Letter to the Editor – Bulletin of the World Health Organization

June 2, 2020

Dear Sir / Madam,

Subject: Expression of Concern - Modes of transmission of virus causing COVID-19: implications for IPC precaution recommendations, Scientific Brief, 29 March 2020

This letter expresses concern over what must be considered misleading statements in the World Health Organization document entitled "Modes of transmission of virus causing COVID-19: implications for IPC precaution recommendations, Scientific Brief, 29 March 2020".[1]

The Scientific Brief states "According to current evidence, COVID-19 virus is primarily transmitted between people through respiratory droplets and contact routes" and cites six papers as authority for the statement[2]. The Scientific Brief further defines "respiratory droplets" as those that are ">5-10 μm in diameter".

A careful review of the six referenced papers (five original research, and a WHO Report) reveals that none provide any "evidence" supporting the mode-of-transmission claim quoted above. In fact, none of the authors discuss, speculate on, nor draw conclusions regarding modes of transmission. Three papers (Liu et al, Burke et al, Huang et al) simply note that transmission between cases and new infectees appeared to be related to "close contact". None actually define

[1] https://www.who.int/news-room/commentaries/detail/modes-of-transmission-of-virus-causing-covid-19-implications-for-ipc-precaution-recommendations

[2] (1) Liu J, Liao X, Qian S et al. Community transmission of severe acute respiratory syndrome coronavirus 2, Shenzhen, China, 2020. Emerg Infect Dis 2020 doi.org/10.3201/eid2606.200239; (2) Chan J, Yuan S, Kok K et al. A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating person-to-person transmission: a study of a family cluster. Lancet 2020 doi: 10.1016/S0140-6736(20)30154-9; (3) Li Q, Guan X, Wu P, et al. Early transmission dynamics in Wuhan, China, of novel coronavirus-infected pneumonia. N Engl J Med 2020; doi:10.1056/NEJMoa2001316; (4) Huang C, Wang Y, Li X, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. Lancet 2020; 395: 497–506; (5) Burke RM, Midgley CM, Dratch A, Fenstersheib M, Haupt T, Holshue M,et al. Active monitoring of persons exposed to patients with confirmed COVID-19 — United States, January–February 2020. MMWR Morb Mortal Wkly Rep. 2020 doi : 10.15585/mmwr.mm6909e1external icon; World Health Organization. (6) Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19) 16-24 February 2020 [Internet]. Geneva: World Health Organization; 2020.

"close contact", nor conclude transmission was via the "contact route" or "respiratory droplets >5-10 um in diameter". Two papers (Chan et al, Li et al) simply indicate their findings suggest "person-to-person transmission".

The WHO-China Joint Mission Report, also cited as evidence for modes of transmission, claims that "COVID-19 is transmitted via droplets and fomites during close unprotected contact between an infector and infectee" but the Report presents no evidence in support of that statement, and offers no definition of "droplet". In contrast to the inference of the Scientific Brief that the modes of transmission are known, the WHO-China Joint Mission Report states that one of the "Knowledge gaps and key questions to be answered to guide control strategies…" is the "Role of aerosol transmission in non-health care settings."

The Scientific Brief concludes with this: "Based on the available evidence, including the recent publications mentioned above, WHO continues to recommend droplet and contact precautions for those people caring for COVID-19 patients. WHO continues to recommend airborne precautions for circumstances and settings in which aerosol generating procedures and support treatment are performed, according to risk assessment." These conclusions are not warranted by information contained in the cited authorities.

I leave it to readers to consider the scientific ethics of the misrepresentations outlined above, and the implications for health care workers around the world.

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