

# E-Com@Eu Programme Work Programme 3



### Developing potential S.M.A.R.T<sup>1</sup>

### **Pandemic Behavioural Objectives**

'Having clearly formulated objectives is the key to achieving any result in terms of impact on people's awareness, attitudes and, above all, behaviour'

World Health Organisation (2010) Integrated communication strategy for distribution of H1N1 Vaccine

<sup>&</sup>lt;sup>1</sup> S.M.A.R.T. Specific. Measurable. Appropriate / Agreed . Realistic / Reliable. Time bound



### Developing potential S.M.A.R.T Pandemic Behavioural Objectives

#### 1. Introduction

A pandemic is a large scale, worldwide epidemic of disease caused by an infectious agent. An influenza pandemic occurs when a new strain of influenza virus emerges which causes human illness and is able to spread rapidly within and between countries because people have little or no immunity to it.

Influencing behaviour sits at the heart of any approach to pandemic management; whether it is influencing the behaviour of individuals to protect themselves and others, the behaviour of civic leaders and healthcare professionals, the reporting behaviour of the media or other individuals who may be agents of social influence through their own publicly observed behaviours.

Influencing behaviour change on such a large scale is not without profound ethical, political, practical and economic considerations. Desirable and undesirable behaviours that are evidenced-based, however, can be specified, communicated and acted on across all phases of a pandemic event.

The public health goal of behavioural interventions in a pandemic event is to reduce transmission, morbidity and mortality associated with the pandemic situation (World Health Organisation & UNICEF, 2009) specifically:

- People who are well, avoid becoming infected
- People who are sick, avoid infecting others and to recover from illness
- People who are caring for sick people, protect themselves and others from infection

The World Health Organisation describes *behaviour change interventions* as a package of well-defined multiple strategies designed to address human behaviour in complex settings (WHO, 2008).

In a pandemic situation the World Health Organisation recommends that public health goals are articulated as clear and specially stated desired outcomes and that a statement of a behavioural objective must be 'SMART', namely:

- **Specific** for the target audience in the context of their knowledge, skills, attitudes, behaviour, beliefs and perceptions, among others
- Measurable for assessing behavioural impact
- Achievable / Agreed attainable under the conditions set
- **Relevant / Reliable** be related to or contribute to the activity
- **Time-bound** with results expected within a given time

This paper presents potential SMART pandemic behaviours as part of the **E-com@eu** programme of work on developing an evidenced-based behavioural and communication package to respond to major epidemic outbreaks.

#### 1. Purpose of this paper

The purpose of this paper is to describe the findings of a rapid review which sets out to identify and analyse behaviours associated with a pandemic event. Its purpose is *not* to report on a review of the evidence of effectiveness of specific behaviours before, during or after a pandemic situation.

This paper describes a process of identifying desirable public pandemic behaviours and developing them into a set of specific, measurable, achievable, and relevant and time bound behavioural objectives.

The behavioural objectives aim to clearly set out what it is people can do in the event of a pandemic and at specific phases of a pandemic. This paper does not attempt to indicate, suggest or propose the *interventions* that will be the agents of this behaviour change.

It is important to state at this point that the behaviours have defined in this paper have been shaped by the six phases of a pandemic as set down by the World Health Organisation (see *Fig 1*).



#### Fig 1. World Health Organisation Pandemic Phases

PHASE	DESCRIPTION	MAIN ACTIONS				
		PLANNING AND COORDINATION	SITUATION MONITORING AND ASSESSMENT	COMMUNICATIONS	REDUCING THE SPREAD OF DISEASE	CONTINUITY OF HEALTH CARE PROVISIO
PHASE 1	No animal influenza virus circulating among animals have been reported to cause infection in humans					
PHASE 2	An animal influenza virus circulating in domesticated or wild animals is known to have caused infection in humans and is therefore considered a specific potential pandemic threat.	Develop, exercise, and periodically revise national influenza pandemic preparedness and response plans.	Develop robust national surveillance systems in collaboration with national animal health authorities, and other relevant sectors.	Complete communications planning and initiate communications activities to communicate real and potential risks.	Promote beneficial behaviours in individuals for self protection, Plan for use of pharmaceuticals and veccines.	Prepare the health system to scale up.
PHASE 3	An animal or human-animal influenza reassortant virus has caused isporatic cases or small clusters of disease in people, but has not resulted in human-to-human transmission sufficient to sustain community-level outbreaks.					
PHASE 4	Human to human transmission of an animal or human-animal influenza reassortant virus able to sustain community-level outbreaks has been verified.	Direct and coordinate rapid pandemic containment activities in collaboration with WHO to limit or delay the spread of infection.	Increase surveillance. Monitor containment operations. Share findings with WHO and the international community.	Promote and communicate recommended interventions to prevent and reduce population and individual risk.	Implement rapid pandemic containment operations and other activities; collaborate with WHO and the international community as necessary.	Activate contingency plans.
PHASE 5	The same identified virus has caused sustained community level outbreaks in two or more countries in one WHO region.	Provide leadership and	Actively monitor and assess	Continue providing undates to general	Implement individual	Implement
PHASE 6	In addition to the criteria defined in Phase 5, the same virus has caused sustained community level outbreaks in at least one other country in another WHO region.	coordination to multisectoral resources to mitigate the societal and economic impacts.	the evolving pandemic and its impacts and mitigation measures	public and all stakeholders on the state of pandemic and measures to mitigate risk.	societal, and pharmaceutical measures.	contingency plans for health systems at all levels.
POST PEAK PERIOD	Levels of pandemic influenza in most countries with adequate surveillance have dropped below peak levels.	Plan and coordinate for additional resources and capacities during possible future waves.	Continue surveillance to detect subsequent waves.	Regularly update the public and other stakeholders on any changes to the status of the pandemic.	Evaluate the effectiveness of the measures used to update guidelines, protocols, and algorithms.	Rest, restock resources, revise plans, and rebuild essential services.
POST PANDEMIC PERIOD	Levels of influenza activity have returned to the levels seen for seasonal influenza in most countries with adequate surveillance.	Review lessons learned and share experiences with the international community. Replenish resources.	Evaluate the pandemic characteristics and situation monitoring and assessment tools for the next pandemic and other public health	Publicly acknowledge contributions of all communities and sectors and communicate the lessons learned; incorporate lessons learned into communications activities and planning	Conduct a thorough evaluation of all interventions implemented.	Evaluate the response of the health system to the pandemic and share the lessons learned.

Source: World Health Organisation

http://www.who.int/influenza/resources/documents/pandemic\_phase\_descriptions\_and\_actions.pdf

The scope of this paper does not include a focus on behaviours associated with planning and preparedness phases or with social, social justice or economic policy associated with Phases 1-3.

This paper focuses on behaviours in the pandemic phases 4, 5 and 6 when there is human to human transmission of a virus and sustained community level outbreaks in one or more WHO regions (see *Fig 2*).





#### Fig 2. World Health Organisation Pandemic Influenza Phases

Source: World Health Organisation http://www.who.int/influenza/resources/documents/pandemic\_phase\_descriptions\_and\_actions.pdf

#### 2.1 Behavioural focus

#### Fig 3. Whole of society approach

The people of specific interest in this work are the health sector workers and individuals, families and communities (see Fig 3).

- People who are infected
- People who are uninfected
  - Uninfected healthcare workers who are working directly with patients and the public



It does not include the behaviour of policy makers, civic leaders, health sector influencers etc.

#### 2. Method

A rapid review of existing pandemic guidance and supporting document was undertaken.

The behaviours of three specific groups of interest were already defined as part of the Ecom@eu programme of work. These three groups were defined as:

- members of the public who are not infected •
- members of the public who are infected
- healthcare workers who are not infected

These three groups can also be described as primary audiences or market segments.

The guidance documents were reviewed for references to behaviours in these three groups. References to specific behaviours were isolated. Data synthesis began with tabulating the extracted behaviours according to source document. Duplicate behavioural references were tallied and cross-referenced.

The tabulated behaviours were then distilled down to produce one summary set of behaviours. The pandemic behaviours identified in the review were condensed according to the nature of each behaviour described and the individuals required to do them.

