaining of collective heating, funeral services, etc.
- Contribution to the organization of pandemic vaccination,
- Communication and information to populations.

The Mayor implements the measures of the municipal protection plans. He:

- Maintains the capacity of municipal services to deal with the crisis;
- Protects the municipal crisis personnel.

The organization of solidarity on the local level is an essential area of activity of the mayors, drawing on the municipal civil defence reserve, associations, and volunteers from all sources whose action must be organized.

All citizens must become crisis managers on their levels:

- Through their volunteer involvement within associations, the municipal civil defence reserve, the national police reserve, military reserves, health reserves, etc.
- Within the health care professions, but also other private and public sector professions, to limit absenteeism as much as possible and to allow for continuity of the activity;
- Through solidarity efforts in municipalities, for services for isolated people, especially the elderly, and child care.

## 3.2. - Multi-sector response strategy

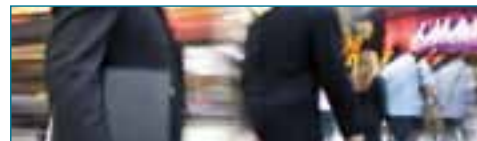
An influenza pandemic can have an impact on all sectors of the life of the country and the response to it requires a synergy of means from most of the ministries, as well as local authorities and companies. For this reason, the response strategy must cover multiple sectors. This response involves the implementation of measures chosen from an on-going evaluation of the risks. It must be adjusted with rapid reaction as a function of the health, economic and social data.

**The goal of the multi-sector response strategy is to deal with pandemics of greatly varying degrees of severity. It is based on measures for which the relevance and gradation must be examined on a case-by-case basis.**

It targets the following objectives:

**For the health dimension (p 18):**

- Identifying the virus and limiting the epidemic at the source as much as possible through an international assistance action;
- Increasing the awareness of health care professionals, other professionals exposed and the public of the observance of protection and hygiene measures and implementing the necessary means;
- Rapidly developing and producing a vaccine to be administered to the most exposed professionals, to people with risk factors or who are most likely to propagate the epidemic, in particular;
- Slowing down the appearance and the dissemination of a new virus in the national territory, through measures adapted to the impact of the epidemic: detection and isolation in hospitals of the first cases, treating the people with whom they are in contact (with antiviral prophylaxis), management of transports with countries affected, health verifications at borders, pre-pandemic vaccine if applicable, closing of schools, etc.



- Attenuating the health impact: limit the contagion through graduated measures, organize and adapt the health care system as a function of the impact of the pandemic:
  - as soon as the number of people affected becomes high, treatment of patients and their contacts at risk of having a serious form, through out-patient care when their state of health allows for it;
  - adaptation of management and patient receiving structures, if their number becomes too high;
  - services, if necessary, to sick people who would be isolated in their homes;
  - graduated mobilization of health care establishments;
  - implementation of “medical countermeasures” with optimal use of reserves constituted in advance composed of health care products, medical equipment and means of protection (antiviral, antibiotics, vaccines, masks, ECMO, etc.);
  - limitation of contacts in places of high human concentration, schools etc.

**For the continuity of the life of the country (p 21):**

- Organize the continuity of the action of the State and of social and economic life:
  - Maintain the living conditions of people in their homes, through local organization drawing on neighbour solidarity and consolidated by the departmental authorities;
  - Maintain activities of vital importance drawing on all available personnel resources (reservists, “young retirees”, volunteers, unemployed, etc.);
  - Maintain economic activities on the best level while ensuring the protection of employees’ health;
  - Maintain the safety of dangerous facilities in a pandemic context;
  - Maintain public order and respect for the law.



### For the international dimension (p 23):

- Cooperating with the Member States of the European Union in the interest of reciprocal information and harmonization of approaches, favouring the inter-sector dimension of cooperation and a concerted approach to the acquisition of vaccines;
- Treating French citizens abroad and foreign citizens in France;

### For the communication (p 26):

- Organizing communication, and information to the stakeholders, the professionals<sup>8</sup> and the population
  - Monitoring opinions; reinforcement of the dialogue between the public authorities and their partners;
  - Disseminating complete information about the risks, explanation of the “why” of the decisions, response to the rumours via the traditional media and on the social networks (Internet);
  - Coordinating communication of authorities to ensure consistency;
  - Encouraging each citizen to become a responsible player in the face of the risk;

### For the ethical dimension (ref. Official Notification No. 106 of the National Ethics Consultative Committee):

- Be sure to maintain a social consensus around ethical principles

A severe pandemic can require priorities of access to health care resources, an effort of solidarity and a commitment from the most exposed professionals. A consensus on shared ethical values is indispensable to preserve social cohesion.

- Duty of solidarity on all levels, from the international level to the local level;
- Care of populations extending to those in situations of exclusion;
- In light of the duty of treatment of health care professionals, and those whose functions lead them to be exposed (including occasional public service employees), duty of society to protect them and their families and to guarantee the future of families of those who are victims of the illness;
- Health care professionals and those in related fields have priority access to the vaccine and are strongly encouraged to receive the vaccination to avoid propagating the virus to the people they treat;
- The Government must allow access to the vaccine and to other health care products, in an order of priority defined through a transparent and publicly-announced procedure;
- Rejecting stigmatisation of isolated patients or people kept in quarantine;
- Duty of all persons to take part, as far as possible, in the efforts for continuity of the life of the country (p 21);

and

- Constantly adapt the response as a function of the development of knowledge and the situation

<sup>8</sup> Particularly social partners and associations

## 3.3. - Health strategy

### A./ The issues of slowing and attenuating

The health strategy to fight the influenza pandemic includes:

- the **slowing stage**, consisting of delaying the introduction and the propagation of an illness in the territory by limiting inter-human transmission,
- The **stage of attenuating** the health impact, consisting of reducing the effects of the virus.

The attenuating stage may or may not be preceded by a slowing stage.

The threat must be constantly evaluated in order to fine tune the positions taken and to adapt the strategy.

#### 1./ The slowing stage (stages 1 and 2, pages 37 and 45)

The slowing of the introduction and the propagation of an illness in the territory can be done by:

- Active search for and early treatment of cases and their contacts, in particular travellers upon their arrival in the country if the epidemic cluster is abroad;
- The implementation of actions to prevent the appearance of epidemic clusters in the territory.

The WHO recommends this slowing strategy if the epidemic cluster is limited to a specific geographical area.



#### 2./ The transition from the slowing stage to the attenuating stage

When the development of the pandemic is such that we observe:

- Active circulation of the virus in the population within a territory, despite detection efforts, treatment of possible cases and the search for contacts of these people;
- That the health resources mobilized for this active search for the contact cases are no longer sufficient to limit the propagation of the virus;
- A risk of saturation of the health care system (intensive care units, paediatric capacities, the work load of doctors in private practice and paramedics SAMU-Centre 15).

You must then move to the attenuating stage, stopping the search for contacts of the patients and reorienting the means to limiting the health effects of the pandemic. Advance preparation is essential and the transition must be graduated.

#### 3./ The attenuating stage (stage 3, page 53)

Reducing the health impact involves in particular:

- Limiting the number of people who could be contaminated;
- Organizing the treatment of suspected cases or people with symptoms;
- Targeting the protection of vulnerable people.

## B./ The main measures of the slowing and attenuating phases

### 1./ The slowing measures

Depending on the epidemiological situation, the slowing measures will be directed to two distinct groups:

MEASURES INTENDED FOR THE GENERAL PUBLIC	MEASURES INTENDED FOR INTERNATIONAL TRAVELLERS
General information	Information to travellers arriving in or leaving risk areas
Treatment of people with symptoms (early antiviral prophylaxis, isolation)	Treatment of travellers with symptoms (early antiviral prophylaxis, isolation)
Active search for contacts with information / consciousness-raising, possible recommendation for maintaining at home and antiviral treatment, if necessary	Active search for contacts with information / consciousness-raising and antiviral treatment, if necessary
A specific search for cases within the population	Detection of cases at entry points and by clinical examination

The slowing phase must be used to prepare:

- A vaccination campaign;
- The implementation or even the distribution of health care products and dedicated equipment;
- The health care system to deal with an influx of patients over a long period.

The shift to the attenuating phase leads to the lightening or even the complete abandonment of several slowing measures: measures intended for travellers, search for and care of contact cases, etc.

### 2./ The attenuating measures

The main attenuating measures involve:

- Reinforcement of barrier measures (hygiene rules, closing of schools, etc.);
- Deployment of prophylactic measures;
- Implementation of the vaccination strategy.

The “exception” measures cannot go on too long, it is necessary to organize care for patients drawing on the usual organization as much as possible. Out-patient medicine could play a larger role:

- Doctors in private practice could monitor patients who do not require extensive care;
- Health care establishments receive patients who require hospitalization, they are managed by the medical SAMU-Centre 15.

The organization and the procedures of a major vaccination campaign must be estimated with respect to

- The epidemiological characteristics of the infectious agent involved;
- The targeted populations: nature and number;
- The constraints, especially logistic ones, which are inherent to the vaccination scheme (single-dose or multi-dose, etc.)

Various organization procedures can be considered:

- Mobilization of the usual vaccination capacities (doctors in private practice and existing vaccination centres: mother and infant protective care centres, etc.), possibly reinforced by hospital structures;
- Organization of dedicated centres within the framework of a major operation.

## C./ The elements that determine the choice of the health strategy

### 1./ The evaluation of the impact of the pandemic

The choice or the reorientation of a strategy (of slowing and/or attenuating, targeted or massive vaccination, etc.) is done based on a proposal from experts, based on an on-going evaluation of the impact of the pandemic.

Efficient monitoring and data gathering systems are necessary. **But the development of a situation cannot be predicted on the basis of this data**, particularly for a new or variable infectious agent of which we do not know the characteristics (virulence, infectiousness, associated morbidity/mortality).

### 2./ Time constraints

The evolution of the health strategy must be anticipated to organize the implementation of measures and to limit the impact of the pandemic. Some decisions are thus made in uncertainty, with the risk of appearing poorly suited as the situation changes. Advance preparation will make it possible to clearly present the possible options and measures.

The response and communication strategies must be transparent and flexible. The doubts must not be minimized and the relevance of the choices made must be constantly re-evaluated.

The Institut de veille sanitaire (InVS – Institute for Health Watch) coordinates influenza monitoring in France. Epidemiological monitoring in private practice is handled by the regional influenza observation groups (Grog) and the Sentinelles network (Overseas, by networks of private practice doctors). The recourse to hospitals is monitored through the consultations and hospitalizations in the Oscour® network. Mortality is estimated by analysis in real time of the number of death certificates received by the city halls (Insee) and later on through analysis of the causes of deaths appearing on these certificates (CépiDC). The virological monitoring is coordinated by the national reference centres. The InVS is involved in the monitoring of grouped cases of low respiratory infections at facilities for elderly people.

In pandemic situations, monitoring of the serious cases admitted to intensive care units could be implemented, with monitoring of the deaths due to influenza in real time. There is also an international watch for human and animal influenza.

# 3.4. - Continuity of social and economic life - solidarity



## A./ Objective

The goal is to guarantee a functioning of the country (government services, companies, etc.) that is as close as possible to normal conditions while protecting people.

### Special attention is paid to:

- Activities of vital importance and essential services that cannot be interrupted: defence, health, food supply, electronic communications, energy, information, transports, circulation of cash and maintaining of means of payment, water management, elimination of wastes, etc.
- The human resources of the social and economic continuity of the country.

## B./ Strategy of maintaining the life of the country and economic activity

- Implementation of **personnel protection** measures.
- **On-going evaluation of the situation and estimation of its development:** organization of zoned observatories, organization of exchanges of information, monitoring of indicators of activity. The indicators involve in particular energy, electronic communications, transports, means of payment, the procurement of food and water, and absenteeism at work.

## C./ Crisis anticipation approach

- **Activation of the economic continuity cell** (CCE) under the Minister of the Economy, which will have an inter-ministerial dimension, in conjunction with the situation unit of the inter-ministerial crisis cell (CIC), when the latter is activated;

- **Verification of the activity continuity plans** (PCA) by the Government services, territorial authorities, companies and operators in charge of implementing measures to prevent interruptions in the procurement of essential resources and products in particular.
- **Coordination of the organization** of exchanges with companies.

### The activity continuity plans involve in particular:

- The designation of an "activity continuity plan manager";
- The methods and means of protection made available to personnel;
- Identification of the priority missions to be guaranteed in all circumstances, including those which contribute to crisis management and economic continuity, and the identification of the corresponding personnel whose presence is indispensable in the work place;
- Organization for the maintaining of the activity, possibly in degraded mode.

Within this framework, government agencies, local authorities and companies are encouraged to plan several modes of organization according to the severity of the epidemic:

- In the most favourable mode, all available employees, who present no particular risk of infection to their entourage, come to their work places;
- In the most critical mode, the priority of the protecting human lives can require a presence reduced to only the employees dedicated to priority assignments, to limit contagion;
- Intermediary modes, with redeployments of personnel, teleworking, etc. must be planned.

## D./ Solidarity and continuity of social life

The actions of the Government and of various public and private organizations are insufficient in and of themselves. **A mobilization of the population is also indispensable.** This involves participation in **solidarity with family and neighbours**, for example:

- **Aid to isolated or ill persons**, both for the procedures and tasks of daily life and for links with the medical corps and the procurement of medication;
- **Individual child care**, on the level of the family or neighbours, the resource of students available due to the closing of high schools and universities (there should be plans for tele-teaching);

- **Continuation of participation in economic and social life**, within the framework of the measures announced by the public authorities and employers' continuity plans.

This mobilization can stem from individual initiatives. **It can also be part of municipal protection plans, the participation in reserves or the action of associations.** The technical support of the Government for these actions and the information goes through its one-stop service centres, the departmental social cohesion services and the Regional services for youth, sports and social cohesion.

**The strict observance of keeping people at home, once they are affected by influenza**, also falls under the duty of solidarity to limit the spreading of the illness.

# 3.5.- International and European framework

## A./ Framework of international action

**International assistance:** support for the WHO and accentuation of technical cooperation with developing countries.

**A regulatory framework:** the international health regulations (IHR) of 2005.

**Foreigners in France, French citizens abroad:**

France guarantees foreign residents on its soil the same treatment as its citizens. The governmental action also applies to the benefit of French citizens abroad.

**Borders:**

The closing of borders should be avoided because of the high level of interdependency in the European Union. The continuity of some activities of vital importance could be penalized.

## B./ Framework of the action within the European Union

### Principles

- Issues of human health are the purview of the States, but a European policy of harmonization of the national plans, associated with watch, public protection and information measures must be actively carried out;
- According to the principle of subsidiarity, the Commission does not take measures unless, because of the scale or the effects of the proposed action, their objectives can be better achieved by the Commission than by its Member States.



