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Novel methods needed to attribute human health impacts of climate change

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Attribution of different hazards and impacts of climate change to specific radiative forcings, including greenhouse gasses, is emerging as a critical field for evidence-based decisions used in, e.g. legal settings, and for Loss and Damage. A recent report published by Wellcome shows that there are 13 climate-health attribution publications to date, mainly using methods that are adapted from the core attribution community, including the good practice and IPCC recommendations. Most of these studies have cut corners from what many in the attribution community would call 'the gold standard', but for good reason, the health signal is more complex than a purely climate signal. Here I discuss a number of new approaches that can be used to attribute human health outcomes from climate change. I give an example using forecast-based attribution, which allows for a low-bias, high-spatial resolution assessment to be made. I concentrate on the Pacific NorthWest heatwave, and couple the results to all-cause, age-specific mortality. I show how this can be used for a variety of different health outcomes, including cause-specific mortality, and morbidity, e.g. mental health related, or vector-borne diseases. I discuss how different attribution techniques can be used to complement each other in the context of health.