



Small area health studies

The Environmental Public Health Service in Wales is often asked to arrange or support health surveys in small areas. This is usually because the people who want the survey are hoping that it will show that something specific is harming their health.

But, doing these studies, and getting useful results, from them can be really difficult, especially in small areas or over short time periods. Risks can be very different between different places and over time, as well as between people of different ages, with sex and with deprivation.

We consider each request individually. The types of things that we think about are described below.

- We think about the symptoms we are told about, how common they are and the other things that could cause them. We look to see if there is scientific evidence that the pollution, chemical, factory or place that people are worried about could cause the health problems that are being reported. If other things could have similar effects, like smoking, diet, or lack of exercise, then it is very difficult to say that the problem is one thing rather than another. We also think about the time people spend at home compared with other places, how long people have lived or worked in a place, the jobs people do now and in the past and how much money they earn.
- We think about how we would “count” how much “illness” there is and if we can do this accurately. Some people go to their GP about symptoms that other people don’t. Some people go to A and E about symptoms that other people don’t.
- We think about how long we need to collect information for to understand what is happening. For road traffic crashes, for example, we need at least three years of data over very large areas. There is also often a delay between people being treated and the data being ready to study. For road traffic crashes this may be up to a year. It can also take a long time for the exposure to lead to the health effect; some cancers may take years to become obvious.
- We think about how big the area is and if there is “enough” illness to measure changes that are useful and important (we call this statistically significant). To do this, we often compare the place with another area. Ideally, this is nearby and has similar numbers of people of the same age and sex, with the same education, employment and income levels. What it would not have is the environmental concern.
- We think about all of the other things that are going on in the area and how these may affect local people. This may be related to the area itself or to the much wider world.
- Finally, we think about whether a study may help or harm people. Sometimes, people think that a situation should affect their health. This can cause worry and anxiety that may lead to more harm than the situation that they are concerned about.

Version control

This paper brings together a number of responses to similar questions to produce a standardised response.

Version 1.0 25 October 2021

Review due 24 October 2024

Produced by the Environmental Public Health Service

A service delivered jointly by Public Health Wales Environmental Public Health Team and the UK Health Security Agency Radiation, Chemical and Environment Hazard team in Cardiff

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