These behaviours were then developed into SMART behavioural goals by employing a behavioural tool called Proto Tool 1 Adopting a Goals and SMART Objectives Approach to Specifying Specific Behavioural Targets in Pandemic Communication and Marketing Programmes (please refer to the E-com@eu Proto Tool 1 in Appendix 2).

Four draft designs of a matrix were created, based upon the phases of a pandemic as described by the World Health Organisation and in reference to behaviour change theories, including personal and social models of behaviour and behaviour change. The conceptual frameworks considered in creating a matrix were the Theory of Planned Behaviour<sup>2</sup>, Health Belief Model<sup>3</sup>, the Protection Motivation Theory<sup>4</sup>.

The four drafts were appraised according to strengths and weaknesses and the anticipated audience for the paper.

<sup>&</sup>lt;sup>2</sup> Ajzen, I. (1985) From intentions to actions: A theory of planned behaviour. In Kuhl, J. & Beckman,

J. (Eds.) Action-control: From cognition to behaviour (pp. 11-39). Heidelberg: Springer <sup>3</sup> Rosenstock IM (1966), "Why people use health services", Milbank Memorial Fund Quarterly 44 (3): 94–12

<sup>&</sup>lt;sup>4</sup> Rogers RW: A protection motivation theory of fear appeals and attitude change. J Psychol 1975 , 91:93-114.



A final matrix design was agreed and developed, which was informed by, and drew upon, the best features of the original four.

#### Findings

#### 2.1 Describing behaviours and behaviour change

In a review of pandemic behaviour, French (2012) states a central conclusion that growing body of evidence and experience indicates that simply providing information and instruction - even if it is well designed, communicated and targeted - will in many cases be insufficient to bring about a required level of compliance with the key personal behaviours necessary to assist in the containment of pandemic events.

When asked about changes in their behaviour, approximately one in four EU citizens stated that their behaviour had changed in order to protect themselves against pandemic influenza H1N1 in 2009 – inferring that the majority had not changed their behaviour (Gallup Organization, 2010).

Behavioural messages based exclusively on technical content are unlikely to be fully effective in promoting desired behaviours and social action (AED, 2009). Behaviour change programmes require a set of clear measurable and sensible behavioural objectives that need to be achieved in the timescales of the programme.

Mah and colleagues (2008) conducted a social marketing analysis of hand hygiene promotion over a 20 year period and state that whilst behavioural messages are often very simple 'Interventions that do not address competing behaviours or messages may lessen their own effectiveness'.

Mah and colleagues cite several examples of competing behavioural messages including environmental messages about water conservation that could influence the acceptance of frequent hand washing and religious prohibitions about exposure to alcohol that could influence the acceptance of alcohol-based hand rubs.

A tentative but intriguing conclusion drawn by the authors of this review is that theories intended to modify individual level behaviours remain the most commonly applied in pandemic events. In recognition of the relationship between individual and societal behaviours during a pandemic event, it is becoming more common to put behaviours together to create a package or 'bundle' of personal behaviours (WHO, 2010).

There is limited but promising evidence for the effectiveness of social marketing in the prevention and control of communicable disease in Europe (ECDC, 2012). The evidence suggests it is not sufficient to consider an individual's voluntary behaviour change in

isolation. The role of communication and other forms of behavioural influence which are outlined in the ECDC review (such as nudging) focus mainly on changing the voluntary behaviours of individuals, rather than enforcing behaviour change.

Governments supported by public health institutions in some pandemic situations may wish to consider using tools to enforce rather than simply encourage behaviour change. The review proposes that when the health threat is great, governments may need to use different tools to influence people to become compliant including incentives and or sanctions.

The guidance documents and their authors describe behaviours associated with a pandemic event using a range of vocabulary. Different authors use different words to describe what might essentially be an identical or similar behaviour, group of behaviours or behavioural objective.

It is an observation worth noting here that some authors were discussing explicitly the acts of individuals as a behavioural objective whilst others were using the term 'behavioural intervention' interchangeably as a behavioural objective.

**Table 1** shows some of the different ways in which the review documents and their authors were describing pandemic behaviours

Description	Source reference
Core behaviours	WHO (2010)
Precautionary behaviours	Bults <i>et al</i> (2011),
Protective behaviours	Rubin <i>et al</i> (2009), Gallup (2010)
Compliant behaviour	WHO (2008)
Preventive behaviours	WHO & UNICEF (2009), Bults et al (2011)
Avoidance behaviours	Rubin <i>et al</i> (2009)
Appropriate behaviour	WHO (2010)
Risk reduction behaviour	WHO (2010)
Maladaptive behaviours	ISS (2012)
Positive behaviours	UK Department of Health (2012)
Recommended behaviours	AED & UNICEF: (June, 2009), Bults <i>et al</i> (2011)
Non-recommended behaviours	UK Department of Health (2012)
Socially responsible behaviours	Cabinet Office & Department of Health (2007)

### Table 1 Examples of the words used by authors to describe a bundle of behavioursassociated with a pandemic event

The AED guidance of 2009 suggests that the first reaction planners have to the time pressure during pandemic response is to develop generic messages based on scientific evidence alone and think that translating generic messages into multiple local languages is a sufficient way to adapt them. The authors go on to state that messages need to reflect local perceptions of risk and disease transmission and an understanding of the perceived consequences to performing desired behaviours.

Sanchez & Holmes (2012) state that much of the success of pandemic responses will then depend on the extent of adoption or modification of recommended behaviours. In the findings of the EU-funded TELLME programme, it is proposed that people are likely to behave consistently with their previous behaviours: the influence of past behaviour related to personal experiences of a previous pandemic event can support the setting of successful behavioural objectives in future events (ISS, 2012).

#### 4.2 Behavioural objectives

There is consensus in the guidance documents reviewed that the initial statement of behavioural objectives will depend on the identified priority groups during a pandemic and that there will be several priority groups for pandemic behaviours.

The AED (2009) guidance encourages programme leaders to think in terms of four basic questions: Who needs to do What, When, Where and Why? A clear statement of this is a reminder of the link between the actual behaviour that is being asked of individuals or communities and the ultimate health goal.

This review paper identifies only what people are asked to do or requested, or recommended to do and when and how often. It does not seek to look at what interventions, beliefs, motivations, social constructs, infrastructure, policy, enforcement required to get people to perform the behaviours and so on.

While there is much literature available and many references to behaviours associated with a pandemic event, clearly defined SMART behavioural objectives are notable by their absence in the literature.

One example of a SMART behavioural objective was identified in communication strategy document authored by the WHO and is shown in **Fig 4**.

This was the *only* example of a SMART behavioural objective found in the documents reviewed.

#### Fig 4 Example of a SMART behavioural objective

Behavioural objectives	Communication objectives
To ensure that 10,000 health workers in XX take	• Ensure that all health workers in XX know when and where to access the vaccine.
one dose of the pandemic (H1N1) 2009 vaccine, administered by a colleague	• Ensure that all health workers in XX understand that the importance of taking the pandemic (H1N1) 2009 vaccine whe it is offered.
at their place of work during the 1st week of February.	• Ensure that all health workers in XX get clear, accurate information about the risks of complications for specific group on pandemic (H1N1) 2009 and the vaccine being offered.
	<ul> <li>Appropriately address misinformation and rumours among health workers related to pandemic (H1N1) 2009 vaccines</li> </ul>
	• Ensure that XX population understands the rationale and reasons for ensuing that health workers are protected and offered the pandemic (H1N1) 2009 vaccines first.

Source: World Health Organisation (2010). Integrated communication strategy for distribution of H1N1 vaccine

#### 4.3 Summary of behaviours

The findings of this rapid review show that the literature does not always produce a consistent consensus on a collection of specific pandemic behaviours – that is, not everyone agrees 'what works'. This is coupled with the acknowledgement in the literature of the ethical and practical challenges of designing case-control studies in a pandemic situation which would help prove what works and what doesn't.

