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REPLY LETTER

Reply letter re: "Mass psychogenic illness following HPV immunization in Carmen de Bolivar, Colombia"

C. Simas[a], N. Munoz[b], L. Arregoces[a], and H. J. Larson[a]

[a]London School of Hygiene and Tropical Medicine, London, UK; [b]Emeritus Professor at the Cancer Institute of Colombia, International Epidemiological Association, Colombia

We are replying to the Letter to the Editor[1] in reply to our case report, "Mass psychogenic illness following HPV immunization in Carmen de Bolivar, Colombia."[2]

While we appreciate the perspective presented, we believe that the author is not fully aware of the robust evidence regarding safety and effectiveness of HPV immunization. While the author does not refute the psychogenic nature of adverse events following immunization, he/she calls for 'openness to uncertainty'. It is unclear to us whether the suggestion to "maintain uncertainty" implies that we should disregard the body of available evidence and instead conclude there is still uncertainty about the events and their causal links to vaccination? The latest data available on the safety and effectiveness of the HPV vaccine has continued to narrow the uncertainty, and given the extent of our compiled knowledge, any new results are unlikely to be very different from what we have until now observed.

Again, we appreciate and recognize that the nature of science and research should always be open to new discovery and findings, but we are concerned that by emphasizing the uncertainty we will undermine the robust evidence which is currently available. We include below a number of the references and some extracts and comment on particular excerpts from this letter.

Evidence concerning effectiveness

A significant reduction in the prevalence rates of high grade histologically confirmed cervical abnormalities (CIN2+) * diagnosed in Australian HPV-vaccinated women, between 2000–2014.[3] In addition, Around 93% reduction of Genital Warts in vaccinated women and heterosexual men, non-vaccinated in Melbourne, Australia,[4,5] and an 8-fold reduction of Juvenile Onset Recurrent Respiratory Papillomatosis (JORRP) in children born to HPV-vaccinated mothers in Australia between 2012 and 2016[6] A preliminary study has shown a reduction of invasive cervical cancer in HPV-vaccinated women in Finland.[7]

Evidence concerning safety

The most recent paper on safety shows that the risk-benefit profile for HPV vaccines remains highly favourable.[8] The results of that study concur with that of the recent WHO position paper[9] and the most recent GACVS report.[10]

The GACVS has met on seven occasions since 2007 to discuss the safety of the HPV $^{\text{vaccine}}$ and have assessed concerns related to anaphylaxis, syncope, mass psychogenic illness, AID including GBS and MS, VTE, CRPS and POTS. The GACVS "considers HPV vaccines to be extremely safe", and reports have been consistently reassuring with no new AEs of concern identified in the 2017 report based on many large, high-quality studies and recent data.

Regarding the statement "While the intention is not to argue against the case correspondence to a clear example of mass psychogenic illness, it is interesting that the possible role of vaccination was not comprehensively discussed when facts did indicate that it influenced the event." The possible role of vaccination in the MPI event was repeatedly mentioned in our paper, despite us not including the results of the case-control study. In our discussion section, for example, we state that although the symptoms being experienced by the school girls did not have a biological relationship with the HPV vaccine, they were, in fact, a mass psychogenic reaction provoked by anxiety and perceptions of risk following the HPV vaccination.

Concerning the concluding paragraph: "In conclusion, given that vaccines against HPV are still under rigorous scientific research, and more accurate data regarding their effectiveness and safety is expected within the next few years, the best position from a strictly scientific standpoint, is to maintain uncertainty: the ability to be astonished by new discoveries". We believe that as post marketing monitoring of the HPV vaccines continues, there is already solid data showing that these vaccines are safe and effective.

Our publication also adds to the current knowledge around MPI by recognising that social media has come into the mix of population characteristics and the sociocultural environment. The possible association between immunisation and episodes of MPI cannot be used against routine immunisation in the same way children cannot be forbidden to attend school because of the Coca-Cola incident described in our paper. A better understanding of the context where vaccines programs are implemented enhance their acceptance and reduces the risk of events such as MPI.

CONTACT H. J. Larson heidi.larson@lshtm.ac.uk

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