### Information of the Union and the States

Each State informs the other States and the Commission of the control measures that it is planning or that it has taken in emergency situations. Other than in emergencies, it must consult the Member States and the Commission. This consultation is not an obligation of harmonization.

The Ministry of Health (DGS) informs the European Union of the measures taken by an Early Warning and Response System message (EWRS).

### Technical topics that can be addressed within the framework of the competencies of the Commission

**In the health sector:**

- Monitoring of influenza epidemics, encouragement for the vaccination of target populations;
- In conjunction with the WHO, acquisition of epidemiological, virological and clinical information;
- Market release authorizations for health care products (EMA);
- Research and development work;
- Monitoring of resistance to anti-viral medications.

**In the other sectors:**

- Reinforcement of the inter-sector dimension of the preparation for an influenza pandemic, within the framework of the competencies of the Union;
- Communication to the benefit of the population;
- Crisis coordination arrangements (CCA).

## C./ Treatment of French citizens abroad

### In the event of a pandemic, measures must be implemented to:

- Protect French citizens;
- Limit the impact of the epidemic on the functioning of diplomatic representations;
- Support the international effort to slow down the dissemination of the virus and the spread of the disease.

The heads of diplomatic posts, the general consuls or consuls in full function will implement the "foreign affairs / influenza pandemic plan". Based on this, they develop their own plan, adapted to their environment. The ambassador is responsible for the system for combating the pandemic.

The "foreign affairs" plan takes into account the WHO phases and the local epidemic situations. It provides for the supplying, to the extent possible, of means of protection and care to all French people abroad, with the intervention of a resident French doctor (or failing that a local doctor) approved by the representation.

Health care products and masks, providing coverage comparable to that of France, have been preventively stocked in the representations. The instructions for the prescription and distribution procedures are sent to the diplomatic posts.

The plan favours treatment of patients on site. To do this, the embassies and consulates may be supplied with additional human and equipment resources. In a pandemic situation, the implementation of a consular and medical reinforcement mission will be considered, after approval from the local authorities, as a function of the means available on site.

As soon as a national vaccination campaign is decided on, it applies on site to French citizens abroad. The Influenza Pandemic plan of each of the representations must provide for the activation of the network for communication with the French community and its representatives. This community is made aware of the pandemic risks at meetings of the security committee of the post. Its internet site is updated regularly. The links with the governmental sites and that of the WHO appear on it. The French representation is in contact with those of the European countries and, if necessary, with the local representatives of the international health organizations.

If necessary, the platform for response to the public of the crisis unit will be opened at the Ministry of Foreign Affairs.



# CHANNELS

## FOR INTERNATIONAL LINKS

### 1./ Political or technical communications with United Nations agencies

These communications are the purview of the United Nations and international organizations department of the **Ministry of Foreign Affairs** (MAEE / NUOI) which mobilizes France's permanent representatives.

**The Ministry of Health** is the contact with the World Health Organization (WHO), as the national focal point under the International Health Regulations (IHR).

**The Ministry of Transport** is the contact with the international organizations competent in this sector, particularly the International Civil Aviation Organization, for the harmonization of the measures to be applied in transport systems during pandemics.

### 2./ Communications with international financial institutions, the World Bank and the International Monetary Fund

These communications are the purview of the **Ministry in charge of the Economy**. The department of economic and financial affairs of the Ministry of Foreign Affairs (MAEE / DE) is involved in these processes.

### 3./ Communications with the European Union (operational issues)

**Animal health and the food chain:** the **Ministry of Agriculture** is the contact with the standing committee for the food chain and animal health (which decides in particular on bans on the importing of poultry) and with the Group of heads of veterinary services (CVO).

**Human health:** the **Ministry of Health** is the contact with various groups and committees that monitor issues linked to human health:

- The Health Safety Committee (HSC),
- The network committee for the epidemiological monitoring and control of transmissible illnesses,
- The European early warning and reaction system (EWRS),
- The European centre for disease prevention and control (ECDC).

**Civil Defense:** the **Ministry of the Interior** is the correspondent of the Union Civil Protection Mechanism (MIC) and the crisis coordination arrangements (CCA).

**Other operational issues (not including foreign and security policies - PESC):** The positions expressed by France with European institutions are examined and prepared by the **secretariat general for European affairs** (SGAE) and sent to the permanent representation in Brussels which takes part in the committees established by the European Commission.

**Transport:** the **Ministry of Transport** takes part in the coordination with the EU plan of the actions undertaken in order to take into account the possible propagation of a pandemic, particularly by the aerial vector.

### 4./ Correspondence

**European diplomatic telegrams involving foreign and security policies:** use of the COREU secured telegraphic network. For France, this network is managed by the exterior relations service of the EU within the EU department of the **Ministry of Foreign Affairs** (MAEE / DUE / RELEX),

**Fields other than foreign and security policies:** correspondence intended for European institutions goes through the **secretariat general for European affairs** (SGAE).

**Information for the EU on the health measures taken:** the **Minister in charge of Health** informs the EU via the Early Warning and Response System (EWRS) and the WHO.

# 3.6. - Elements of communication strategy

The efficiency of the measures taken to prevent or fight against an influenza pandemic depends on the quality of the relations between the public authorities and the population and on the participation of all citizens.

Governmental communication must be based on a strategy that includes the following objectives:

- Taking into account the public expression and responding to it in a suitable manner;
- Favouring professional networks in the dissemination of information to the population;
- Rationalizing the expert debates on the pandemic risk in periods of uncertainty;
- Establishing on-going communication links with the population to promote the development of a public health culture.



Fundamental elements of communication strategy

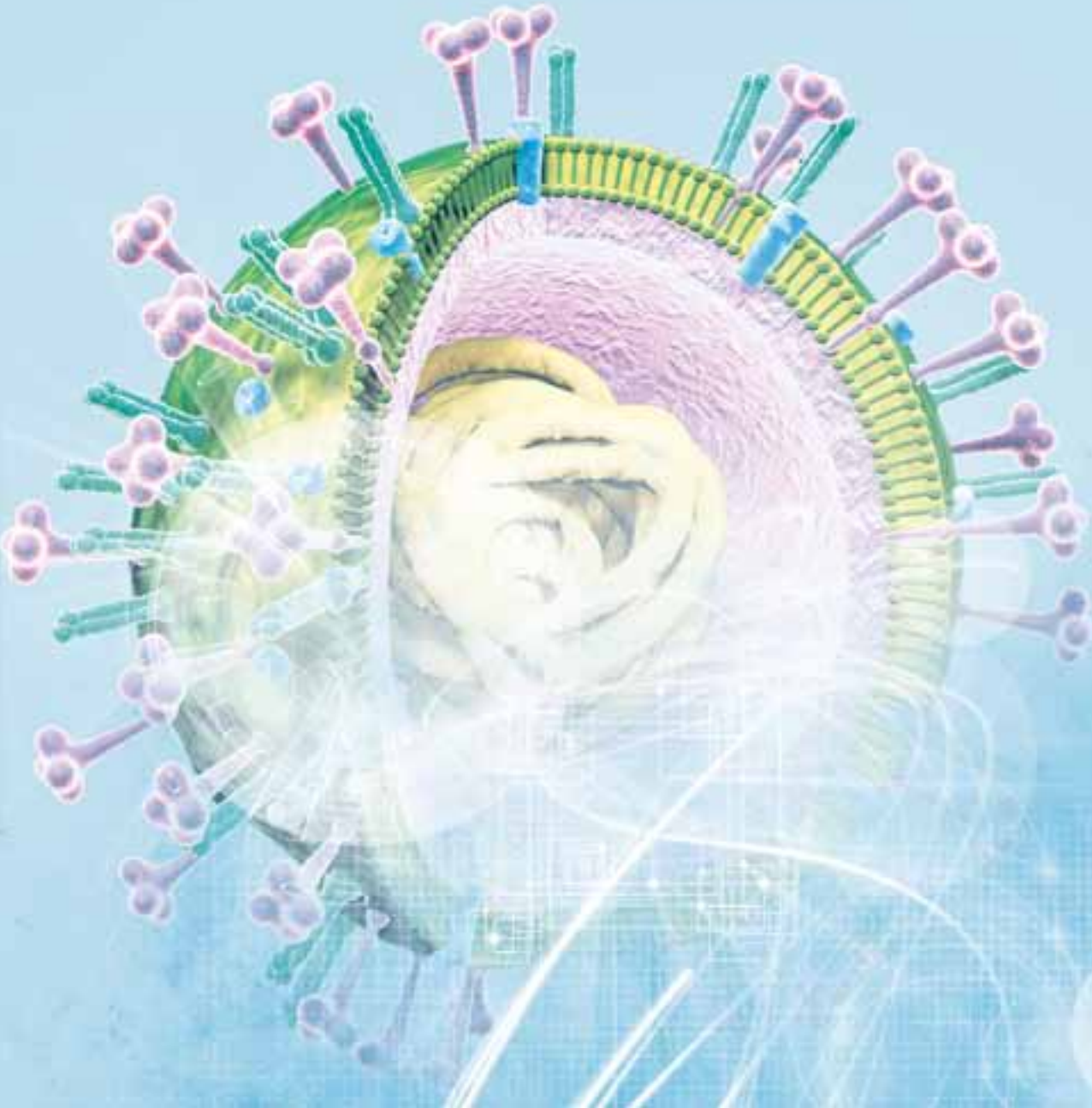
Maintaining the trust of the public	Favoring following of the measures taken	Allowing citizens to be actors
<b>Informing</b> on the reality of the situation (status of the risk and of its perception, reviews, research progress, etc.)	<b>Explaining</b> with pedagogy the conditions of implementation of the measures: - to elected officials, - to social partners, - to health care professionals, - to the population.	<b>Transmitting</b> the behaviour to adopt to promote good implementation of the measures decided.
<b>Communicating</b> regarding the mobilization of means of response (human and equipment resources, etc.)	<b>Giving</b> meaning to the measures taken and the reasons that motivated their choices.	<b>Communicating</b> recommendations for self-protection and vigilance.

Variable elements to be taken into account as a function of the context

International context	State of the resources	State of the opinion
Territorial context	Risk level	Political context

The development of a specific strategy for the use of the Internet is essential for dealing with several situations:

- Dealing with rumours and disinformation;
- Adapting the dissemination of information to smart phones;
- Responding to the expression of specific needs of different populations.



**PART**  
**02**

# DECISION MAKING GUIDE

- 1./ Recommendations and use of the guide
- 2./ Help with decision-making in the main stages of the epidemic
  - **INITIAL ALERT:**  
The first measures
  - **Stade1:** Slow down the introduction of the virus into the territory
  - **Stade2:** Slow down the propagation of the virus in the territory
  - **Stade3:** Attenuate the effects of the epidemic wave
  - **Stade4:** Return to the former situation and prepare for the possible next wave
- 3./ Transverse measures
  - **Vaccination:**  
taking the strategic decisions
  - **Communication:**  
it accompanies each measure



# 1./ RECOMMENDATIONS

## and use of the guide



### A./ The decision-making guide make a distinction between:

- **1 initial alert sheet**, immediately the first information mentioning a new influenza virus is received (page 31),
- **4 sheets corresponding** to the 4 main epidemic stages (sheets pages 37, 45, 53 and 63)
- **2 transverse measure sheets**: vaccination (page 70) and communication (page 73).

### B./ Each sheet presents:

- **Information anyone should know** before choosing an option,
- **Guidelines for thinking** about how to evaluate the appropriateness of the measures,
- **A flowchart to help with decision-making**, showing the measures that can be taken and, if applicable, the possible gradation of these measures (colour code, see below),
- **The nomenclature of the measures** which it is possible to take, with the “measure sheet” references specifying their content and their implementation, these sheets are put on line as they are drawn up on the site <http://www.risks.gouv.fr>

### C./ The decision-making diagrams show the actions available to the decision-maker, but also the possible gradation of several measures as a function of the seriousness of the situation:

This gradation reflects their intensity and also the constraints for implementing them (easy in green, moderately difficult in orange, very difficult in red).

#### KEY: LEVEL

- Low
- Average
- Very high

# 2./ HELP WITH DECISION-MAKING IN THE MAIN STAGES OF THE EPIDEMIC

- **INITIAL ALERT:**  
The initial measures
- **Stade1:**  
Slowing the introduction  
of the virus into the territory
- **Stade2:**  
Slowing the propagation  
of the virus in the territory
- **Stade3:**  
Attenuating the effects  
of the epidemic wave
- **Stade4:**  
Returning to the former situation  
and preparing for a possible  
new wave





# **INITIAL** **ALERT**

# INITIAL ALERT

# THE FIRST

# MEASURES

- 1./ What you need to know
- 2./ Guidelines for thinking
- 3./ Diagram for examination of the measures that could be taken in the initial alert
- 4./ Possible measures  
Nomenclature  
of the measure sheets







# INITIAL ALERT

## The first measures

**Still uncertain information suggests that a new influenza virus with pandemic potential has appeared and has started to be transmitted within a population.**

### WHAT YOU NEED TO KNOW

In the initial stage of a health crisis, it is very rare that we have a reliable quantitative evaluation of the consequences. A high level of uncertainty is inevitable.

Therefore, conservation measures must be taken which are, as far as possible, in proportion with knowledge that we have of the event:

- Seek information and evaluate the situation,
- Activate the crisis management organization,
- Act in coordination with foreign partners, particularly European partners,
- Protect our citizens in the countries affected,
- Prepare for early detection of the first cases in France,
- Prepare for implementation of the response measures,
- Monitor the reactions of public opinion, detect rumours, inform the public and health care professionals,
- Get professional organizations in the health field involved without delay, to keep them up to date with the information received and the measures under consideration.

### GUIDELINES FOR THINKING

- What definite information do we have (particularly regarding the nature of the infectious agent)? What information is very likely to be accurate? What doubtful information remains to be confirmed? Who can provide these confirmations?
- What is the dominant nature of the crisis: health, economic, media, social? Is there an inter-sector dimension? Is it necessary to activate the Inter-ministerial crisis cell?
- Are the response systems ready (organization of the system to provide care for the patients, organization of the laboratories for the identification of the cases, etc.)?
- What measures should be taken at borders in light of the situation (information for travellers, health control, etc.)?
- What information must be given without delay to health care professionals and to the public?
- What actions should be taken with regard to French citizens who are far from the capitals of the countries involved, and thus far from the embassy?