A summary of desirable pandemic behaviours can be found in **Table 2** and these behaviours are further refined in **Section 4.6** as a matrix of potential SMART pandemic behaviours. The complete findings of the rapid review of pandemic guidance documents to identify potential SMART pandemic behaviours can be found in **Appendix 1**.



#### Table 2. Summary of desirable pandemic behaviours in infected and uninfected people

Uninfected public	Infected public	Uninfected healthcare workers
<ul> <li>Follow the advice of health and civic leaders on recognising symptoms and seeking treatment</li> <li>Keep working if feeling well</li> <li>Wash hands thoroughly with soap and water or cleanse them with an alcohol-based hand rub on a regular basis</li> <li>Stay at least one metre away from people who are coughing or sneezing</li> <li>Avoid contact such as touching, hand-shaking or kissing</li> <li>Reduce the time spent in crowded places</li> <li>Avoid touching the mouth, nose and eyes as much as possible</li> <li>Get vaccinated if advised to do so</li> <li>Clean frequently touched household surfaces regularly with normal cleaning products</li> <li>Take anti-viral medicines exactly as instructed</li> <li>Postpone non-essential travelling</li> <li>Choose a single caregiver for a sick person</li> <li>Keep a sick person at least 1m away from others</li> <li>Let sick people drink as much as they can</li> <li>Improve air flow in living spaces by opening windows</li> <li>Recognize danger signs and seek prompt care</li> <li>If in a high risk group, get vaccinated routinely against seasonal influenza and pneumonia</li> <li>Caregivers to wear a mask when caring</li> </ul>	<ul> <li>Seek medical advice with the onset of symptoms</li> <li>Make telephone contact with health services rather than attending surgeries and hospitals</li> <li>Stay at home from work or school if feeling ill for at least 48 hours or until you are symptom free</li> <li>Wash hands thoroughly with soap and water or cleanse them with an alcohol-based hand rub on a regular basis</li> <li>Clean frequently touched household surfaces regularly with normal cleaning products</li> <li>Keep at least one metre away from healthy people</li> <li>Avoid contact such as touching, hand-shaking or kissing</li> <li>Cough or sneeze into a single-use tissue, dispose of the tissue and wash your hands immediately after</li> <li>Cover coughs and sneezes with hands, a sleeve or clothing</li> <li>Take anti-viral medicines exactly as instructed</li> <li>Drink as much fluids as possible</li> <li>If symptoms get worse, seek advice from your doctor or healthcare worker</li> <li>Reduce the time spent in crowded places</li> <li>Travel only when feeling well</li> <li>Wear a face mask if unwell</li> </ul>	<ul> <li>Continue to comply with standard infection prevention and control practice</li> <li>Get vaccinated if advised to do so</li> <li>Attend specific pandemic training as requested</li> <li>Communicate pandemic facts to patients and the public</li> <li>Administer vaccines as instructed</li> <li>Administer antiviral prophylaxis treatment as instructed</li> <li>Do not abandon vaccine resistant patients</li> <li>Keep going to work when feeling well</li> <li>Wear a medical facemask if within 1m of infected patients</li> </ul>



#### 4.6 Matrix of potential SMART pandemic behaviours

	New behaviour to adopt	Existing behaviour to modify	Existing behaviour to stop		
	Pandemic alert Phase 4				
	<ul> <li>XX% of adults living in households in XX region/town/city, at XX date, able to describe XX symptoms of pandemic infection, as per advice given by health or civic leaders in their region</li> <li>XX% of parents of children aged 18 years and under living in XX region/town/city, at XX date, able to describe XX symptoms of pandemic infection and specific risks to their child, as per advice given by health or civic leaders in their region/town/city</li> </ul>	<ul> <li>XX% of adults living, working or travelling through XX region/town/city, between XX date and XX date, self-reporting to reduce the time spent in crowded places by XX amount of time</li> <li>XX% of individuals living in households in XX region/town/city between XX date and XX date, who self-identify as the principal caregiving adult (or caregiver) within the household</li> </ul>	XX% of adults living, working or travelling through XX region/town/city who self- report/are observed to refrain from touching, hand-shaking or kissing during social interactions between XX date and XX date		
Uninfected public	XX % of adults living in XX region/town/city, at XX date, able to describe XX treatment seeking actions, as per advice given by health or civic leaders in their region/town/city	XX% of caregiving adults living in households in XX region/town/city between XX date and XX date who report keeping a sick person at least 1m away from others in the household	XX% of adults living or working in XX region/town/city who self- report/are observed not to touch their mouth, nose or eyes with their hands during XX time		
	XX% of caregiving adults living in XX region/town/city, at XX date, able to describe XX danger signs in vulnerable individuals which require immediate medical care, as per advice given by health or civic leaders in their region/town/city	XX% of working individuals within households in XX region/town/city self-reporting to have continued to attend work when feeling well enough to work between XX date and XX date			



XX% of high-risk individuals in XX risk- groups living in XX region/town/city, between XX date and XX date, getting routinely vaccinated when offered	XX% of households with no infected inhabitants, in XX region/town/city between XX date and date where frequently touched household surfaces (including XX) are cleaned XX times a day with XX cleaning products	
XX% of individuals living, working or travelling within XX risk communities in XX region/town/city between XX date and XX date get vaccinated when offered	XX% of adults living in XX region/town/city self-report to wash their hands thoroughly with soap and water or cleanse them with an alcohol-based rub on at least XX separate occasions through XX period of time	
XX% of adults living in households/communities in XX region/town/city self-report taking anti-viral medication exactly as instructed by XX, between XX date and XX date / within XX date	XX% of parents of children aged 18 years or under living in XX region/town/city self-report to ask their child to wash their hands thoroughly with soap and water or cleanse them with an alcohol-based rub on at least XX separate occasions through XX period of time	
XX% of caregiving adults living in households in XX region/town/city who report wearing a face mask on XX occasions when caring for a sick individual between XX date and XX date	XX% of high-risk individuals in XX risk <sup>5</sup> - groups living in XX region/town/city, between XX date and XX date, getting routinely vaccinated when requested to do so by their healthcare workers	
	XX% of adults living, working or travelling within XX region/town/city self-reporting to postpone non-essential journeys between XX date and XX date	

<sup>&</sup>lt;sup>5</sup> These groups may contain individuals at increased risk for example older people, pregnant women, children and infants and people living with long term conditions such as diabetes. The definition of a high risk group would be decided by each member country.



		XX% of caregiving adults living in XX region/town/city, at XX date, reporting to give XX litres fluids to a sick individual on XX occasions / per day	
	XX% of adults in XX region/town/city, at XX date, able to describe XX symptoms of pandemic infection, specific to advice given by health or civic leaders in their region/town/city	XX % of adults living or working in XX region/town/city, at XX date, doing XX treatment seeking actions with the onset of symptoms as per advice given by health or civic leaders in their region/town/city	XX% of travellers reporting to cease travelling to, within or through XX region/town/city between XX date and XX date, if suspecting infection or recognising onset of symptoms
Infected public		XX% of adults living in XX region/town/city self-report to wash their hands thoroughly with soap and water or cleanse them with an alcohol-based rub on at least XX separate occasions through XX period of time	XX% of working adults living or working in XX region/town/city between XX date and XX date reporting to have stayed away from work when ill with XX symptoms for at least 48 hrs
		XX% of adults living or working in XX region/town/city, between XX date and XX date, seeking medical advice via telephone or third party contact instead of presenting at medical facilities	XX% of adults living in households in XX region/town/city who self- report/are observed to refrain from touching, hand-shaking or kissing during social interactions between XX date and XX date



	XX% of adults living, working or travelling within XX region/town/city between XX date and XX date, who self-report to coughing or sneezing into a single-use tissue, disposing of the tissue and washing hands immediately after	XX% of adults living or working in XX region/town/city who self- report/are observed not to touch their mouth, nose or eyes with their hands between during XX time
	XX% of coughing and sneezing adults living, working or travelling within XX region/town/city who self-report/are observed to be keeping at least 1m between themselves and other people between XX date and XX date	
	XX% of coughing and sneezing adults living, working or travelling within XX region/town/city who self-report/are observed to cough or sneeze into their hand, sleeve or clothing between XX date and XX date	
	XX% of households with infected inhabitants, in XX region/town/city between XX date and date where frequently touched household surfaces (including XX) are cleaned XX times a day with XX cleaning products	
	XX% of infected adults living in households/communities in XX region/town/city self-report taking anti-viral medication exactly as instructed by XX, between XX date and XX date / within XX date	



