

30<sup>th</sup> November 2019

Professor Sophia CHAN, JP  
Secretary for Food and Health  
Government of the Hong Kong Special Administrative Region

Dear Professor Sophia CHAN,

### **Public Health Crisis in Hong Kong**

We write to express our discontent towards the disregard of duty of Prof. Sophia Chan in her capacity as the Secretary of Food and Health (SFH). Her recent public statements addressing the members of the public related to the use of crowd control agents have been irresponsible, non-evidence based and lack of scientific backup.

1. On the publication of “Use of tear gas for crowd control in Hong Kong’ (The Lancet, online on 14 Oct, 2019; subsequently Lancet 2019; 394: 1517-8), she “*rejected this criticism*”, and said the Food and Environmental Hygiene Department (FEHD) “*had issued guidelines for workers who clean up streets where tear gas has been used*”. Her respond was apparently trying to divert attention and evading from the detrimental effect of tear gas (TG) on human health.

The Lancet correspondence quoted the reference by Haar RJ et al, BMC Public Health 2017; 17: 831, which clearly states:

*” Although chemical weapons may have limited role in crowd control, our findings demonstrate that they have significant potential for misuse, leading to unnecessary morbidity and mortality”*

The data show that 8.7% of 9261 total injuries were severe, with projectile munition trauma, where 27% were severe. And these data were based on American made weapons. The recent injuries caused by China made TG were obviously more severe comparing to the previously used ones. The HKSAR Government and relevant departments have made no initiative and attempt to provide product information of China made TG, which violates the principle of public’s right to know, and further fuels the public mistrust and discontent towards the government.

2. On 29 October 2019, Prof. Chan claimed that food and fruits tainted by TG or blue-dye containing water (fired from water cannon truck) are suitable for consumption provided that they have been sufficiently washed with running water beforehand. When the content of TG and blue-dye containing water remains obscure to the public and health officials, there is complete lack of scientific data to back her statement up. The fact that we can still see walls and road surface in streets being tainted with blue-dye, makes the claim that “blue-dye could be removed by running water” highly questionable. Prior to her appointment as SFH, Prof. Chan was a scientist and an

expert in public health. We would urge Prof Chan to respond to the public in a scientific and evidence-based manner, instead of placing politics above public health and conscience.

3. On 20 November 2019, at the Global Digital Health partnership 5th Summit in Hong Kong, she again said: “*We have conducted internal studies on whether tear gas will produce dioxin or cyanide. We found no evidence based on existing research and academic literature that tear gas will generate dioxin.*”

In a study conducted by the United States Army (Hout JJ et al. J Occupational and Environmental Hygiene 2010; 7: 352.), it has been shown that with chlorobenzylidene malononitrile (the CS riot control agent used in tear gas), there is a graded response in the dispersion of degradation products with temperatures varying from 150-900°C. At 275-300°C, there will be the liberation of chlorobenzene which can further decompose to form **dioxin**, as well as 3-(2-chloroethyl) propynenitrile which can form **hydrogen cyanide**. The possibility of environmental contamination by toxic chemicals related to these riot control agents can threaten public health is substantial and should not be easily dismissed without robust scientific data to prove otherwise. Under the current atmosphere and generalized mistrust of the public towards the government, the best and only way to alleviate public concern is by credible scientific data.

We understand that TG related problems and aftermath are overlapping responsibility, and it is not under the complete jurisdiction of FHB. However, there are clear cut duties that are supposed to be carried out by the Bureau. The public perceives that such duties are overwhelmed by politics and the government’s favouritism towards police operation, at the same time ignoring all other aspects including public health. The FHB is degrading and falling below the expectation of the public, which disappoints all healthcare professions for not standing firm to put public health as first priority.

Prof. Chan’s duty is to inform the public about the potential hazard of chemical weapons towards human body and environment without prejudice. If the HKSAR government remains incapable to deal with the current social unrest with wisdom and continues to choose chemical weapons as their only option, then Prof. Chan’s will have to safeguard the wellbeing of the members of the public and perform thorough investigation and recommendation to protect the environment from being contaminated by toxic substances related to the excessive and improper use of these crowd control agents!

**Hong Kong Public Doctors’ Association**

**Frontline Doctors’ Union**

**QEH Frontline Medical Professionals Concern Group**