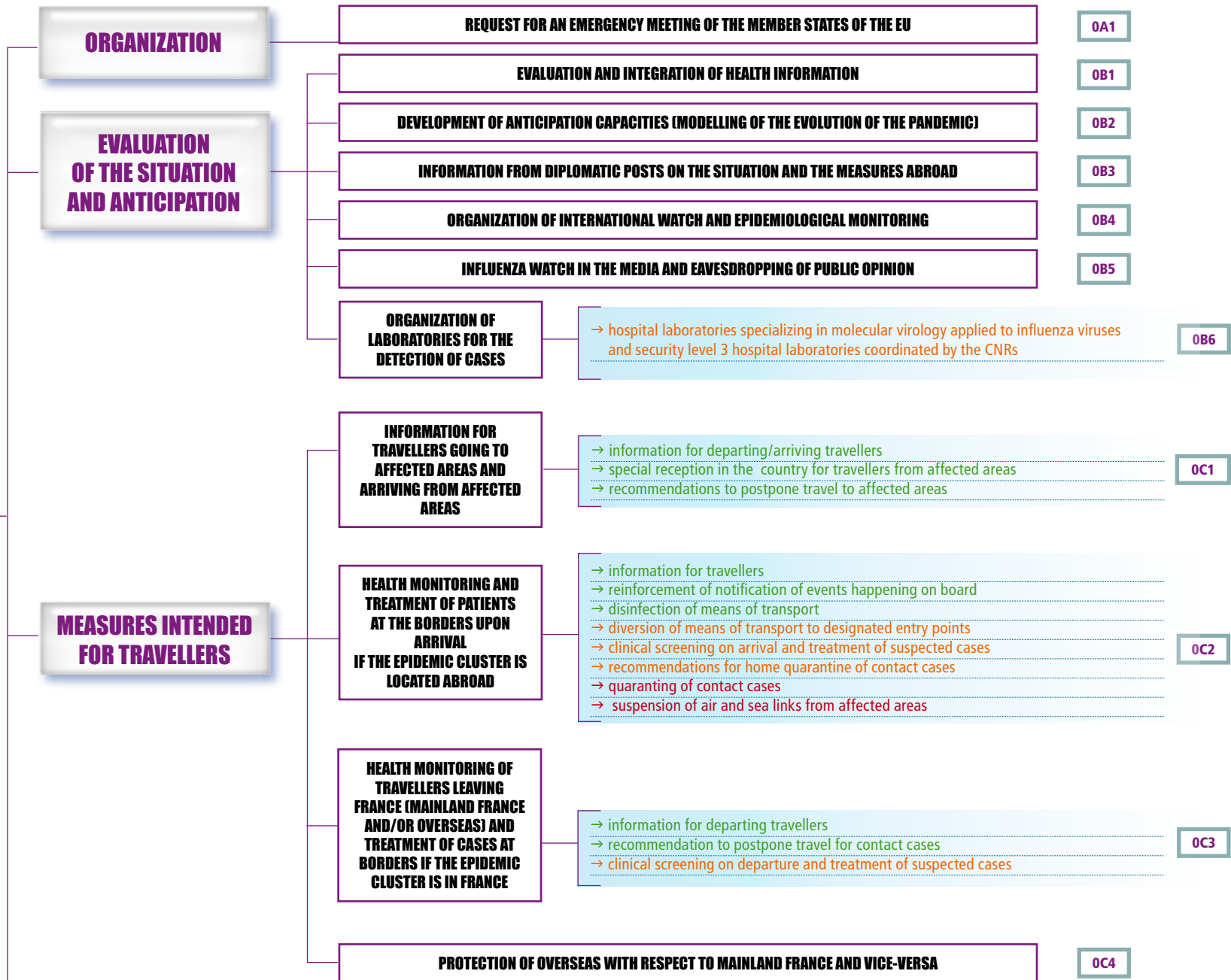
# DIAGRAM FOR EXAMINATION OF THE MEASURES THAT COULD BE TAKEN IN THE INITIAL ALERT

## GENERAL CONTEXT

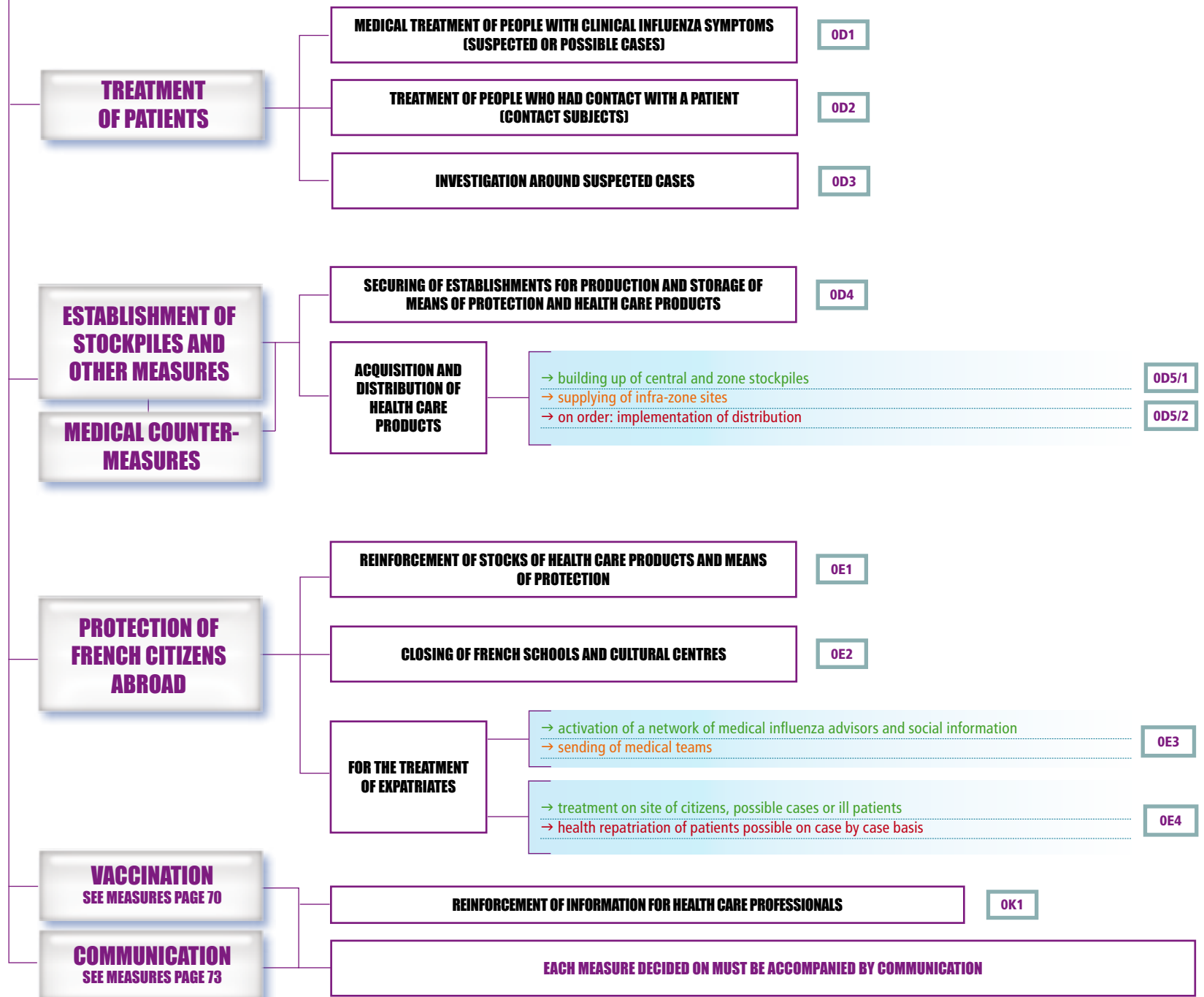
Still uncertain information suggests that a new influenza virus with pandemic potential has appeared and has started to be transmitted in a population.

The diagram shows, for several decisions, a gradation of the measures under consideration as a function of the constraints that they impose:

- KEY: LEVEL**
- Low
  - Average
  - Very high



# INITIAL ALERT



The diagram shows, for several decisions, a gradation of the measures under consideration as a function of the constraints that they impose:

**KEY: LEVEL**  
 ■ Low      ■ Very high  
 ■ Average

# NOMENCLATURE OF THE MEASURE SHEETS

## POSSIBLE MEASURES

### Organization

- OA1** Request for an emergency meeting of the Member States of the EU on the measures to be taken on the EU level. Consultation with or information to the Member States and the Commission regarding the measures being considered by France

### Evaluation of the situation and anticipation

- OB1** Evaluation and integration of health information
- OB2** Development of anticipation capacities
- OB3** Information from diplomatic posts on the situation and the measures abroad
- OB4** Organization of international watch and epidemiological monitoring in pandemics
- OB5** Launching of influenza watch in the media (national and international) and on the state of public opinion (including Internet and the social networks)
- OB6** Organization of laboratories for detection of cases

### Measures intended for travellers

- OC1** Information for travellers going to and arriving from the affected areas
- OC2** Procedures for implementation of health monitoring and treatment of patients (suspected cases and contacts) upon arrival at borders
- OC3** Procedures for implementation of health monitoring of travellers leaving France (Mainland France and/or overseas) and treatment of patients (suspected and contacts) at borders
- OC4** Circulation and health control measures to be implemented in the event of an epidemic in Mainland France in order to protect the overseas areas (vice-versa if the initial contamination occurs overseas to protect Mainland France)

### Treatment of patients

- OD1** Medical treatment of people showing clinical influenza symptoms (suspected or possible cases)

- OD2** Treatment of people who were in contact with people showing symptoms (contact subjects)

- OD3** Investigation for suspected cases

### Establishment of stockpiles and additional measures Medical counter-measures

- OD4** Measures to secure establishments for the production and storage of means of protection and health care products

- OD5/1** Acquisition of health care products, equipment (not including vaccines and injection equipment) and personal protective equipment for patients and contact subjects

- OD5/2** Distribution of health care products and personal protective equipment for ill patients and contact subjects

### Protection of French citizens abroad

- OE1** Reinforcement of stockpiles of health care products and means of protection at diplomatic posts.

- OE2** Closing of French schools and cultural centres in the countries affected

- OE3** For the treatment of expatriates, activation of a network of medical influenza advisors and information for companies. If necessary and if possible, sending of medical teams to diplomatic posts where demand is particularly high

- OE4** Treatment on site of citizens (suspected or possible cases). As a function of the local health care capacities and the state of the patient, repatriation for health reasons possible on a case by case basis based on a joint decision of the diplomatic post, the Ministry of Foreign Affairs, the minister in charge of health and the patient's insurer, as long as the safety of the crew and the medical assistance team can be guaranteed

### Communication and consciousness-raising

- OK1** Reinforcement of the information of health care professionals on the health measures for the influenza pandemic and on their role in the management system

### Vaccination - SEE MEASURES PAGE 70

### Communication - SEE MEASURES PAGE 73

**There must be accompanying communication for each measure decided on**



**STAGE**  
**01**

# SLOWING THE INTRODUCTION OF THE VIRUS INTO THE TERRITORY

- 1./ What you need to know
- 2./ Guidelines for thinking
- 3./ Diagram for examination of the measures that could be taken in stage 1
- 4./ Possible measures  
Nomenclature  
of the measure sheets





# SLOWING THE INTRODUCTION

## of the virus into the territory

This is a phase of early detection of the first cases arriving in the territory, with the implementation of measures such as health controls at borders, medical treatment of patients and their contacts, and the implementation of barrier measures. Stage 1 does not apply if the epidemic cluster is within the national territory.

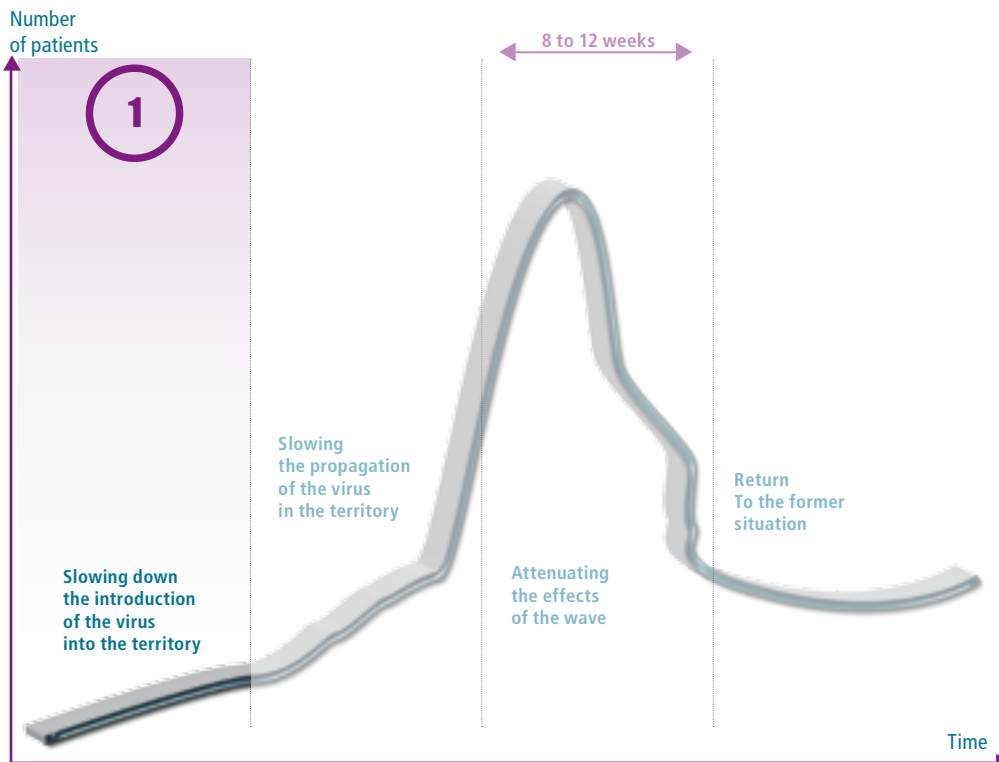
### WHAT YOU NEED TO KNOW

- This “slowing down” stage involves delaying the introduction of the disease into the territory, to better prepare:
  - A pandemic vaccine so that it is available, if possible, before a major wave,
  - The distribution of health care products and dedicated equipment,
  - The health care system to be able to sustainably handle an influx of patients,
- Health checks at borders are only effective at the beginning of the epidemic, when the cases are rare in France,
- The interruption of flights to the affected destinations is a measure that has little effect,
- Controls are most efficient if they can be coordinated on the European level; they are based on an application of the international health regulations (IHR) with pre-designated and equipped entry points in France,

*The lessons learned from the pandemic of 2009: the United Kingdom and Spain were hit by a pandemic wave very early which did not spread to the rest of Europe, demonstrating that the “permeability of borders” to viruses is not a general rule. In France, the slowing measures seemed to have had a slowing effect on the epidemic (reporting of cases, hospital isolation, treatment and antiviral treatment of contact cases, closing of classes or schools, etc.).*

### GUIDELINES FOR THINKING

- At this stage, has the nature of the crisis changed: health, economic, media, social?
- What are the possible development scenarios?
- If the inter-ministerial crisis cell is not yet activated, does the situation imply this activation?
- What measures are necessary at borders? Which are compatible with the flow of passengers and the modes of transport involved?
- Are particular measures needed to protect overseas territories?
- Are the measures compatible with the Schengen agreements and with the IHR?
- How does the population perceive the situation and the decisions? And the world of health care?
- Are there rumours?
- How can vaccination against the new virus be planned?
- Does the level of circulation of the virus and the number of cases observed in the territory still allow for an active search for contacts of people who are ill?