		XX% of infected adults living in XX region/town/city, between XX and XX date, self-report seeking immediate medical advice or care from XX when XX symptoms are worsening	
		XX% of adults living, working or travelling within XX region/town/city self-reporting to postpone non-essential journeys between XX date and XX date	
Uninfected	XX% of healthcare workers working in XX in XX region/town/city attending XX number of specific pandemic training sessions between XX date and XX date	XX% of healthcare workers working in XX in XX region/town/city self-report of XX% compliance with XX standard infection prevention and control practice	
healthcare workers	XX number and % vaccines administered by XX healthcare workers to XX individuals living, working or travelling through XX region/town/city between XX date and XX date	XX% of healthcare workers self-reporting / observed to convey XX facts about pandemic infection to patients on XX consulting occasions between XX date and XX date	
	XX number and % antiviral prophylaxis treatments administered by XX healthcare workers to XX individuals living, working or travelling through XX region/town/city between XX date and XX date	XX% of healthcare workers working in XX in XX region/town/city self-reporting to have continued to attend work when feeling well enough to work between XX date and XX date [Employers / managers of healthcare workers recording XX% daily attendance to place of work in XX region/town/city between XX date and XX date]	



	XX% of healthcare workers living, working or travelling within XX risk communities in XX region/town/city between XX date and XX date get vaccinated when offered	XX% of healthcare workers working in XX in XX region/town/city self-reporting /observed to wear a face mask when within 1m of infected patients between XX date and XX date	
	New behaviour to adopt	Existing behaviour to modify	Existing behaviour to stop
	Panden	nic alert Phase 5 and 6	
Uninfected public	XX% of adults living in households in XX region/town/city, at XX date, able to describe XX symptoms of pandemic infection, as per advice given by health or civic leaders in their region/town/city	XX% of adults living, working or travelling through XX region/town/city, between XX date and XX date, self-reporting to reduce the time spent in crowded places by XX amount of time	XX % of uninfected adults living, working or travelling through XX region/town/city who self- report/are observed to refrain from touching, hand-shaking or kissing during social interactions between XX date and XX date
	XX% of parents of children aged 18 years and under living in XX region/town/city, at XX date, able to describe XX symptoms of pandemic infection and specific risks to their child, as per advice given by health or civic leaders in their region/town/city	XX% of individuals living in households in XX region/town/city between XX date and XX date, who self-identify as the principal caregiving adult (or caregiver) within the household	XX% of uninfected adults living or working in XX region/town/city who self- report/are observed not to touch their mouth, nose or eyes with their hands during XX time



XX % of adults living in XX region/town/city, at XX date, able to describe XX treatment seeking actions, as per advice given by health or civic leaders in their region/town/city	XX% of caregiving adults living in Households in XX region/town/city between XX date and XX date who report keeping a sick person at least 1m away from others in the household	XX% of individuals self- reporting / observed to cease travelling to, within or through XX region/town/city between XX date and XX date as per XX instructions of health or civic leaders
XX% of caregiving adults living in XX region/town/city, at XX date, able to describe XX danger signs in vulnerable individuals which require immediate medical care, as per advice given by health or civic leaders in their region/town/city	XX% of working individuals within households in XX region/town/city self-reporting to have continued to attend work when feeling well enough to work between XX date and XX date	
XX% of high-risk individuals in XX risk- groups living in XX region/town/city, between XX date and XX date, getting routinely vaccinated when offered	XX% of households with no infected inhabitants, in XX region/town/city between XX date and date where frequently touched household surfaces (including XX) are cleaned XX times a day with XX cleaning products	
XX% of individuals living, working or travelling within XX risk communities in XX region/town/city between XX date and XX date get vaccinated when offered	XX% of adults living in XX region/town/city self-report to wash their hands thoroughly with soap and water or cleanse them with an alcohol-based rub on at least XX separate occasions through XX period of time	
XX% of adults living in households/communities in XX region/town/city self-report taking anti-viral medication exactly as instructed by XX, between XX date and XX date / within XX date	XX% of parents of children aged 18 years or under living in XX region/town/city self-report to ask their child to wash their hands thoroughly with soap and water or cleanse them with an alcohol-based rub on at least XX separate occasions through XX period of	



		time	
	XX% of caregiving adults living in households in XX region/town/city who report wearing a face mask on XX occasions when caring for a sick individual between XX date and XX date	XX% of high-risk individuals in XX risk-groups living in XX region/town/city, between XX date and XX date, getting routinely vaccinated when requested to do so by their healthcare	
		XX% of adults living, working or travelling within XX region/town/city self-reporting to postpone non-essential journeys between XX date and XX date	
		XX% of caregiving adults living in XX region/town/city, at XX date, reporting to give XX litres fluids to a sick individual on XX occasions / per day	
Infected public	XX% of infected adults in XX region/town/city, at XX date, able to describe XX symptoms of pandemic infection, specific to advice given by health or civic leaders in their region/town/city	XX % of infected adults living or working in XX region/town/city, at XX date, doing XX treatment seeking actions with the onset of symptoms as per advice given by health or civic leaders in their region/town/city	XX% of travellers reporting to cease travelling to, within or through XX region/town/city between XX date and XX date, if suspecting infection or recognising onset of symptoms
		XX% of infected adults living in XX region/town/city self-report to wash their hands thoroughly with soap and water or cleanse them with an alcohol-based rub on at least XX separate occasions through XX period of time	XX% of infected working adults living or working in XX region/town/city between XX date and XX date reporting to have stayed away from work when ill with XX symptoms for at least 48 hrs



	XX% of infected people in XX region/town/city, between XX date and XX date, seeking medical advice via telephone or third party contact instead of presenting at medical facilities	% of infected adults living in households in XX region/town/city who self- report/are observed to refrain from touching, hand-shaking or kissing during social interactions between XX date and XX date
	XX% of infected adults living, working or travelling within XX region/town/city between XX date and XX date, who self-report to coughing or sneezing into a single-use tissue, disposing of the tissue and washing hands immediately after	% of uninfected adults living or working in XX region/town/city who self- report/are observed not to touch their mouth, nose or eyes with their hands
	XX% of coughing and sneezing adults living, working or travelling within XX region/town/city who self-report/are observed to be keeping at least 1m between themselves and other people between XX date and XX date	
	XX% of coughing and sneezing adults living, working or travelling within XX region/town/city who self-report/are observed to cough or sneeze into their hand, sleeve or clothing between XX date and XX date	



		XX% of households with infected inhabitants, in XX region/town/city between XX date and date where frequently touched household surfaces (including XX) are cleaned XX times a day with XX cleaning products	
		XX% of infected adults living in households/communities in XX region/town/city self-report taking anti-viral medication exactly as instructed by XX, between XX date and XX date / within XX date	
		XX% of infected adults living in XX region/town/city, between XX and XX date, self-report seeking immediate medical advice or care from XX when XX symptoms are worsening	
		XX% of adults living, working or travelling within XX region/town/city self-reporting to postpone non-essential journeys between XX date and XX date	
Uninfected healthcare workers	XX% of healthcare workers working in XX in XX region/town/city attending XX number of specific pandemic training sessions between XX date and XX date	XX% of healthcare workers working in XX in XX region/town/city self-report of XX% compliance with XX standard infection prevention and control practice	
	XX number and % vaccines administered by XX healthcare workers to XX individuals living, working or travelling through XX region/town/city between XX date and XX date	XX% of healthcare workers self-reporting / observed to convey XX facts about pandemic infection to patients on XX consulting occasions between XX date and XX date	



XX number and % antiviral prophylaxis treatments administered by XX healthcare workers to XX individuals living, working or travelling through XX region/town/city between XX date and XX date	XX% of healthcare workers working in XX in XX region/town/city self-reporting to have continued to attend work when feeling well enough to work between XX date and XX date [Employers / managers of healthcare workers recording XX% daily attendance to place of work in XX region/town/city between XX date and XX date	
XX% of healthcare workers living, working or travelling within XX risk communities in XX region/town/city between XX date and XX date get vaccinated when offered	XX% of healthcare workers working in XX in XX region/town/city self-reporting /observed to wear a face mask when within 1m of infected patients between XX date and XX date	

#### 4.5 Measuring success

The rapid review also yielded some potential ways in which the achievement of SMART behavioural objectives can be measured, thereby allowing an evaluation of the success of interventions put in place.

