
OPINION

concerning public health messages to be issued during episodes of pollution by particles, ozone, nitrogen dioxide and/or sulphur dioxide

15th November 2013

As a preamble, the French High Council for Public Health (*Haut Conseil de la santé publique - HCSP*) insists on the need to:

- adopt an integrated approach to the messages dissemination. The High Council for public health believes that a simple unique message, irrespective of the pollutant, combined with clarity in the use of criteria for sounding the alarm (aggravation or persistence) are more effective than multiple messages which vary according to the different possible situations. Such a choice is also in line with an approach based on a general index of air quality, such as the ATMO index, the European Citeair index, or those used in Germany (LuQx –LuftQualitätsindex Bade-Wurtemberg¹) or in Canada (Cote air santé index- CAS, 2008²).
- categorize the targeted populations. While it is relatively easy to define those persons at risk (an age range or those suffering from and being treated for a particular pathology), the term “general public” covers a wide range of situations. Without being aware, certain people may be more sensitive or particularly exposed to risk simply because they are in close proximity to a source of pollution.
- always make the connection between chronic pollution and peak episodes:
 - it is imperative that the messages that circulate on the Internet when any procedure is initiated, and this for each pollutant, are associated with a statement of the number of times the threshold has been exceeded, and the number of days in the past 12 months during which an excess has been observed, as recommended by the High Council for public in its 2012 report “Particulate pollution of the ambient air”³;
 - thresholds only correspond to the categories emanating from regulatory texts, which themselves change; thus even below those defined thresholds, the general public, in particular its more fragile segments, can be affected.
- make the connection between (a) the general measures taken to lower the emissions that contribute to pollution, (b) the measures aimed at reducing the population's exposure and (c) the associated public health measures. Associating public health messages with messages that aim

¹ Air Quality Indices LuQx and LaQx (in short- and long-term effectiveness) for Baden-Württemberg; an Overview. State Institute for Environment, Measurements and Nature Conservation Baden-Wuerttemberg (LUBW), Karlsruhe, Germany, 2007.

² The Quebec National Institute of Public Health Final assessment report: Service automatisé d'alertes téléphoniques de la Cote air santé : étude de l'observance des recommandations de santé transmises chez un groupe de patients vulnérables à la qualité de l'air. (Automated telephone alerts from the “Air/Health Index”: a study of a group of people sensitive to the quality of the air and their level of compliance with the public health recommendations they received). February 2013 (Link checked on 25/09/2013):
http://www.inspq.qc.ca/pdf/publications/1646_CoteAirSante_ObservRecommSante.pdf

³ <http://www.hcsp.fr/Explore.cgi/avisrapportsdomaine?clefr=273>

to change people's behaviour with an encouragement to participate, at the individual level, in the reduction of emissions, could prove interesting since health could become a behaviour-changing vector.

- disseminate information and recommendations at various times of the year and not just when there is a pollution episode. These messages should not only be issued through the usual media channels, but also to the medical profession and to the directors of establishments that host elderly people and children, with clear indications of the physiological and medical factors which render certain people particularly sensitive to air pollution. The aim is to enable every one to identify oneself, when concerned, as particularly sensitive to air pollution, or to be identified as such by others (relatives and health-workers), and thus become more attentive to the messages which are issued when there is a pollution episode.
- always bear in mind that taking on board such messages requires an effective communication strategy (communication that is an incitement to act⁴) with key messages understood by all, involving all the appropriate stakeholders (public authorities, experts in air quality, the medical profession, environmental and social organisations, the media, caring personnel, etc.).
- ensure full assessment of communication campaigns, the effectiveness of which is heavily dependent on the tools, the criteria and the multitude of targets and contexts. The HCSP regrets that it has not been able to consult any quantified assessment of the relevance of messages that have been issued since 2000.

RECOMMENDATIONS

On the basis of the principles laid out above, the HCSP recommends using the following tables to decide on the public health messaging when either (a) the *information and recommendation* threshold is reached or (b) when the alert threshold is exceeded. In both cases, it further recommends accompanying this messaging with the following information: the number of times in the past 12 months that the threshold has been exceeded (figures to be made available on all digital media) and the number of days that the episode lasted.