# DIAGRAM FOR EXAMINATION OF MEASURES THAT COULD BE TAKEN

## STAGE

1

## GENERAL CONTEXT

This is a phase of early detection of the first cases arriving in the territory, with implementation of measures such as health checks at borders, the medical treatment of patients and their contacts, and the implementation of barrier measures. Stage 1 is not applicable if the epidemic cluster is in the national territory.

The diagram shows, for several decisions, a gradation of the measures under consideration as a function of the constraints that they impose:

**KEY: LEVEL**  
 ■ Low      ■ Very high  
 ■ Average

### EVALUATION OF THE SITUATION AND ANTICIPATION

EVALUATION AND INTEGRATION OF HEALTH INFORMATION

OB1

DEVELOPMENT OF CAPACITIES FOR ANTICIPATION (MODELLING OF THE DEVELOPMENT OF THE PANDEMIC)

OB2

INFORMATION FROM DIPLOMATIC POSTS ON THE SITUATION AND THE MEASURES ABROAD

OB3

ORGANISATION OF LABORATORIES FOR THE DETECTION OF CASES

→ hospital laboratories specializing in molecular virology applied to Influenza viruses and security level 3 laboratories coordinated by the CNRs  
 → all virological diagnostic analysis laboratories of health care establishments

OB6

ORGANISATION OF PHARMACOVIGILANCE

1B7

ORGANISATION OF INTERNATIONAL WATCH AND EPIDEMIOLOGICAL MONITORING

OB4

MONITORING USE OF CONFIRMATION TESTS FOR VIROLOGICAL DIAGNOSIS

1B8

MONITORING BY EACH MINISTRY OF ITS SITUATION INDICATORS

1B9

INFLUENZA WATCH IN THE MEDIA AND EAVESDROPPING OF PUBLIC OPINION

OB5

### ORGANISATION

REQUEST FOR AN EMERGENCY MEETING OF THE MEMBER STATES OF THE EU

0A1

DISCUSSION GROUPS WITH THE HEALTH CARE PROFESSIONS, ASSOCIATIONS

1A2

MOBILISATION OF RESEARCH IN EMERGENCY SITUATIONS

1A3



**STAGE**

**1**

**HEALTH CHECKS AT BORDERS**

**HEALTH CHECKS ON LEAVING AFFECTED COUNTRIES**

1C5

**INFORMATION FOR TRAVELLERS GOING TO AND ARRIVING FROM THE AFFECTED AREAS**

- information to departing/arriving travellers
- specific reception in the territory from affected areas
- recommendations to postpone travel to the affected areas

0C1

**HEALTH MONITORING AND TREATMENT OF CASES AT BORDERS UPON ARRIVAL IF THE EPIDEMIC'S CLUSTER IS LOCATED ABROAD**

- information to travellers
- reinforcement of notifications of events occurring on board
- disinfection of means of transportation
- diversion of means of transport to designated entry points
- clinical screening upon arrival and treatment of suspected cases
- recommendations for quarantine of contact cases at home
- quarantining of contact cases
- suspension of air and maritime links from affected areas

0C2

**HEALTH MONITORING OF TRAVELLERS LEAVING FRANCE (MAINLAND AND/OR OVERSEAS) AND TREATMENT OF CASES AT BORDERS IF THE EPIDEMIC'S CLUSTER IS IN FRANCE**

- information for departing travellers
- recommendation to postpone travel for contact cases
- clinical screening upon departure and treatment of suspected cases

0C3

**PROTECTION OF OVERSEAS WITH RESPECT TO MAINLAND FRANCE AND VICE-VERSA**

0C4

**TREATMENT OF PATIENTS AND ORGANISATION OF CARE**

**MEDICAL TREATMENT OF PEOPLE WITH CLINICAL INFLUENZA SYMPTOMS (SUSPECTED OR POSSIBLE CASES)**

0D1

**INVESTIGATION OF SUSPECTED CASES**

0D3

**TREATMENT OF PEOPLE WHO HAVE HAD CONTACT WITH A PATIENT (CONTACT SUBJECTS)**

0D2

**SECURING OF ESTABLISHMENTS FOR THE PRODUCTION AND STORAGE OF MEANS OF PROTECTION AND HEALTH CARE PRODUCTS**

0D4

**ACQUISITION AND DISTRIBUTION OF HEALTH CARE PRODUCTS**

- building up of central and zone stockpiles
- supplying of infra-zone sites
- on order: implementing of distribution

0D5/1

0D5/2

**ORGANISATION OF CARE DURING PANDEMICS**

1D6

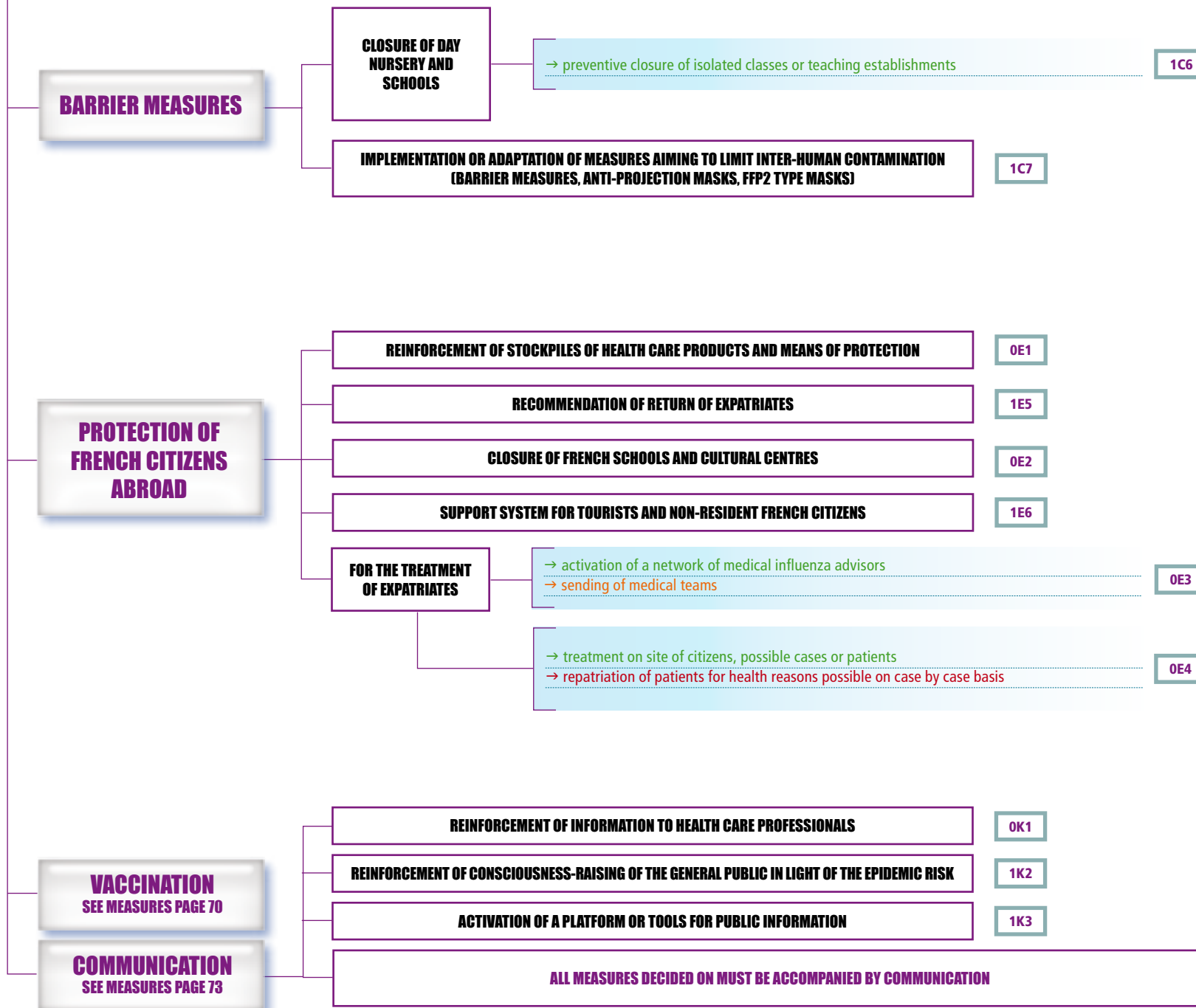
The diagram shows, for several decisions, a gradation of the measures under consideration as a function of the constraints that they impose:

**KEY: LEVEL**

- Low
- Average
- Very high

# STAGE

1



The diagram shows, for several decisions, a gradation of the measures under consideration as a function of the constraints that they impose:

**KEY: LEVEL**  
 ■ Low      ■ Very high  
 ■ Average

# NOMENCLATURE OF MEASURE SHEETS

## POSSIBLE MEASURES

### Evaluation of the situation and anticipation

- OB1** Evaluation and integration of health information
- OB2** Development of anticipation capabilities
- OB3** Information from diplomatic posts on the situation and measures abroad
- OB6** Organisation of laboratories for the detection of cases
- 1B7** Organisation of pharmacovigilance
- OB4** Organisation of international watch and epidemiological monitoring in pandemics
- 1B8** Use of virological diagnosis confirmation tests
- 1B9** Monitoring by each ministry of its situation indicators
- OB5** Launching of influenza watch in the media (national and international) and for public opinion (including Internet and the social networks)

### Organisation

- OA1** Request for an emergency meeting of the EU Member States concerning the measures to be taken at EU level. Consultation or information for Member States and the Commission on the measures planned by France
- 1A2** Meeting of discussion groups with the representatives of the health professions, associations and all representatives of the sectors that could be impacted by the pandemic
- 1A3** Triggering of research mobilization in emergency situations

### Health checks at borders

- 1C5** Health checks leaving the affected countries and heading for France
- OC1** Information for travellers leaving for and arriving from affected areas

- OC2** Procedures for the implementation of health monitoring and treatment of cases (suspected cases and contacts) upon arrival at borders
- OC3** Procedures for the implementation of health monitoring for travellers leaving France (Mainland France and/or overseas) and treatment of patients (suspected cases and contacts) at borders
- OC4** Measures for the control of travel and health checks to be implemented in the event of an epidemic in Mainland France for the purpose of protecting the overseas communities (vice-versa if the initial contamination occurred overseas to protect Mainland France)

### Treatment of patients and organisation of care

- OD1** Medical treatment of people with clinical influenza symptoms (suspected or possible cases)
- OD3** Investigations of suspected cases
- OD2** Treatment of people who had contact with a patient (contact subjects)
- OD4** Measures for the securing of establishments for the production and storage of means of protection and health care products
- OD5/1** Acquisition of health care products, equipment (not including vaccines and injection equipment) and personal protective equipment for patients and contact subjects
- OD5/2** Distribution of health care products and personal protective equipment for patients and contact subjects
- 1D6** Organisation of care during pandemics

### Barrier measures

- 1C6** Closure of day nursery, teaching and training establishments, boarding schools, centres for minors
- 1C7** Implementation of measures aimed at limiting inter-human contamination (barrier measures)

### Protection of French citizens abroad

- OE1** Reinforcement of stockpiles of health care products and means of protection in diplomatic posts
- 1E5** Recommendation of the return of expatriates: families, French students, non-essential State agents
- OE2** Closure of French schools and cultural centres in the countries affected

**STAGE**

**1**

- 1E6** Implementation of a support system for tourists and non-resident French citizens
- 0E3** For the treatment of expatriates: activation of a network of medical influenza advisors and information for companies. If necessary and if possible, sending of medical teams to diplomatic posts experiencing heavy demand
- 0E4** Treatment on site of citizens (suspected or possible cases): as a function of the local health care capabilities and the state of the patient, repatriation for health reasons possible on a case by case basis based on a joint decision of the diplomatic post, the Ministry of European and Foreign Affairs, the minister in charge of health and the patient's insurer, as long as the safety of the crew and the medical assistance team can be guaranteed

**Communication and consciousness-raising**

- 0K1** Reinforcement of information to health care professionals on the health measures for the influenza pandemic and their role in the management system
- 1K2** Reinforcement of public awareness campaigns regarding hygiene measures
- 1K3** Activation of public information platform or tools

**Vaccination - SEE MEASURES PAGE 70**

**Communication - SEE MEASURES PAGE 73**

**Each measure decided on must be accompanied by communication**



**STAGE**  
**02**

# SLOWING DOWN THE PROPAGATION OF THE VIRUS IN THE TERRITORY

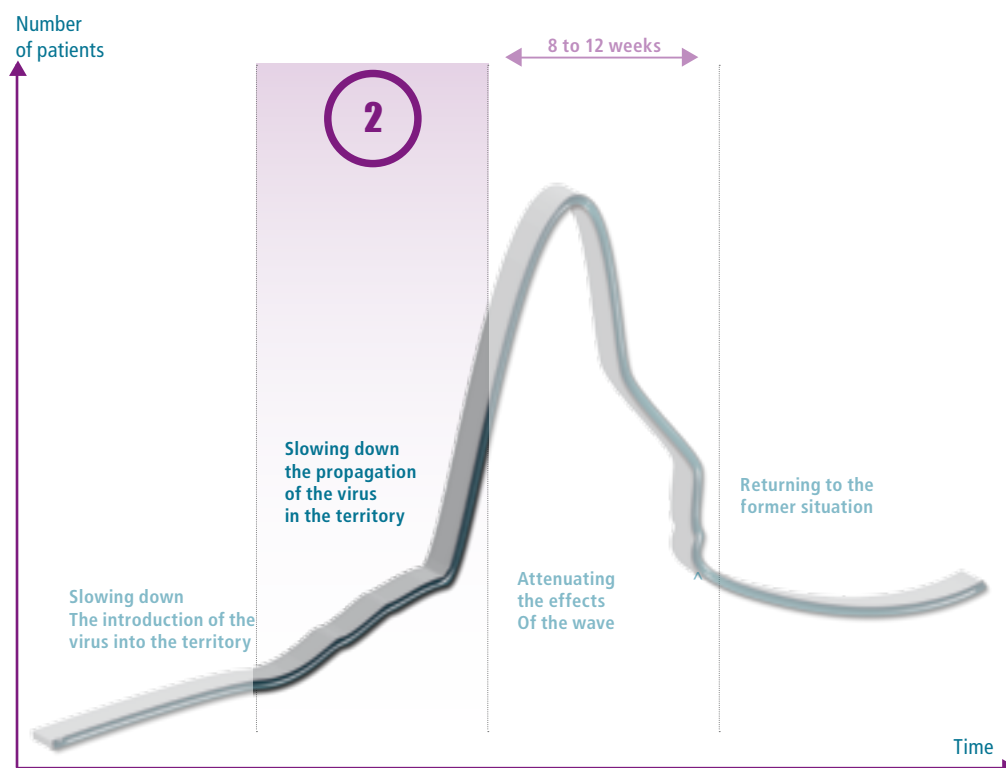
- 1./ What you need to know
- 2./ Guidelines for thinking
- 3./ Diagram for examination of the measures that can be taken in stage 2
- 4./ Possible measures  
Nomenclature of measure sheets





# SLOWING DOWN THE PROPAGATION of the virus in the territory

This is a phase of implementation of barrier measures and the scaling up of the health system, as soon as isolated domestic cases of small clusters develop in the territory.