These findings are listed in Table 3.

#### Table 3. Potential ways to measure behaviour and behaviour change

### **Methods and Measures**

- 1. Logging the number of calls and enquiries to a public helpline
- 2. Count of the number of vaccines administrated to healthcare workers
- 3. Count of the number of vaccines administered to the public
- 4. Count of the number of people completing a course of anti-viral medication
- 5. Count of the number of vaccines administered to specific sub-groups at increased risk of infection or the consequences of infection
- 6. Survey of public knowledge, awareness and opinions on pandemic messages heard or seen
- 7. Attitudinal and behavioural survey or census of a sample of households in a specific area
- 8. Type and form of media reporting on the pandemic; a review of all channels including radio, television, newspapers and social media with type and tone of reporting
- 9. The number of information materials distributed (to healthcare workers, to the public, to specific sub-groups)
- 10. The number of individuals receiving pandemic information materials from a healthcare worker
- 11. The number of individuals asking questions of healthcare workers
- 12. The amount of information material requested and distributed by healthcare workers



- 13. The number of online hits to a website
- 14. No of pandemic champions and/or vaccination advocates recruited and trained
- 15.No of speaking engagements undertaken by champions/advocates/healthcare workers
- 16. The number of households visited in door-to-door outreach communication campaigns
- 17. Monitoring of synchronicity of web posting between World Health Organisation and sampled web sites
- 18. Monitoring of Facebook, YouTube and other social media reaction to and coverage of the event by country and region
- 19. Monitoring twitter feeds and blogs and other forms of social networks re reaction to the pandemic event.
- 20. Staff survey of healthcare worker knowledge, attitudes and behaviours
- 21. Count of installation of hand sanitizer equipment in entrances to public buildings
- 22. Observation of public use of hand sanitizer equipment in a sample of buildings
- 23. Survey of traveller behaviours and numbers
- 24. Observation of traveller behaviours
- 25. Sales of face masks and other prevention orientated goods such as disposable tissues, cleansing gel etc.
- 26. Patterns in distribution and uptake of vaccines



#### Summary

This paper is not a review of the effectiveness of desirable behaviours in a pandemic situation but a review to collate behaviours leading to the development of SMART behavioural goals for further discussion and review. There are many and varied factors to consider when developing SMART behavioural objectives for a pandemic situation and these include:

- 1. How rapidly behaviour must change
- 2. An analysis of who needs to do what, when, where and how
- 3. Whether or not the behaviour can be decided and/or enacted by the individual, or if governments and authorities must decide and enable
- 4. The potential for enforcement, incentives and sanctions

It is important to state here that further segmentation of the three broad audiences will be needed to increase the adoption and modification of behaviours. Individual member countries may wish to undertake a more in-depth segmentation in order to arrive at a manageable number of segments which are socially and culturally appropriate but also readily identifiable within a given population. There are limitations to the worked presented in the paper. This matrix has been developed to define desirable behaviours to be adopted, maintained or adapted in a pandemic situation and to form SMART behavioural goals. This paper does not attempt to indicate, suggest or propose the interventions that will be the agents of this behaviour change.

One observation in doing this review is that within the literature that the term 'behaviour' and the term 'intervention' were used interchangeably, for example, in describing an intervention the author was also describing a behaviour e.g. using a face mask/use a face mask. Another and important observation is of the abundance of discussion and debate on the attitudes, beliefs and knowledge needed to perform a behaviour but a noticeable lack of clearly defined SMART behavioural objectives.

#### Next steps

The matrix of potential SMART pandemic behaviours will be reviewed and revised in light of on-going progress in the **E-com@eu** programme.

In response to the lack of readily identifiable behavioural objectives in the existing pandemic guidance documents, it would be both prudent and enlightening to discuss with public health professionals the specific challenges of setting behavioural objectives in pandemic event planning and management.



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World Health Organisation February 2010 Integrated communication strategy for distribution of H1N1 vaccine Developed by WHO/H1N1 Communications Team and Societal and Individual Measures Team in consultation with Regions and partners



## Appendix 1 Results of rapid review of pandemic guidance documents to identify potential SMART pandemic behaviours

Evidence source	Regions and people	Behaviour(s) – as described by authors
World Health Organisation (2009) Behavioural interventions for reducing the transmission and impact of influenza (H1N1) virus: a framework for communication strategies. http://www.who.int/csr/resources/ publications/swineflu/framework 20090626_en.pdf	Member state populations in affected areas	Seek information from credible sources Stay at least one 1 metre away from people who are coughing or sneezing Avoid touching, hand-shaking or kissing Reduced time spent in crowded places If you feel ill, work from home If you feel ill, contact health-care provider by phone for advice, if possible If you are ill, ask others for help with daily chores Infected persons use a single-use tissue, if possible Dispose of the single-use tissue as soon as it used Wash hands immediately after disposing the tissue Cough or sneeze into sleeve, your jacket or other clothing to prevent droplets from travelling in the air Wash hands frequently If possible, wash hands after coughing or sneezing Wash hands are taking off any type of face cover Keep hands away from face Give sick people a separate space at home Keep a sick person at least 1 metre away from others Keep this space well aired by making use of natural breezes from doors and windows Assign the mother as the caregiver if her breastfed infant is sick Caregivers should take special care to wash their hands before and after caring and cover mouth and nose during contact with the sick person Let sick people drink as much as they can Use 'sweet waters', fruit juice, soup or oral rehydration salts



		Continue to breastfeed healthy and sick infants unless the clinical condition of the sick mother does not permit this Recognise danger signs (difficulty breathing, shortness of breath, chest pain, weakness, inability to stand, unconsciousness, high fever for more than 3 days, seizures or difficulty to awaken) and seek prompt care Help sick person with danger signs to reach the nearest health facility Seek prompt care for any influenza-like illness in children younger than 5 years
World Health Organisation (2005) Global influenza preparedness plan: The role of WHO and recommendations for national measures before and during pandemics. ANNEX 1 Recommendations for non- pharmaceutical public health interventions. WHO Department of Communicable Disease	Member state populations; for persons living or travelling within an affected country	Receive public health information on risks Receive public health information on risk avoidance Receive public health information on universal hygiene behaviour Self-confinement if infected Symptomatic persons to wear a face mask Exposed persons to consider wearing a face mask (based on risk assessment) Voluntary quarantine in asymptomatic persons who had contact with infected persons Self-confinement in persons undergoing antiviral prophylaxis Voluntary quarantine in asymptomatic persons who have had contact with a person undergoing antiviral prophylaxis Self-health monitoring Self-reporting of illness if symptoms appear Voluntary home confinement of symptomatic persons Prompt self-diagnosis Hand-washing Household disinfection of potentially contaminated surfaces Avoid contact with high-risk environments Deferral of non-essential travel to affected areas Postponement of travel in ill persons



Healthcare workers	Receive public health information on risks and risk avoidance Confine mild and severe cases as appropriate to local situation Provide care Health-care workers who will be within 3 feet (1 metre) of infected patients use medical masks (e.g., surgical or procedure) when caring for patients either with, or suspected to have, pandemic influenza Health-care workers use such masks whenever entering a room containing a patient diagnosed with pandemic influenza Disinfect the hands with an alcohol-based preparation or wash the hands with soap and water immediately after each encounter with a patient and before seeing another patient If the health-care worker is attending an individual patient who is in isolation, the mask or respirator should be discarded after leaving the room If the health-care worker is attending multiple patients in the same room, the same mask or respirator may be used until the healthcare worker leaves the room, the mask or respirator should be discarded after leaving the room Hand hygiene performed immediately after discarding a used mask or respirator If resources allow and particulate respirators are available, they should be used during aerosol producing procedures in pandemic influenza settings Advise contacts of infected persons to reduce social interaction Advise contacts of infected persons to defer travel to unaffected areas Provide contacts of infected persons with antiviral prophylaxis Raise awareness of social distancing, quarantine or isolation



