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Is lack of vitamin D linked to swine flu?

Scotland has a disproportionately high number of swine flu cases. There could be a simple reason

Melanie Reid

It was all very predictable, I suppose, that when the first UK death from someone suffering from swine flu came, it did not come from St Ives or St Andrews. Jacqueline Fleming lived on a rundown council estate in Glasgow; she came from the other Scotland, the bleak one we garland with jokes and statistics but ultimately prefer to ignore.

The H1N1 outbreak is an uncomfortable reminder that the health gap both between the rich and the poor in Scotland, and between Scotland and practically everywhere else in Europe, is not only inescapable - it is, sadly, one of the things that define this country.

How symbolic that Ms Fleming, 38 - the first person with swine flu outside the Americas to die - lived of all places in poor little Carnwadric, a deprived council ward in the West of Scotland. She is, in death, a Scottish landmark, an unintended indictment of this country's disproportionately woeful health record.

Ms Fleming apparently suffered from strokes and seizures. She was described as “a good, quiet woman”; a full-time mother, who lived an existence constrained by lack of opportunity and income. She was expecting her third child. When she caught the illness, which had occurred at a local primary school, she was made doubly vulnerable through her chronic condition and by virtue of the pregnancy.

She fell gravely ill, gave birth to her baby at 29 weeks and died two weeks later without regaining consciousness. Her child, Jack, who did not have the virus, died 24 hours later: a private double tragedy that echoed round the world.

The following day, I was invited on The Jeremy Vine Show. We want to ask, said the researcher, why Scotland? Why is swine flu cutting swaths across Scotland, and killing people? The unvoiced question hovered: what's wrong with you people that makes you the sickest in half the world?

You can understand where they were coming from. Scotland has 530 confirmed cases of swine flu, 441 possible cases and 300 clinically diagnosed possibles - a total of more than 1,200. By comparison, bigger countries are relatively unscathed. England, with ten times the people, only has 1,062 cases, Austria 7, Portugal 3, France 80, Germany 170, Spain 488 and Ireland 12.

Beneath the soundbites, there are several answers. One can say with absolute certainty that there has been better monitoring here.

NHS Scotland and its many limbs, Health Protection Scotland and Health Scotland and NHS Quality Improvement Scotland and the Healthcare Environment Inspectorate and the Information Services Division - I could go on - are just part of one of the most impressive health service data engines in the world. In this regard Scotland purrs along like a Rolls-Royce: few other nations have information that combines high-quality data, consistency, national coverage and the ability to link data to allow patient-based analysis and follow-up. No case of swine flu has a chance of getting away from that lot.

And yes, of course, there's much to monitor. Scotland possesses a health record that would make a Third World dictator wince: hospital admissions from alcohol up 7 per cent on the previous year and up 17 per cent on five years ago; chronic levels of disability from strokes, coronary heart disease and cancer; lung cancer; drug use; a diet built on fat and sugar; and soaring levels of obesity. Surely these endemic weaknesses are what makes us vulnerable to swine flu?

Yes - but it's not the whole answer either. Since devolution, and the pumping in of billions of pounds, NHS Scotland is a fairly magnificent operation. Rates of ill health are declining, although the gap between the most deprived areas and the most affluent is widening, and England's health, similarly blessed with extra funding in the good times, is improving faster than Scotland's.

Which brings us face to face with the disconcerting thing they call the health deficit: the unexplained gap between Scotland's health outcomes and that of the rest of Britain; a gap that still persists even when the epidemiologists factor in all the lifestyle issues; the gap, in other words, that makes the Scots sick no matter how much money is spent on them.

It was fashionable for a while to talk about the biology of poverty, explaining it away by poor housing and a history of deprivation; cooked up with low self-respect and expectation.

But could the puzzle have a simpler answer? Recently *The Times* has revealed astonishing research showing the links between low vitamin-D levels and poor general health. Multiple sclerosis, cancer and diabetes are just some of the diseases linked to an immune system compromised by lack of the vitamin. And the Scots, living in a cloudy climate, are known to be twice as likely to be vitamin D deficient as the English. Increasing numbers of scientists suspect vitamin D could be the Scots' Achilles' heel.

Influenza, we know, strikes in the winter when vitamin D levels are naturally lowered - hence a possible reason why swine flu is at present widespread in Australia, where it's winter. Could the disproportionate prevalence of H1N1 in Scotland be related to endemic low levels of vitamin D among the population - especially those least likely to buy themselves supplements? It is a huge, intriguing question.