## WHAT YOU NEED TO KNOW

- At this stage, with the virus circulating in the territory, the goal is to slow down its propagation, particularly to gain time for the scaling-up of the health care system or the preparation of a vaccine.
- In stage 2, personnel and resources should be economised to preserve potential for the very demanding stage of the pandemic wave (stage 3),
- The pandemic episode of 2009 seemed to confirm the slowing effect of barrier measures. They should be encouraged, while adapting them as a function of the impact of the epidemic,
- To be effective, measures for the closure of classes or teaching establishments must be taken as soon as the first cases appear.

*Lessons learned from past pandemics: A low apparent severity can hide very serious consequences. In 1957-58, there was one death per 300 patients, suggesting a very benign illness. But for 10 million patients, frequent in a pandemic, this means at least 30,000 deaths in France. In 2009 and 2010, people with a risk factor were affected most frequently. 16% (in 2009) to 36% (in 2010) of the deaths due to the A(H1N1)2009 virus were of people with no known risk factor<sup>10</sup>.*

## GUIDELINES FOR THINKING

- At this stage, has the nature of the crisis changed: health, economic, media, social?
- What are the possible development scenarios?
- If the inter-ministerial crisis cell has not yet been mobilised, does the situation call for this mobilization?
- Does the organization of the health care system allow for the absorption of the flow of patients or is there a risk of saturation?
- How does the population perceive the situation and the decisions? And the world of health care? Are there rumours?
- How should the vaccination against the new virus be organized?

<sup>10</sup> Epidemiological influenza bulletin of the 'InVS of 20 April 2011 / VAUX S. et al. Bulletin épidémiologique hebdomadaire of the 29th of June 2010, n°24-25-26.

# DIAGRAM FOR EXAMINATION OF MEASURES THAT COULD BE TAKEN

## STAGE

2

## GENERAL CONTEXT

It is a phase of implementation of barrier measures and scaling-up of the health care system, as soon as isolated domestic cases or small clusters develop in the territory.

The diagram shows, for several decisions, a gradation of the measures under consideration as a function of the constraints that they impose:

**KEY: LEVEL**  
 ■ Low      ■ Very high  
 ■ Average

### EVALUATION OF THE SITUATION AND ANTICIPATION

EVALUATION AND INTEGRATION OF HEALTH INFORMATION

OB1

DEVELOPMENT OF CAPABILITIES OF ANTICIPATION (MODELLING OF THE DEVELOPMENT OF THE PANDEMIC)

OB2

INFORMATION FROM DIPLOMATIC POSTS ON THE SITUATION AND MEASURES ABROAD

OB3

ORGANISATION OF LABORATORIES FOR THE DETECTION OF CASES

→ hospital laboratories specializing in molecular virology applied to influenza viruses and security level 3 laboratories coordinated by the CNRs  
 → all virological diagnosis analysis laboratories of health care establishments

OB6

ORGANISATION OF PHARMACOVIGILANCE

1B7

ORGANISATION OF INTERNATIONAL WATCH AND EPIDEMIOLOGICAL MONITORING

OB4

USE OF VIROLOGICAL DIAGNOSIS CONFIRMATION TESTS

1B8

MONITORING OF THE SOCIO-ECONOMIC SITUATION AND EVALUATION OF THE ECONOMIC COSTS OF THE PANDEMIC

2B10

MONITORING BY EACH MINISTRY OF ITS SITUATION INDICATORS

1B9

INFLUENZA WATCH IN THE MEDIA AND EAVESDROPPING OF PUBLIC OPINION

OB5

MEDICAL TREATMENT OF PEOPLE WITH CLINICAL INFLUENZA SYMPTOMS (SUSPECTED OR POSSIBLE CASES)

→ at home  
 → in health care establishments

OD1

INVESTIGATION OF SUSPECTED CASES

OD3

TREATMENT OF PEOPLE WHO HAVE HAD CONTACT WITH A PATIENT (CONTACT SUBJECTS)

→ systematic  
 → in difficult situation, priority to risk populations

OD2

SECURING OF ESTABLISHMENTS FOR THE PRODUCTION AND STORAGE OF MEANS OF PROTECTION AND HEALTH CARE PRODUCTS

OD4

ACQUISITION AND DISTRIBUTION OF HEALTH CARE PRODUCTS

→ building up of central and zone stockpiles  
 → supplying of infra-zone sites  
 → on order: implementation of distribution

OD5/1

OD5/2

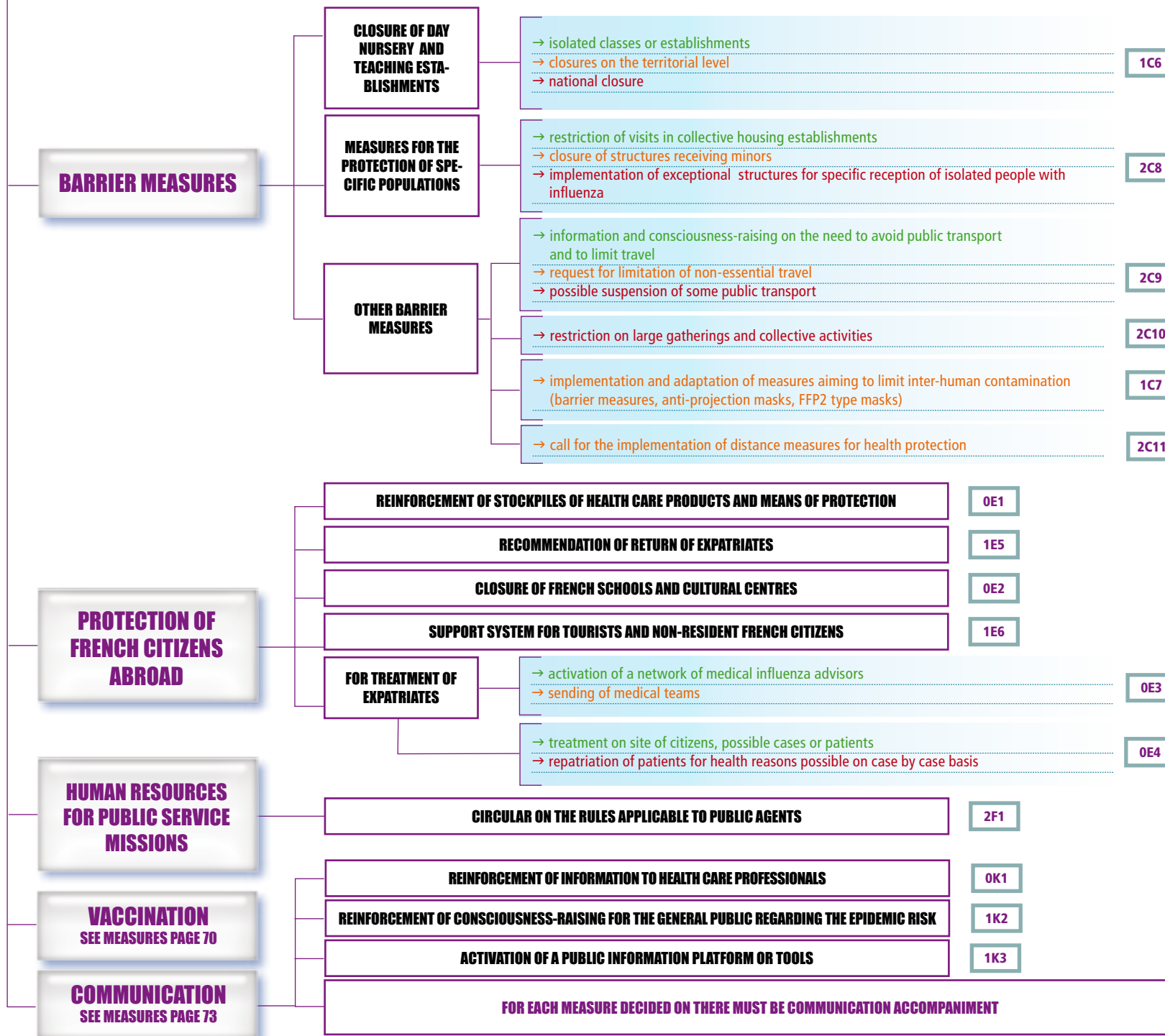
ORGANISATION OF CARE DURING PANDEMICS

1D6



# STAGE

## 2



The diagram shows, for several decisions, a gradation of the measures under consideration as a function of the constraints that they impose:

**KEY: LEVEL**

- Low
- Average
- Very high

# NOMENCLATURE OF THE MEASURE SHEETS

## POSSIBLE MEASURES

### Evaluation of the situation and anticipation

- OB1** Evaluation and integration of health information
- OB2** Development of anticipation capabilities
- OB3** Information from diplomatic posts regarding the situation and the measures abroad
- OB6** Organisation of laboratories for the detection of cases
- 1B7** Organisation of pharmacovigilance
- OB4** Organisation of international watch and epidemiological monitoring in pandemics
- 1B8** Use of virological diagnosis confirmation tests
- 2B10** Monitoring of the socio-economic situation and evaluation of the economic costs of the pandemic
- 1B9** Monitoring by each ministry of its situation indicators
- OB5** Launching of an influenza media watch (national and international) and regarding public opinion (including Internet and the social networks)

### Treatment of patients

- OD1** Medical treatment of people with clinical influenza symptoms (suspected or possible cases)
- OD3** Investigations of suspected cases

- OD2** Treatment of people who have had contact with a patient (contact subjects)
- OD4** Measures for the securing of establishments for the production and storage of means of protection and health care products
- OD5/1** Acquisition of health care products, equipment (not including vaccines and injection equipment) and personal protective equipment for patients and contact subjects
- OD5/2** Distribution of health care products and personal protective equipment for patients and contact subjects
- 1D6** Organisation of care during pandemics

### Barrier measures

- 1C6** Closure of day nursery, teaching and training establishments, boarding schools, centres for minors
- 2C8** Measures for protection of specific populations (elderly people, disabled people, children, homeless people, etc.) in pandemic situations
- 2C9** Encouraging the public to use individual means of transport. Request for limitation of non-essential individual travel
- 2C10** Restriction of collective activities: performances, sports events, exhibitions and trade fairs, major gatherings, limitation of religious activities, limitations on non-essential professional, social, educational and associative activities
- 1C7** Implementation of measures to limit inter-human contamination (barrier measures)
- 2C11** Call for the implementation of distance measures for health protection: tele-working, limitations on meetings and travel, teleconferences

### Protection of French citizens abroad

- OE1** Reinforcement of stockpiles of health care products and means of protection in diplomatic posts
- 1E5** Recommendation for the return of expatriates: families, French students, non-essential State agents

- 0E2** Closure of French schools and cultural centres in the countries affected
- 1E6** Implementation of a support system for tourists and non-resident French citizens
- 0E3** For the treatment of expatriates: activation of a network of medical influenza advisors and information for companies. If necessary and if possible, sending of medical teams to diplomatic posts experiencing heavy demand
- 0E4** Treatment on site of citizens (suspected or possible cases): as a function of the local health care capabilities and the state of the patient, repatriation for health reasons possible on a case by case basis based on a joint decision of the diplomatic post, the Ministry of European and Foreign Affairs, the minister in charge of health and the patient’s insurer, as long as the safety of the crew and the medical assistance team can be guaranteed

**Human resources for public service missions**

- 2F1** Adjustment of the circular on the rules applicable to public agents in the event of a major crisis

**Communication and consciousness-raising**

- 0K1** Reinforcement of information to health care professionals on health measures for influenza pandemics and on their role in the management system
- 1K2** Reinforcement of public consciousness-raising campaigns for hygiene
- 1K3** Activation of a public information platform or tools

**Vaccination - SEE MEASURES PAGE 70**

**Communication - SEE MEASURES PAGE 73**

**For each measure decided on there must be accompanying communication**





**STAGE**  
**03**

# ATTENUATING THE EFFECTS OF THE EPIDEMIC WAVE

- 1./ What you need to know
- 2./ Guidelines for thinking
- 3./ Diagram for examination of the measures that could be taken in stage 3
- 4./ Possible measures  
Nomenclature  
of the measure sheets

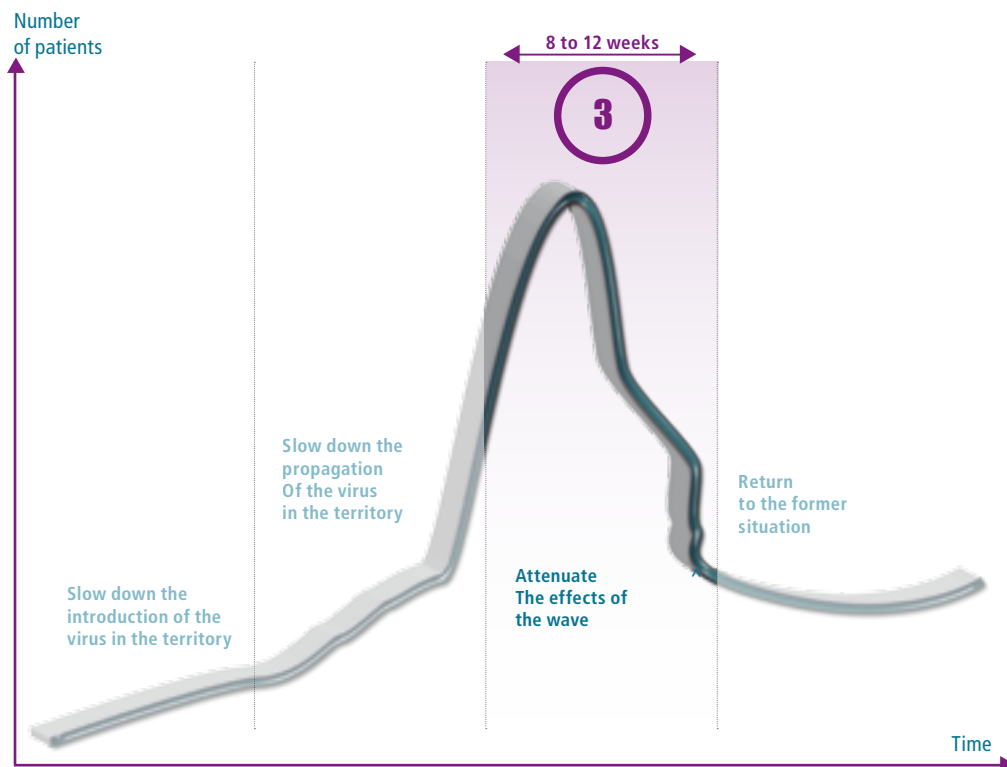




# ATTENUATING

## the effects of the epidemic wave

A rapid increase in the number of cases indicates the beginning of the epidemic wave. Stage 3 marks the end of the individual monitoring of cases by the health watch institute. The goal at this stage is to limit contagion through barrier measures, to reduce the load on the health care system, to limit absenteeism at work and to strengthen the health response capability.