⁴ Françoise Bernard (2010). An example of the emergence and development of scientific programmes in communication sciences: The programme entitled: « La communication engageante ET instituante appliquée à la communication environnementale. (Attractive AND winning communication as applied to environmental communication). » In: Loneux C. & Parent B. (Eds.), Communication des organisations : recherches récentes, (Communication from organisations: recent research), Tome 1. Paris : L'Harmattan, 15-26.

a) Messages when the information and recommendation threshold is exceeded

The message targets	Information and recommendation messages
<p>- Vulnerable populations and their immediate entourage (helpers) pregnant women, babies and children under the age of five, people suffering from asthma, cardiovascular disorders, cardiac or respiratory deficiencies.</p> <p>- Sensitive populations*</p>	<p>Reduce, or even avoid, intense physical or sport activities** (including competition), both indoors and outdoors.</p> <p>If you become aware of the symptoms and they are less pronounced when you remain indoors, decide to take shorter excursions which require less effort than usual.</p> <p>Avoid going out early in the morning or at the end of the day, and keep clear of main arterial roads (seek information from your local authority organisation responsible for monitoring air quality concerning the most polluted areas in your neighbourhood)</p> <p>In case of symptoms or should you worry, seek advice from your doctor or local pharmacist.</p> <p>Messages specific to episodes of ozone pollution: “Intense physical and sport activities can be continued indoors. Avoid going out between midday and 4 pm.”</p>
<p>General public</p>	<p>No modification to your usual activities is required.</p> <p>However, if you feel some form of unusual discomfort (e.g. tiredness, sore throat, blocked nose, cough, breathlessness, wheezing, palpitations), seek advice from your doctor or local pharmacist.</p>

* People considered as sensitive during pollution peaks and/or whose symptoms are aggravated during such peaks, e.g. diabetics, immunocompromised subjects, people suffering from neurological afflictions or at risk from infection or from respiratory or cardiac deficiencies.

** Intense physical and sport activities: exercise which necessitates breathing through the mouth.

b) Messages when the alert threshold is exceeded

The message targets	Alert messages
<p>- Vulnerable populations and their immediate entourage (helpers)</p> <p>pregnant women, babies and children under the age of five, people suffering from asthma, cardiovascular disorders, cardiac or respiratory deficiencies.</p> <p>- Sensitive populations*</p>	<p>Avoid intense physical or sport activities**, both indoors and outdoors.</p> <p>If you feel any unusual respiratory or heart-related problems seek advice from your doctor or local pharmacist or from the “air and health” emergency number***. The website of your local air quality monitoring organisation contains more information.</p> <p>Take your doctor's advice to know whether your treatment needs to be modified.</p> <p>If you believe that the symptoms are less pronounced when you remain indoors, decide to take shorter excursions than usual. Avoid going out early in the morning or at the end of the day, and keep clear of main arterial roads. Postpone those activities which require the most effort.</p> <p>Messages specific to episodes of ozone pollution: “Light physical and sporting activities can be continued indoors. Avoid going out between midday and 4 pm.”</p>
<p>General public</p>	<p>If certain symptoms appear (e.g. unusual tiredness, sore throat, blocked nose, cough, breathlessness, wheezing, palpitations), reduce or postpone intense physical and sporting activities both indoors and outdoors until the pollution episode is over, and seek advice from your doctor or local pharmacist or from the “air and health” emergency number***.</p>

* People considered as sensitive during pollution peaks and/or whose symptoms are aggravated during such peaks, e.g. diabetics, immunocompromised subjects, people suffering from neurological afflictions or at risk from infection or from respiratory or cardiac deficiencies.

** Intense physical and sport activities: exercise which necessitates breathing through the mouth.

*** This is a permanently available public health contact service for which implementation details are still being discussed (Internet or telephone); such permanent hot-line services are already available in certain regions.

The HCSP highlights the following points concerning public health messages and recommends:

- not to change any usual practices and habits concerning ventilation as the situation generated by a pollution episode does not justify any form of confinement or isolation⁵;
- avoiding any aggravation of the effects of pollution by exposure to other irritants, e.g. tobacco smoke, use of solvents in confined spaces, wood fires, pollens in the appropriate season, etc.;
- since allergic reactions caused by pollens tend to be exacerbated during pollution episodes, ensuring that in every region the air quality surveillance networks and organizations that monitor pollen levels are in permanent liaison so as to ensure that pollen level information is available to the public at the same time as information concerning pollution episodes;
- taking greater account of unequal exposure levels (e.g. the situation close to heavy traffic as opposed to the background urban level; an urban environment compared with a rural one);
- ensuring that public health messages are accompanied by:
 - the name of a referent person on health risks,
 - a 24-hour public health “hot-line” which could be achieved using a telephone number which (re)-directs calls to the local poison control centre and/or to websites with more specific information (depending on the target population and the pollutant(s) concerned in each episode);
- inviting persons in charge of specific activities (managers of old-peoples' homes, heads of educational and similar establishments, organisers of sporting events, etc.) to identify, outside any pollution episode, those people who can be considered as sensitive and who could be the targets for any specific action when the need arises;
- that those regions that have not yet done so follow the lead of those which have set up a communications network designed for general practitioners, hospitals and old-peoples' homes, all means that facilitate implication of professionals.

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⁵ This excludes the situations generated by industrial accidents which necessitate specific measures and public health messaging that are not covered by this opinion.