World Health Organisation. What can I do to protect myself from catching Pandemic (H1N1) 2009 http://www.who.int/csr/disease/sw ineflu/frequently_asked_question s/what/en/index.html	Member state populations in affected areas	Keeping your distance from people who show symptoms of influenza-like illness, such as coughing and sneezing (trying to maintain a distance of about 1 metre if possible) clean hands thoroughly with soap and water, or cleanse them with an alcohol-based hand rub on a regular basis (especially if touching surfaces that are potentially contaminated) Avoid touching your mouth, nose and eyes as much as possible Reduce the time spent in crowded settings if possible Improve airflow in your living space by opening windows Practise good health habits (including adequate sleep, eating nutritious food, and keeping physically active Getting yourself (or family members age 6 months and older) vaccinated If you are not sick you do not have to wear a mask If you are not sick you do not have to wear a mask when you are in close contact with the ill person and dispose of it immediately after contact, and cleanse your hands thoroughly afterwards If you are sick and must travel or be around others, cover your mouth and nose. Using a mask correctly in all situations is essential If you feel unwell, have a fever, cough or sore throat stay at home and keep away from work, school or crowds Rest and take plenty of fluids Cover your coughs and sneezes. If using tissues, make sure you dispose of them carefully. Clean your hands immediately after with soap and water or cleanse them with an alcohol-based hand rub If you do not have a tissue close by when you cough or sneeze, cover your mouth as much as possible with the crook of your elbow Use a mask to help you contain the spread of droplets when you are around others, but be sure to do so correctly Inform family and friends about your illness Try to avoid contact with other people Contact a health professional before traveling to a health facility to discuss whether a medical examination is necessary
		breathing, or if a fever continues more than three days



		For parents with a young child who is ill, seek medical care if a child has fast or laboured breathing, continuing fever or convulsions (seizures) you should stay home and away from work through the duration of your symptoms If you are feeling unwell or have symptoms of influenza, you should delay travel
World Health Organisation (Feb 2010) Integrated communication strategy for distribution of H1N1 vaccine	Healthcare workers	Ensure that all health workers in XX know when and where to access the vaccine Ensure that all health workers in XX understand that the importance of taking the pandemic (H1N1) 2009 vaccine when it is offered Ensure that all health workers in XX get clear, accurate information about the risks of complications for specific groups on pandemic (H1N1) 2009 and the vaccine being offered Appropriately address misinformation and rumours among health workers related to pandemic (H1N1) 2009 vaccines Behavioural objective: To ensure that 10,000 health workers in XX take one dose of the pandemic (H1N1) 2009 vaccine, administered by a colleague at their place of work during the 1st week of February.
		Not using a vial of vaccine after it had been contaminated Participation in workshops for training on how to respond to questions about H1N1 and about the vaccine. Comply with standard and droplet precaution measures Wash their hands frequently with water and soap before and after seeing a patient. Get vaccinated



Pregnant women, people with serious chronic health conditions such as heart, lung, kidney disease, diabetes & severely immuno- suppressed people	Have the target groups take the vaccine Be vaccinated as soon as the vaccine is available Washing your hands often Avoiding crowded places if there is a lot of virus circulating Designating one person in the household to care for a family member who has contracted the virus
People who are ill	Cough etiquette (covering mouth when coughing, cough into sleeve when possible, Wash hands if coughed/sneezed into them, and trying to avoid touching your eyes or Nose when your hands are not clean) Cover their mouth and nose when coughing or sneezing, Keep some distance from healthy people, as much as possible Staying home from work or school if feeling ill
People who feel well	Washing your hands with soap and water frequently Keeping your distance from someone who is coughing or sneezing Talk to your doctor or health-care provider if you have questions about the virus or this flu vaccine.



World Health Organisation. <i>Public health measures during</i> <i>the influenza</i> . A (H1N1)2009 pandemic. Meeting Report. WHO Technical Consultation. Gammarth, Tunisia 26 28 October 2010.	Member state populations	Hand hygiene Hand sanitiser installation Cough etiquette Staying at home with a fever Social distancing Home disinfection Family care Disinfection of public places Home mask use Business closure Voluntary self-isolation Use hand-rubs
	Healthcare workers, public facing workers	Use hand-rubs Administer pandemic vaccines
	ſ	
<ul> <li>D.17 Population behaviour in Epidemics Summary Report</li> <li>TELL ME- Transparent</li> <li>Communication in Epidemics:</li> <li>Learning Lessons from</li> <li>experience, delivering effective</li> <li>Messages, providing Evidence</li> <li>Project co-funded by the</li> <li>European Commission within the</li> <li>7<sup>th</sup> Framework Programme – health theme</li> <li>[57 papers included in this review, a total of 40 studies focus on preventive behaviours and</li> </ul>	Healthcare workers	Healthcare providers should work with vaccine resistant caregivers, avoiding strategies that will alienate them. Aim for incremental success if full vaccination cannot be persuaded. Acknowledge concerns and be prepared to address them using accurate information. Do not abandon vaccine resistant patients; continue to provide care, and take advantage of every opportunity to further educate about the benefits of vaccination Provide accurate and clearly explained information with a preparedness to counter common misconceptions Handwashing Wearing face masks Wearing gloves Wearing gowns



their related factors. 19 studies		Adding virucidals or antiseptics to normal hand washing
were conducted in Asiatic		Face masks together with hand sanitizer use
regions, 1 in Saudi Arabia, 4 in		Using effective timing strategies to take advantage of heightened vaccine acceptance
the US. 5 in Australia and 8 in		in various settings and emotional states
Europe, 3 international studies		Assuage doubts about the safety and effectiveness of pandemic influenza vaccines
		Engage more actively the public in the decision-making process
		Communicate with patients in a language that is easily understood
		Take care that natients are not overloaded with information in order to avoid
		denerating ambiguities
		Focus mostly on the facts that need to be communicated to the public
		Be well prepared for answering questions about the disease and long-term side effects
		(if any) that vaccine could have
		Get vaccinated
		Personal hydiene
		Social distancing
		The use of facemask
		Limitation of travel
	Conoral population	Comply with home guaranting
		Comply with home quarantine Reduced mexement
		Reduced movement
		Nooring a face mask in the home
		Wearing a face mask in the home
		Wearing a face mask in the nome
		Recognise their own (or their family members ) symptoms,



World Health Organisation Pandemic (H1N1) 2009 briefing note 2 http://www.who.int/csr/disease/swineflu/notes/ h1n1_vaccine_20090713/en/index.html	Health care workers	Health-care workers vaccinated as a first priority to protect essential health infrastructure
Bults M, Beajean JMA, de Zwart O, Kok G, van Empeien P, van Steenbergen JE, Richardus JH & Voeten HACM. (2011) <i>Perceived</i> <i>risk, anxiety, and behavioural</i> <i>responses of the general public</i> <i>during the early phase of the</i> <i>Influenza A (H1N1) pandemic in</i> <i>the Netherlands: results of three</i> <i>consecutive online surveys.</i> BMC; 11: 2	The Netherlands, adults aged 18yrs and above	Avoiding crowded places Practicing better hygiene Using tissues when coughing or sneezing Avoiding persons with Influenza Avoiding regions with Influenza Wearing face mask Seeking medical advice with the onset of flu symptoms Taking antiviral medicine Staying home from school or work Getting vaccinated with a new vaccine