### WHAT YOU NEED TO KNOW

- During the epidemic wave, saturation of the health care system can occur very quickly. The alert must therefore be very rapid and it must be possible to activate the response measures without delay,
- In the event of saturation of the health care resources, treatment priorities must be applied,
- On the scale of large companies, the percentage of people ill simultaneously should not exceed 10%, but it can be substantially higher on the scale of groups of people working together. Absenteeism in pandemic situations can be greater than the number of patients (child care, transport difficulties, etc.),
- The closure of schools can help to decrease the impact of a pandemic. According to an INSERM study of real situations, school vacations during an epidemic lead to a reduction of about one quarter in the impact of seasonal influenza in young people<sup>11</sup>.

*The lessons of the pandemic of 2009 (High Council for Public Health, opinion of the 4th of March 2011): the early curative use of antiviral drugs (oseltamivir) was effective in preventing serious forms, complications and deaths. In hospitals, there was a significant reduction in mortality with respect to untreated patients. Their preventive efficacy (prophylaxis) was confirmed in blocking the spreading of the epidemic in closed environments (institutions, etc.) and in protecting fragile patients. Monitoring of the undesirable effects of oseltamivir and zanamivir did not identify any worrying signals. Observing the reticence regarding anti-viral drugs, the High Council for Public Health would like to underscore the need for communication regarding this fact.*

### GUIDELINES FOR THINKING

- Are we really seeing a start of the epidemic wave or is the observed inflection due to other types of respiratory viruses?
- At this stage, has the nature of the crisis changed: sector or inter-sector, health, economic, media, social? If the CIC has not been mobilised, does the situation require its mobilisation? Does the number of ministries called on need to be extended? What are the possible development scenarios?
- Are we seeing the beginnings of a saturation of the health care system (out-patient or hospital care)? If so, what should be the immediate response?
- How should the vaccination against the new virus be organised?
- How does the population perceive the situation and the decisions? And the health care world? Are there rumours?

<sup>11</sup> CAUCHEMEZ S. et al. Nature, 10<sup>th</sup> of April 2008.

# DIAGRAM FOR EXAMINATION OF MEASURES THAT COULD BE TAKEN

## STAGE

3

## GENERAL CONTEXT

The rapid increase in the number of cases indicates the beginning of the epidemic wave. Stage 3 marks the end of individual monitoring of cases by the health watch institute. The goal is then to limit contagion through barrier measures, to reduce the load on the health care system, to limit absenteeism at work and to strengthen the capabilities of the health care response.

The diagram shows, for several decisions, a gradation of the measures under consideration as a function of the constraints that they impose:

**KEY: LEVEL**  
 ■ Low    ■ Very high  
 ■ Average

### EVALUATION OF THE SITUATION AND ANTICIPATION

EVALUATION AND INTEGRATION OF HEALTH INFORMATION

OB1

INFORMATION FROM DIPLOMATIC POSTS ON THE SITUATION AND MEASURES ABROAD

OB3

ORGANISATION OF INTERNATIONAL WATCH AND EPIDEMIOLOGICAL MONITORING

OB4

ORGANISATION OF PHARMACOVIGILANCE

1B7

USE OF VIROLOGICAL DIAGNOSIS CONFIRMATION TESTS

1B8

MONITORING BY EACH MINISTRY OF ITS SITUATION INDICATORS

1B9

MONITORING OF THE SOCIO-ECONOMIC SITUATION AND EVALUATION OF THE ECONOMIC COSTS OF THE PANDEMIC

2B10

INFLUENZA WATCH IN THE MEDIA AND EAVESDROPPING OF PUBLIC OPINION

OB5

### TREATMENT OF PATIENTS

MEDICAL TREATMENT OF PEOPLE WITH CLINICAL INFLUENZA SYMPTOMS (SUSPECTED OR POSSIBLE CASES)

→ at home  
 → in health care establishments

OD1

TREATMENT OF PEOPLE WHO WERE IN CONTACT WITH A PATIENT (CONTACT SUBJECTS)

→ systematic  
 → in difficult situations, priority to populations at risk

OD2

ORGANISATION OF CARE DURING PANDEMICS

1D6

CARE OF OF ISOLATED CHILDREN AND DEPENDENT PERSONS NOT SUFFERING FROM INFLUENZA

3D7

ACQUISITION AND DISTRIBUTION OF HEALTH CARE PRODUCTS

→ building of central and zone stockpiles  
 → supplying of infra-zone sites  
 → on order: implementation of distribution

OD5/1

OD5/2



# STAGE

3

## BARRIER MEASURES

### CLOSURE OF DAY NURSERY AND TEACHING ESTABLISHMENTS

- isolate classes or establishments
- closures on a territorial scale
- national closure

1C6

### MEASURES FOR PROTECTION OF SPECIFIC POPULATIONS

- restriction of visits in collective accommodation establishments
- closure of structures receiving minors
- implementation of exceptional structures for specific reception for isolated people with influenza

2C8

### OTHER BARRIER MEASURES

- information and consciousness-raising on the need to avoid public transport and limiting travel
- request for limitation of non-essential travel
- possible suspension of several public transport

2C9

- restriction of large gatherings and group activities

2C10

- implementation or adaptation of measures aiming to limit inter-human contamination (barrier measures, anti-projection masks, FFP2 type masks)

1C7

- call for implementation of distances measures for health protection

2C11

## PROTECTION OF FRENCH CITIZENS ABROAD

### CLOSURE OF FRENCH SCHOOLS AND CULTURAL CENTRES

0E2

### FOR THE TREATMENT OF EXPATRIATES

- activation of a network of medical influenza advisors
- sending of medical teams

0E3

- treatment on site of citizens if suspected cases or ill people
- repatriation of patients for health reasons possible on case by case basis

0E4

The diagram shows, for several decisions, a gradation of the measures under consideration as a function of the constraints that they impose:

#### KEY: LEVEL

- Low
- Average
- Very high

## STAGE

3

### HUMAN RESOURCES FOR PUBLIC SERVICE MISSIONS

CIRCULAR ON THE RULES APPLICABLE TO PUBLIC AGENTS

2F1

COORDINATION OF SUPPLY AND DEMAND FOR EMPLOYMENT IN PRIORITY SECTORS

3F2

POOLING OF PERSONNEL RESOURCES FOR PRIORITY NEEDS

3F3

PROCEDURES FOR BRINGING IN PERSONNEL

3F4

PROCEDURES FOR BRINGING IN HEALTH CARE PERSONNEL

3F4/1

PROCEDURES FOR BRINGING IN PERSONNEL IN NON-HEALTH FIELDS

3F4/2

SCALING UP OF THE NATIONAL GENDARMERIE AND THE NATIONAL POLICE

3F4/3

### SOLIDARITY APPROACH

CALL FOR LOCAL SOLIDARITY

3F5

RECOURSE TO VOLUNTEERS AND ASSOCIATIONS

3F6

FINANCIAL SUPPORT FOR HOUSEHOLDS THAT ARE VICTIMS OF THE PANDEMIC

3F7

### CONTINUITY OF SOCIAL AND ECONOMIC LIFE

ENCOURAGEMENT FOR THE IMPLEMENTATION OF ACTIVITY CONTINUITY PLANS

3F8

ACTIVATION OF SOLUTIONS TO ENSURE THE CONTINUITY OF EDUCATION

3F9

PROVISION, BY ALL MINISTRIES AND THE TERRITORIAL AUTHORITIES, OF CLOSED ESTABLISHMENTS

3F10

MEASURES REGARDING TEMPORARY LAYOFFS

3F11

SECURING OF INDUSTRIAL FACILITIES

3F12

MONITORING OF PRICES AND AVAILABILITY OF PRODUCTS FOR DISTRIBUTION

3F13

The diagram shows, for several decisions, a gradation of the measures under consideration as a function of the constraints that they impose:

**KEY: LEVEL**  
■ Low ■ Very high  
■ Average

# STAGE

# 3

**MAINTAINING OF THE MISSIONS OF ESSENTIAL SERVICES AND BUSINESS SECTORS OF VITAL IMPORTANCE**

- GOVERNMENTAL LINKS** 3F14
- DEFENCE** 3F15
- DRINKING WATER** 3F16
- ARRANGEMENTS FOR THE DISPOSAL OF HOUSEHOLD WASTES** 3F17
- MANAGEMENT OF INFECTIOUS WASTES (DASRI)** 3F18
- ENERGY, ELECTRONIC COMMUNICATIONS, FINANCIAL AND BANKING SERVICES, POSTAL SERVICES, ECONOMIC, FINANCIAL AND CUSTOMS MEASURES** 3F19
- SUPPLY OF FOOD AND THE MOST ESSENTIAL PRODUCTS** 3F20
- TRANSPORTS (ROAD, AIR, RAIL, SEA, RIVER)** 3F21
- MAINTAINING OF ESSENTIAL JUDICIAL ACTIVITIES** 3F22
- MAINTAINING OF THE PHARMACEUTICAL, MEDICAL AND HYGIENE PRODUCT INDUSTRIES** 3F23
- MAINTAINING OF PRIORITY MISSIONS OF MÉTÉO FRANCE** 3F24
- CONTINUITY PLANS OF HEALTH CARE ESTABLISHMENTS** 3F25

**VACCINATION**  
SEE MEASURES PAGE 70

**COMMUNICATION**  
SEE MEASURES PAGE 73

**EACH MEASURE DECIDED ON MUST HAVE ACCOMPANYING COMMUNICATION**

The diagram shows, for several decisions, a gradation of the measures under consideration as a function of the constraints that they impose:

**KEY: LEVEL**  
■ Low    ■ Very high  
■ Average

# NOMENCLATURE OF MEASURE SHEETS

## POSSIBLE MEASURES

### Evaluation of the situation and anticipation

- OB1** Evaluation and integration of health information
- OB3** Information from diplomatic posts regarding the situation and measures abroad
- OB4** Organisation of international watch and epidemiological monitoring in pandemics
- 1B7** Organisation of pharmacovigilance
- 1B8** Use of virological diagnosis confirmation tests
- 1B9** Monitoring by each ministry of its situation indicators
- 2B10** Monitoring of the socio-economic situation and evaluation of the economic costs of the pandemic
- OB5** Launching of influenza watch in the media (national and international) and on public opinion (including Internet and the social networks)

### Treatment of patients

- OD1** Medical treatment of people with clinical influenza symptoms (suspected or possible cases)
- OD2** Treatment of people who had contact with a patient (contact subjects)
- 1D6** Organisation of care during pandemics
- 3D7** Treatment for isolated children and dependent people not suffering from influenza
- OD5/1** Acquisition of health care products, equipment (not including vaccines and injection equipment) and personal protective equipment for patients and contact subjects
- OD5/2** Distribution of health care products and personal protective equipment for patients and contact subjects

### Barrier measures

- 1C6** Closure of day nursery, teaching and training establishments, boarding schools, centres for minors
- 2C8** Measures for the protection of specific populations (elderly people, disabled people, children, homeless people, etc.) in pandemic situations
- 2C9** Encouraging the public to use individual means of transport. Request for limitation of non-essential individual travel
- 2C10** Restriction of collective activities: performances, sports events, exhibitions and trade fairs, large gatherings, limitation on religious activities, limitations on non-essential professional, social, educational and associative activities
- 1C7** Implementing of measures aiming to limit inter-human contamination (barrier measures)
- 2C11** Call for the implementation of distance measures for health protection: tele-working, limitation on meetings and travel, teleconferences

### Protection of French citizens abroad

- OE2** Closure of French schools and cultural centres in the countries affected
- OE3** For the treatment of expatriates: activation of a network of medical influenza advisors and social information. If necessary and if possible, the sending of medical teams to diplomatic posts experiencing heavy demand
- OE4** Treatment on site of citizens (suspected or possible cases): as a function of the local health care capabilities and the state of the patient, repatriation for health reasons possible on a case by case basis based on a joint decision of the diplomatic post, the Ministry of European and Foreign Affairs, the minister in charge of health and the patient's insurer, as long as the safety of the crew and the medical assistance team can be guaranteed

### Human resources for public service missions

- 2F1** Adjustment of the circular on the rules applicable to public agents in the event of a major crisis
- 3F2** Coordination of supply and demand for employment in priority sectors
- 3F3** Pooling of personnel resources for priority needs: recourse to people made available by the closure of establishments, "young retirees" and students

- 3F4** Procedures for bringing in personnel
- 3F4/1** Procedures for bringing in health care personnel
- 3F4/2** Procedures for bringing in personnel in non-health care sectors
- 3F4/3** Scaling up of the National Gendarmerie and the National Police

### Solidarity approach

- 3F5** Call for local solidarity (neighbours)
- 3F6** Recourse to volunteers and associations
- 3F7** Financial support for households affected by the pandemic

### Continuity of social and economic life

- 3F8** Encouraging government agencies, territorial authorities and operators to implement the activity continuity plans (PCA)
- 3F9** Activation of solutions to ensure the continuity of education for pupils and students affected by the interruption of classes due to the closure of an establishment in the event of a pandemic
- 3F10** Making available, by all ministries and territorial authorities, of closed establishments (teaching establishments, sports centres, etc.) to meet all priority needs
- 3F11** Implementing of provisions for partial layoffs
- 3F12** Securing of industrial facilities at risk
- 3F13** Implementation of monitoring of prices and availability of products in distribution locations

