EGU2020-16190, updated on 25 Jan 2021
https://doi.org/10.5194/egusphere-egu2020-16190
EGU General Assembly 2020

‘This advice is absurd’: issues with providing generic advice on community protection from chronic volcanic degassing

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Around the world, there are a number of volcanoes which are passively degassing, chronically exposing communities to potentially-harmful gases and aerosols. The medical evidence, to date, is unclear about the long-term health impacts of such exposures, but there is evidence that people experience an exacerbation of existing respiratory disease, such as asthma, bronchitis, and COPD. In addition, there are a range of physiological and psychological symptoms which even otherwise healthy people experience, which can impact their lives and livelihoods. In Hawaii, prior to the end of the 2018 Lower East Rift Zone eruption crisis of Kīlauea Volcano, communities downwind of the vents were frequently exposed to volcanic pollution or ‘vog’, with exposures worsening during the 2018 crisis. Local emergency and health agencies provided generic advice on measures to reduce exposure but the usefulness and uptake of the advice was unknown. A survey of Hawai’i island residents in 2015, highlighted the range and severity of symptoms that they perceived to be caused by vog exposures, and exposed a lack of application of the official advice. Some respondents described how their lifestyles (e.g., the open structure of their homes and availability of air conditioning) didn’t allow them to implement key strategies such as closing doors and windows and staying indoors. The perceived irrelevance of official advice, and a perception, by some, that vog information was suppressed due to political pressures, led to mistrust in the official agencies by a subset of the population. The survey also revealed undocumented strategies that individuals were using to protect themselves and cope with symptoms of vog exposure. In partnership with local agencies, we rewrote the guidance to be more applicable to the local situation. Revised guidance incorporated successful local practices, where medical evidence of efficacy could be found. We also developed an online interagency ‘vog dashboard’ that provided a comprehensive source for vog information and advice. The ‘Vog Talk’ Facebook page was also initiated to provide a forum for informal discussion amongst community members and between communities and agency representatives. During the 2018 eruption crisis, these resources were extensively utilised and were considered primary sources of information for Hawaii residents, tourists and the world’s media. The experience in Hawaii demonstrates the importance of a multi-disciplinary approach to engaging communities, with health management professionals, physical and social scientists, and community representatives working together to ensure that issued advice is trusted, relevant and practical.