Republic of the Philippines
Department of Health
FOOD AND DRUG ADMINISTRATION

26 June 2013

FDA Advisory No. 2013-015

SUBJECT: SECONDARY EXPOSURE TO E-CIGARETTE EMISSION MIGHT BE HARMFUL TO HEALTH

Electronic cigarettes are not emission-free. E-cigarettes contain volatile organic substances, including propylene glycol, flavors and nicotine, and are emitted as mist or aerosol into indoor air. Study showed that these ultrafine liquid particles of less than 2.5 micrometer in diameter may penetrate deeply into the lungs. Study further showed that these e-cigarettes produce substantially fewer ultrafine particles than conventional cigarettes, however, the substances emitted by e-cigarettes may be inhaled by non-users when used indoor. Second-hand exposure to e-cigarette emission which may lead to adverse health effects cannot be excluded.

To date, few studies have been conducted on the substances in the mist of e-cigarettes. In a publication this year on Electronic Cigarettes – An Overview by the German Cancer Research Center (DKFZ) Unit Cancer Prevention, Heidelberg, and the WHO Collaborating Centre for Tobacco Control[1], the findings revealed the following about the emissions of e-cigarette: a) besides glycol (the main ingredient), nicotine, flavors, tobacco-specific nitrosamines, volatile organic compounds, acetone, form aldehyde, acetaldehyde, benzo(a)pyrene as well as silicate and various metal particles are present, and b) the particle size is between 100 and 600 nanometers, which is comparable to the particle size found in tobacco smoke of conventional cigarettes. The levels of most harmful substances are lower in the e-cigarettes than in conventional cigarette smoke, but they do accumulate in indoor air.

The study further showed that four of the metals measured, namely sodium, iron, aluminum and nickel, were present at higher levels than with those known in cigarette smoke. Five others, namely copper, magnesium, lead, chromium, manganese, were present in the same amount, while potassium and zinc were present at lower levels. Nickel and chromium are carcinogenic and lead is suspected to be carcinogenic. If several people are using e-cigarettes in a room at the same time, considerable indoor air pollution will accumulate and may result to harmful second-hand exposure.

The public, especially the youth sector, is advised NOT to start smoking at all and to stop using cigarettes, cigars, or e-cigarettes. Consistent with the mandate of the DOH and as provided by the RA No. 7394, otherwise known as The Consumer Act of the Philippines, the local government units (LGUs) shall be guided by this advisory in strengthening their ordinances against smoking in public places and on second-hand exposure to harmful substances.

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[1]http://www.dkfz.de/de/tabakkontrolle/download/Publikationen/RoteReihe/Band_19_e-cigarettes_an_overview.pdf