### Maintaining of essential service missions and business sectors of vital importance

- 3F14** Government links and chains of command
- 3F15** Maintaining of essential defence activities

- 3F16** Production and distribution of drinking water and control of the quality of drinking water and water for leisure activities
- 3F17** Collection and treatment of household and similar wastes (municipalities, public establishments for inter-municipal cooperation and joint unions)
- 3F18** Specific measures for treatment of waste from care activities involving risk of infection (DASRI)
- 3F19** Energy, electronic communications, financial and banking services, postal services; economic and financial measures including customs measures
- 3F20** Supplying of food and products of primary necessity: production and distribution
- 3F21** Maintaining of transport with readjustment to the priority needs planned by the Government services and the operators involved
- 3F22** Maintaining of essential judicial activities
- 3F23** Maintaining of the pharmaceutical, medical and hygiene product industries: essential health care products
- 3F24** Maintaining of the priority missions of Météo France
- 3F25** Continuity plan for health establishments

### Vaccination - SEE MEASURES PAGE 70

### Communication - SEE MEASURES PAGE 73

Each measure decided on must be accompanied by communication





**STAGE**  
**04**

# RETURNING TO THE FORMER SITUATION

- 1./ What you need to know
- 2./ Guidelines for thinking
- 3./ Diagram for examination of measures that could be taken in stage 4
- 4./ Possible measures  
Nomenclature of measure sheets





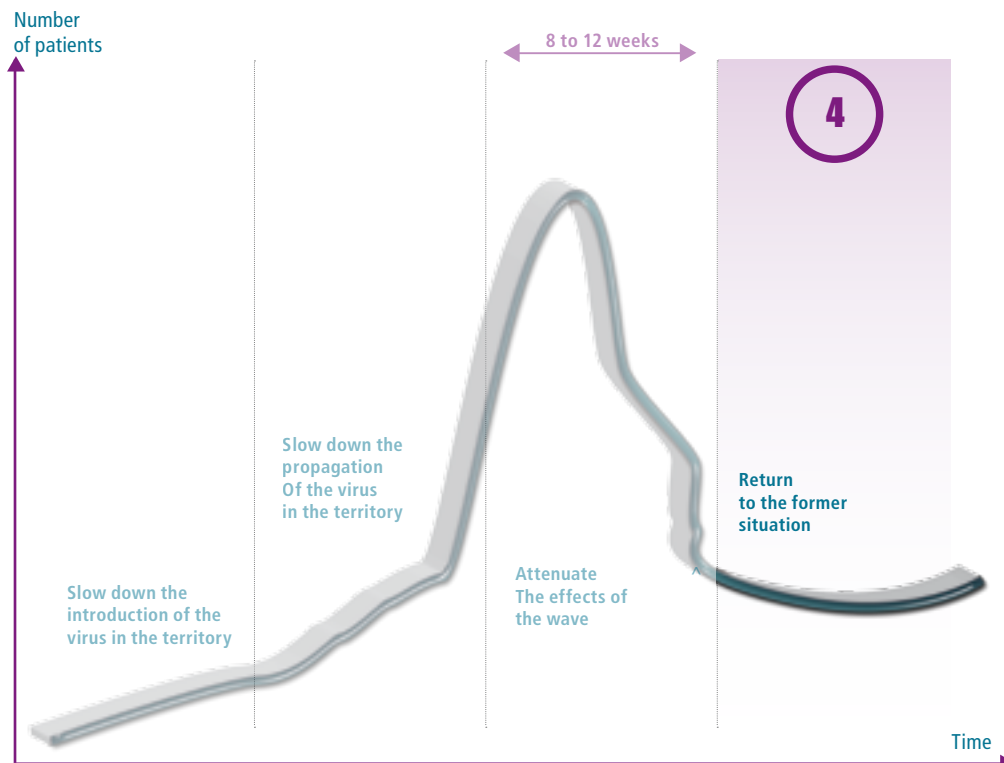


# RETURNING

## to the former situation and preparing for a possible next wave

**Threshold:** We switch to stage 4 as soon as we are once again under the epidemic threshold defined by the INVS.

**Return to a normal situation, evaluation of the consequences of the "pandemic wave", lessons learned from crisis management, preparation for a possible new wave, continuation of vaccination with this in mind.**



### WHAT YOU NEED TO KNOW

- At this stage, the final results are not known with certainty. Only the mortality statistics, established from the death certificates, will allow for evaluation of the excess mortality due to influenza.
- The possibility of a next wave, within a period of a few weeks, a few months, or even one or several years, must be taken into account. In particular, the vaccination campaign must not be interrupted.

*Lessons learned from the pandemic of 2009:* Attention: the end of an epidemic wave is almost always interpreted as being the end of the pandemic and the later occurrence of a new wave generally surprises the population. "Aftershocks" often occur in pandemics. In winter 2010-2011, the "seasonal" A(H1N1) epidemic wave, although it was moderate, still had strong pandemic characteristics (serious victims and deaths in relatively young populations, often with no risk factors). In the United Kingdom, the wave of 2010-2011 caused 569 deaths<sup>12</sup> (versus 360 in 2009). In France: 144 deaths in 2010-2011 - 350 in 2009)<sup>13</sup>.

### GUIDELINES FOR THINKING

- What are the possible development scenarios?
- How can we react rapidly if there is a new epidemic wave?
- Will the available means have to be supplemented again?
- What is the health care situation? How many people have already been in contact with the virus? Has the virus evolved? Who should receive priority protection?
- Are the necessary conditions in place to totally or partially deactivate the crisis management systems (Inter-ministerial crisis cell, health crisis centre)?
- What watch and anticipation systems should be implemented?

<sup>12</sup> The number of deaths was partly due to the low participation in the British campaigns for vaccination against H1N1.

<sup>13</sup> Ref. Weekly "Influenza" bulletins of the Health Watch Institute and the Health Protection Agency.

# DIAGRAM FOR EXAMINATION OF MEASURES THAT COULD BE TAKEN

## STAGE

4

## GENERAL CONTEXT

We go to stage 4 when we again fall below the epidemic threshold defined by the Health Watch Institute. Return to a normal situation, evaluation of the consequences of the “pandemic wave”, lessons learned from crisis management, preparation for a possible new wave, continuation of the vaccination with this outlook.

The diagram shows, for several decisions, a gradation of the measures under consideration as a function of the constraints that they impose:

**KEY: LEVEL**  
 ■ Low      ■ Very high  
 ■ Average

### EVALUATION OF THE SITUATION AND ANTICIPATION

EVALUATION AND INTEGRATION OF HEALTH INFORMATION

0B1

INFORMATION FROM DIPLOMATIC POSTS ON THE SITUATION AND MEASURES ABROAD

0B3

ORGANISATION OF PHARMACOVIGILANCE

1B7

MONITORING OF THE SOCIO-ECONOMIC SITUATION AND EVALUATION OF THE ECONOMIC COSTS OF THE PANDEMIC

2B10

MONITORING BY EACH MINISTRY OF ITS SITUATION INDICATORS

1B9

INFLUENZA WATCH IN THE MEDIA AND EAVESDROPPING OF PUBLIC OPINION

0B5

### ASSISTANCE TO THE POPULATION AND TO COMPANIES

EVALUATING THE POPULATIONS MADE PRECARIOUS BY THE PANDEMIC

4G1

EVALUATING THE COMPANIES THAT SUFFERED LOSSES. IDENTIFICATION OF PRIORITY ACTIVITIES FOR RELAUNCHING

4G2

FINANCIAL SUPPORT FOR HOUSEHOLDS THAT WERE VICTIMS OF THE PANDEMIC

3F7

MONITORING OF PROCEDURES FOR COMPENSATION BY INSURANCE COMPANIES

4G3

MECHANISMS FOR THE SUPPORT MEASURES FOR DIFFERENT SECTORS AND COMPANIES

4G4

# STAGE

## 4

### FEEDBACK FROM EXPERIENCE AND REVISION OF PLANS

- REQUEST FOR FEEDBACK 4H1
- REVISION OF PLANS 4H2

### ADAPTATION OF THE HEALTH CARE SYSTEM AND PREPARATION FOR A POSSIBLE WAVE

- IMPLEMENTATION OR ADAPTATION OF MEASURES AIMING TO LIMIT INTER-HUMAN CONTAMINATION (BARRIER MEASURES, ANTI-PROJECTION MASKS, FFP2 TYPE MASKS) 1C7
- ACQUISITION OF HEALTH CARE PRODUCTS 0D5/1
- VACCINATION STRATEGY – BEGINNING OR CONTINUATION OF THE PANDEMIC VACCINATION V3

### PROTECTION OF FRENCH CITIZENS ABROAD

- REINFORCEMENT OF STOCKPILES OF HEALTH CARE PRODUCTS AND MEANS OF PROTECTION 0E1

### VACCINATION SEE MEASURES PAGE 70

### COMMUNICATION SEE MEASURES PAGE 73

EACH MEASURE DECIDED ON MUST BE ACCOMPANIED BY COMMUNICATION

The diagram shows, for several decisions, a gradation of the measures under consideration as a function of the constraints that they impose:

**KEY: LEVEL**

- Low
- Average
- Very high

# NOMENCLATURE OF MEASURE SHEETS

## POSSIBLE MEASURES

### Evaluation of the situation and anticipation

- 0B1** Evaluation and integration of health information
- 0B3** Information from diplomatic posts about the situation and measures abroad
- 1B7** Organisation of pharmacovigilance
- 2B10** Monitoring of the socio-economic situation and evaluation of the economic costs of the pandemic
- 1B9** Monitoring by each ministry of its situation indicators
- 0B5** Launching of influenza watch in the media (national and international) and for public opinion (including Internet and the social networks)

### Assistance to the population and to companies

- 4G1** Evaluating the populations made precarious by the pandemic
- 4G2** Evaluating the companies that suffered losses. Identifying the priority activities for relaunching
- 3F7** Financial support for the households affected by the pandemic
- 4G3** Monitoring for the procedures of compensation by insurance companies

- 4G4** Implementation of support measures for different sectors and companies in difficulty due to the pandemic

### Feedback from experience and revision of plans

- 4H1** Request for feedback from experience from government agencies, territorial authorities, companies and the various categories of associated partners
- 4H2** Revision of plans (national plan, ministerial plans and all derived public and private plans)

### Adaptation of the health care system and preparation for a possible new wave

- 1C7** Implementation of measures aiming to limit inter-human contamination (barrier measures)
- 0D5/1** Acquisition of health care products, equipment (not including vaccines and injection equipment) and personal protective equipment for patients and contact subjects
- V3** Procedures for organisation of a vaccination campaign

### Protection of French citizens abroad

- 0E1** Reinforcement of stockpiles of health care products and means of protection at diplomatic posts

### Vaccination - SEE MEASURES PAGE 70

### Communication - SEE MEASURES PAGE 73

**Each measure decided on must be accompanied by communication**

# 3./ TRANSVERSE MEASURES

# VACCINATION AND COMMUNICATION

- 1./ Vaccination: making strategic decisions
- 2./ Communication: it accompanies all measures





# VACCINATION

## Making strategic decisions

### WHAT YOU NEED TO KNOW

The occurrence of an influenza pandemic is linked to the dissemination of a new influenza virus in a population which is not immune to it.

#### The vaccination can have two health objectives:

- The first objective, a collective one, is to limit the dissemination of the pandemic in the population.
- The second objective, an individual one, involves reducing the risk of serious forms and death, particularly through the vaccination of vulnerable and exposed people (or vaccination of people close to them, when the vulnerable people cannot be vaccinated).

#### Priorities must be established for vaccination, for example:

- Protect the populations that are most at risk medically,
- Limit the infectiousness of the virus by giving priority to protection of the populations who promote infection (especially children),
- Protect specific personnel whose activity absolutely must not be interrupted.

The dates for delivery of the pandemic vaccines remain very unpredictable and the distribution of the orders among several manufacturers constitutes an important precaution.

*Lessons from past pandemics: it is very difficult to do a large scale vaccination of a population before a first pandemic wave, but vaccination can be considered in a context of successive pandemic waves, which is frequent<sup>14</sup>.*

The organisation of the vaccination campaign is addressed in the guide for the organisation of an exceptional vaccination campaign published by the Ministry of Health.

### GUIDELINES FOR THINKING

- Can we have several scenarios for the organisation of the vaccination as a function of the development of the situation?
- What are the relevant vaccination objectives given the severity of the pandemic, and its health, social and economic consequences?
- Which vaccination strategy should be chosen in light of the context: minimum and maximum coverage targeted? Target of the vaccination? Choice or balance between collective strategy (mass immunity) and individual protection strategy? Available packaging (single-dose, multi-dose)?
- How is the support for the vaccination changing in public opinion and among health care professionals?

<sup>14</sup> MILLER M.A. et al., N.Engl.J.Med. 2009, p 2595

# DIAGRAM OF EXAMINATION OF STRATEGIC DECISIONS FOR VACCINATION

## CONTEXT

Vaccination represents the most efficient means of eradicating or attenuating a pandemic, once the pandemic appears to be a major threat and the health benefits of vaccination seem greater than the possible drawbacks.

The diagram shows, for several decisions, a gradation of the measures under consideration as a function of the constraints that they impose:

- KEY: LEVEL**
- Low
  - Average
  - Very high

### INITIAL CHOICE, GIVEN THE TARGET TIME FRAME, OF THE STRATEGIC OPTIONS

#### DETERMINATION OF THE APPROPRIATENESS OF A MAJOR VACCINATION CAMPAIGN - CHOICE OF THE VACCINATION STRATEGY

V1

- collective strategy /strategy of individual protection
- target populations
- order of priority
- vaccination coverage to be reached
- place of vaccination: **standard services**, possibly adapted (private practice, national education, etc.), **reinforcement of vaccination services** (hospitals, health reserve, etc.), **organisation of dedicated centres**

#### ACQUISITION OF VACCINES AND INJECTION EQUIPMENT

V2

- quantities and types of vaccines, delivery times
- single dose and multi-dose packaging
- presence or absence of additives
- diversification of producers
- adaptation of contractual provisions, supplier/contractor responsibilities,
- awarding of contracts

### IMPLEMENTATION AND ADAPTATION OF THE VACCINATION STRATEGY

#### PROCEDURES FOR THE ORGANISATION OF A VACCINATION CAMPAIGN - PERIODIC RE-EXAMINATION OF THE VACCINATION STRATEGY

V3

- campaign to supplement the anti-pneumococcus vaccination for vulnerable people
- if necessary, use of pre-pandemic vaccine
- place of vaccination: **standard services**, possibly adapted (private practice, national education, etc.), **reinforcement of vaccination services** (hospitals, health reserve, etc.), **organisation of dedicated centres**
- order of priority
- method of vaccination of vulnerable people
- initiating the pandemic vaccination campaign

# NOMENCLATURE OF THE MEASURE SHEETS

## POSSIBLE MEASURES

### Initial choice of the strategic options, given the target time frame

- V1** Determination of the appropriateness of a major vaccination campaign
- V2** Acquisition of vaccines and injection equipment

### Implementation and adaptation of the vaccination strategy

- V3** Procedures for organisation of a vaccination campaign



# COMMUNICATION

## it accompanies each measure



### WHAT YOU NEED TO KNOW

- The state of opinion can change very quickly:  
In August 2009, during the pandemic, 65% of the population planned to receive the vaccination. On the 15<sup>th</sup> of September, this figure was only 39% and, one month later, only 19%<sup>15</sup>,
- Corrective information must be given immediately to counteract false information and rumours which can circulate, using the same channels,
- Internet and the social networks now represent a major method of exchanging information and communication. They are a forum in which the public authorities must be present,
- There must also be communication before decisions are made, through on-going dialogue with the various partners of the public authorities,
- Health care professionals are essential actors and unavoidable people for relaying health information to the population. They are priority recipients of information regarding the “why” of the decisions.