The Gallup Organization (March 2010) Eurobarometer on Influenza H1N1: Survey conducted by The Gallup Organization, Hungary upon the request of the European Commission, Directorate-General for Health and Consumers	28,000 randomly selected citizens aged 15 years and over across the 27 EU Member States, as well as in Norway, Switzerland and Iceland	Get vaccinated against seasonal influenza Wash your hands regularly Avoid places where large numbers of people are gathered (e.g. buses, trains, cinemas, bars, restaurants, schools etc.) Good respiratory hygiene (e.g. sneezing into a tissue, disposal of used tissues) Avoiding contact with people who were infected with pandemic influenza Wearing a face mask Taking antiviral drugs
European Centre for Disease Prevention and Control (2012) Evidence review: social marketing for the prevention and control of communicable disease	Member States	Hand wasning Use of alcohol-based hand sanitizers Respiratory hygiene / cough etiquette
Cabinet Office & Department of Health (2007) <i>Flu Pandemic A</i> <i>national framework for</i> <i>responding to an influenza</i> <i>pandemic</i>	UK, the asymptomatic public	Washing hands frequently with soap and warm water Covering the nose and mouth with a tissue when coughing or sneezing Disposing of dirty tissues promptly and carefully – bagging and binning them Making sure that children do these behaviours Avoiding crowded gatherings where possible, especially in enclosed spaces Cleaning frequently touched hard surfaces (e.g. kitchen worktops, door handles) regularly using normal cleaning products Keep using public transport whilst adopting good hygiene measures Staggering journeys where possible



	UK infected public	Stay at home if ill
		Minimise non-essential (leisure/social) travel
		Wearing a disposable face mask to protect others should it become absolutely essential to go out (e.g. to go to hospital) Make telephone contact with health services through the National Flu Line service, rather than attending surgeries, hospitals or other health establishments Voluntary home isolation
		Inform a relative or friend and if necessary ask them to collect antiviral medicines
	Individuals/UK	Keep themselves informed
	public during inter-	Have supplies of normal home remedies and other basic necessities,
	pandemic years	Explore support from family and friends not resident with them ('flu friends')
		Practice good hygiene habits
		Ensure that they are routinely vaccinated against seasonal influenza and pneumonia
	Health and social care workers	Apply individual and community infection control measures
		Assess all symptomatic patients rapidly and treating promptly with antiviral and other medicines if indicated
		Providing effective treatment for those suffering complications
		Educate the community and providing public advice and information
		Provide vaccination, if and when suitable vaccines are available
Al Comm (July 2009) Conceptual	Households within	Sanitation and hand washing
Framework	an at-risk group or	Hygiene
for Avian and	population	Social distance
Pandemic Influenzas and Other Emerging		Quarantine
Infectious Diseases		Isolation
		Antiviral prophylaxis and treatment
		<u> </u>



Pan American Health	Infected people	Those who are ill should remain at home	
Organization: Regional Office of		Drink plenty of fluids and rest	
the World Health Organization		Use good respiratory hygiene (wash hands, cough into sleeve or tissue)	
Communication Strategy for		Limit exposure to family members and friends	
Pandemic Influenza.		If you're sick, stay away from others, cover your mouth when sneezing or coughing, throw away used tissue, and sanitize household objects Those who are ill should remain isolated until after the end of fever	
		Ask friends or helpers can leave supplies outside your door so that you do not expose them to the flu	
	Uninfected public	If you believe you have the (event specific) flu, contact your health care provider right away	
		Avoid close contact with the sick	
		Wash hands (use soap)	
		If you smoke, stop	
		Wash your hands regularly, cough and sneeze into a tissue, and keep your hands away from your eyes, nose and mouth Eat nutritious food	
		Get exercise	
		Get enough sleep	
		Get an annual influenza shot to protect from seasonal strains that are circulating	
		Families can create their own safety plan	
		Keep a chart with basic medical information about family members	
		Prepare a first aid kit	
		Stock emergency supplies including food, medicines and cleaning supplies	



Department of Health	UK public	Prepare to look after yourself and members of your family
(December 2012) Pandemic Flu Communications Strategy	pre-pandemic	If you are in a high risk group, ensure that you are vaccinated routinely against seasonal influenza and pneumonia To reduce the risk of catching a virus, cover your mouth and nose with a tissue when coughing or sneezing, dispose of tissues quickly Regularly wash your hands with soap and water, or use a sanitising gel
	UK public during a	Maintain a hand hygiene routine
	pandemic	Make sure you have supplies of over-the-counter cold and 'flu medicines and other basic necessities and that you can care for any existing health conditions. Familiarise yourselves with local arrangements for accessing health and social care support early should you need them, including getting antiviral medicines if needed Support friends and family who are ill. They might need you to pick up medicines for them or help in other practical ways Be a good neighbour - you may know of those in your community who are vulnerable or could be made vulnerable due to a pandemic. You can help them by checking if they are all right or need help If infected with influenza, stay at home, keep warm and drink plenty of fluids
		If you have influenza and your symptoms are getting worse, or you have a long-term medical condition, you should contact your GP or other health professional for assessment and advice immediately
Crosier A, McVey D & French, J. (2013) Report from Work Package 3 EU@E-Com. A report of three case studies (England, Italy and Hungary) and their use of audience research for communications aimed at health	Hungarian public	Cover nose and mouth with tissue when coughing or sneezing. Dispose the tissue in the trash after use Avoid touching eyes, nose or mouth with unwashed hands Frequent hand washing with soap and warm water especially after coughing or sneezing Avoid close contact with sick people.
care workers and the general public in relation to pandemic influenza, based on the 2009 H1N1 outbreak	English adults	Carrying tissues Buying sanitising gel Avoiding public transport Visiting a GP, hospital or calling a national helpline with flu related symptoms



USAID (2009) Planning Strategic Behaviour Change Communication (BCC) for Pandemic Influenza	Community Health Responders (CHRs), such as community health workers, health extension workers, NGO staff and volunteers	Coordinate with local community leaders and health officials to develop plan for responding to local outbreak Obtain general orientation on pandemic influenza, including significance of WHO phases and chains of communication. Obtain training on pandemic influenza with emphasis on interpersonal communication regarding personal hygiene, social distancing measures, home care of patients for common illnesses, and when to seek care from health facilities Visit households in community regularly Communicate key messages Provide guidance on accurate sources of information Support home-based care of patients Promote adoption of social distancing measures Provide updates on situation Obtain feedback from community members Meet with supervisors regularly to provide feedback from the community, obtain additional technical support and information on status of the outbreak, revise activities and approaches as appropriate Practice personal hygiene to reduce transmission of diseases Become familiar with key aspects of pandemic flu, including preventing transmission (personal hygiene and social distancing measures), and rationale and importance of home-based care of natients when possible
	The public	Seek information from reliable and accurate sources. Adopt and adhere to social distancing measures and related actions (such as limited movement) as recommended by health and civic leaders, including staying in place Provide appropriate care for patients at home unless they are severely ill Keep your distance from someone who is coughing and sneezing Stay home if you feel ill Cover your coughs and sneezes Wash your hands with soap and water Give sick people a separate space at home Assign a single caregiver to a sick person Give plenty of fluids to the sick person Recognize danger signs and seek prompt care



Eastwood K, Durrheim DN, Butler M, Jones A. Responses to pandemic (H1N1) 2009, Australia. Emerg Infect Dis [serial on the Internet]. 2010 Aug [ <i>date</i> <i>cited</i> ]. http://wwwnc.cdc.gov/eid/article/16/8/ 10-0132.htm	Australian public	Covering coughs and sneezes Buying a face mask Wearing a face mask Purchased anti-viral medication Seek information on symptom identification Compliance with quarantine or isolation measures Stayed at home when sick Stayed at home when sick Avoiding places where many people gather
SteelFisher G K, Blendon R J, Ward J R M Rapoport R, Kahn E B, Kohl K S Public response to the 2009 influenza A H1N1 pandemic: a polling study in five countries. The Lancet Infectious Diseases doi:10.1016/S0140- 6736(08)61345-8	Adults in Argentina, Japan, Mexico, the UK, and the USA.	Wearing masks in public Handwashing Buy a thermometer
Murphy C. NHS Direct: struggling with swine flu. 2009 http://news.bbc.co.uk/2/hi/health/ 8152034.stm	UK adults	Get treatment Setting up a network of "flu friends" to provide mutual assistance should someone become ill
Rubin G J, Amlôt R, Page L & Wessely, S. Public perceptions, anxiety, and behaviour change in relation to the swine flu outbreak: cross sectional telephone survey. <i>BMJ 2009;339:b2651</i>	English speaking residents of England, Scotland, and Wales,18 years or older who had heard of swine flu	Washing hands regularly with soap and water Avoiding large crowds Avoiding large crowds or public transport Deliberately cancelled or postponed a social event, such as meeting friends, eating out, or going to a sports event Reduced the amount I use public transport Taken time off work Reduced the amount I go into shops



