

# Correspondence

## Intranasal versus Injectable Influenza Vaccine

SIR—We read with interest the article by Sendi et al. [1] on the safety of intranasal and injectable influenza vaccines in a working Swiss population. They report that, of the 13% of the subjects who wished to be vaccinated, the nasal route was the preferred route of administration for 97%. This is a striking finding, and we would like to know what information was provided to the volunteers for them to make their choices. Indeed, at that time (winter 2000), to our knowledge, there were no published safety data with side-by-side comparisons of the 2 types of vaccines; more importantly, there were no data on immunogenicity (protective antibody titers) and, therefore, on the efficacy for humans of the specific intranasal vaccine used (Nasalflu; Berna Biotech AG). Thus, we wonder on what grounds the subjects mentioned “increased efficacy” as a reason for choosing the nasal spray (23% in table 1 of [1]). Was that information suggested by the information leaflet?

We made an acceptability assessment during the winter season of 1999–2000 in an elderly population attending the Medical Outpatient Clinic, University of Lausanne (Lausanne, Switzerland) as part of a comparative safety and immunogenicity trial. Our findings are very different from those of Sendi et al. [1]. Indeed, only 98 (25%) of 400 elderly persons agreed to be randomized—in other words, to potentially receive the intranasal vaccine (Nasalflu; Berna Biotech AG). The main reasons they gave to potentially receive the mucosal route were “to try” it and because they “don’t like injections.” The other 75% of persons preferred to receive the conventional injectable vaccine, with the main reasons being “one shot and that’s done,” “I am used to it,” and “I have prob-

lems with my nose.” Because the subjects were recruited upon usual attendance for flu vaccination, and because the study protocol did not include many constraints (only 1 additional visit and 2 blood draws were required), it is unlikely that participation in the trial was the main reason for the low acceptance of the intranasal vaccine. Moreover, during the subsequent winter season, we let the working personal of the Medical Outpatient Clinic freely choose between the intranasal or the intramuscular vaccine. Among those who accepted vaccination, 19% chose the intranasal route, and 81% chose the intramuscular route, which is very far from the rates of 97% and 3%, respectively, among the employees of the Canton Basel Stadt reported by Sendi et al. [1].

The study by Sendi et al. [1] was aimed primarily at assessing the safety of a new intranasal vaccine. It definitely contributed to the identification of an important severe adverse event (i.e., facial palsy), a finding that was supported by a later study [2]. However, the design was not appropriate to assess subjects’ preference for one vaccine or the other, and this may explain the very different findings between 2 young working communities within the same country. Thus, we doubt the authors’ conclusions on public preference based on these data. Such variability calls for well-designed studies aimed at specifically assessing vaccine route preference among the public, using standardized information based on published peer-reviewed evidence.

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**Conflict of interest.** B.G. and V.D.A. were investigators of several clinical studies of vaccines sponsored by Berna Biotech AG; V.D.A. received

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### Reply

SIR—We thank Genton and D’Acremont [1] for their interest in our article. We agree with the authors that no data from a randomized controlled trial comparing the efficacy of the intranasal versus injectable vaccine are available. However, immunogenicity and safety data regarding the virosome-formulated subunit vaccine containing the heat-labile toxin of *Escherichia coli* were published before winter 2000 [2]. In addition, immunogenicity and safety data were available from Berna Biotech AG. It has been argued that the intranasal vaccine would induce secretory IgA antibodies (in addition to IgG antibodies) in the nasopharyngeal cavity, which are able to neutralize influenza viruses [3]. This may suggest a potentially higher efficacy [3], although a head-to-head randomized controlled trial of the injectable versus intranasal vaccine would be needed to verify this. In our study, patients who chose the intranasal vaccine were less likely to develop influenza-like