### GUIDELINES FOR THINKING

- Is opinion changing?  
Is discontent being expressed?  
Is the population worried?
- Are rumours circulating?
- Is the dialogue of the public authorities with its partners sufficient?
- How should the presence of the public authorities on the Internet be expressed?

<sup>15</sup> Government information service

# COMMUNICATION

## THE PRINCIPLES TO FOLLOW

Each measure of the plan must be accompanied by adapted communication efforts. A "communication" component must be defined in advance for each measure decided on.

The points listed below are intended to help with the construction of this component.

The effectiveness of the system provided for in the plan depends on the maintaining of a strong link of trust between the government authorities and the population. It is necessary to demonstrate sensitivity to the concerns of the population and to address them rapidly. Always make sure that there is follow through up all of the actions which contribute to the communication.

### SENSITIVITY AND LISTENING



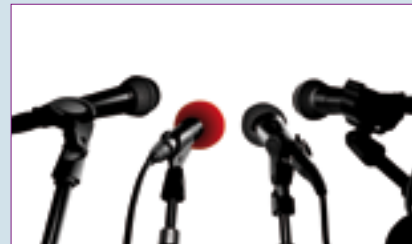
- 1 Be aware in real time of the state of public opinion and its various components, its perception of the risk and its support for the measures taken: individuals, families, health care professionals. Detect unfounded rumours and explain why they are false.

### COMMUNICATE WITH THE PARTNERS

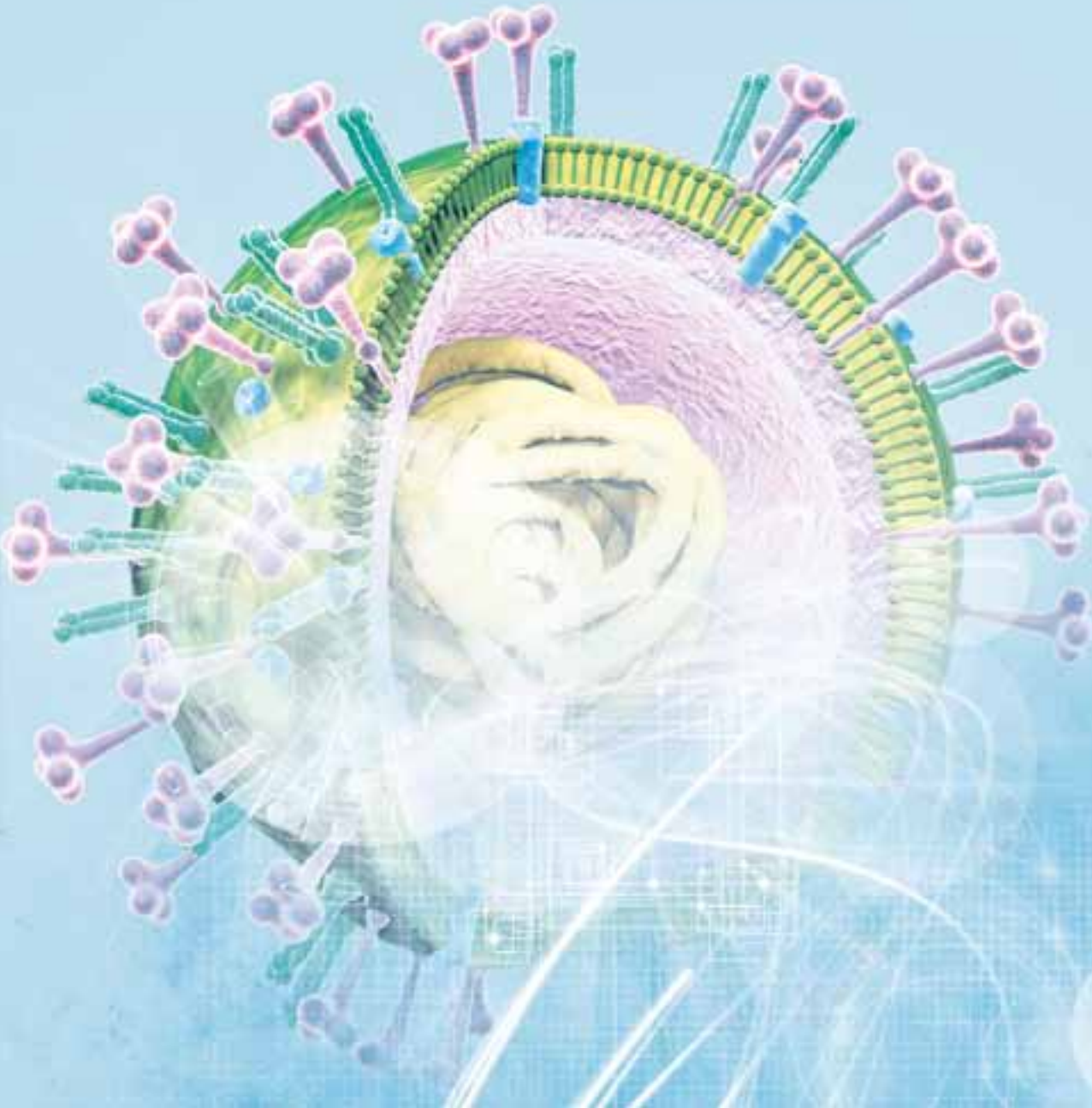


- 2 Draw on the contacts and networks: elected officials, doctors, pharmacists, associations
- 3 Initiate dialogue on all levels, particularly health care professionals and the public, take their opinions into account and encourage support for the measures taken. Initiate dialogue on the social networks.
- 4 Encourage all citizens to become actors and responsible in the face of risk and promote solidarity (checking on isolated people, help for patients, child care, etc.)

### DELIVER INFORMATION AND IMPORTANT MESSAGES



- 5 Respond without delay to expectations and questions and questions of public opinion. Be present on the Internet and use it to provide the necessary explanations
- 6 Provide information on the situation and the measures taken, using transparent and motivating information. Inform each category of the population (children, families, French citizens abroad, etc.) about the protection measures which involve them
- 7 Explain why decisions were made in order to maintain the trust of the population and the credibility of public authorities
- 8 Provide a reminder of the importance of vaccination, the foremost measure for the prevention of serious cases



# GLOSSARY

**Anti-body:** Serum protein involved in the mechanism of immunity, produced by the organism in response to the introduction of an antigen with which it combines to neutralise it.

**Antigen:** Substance which, when introduced into an organism, triggers the synthesis of antibodies specific to this antigen.

**Agence régionale de santé/Regional Health Agency (ARS):** Public administrative establishment created by the law of the 21st of July 2009 implementing hospital reforms and concerning patients, health and the territories (article 118), in order to ensure unified supervision of health care within a region and to better meet the needs and to increase the efficiency of the system, bringing together the resources of the State (particularly DDASS, DRASS, ARH) and the Health Insurance system on the regional level.

**Suspected case:** Person with a clinical symptoms compatible with the new virus in circulation (influenza syndrome, possibly conjunctivitis, etc.)

**Possible case:** Suspected case within the definition developed by the Health Watch Institute (InVS) specific to the pandemic virus.

**Confirmed case:** Suspected or possible case in whom a precise analysis by PCR (Polymerase Chain Reaction) for the new virus in circulation is positive.

**Excluded case:** A suspected case is excluded if it is not within the definition of the possible cases. A possible case is excluded, other than in exceptional circumstances, if the results of the biological investigation are negative (absence of infection with emerging virus).

**Centre national de référence/National reference centre (CNR):** Laboratory within a health care, teaching or research establishment designated for five years by the Minister of Health following a call for applications and based on a proposal from the Health Watch Institute (InVS). These laboratories provide expertise and consulting in microbiology, the pathology of infectious agents and their sensitivity to anti-infectious agents. They contribute to the epidemiological monitoring and alert the InVS and the Minister of Health of any observations that could have an impact on the health condition of the population.

**Medical counter-measures:** Measures that attenuate the effects of a pathogenic agent in people who have been or could be exposed to it. They include, in particular, the medical treatment of infected people and medical measures such as pre-treatments and post-treatments.

**Vaccine coverage:** This corresponds to the number of people who received the recommended vaccine doses divided by the number of people making up the target population.

Inter-ministerial delegate for the fight against avian influenza (DILGA): The function of the DILGA

working with the Prime Minister from 2005 to 2011 brought momentum to the action of the Government against the risk of an influenza pandemic. Substantial preparation work by all of the ministries, local authorities, companies and professionals involved, especially in the field of health, and the population was carried out within this framework.

**Epizootic:** Contagious disease affecting, within a relatively broad area, an animal species (or a group of species) as a whole.

**Influenza:** This is an acute, contagious respiratory infection, due to the Influenza viruses. The influenza viruses are broken down into different types: A, B and C. Influenza symptoms most often appear suddenly and involve: fever, asthenia, headache and myalgia. The symptomatology of influenza is not specific, and many other viruses can cause similar symptoms.

In the case of non-complicated influenza, these symptoms disappear within one or two weeks. In "complicated" influenza, the complications are due either to the viruses themselves or to the bacterial super-infections that they can lead to (pneumopathy). During epidemics, complicated forms of influenza generally affect elderly and fragile people (chronic, heart, pulmonary, metabolic, immunological illness, etc.). These complications can involve acute respiratory distress syndrome.

**Immunisation:** Acquisition by the organism of a resistance to the action of a pathogenic agent by means of either a primary infection that has been overcome or a vaccine or specific immunoglobulin.

**Out-patient medicine:** Refers to medical practice outside of hospitals.

**Barrier measures:** Measures to break the chains of direct and indirect transmission of an infectious disease. In the case of influenza, this involves hygiene measures in particular (washing and disinfecting of hands, use of anti-projection masks, aeration of rooms, isolation of sick people, etc.).

**Morbidity:** Number of people suffering from a given illness over a given time period, in general one year, within a population. Incidence (new cases) and prevalence (the sum of all of the cases) are two ways of expressing the morbidity of an illness. The rate of morbidity is the ratio which measures the incidence and the prevalence of an illness over a given time. This rate indicates the number of people who fall ill compared with the population.

**Mortality:** The mortality or mortality rate is the annual number of deaths attributable to an illness compared with the number of inhabitants of a given territory or a number of ill patients.

**Influenza Pandemic:** Epidemic linked to an influenza virus, occurring on the level of a very broad geographic area because of the appearance of a new virus sub-type resulting from a major genetic modification.

**Co-exposed person:** Person exposed to the same source of viral exposure as the possible case.

**Contact person:** Person particularly exposed to contamination by droplets from a possible case such as:

- People sharing the same living space: family, same hospital room or boarding school, etc.
- Direct contacts, face to face, at less than one metre at the time of a cough, a sneeze or a discussion, flirting, intimate friends, classroom/office neighbours or neighbours in an airplane/train.
- Health care professionals who have not implemented the appropriate barrier measures.

**Pharmacovigilance:** All techniques for the identification, evaluation and prevention of the risk of undesirable effects of medications sold on the market, including both potential and confirmed risks. It includes: the reporting of undesirable effects and the gathering of information concerning them; the recording, evaluation, and use of this information for the purpose of prevention, the carrying out of studies or work concerning the safety of the use of medications, the implementation of actions: modification(s) of information intended for health care professionals and patients, suspension, withdrawal of market release authorizations (AMM).

**The various actors are:** the patient, health care professionals, the regional pharmacovigilance centres, the French agency for health safety for health care products and the medications companies.

**Blue Plan:** Housing facilities for dependent elderly people and the residences must have a blue plan for the management of health crises. The blue plan sets out the general method of organisation of each institution, whether public, private, associative or commercial, in the event of a crisis.

**Prophylaxis:** Set of methods and measures which can protect an individual or a population against the spread of a transmissible illness.

**International health regulations (IHR):** binding legal instrument of international law which is obligatory for 194 countries, and especially for all of the Member States of the WHO. The scope and purpose of the IHR are to prevent the international propagation of illnesses, to provide protection from them, to control them and to react to them through a proportionate public health action limited to the risks which it presents for public health, avoiding the creation of useless obstacles to international travel and trade. In particular, the IHR governs health verifications at borders.

**Epidemiological monitoring:** Continuous process of collection, compilation, analysis and processing of health data, monitoring of the dissemination of the results for the purpose of intervention. The objectives of the epidemiological monitoring of influenza are the following: ensuring early detection, the monitoring of influenza epidemics in France and identifying the populations most severely affected by this illness in order to best adjust the control measures.

**Virological monitoring:** Monitoring based on laboratory study of viral strains in circulation within a territory. It is coordinated by a national reference centre which has this as a mission. The objectives of virological monitoring of influenza, which supplement the epidemiological monitoring, are the early detection and isolation of the viruses in circulation, determining their antigenic characteristics and identifying the appearance of strains resistant to anti-viral drugs.

**Rapid serological tests:** Diagnostic tests based on the specific interaction between “antigens” (molecules present on the surface of micro-organisms) and “antibodies” (molecules secreted by the immune system) produced through a reaction of the organism. This “antigen-antibody” interaction is very specific and allows for rapid methods for detection of an infection.

**Transmissibility:** Capacity for an infectious agent to infect a healthy person from a sick person. The transmissibility of an infectious disease is, in general, expressed by the base reproduction rate: average number of secondary cases produced by each primary case in a totally susceptible population.

**Pandemic wave:** Terminology describing the kinetics of an epidemic and particularly the phase of propagation of the illness and the sustained exceeding of the epidemic threshold.

**Virulence:** Capacity, in terms of intensity, of an infectious germ (virus in the case of influenza) to multiply within an organism and to cause a pathological state in it. In general, virulence means the pathogenic, harmful and violent nature of the virus.



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