	Healthcare workers	Kept one or more of my children out of school or nursery Kept away from crowded places generally Increased the amount I clean or disinfect things that I might touch, such as door knobs or hard surfaces Washed my hands with soap and water more often than usual Discussed with a friend or family member what we would do if one of us catches swine flu Read a Government leaflet about swine flu Compliance with standing orders Compliance with standing orders Not to use a language that could lead to emotive and irrational inferences
Maddox, K, McWhorter A, Hoffman S, Phelps T & Kenney J. 2009 Pandemic influenza (H1N1) communication activities at CDC: Focusing on specific audiences and settings APHA 138 <sup>th</sup> Annual Meeting & Expo, Denver, Colorado. November 2010.	International travellers and domestic travellers using ports of entry in the USA	Seek health advice before travelling Talk to your healthcare provider before travelling Travel only when you feel well Wash your hands frequently Cover your coughs and sneezes If you have been exposed to the virus, stay at home, stay in your hotel If you have been exposed to the virus stay away from others for at least 48 hours until you are symptom free
Freiman AJ, Montgomery JP, Green	Healthcare workers	Handwashing
JJ, Thomas DL, Kleiner AM, Boulton	LICA Mississippi	Detions advection this strategy was narrowly defined to advectional material being given to
Did H1N1 influenza prevention messages reach the vulnerable population along the Mississippi Gulf Coast? J Public Health Management Practice. 2011 Jan-Feb; 17(1):52-8.	vulnerable populations	individuals during a clinical contact
Hagan P. Maguire B & Bonning D	The Australian public	Washing hands
(2008) Public behaviour during a		Avoiding contact with infected people
pandemic. The Australian Journal of		Taking prescribed medication
Emergency Management: 23; 3: 35-		Not taking non-prescribed medications
41	Essential workers	Continue to work



#### **APPENDIX 2**

#### **Behavioural Tools Set: Proto Tool 1**

#### Adopting a Goals and SMART Objectives Approach to Specifying Specific Behavioural Targets in Pandemic Communication and Marketing Programmes

This proto tool sets out an approach for establishing what specific behaviours will be the focus of an intervention programme or campaign. The term 'behaviour change' is widely used and while a useful short hand for discussions about ways to influence behaviour, it can constrict and does not adequately describe the range of issues that need to be considered.

Often the target is not to 'change' behaviour but to find ways to: encourage the adoption and establishment of helpful and positive behaviour; and or how to avoid the adoption and establishment of harmful or problematic behaviour. The approach set out in this proto tool starts by recognising that behaviour is inherently 'dynamic', i.e. behaviour is not a fixed state or static, but changes overtime. Behaviour is inherently 'dynamic' i.e. subject to variation and is often not an isolated single action, but part of a pattern of actions over time'

The approach set out in this proto tool starts with the development of a clear understanding of 'what' behaviour is occurring, and what different people know, think and feel about it. Before going on to analyse what theory or models that might help inform or develop insight into why people are adopting behaviour and the potential insights that might provide ways for effectively intervening. A focus on specifying precisely target behaviours informs the development of a theoretical perspective rather than the other way round.

As stated above there can be a tendency with traditional 'behaviour change' approach to focus specifically on the 'problem behaviour' and what can be perceived as 'problem people', and to concentrate on trying to get them to change. A key consideration is to understand what range of factors is influencing both the positive and the problematic behaviours.

#### Establishing Behavioural Goals and SMART Objectives

The task is to be able to describe the issue being addressed in terms of specific behaviours both those behaviours that are problematic and those that are positive and need to be encouraged. This will help ensure that the methods or interventions used can be geared to addressing the specific behaviours with specific target groups. Behavioural goals are overarching aims or statements of intent, behavioural objectives are more specific and should ideally be able to be expressed in SMART form (SMART; Specific, Measurable, Achievable / Agreed, Relevant / Reliable, Time bound) and also expressed in terms of the focus of the objective: Cognitive, (Knowledge, and understanding) Affective (Emotional , beliefs and attitudes) or Psychomotor (Physical doing observable actions)

The following checklist sets out a number of issues that need to be considered for both positive behaviours and problematic behaviours



**An AIM is:** A broad strategic purpose of a project, AIMS can be long term, medium term or short term.

An Objective is: A specific, measurable goal, whose achievement will contribute towards the aim.

#### Defining the problem:

Think of your health problem as the gap between what should occur in your community and what is occurring, or the gap between an acceptable/desirable health status and the current status.

#### Problem definition statement

• What is the aim of the intervention?

#### Objectives can be focused on three different issues:

- Affective objectives, focused on feelings.
- Cognitive objectives, focused on learning.
- Psychomotor objectives focused on doing or observable or reported behaviour.

#### **Objectives should be set out in a SMART format. SMART stands for:**

- Specific: not open to different interpretations.
- Measurable:
- Achievable/ Agreed: with the resources that are available.
- Reliable / Relevant: durable and consistent data can be gathered.
- Time bound: can be measured within the time frame of the intervention.

#### Objectives must be specific and answer the following questions:

- What you are evaluating?
- What are you aiming to achieve?
- How will change be measured?
- Who is the intervention aimed at?
- Where is it taking place?
- What is its time scale?
- Who will deliver the intervention?

E.g. The programme will increase the current attendance rate of 12% at the East Rd Vaccination Clinic by white middle class men aged 25-35 from the Small Town area, to a rate of 15% by the end of December 2013.



#### **Behavioural Feasibility Assessment**

Use the following check list of questions to assess the likelihood of the desired behaviour being adopted:

- Is the current behaviour seen as a problem?
- How rewarding is the undesirable behaviour?
- How costly is the current behaviour?
- How complex is the behaviour (does it involve several elements)?
- How frequently must the desired behaviour be performed?
- How compatible is the desired behaviour with the target audience's behaviour?
- Is the current behaviour approved of socially?
- Are their major barriers to engaging with the desired behaviour?
- What information does the audience need to perform the behaviour?
- What skill does the audience need to perform the behaviour?
- What resources does the audience need to perform the behaviour?
- Are there some members of the segment who already do the desired behaviour?

#### List the potential target audiences

- **Primary audience** (The key people you want to help change)
- Secondary audience (The people who you can help and who can help the primary audience)
- **Tertiary or other audiences** (Others who have influence on the primary and or secondary audiences)

Primary		
Secondary		
Tertiary		

#### **Current Behaviour**

**Describe current problematic behaviour** (Set out in specific and quantifiable terms the behaviour)



List and describe related problematic behaviours.

#### List and describe current beneficial behaviours to be maintained.

Specify the behavioural goals for each target group? Specify positive behaviours to be maintained, negative behaviours to be changed and new behaviours to be adopted.

Positive behaviours to be maintained:	
Cognitive	
Affective	
Psychomotor	

#### Negative behaviours to be changed

Cognitive

Affective

Psychomotor

New behaviours to be adopted:

Cognitive

Affective

Psychomotor



### Under each behaviour set out the specific behavioural objectives that relate to that goal, (There may be several) for positive, negative and new behaviours.

Specify how each behavioural objective can be expressed as a single specific observable behaviour and how it could be measured. Each behavioural objective should be expressed in terms of a SMART objective.

Cognitive	Affective	Psychomotor
	Cognitive	Cognitive Affective

Negative behaviour objectives:			
	Cognitive	Affective	Psychomotor
1			
2			
3			
4 Etc:			

New behaviour objectives:			
	Cognitive	Affective	Psychomotor
1			
2			
3			
4			
Etc:			