

PE1597/B

Directorate for Chief Medical Officer

Mr Mike Stevens
Chief Scientist Office Division

T: 0131-244 2259 F: 0131-244 2285
E: mike.stevens@scotland.gsi.gov.uk

Public Petitions Clerks
Room T3.40
The Scottish Parliament
Edinburgh
EH99 1SP

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Dear Ned

Re: CONSIDERATION OF PETITION [PE1597](#) (Mycoplasma fermentans in Regressive Autism)

Calling on the Scottish Parliament to urge the Scottish Government to commission a properly conducted controlled study (which recognises the intracellular nature of the pathogen) into the presence and role of Mycoplasma fermentans in regressive autism.

Thank you for your letters of 27 January 2016 to both the Chief Scientist Office and the wider Scottish Government in relation to the above petition. As suggested in the covering email, we have decided to combine the responses to these two letters.

The Committee seeks the view of the Chief Scientist / Scottish Government on the petition.

The view of the Scottish Government on the petition is that the overwhelming weight of scientific evidence, gained through individual studies and meta-analyses of multiple studies, shows that there is no credible causal link between MMR vaccination and autism.

The Scottish Government is being asked to commission research into the theory that regressive autism may be caused by Mycoplasma fermentans contamination of some or all of the components of the combined MMR vaccine. There is no scientific evidence to support this hypothesis, and, as stated above, there is categorically no

serious scientific evidence to support the notion of a causal link between the MMR vaccine and autism.

The Committee asks whether the Scottish Government has commissioned any research into the apparent increased incidence of autism in Scotland or whether such research is being undertaken independently.

While Scottish Government data from the Pupil Census does show an increase in the reported number of children diagnosed with autism, there is nothing to substantiate the view that there has been a rise in the incidence of regressive autism.

Evidence suggests that the increase in diagnosis of autism is down to greater awareness of autism, as well as better diagnostic facilities, rather than an increase in prevalence.

The Scottish Government has invested in autism services since 2005 and significantly since the launch of the Scottish Strategy in 2011. There has been a marked increase in the provision of early diagnostic provision across Scotland. There is better consistency in the diagnostic tools used, an increase in the training of professionals in these tools, a reduction in the waiting times for diagnosis and a reduction of the average age at diagnosis.

These trends are also apparent in other developed countries. A recent study based on Danish national health registers demonstrated that the majority of the rise in reported diagnosis can be attributed to changes in reporting practices.

<http://archpedi.jamanetwork.com/article.aspx?articleid=1919642>

Estimating prevalence from rates in published research cannot provide an accurate estimate of likely numbers. There are many factors which explain the variations in reported prevalence figures, the various research methodologies, differences in cohorts, across time periods, across countries, across subgroups etc. It is only by collecting good local data can we accurately ascertain numbers, their profile of issues and co-morbidities and be able to plan for and meet their service needs.

There is currently no national system in Scotland that allows us to calculate the prevalence of autism. However, new developments in data linkage, the collection and use of health data will have an essential role in informing the development of health and social care supports and services for people with autism. Much work is underway in Scotland to improve health and social data in a collaborative way. Researchers and analysts from the FARR Institute, the SPIRE Primary Care Project and the Scottish Learning Disability Observatory are capitalising on resources and expertise to better understand and monitor the health of the Scottish population.

The Committee asks whether new evidence has come to light since the MMR Expert Group report in 2002 that would suggest there is a case for establishing a new expert group to examine the issue.

Vaccination policy in Scotland is informed by the best evidence and advice available by the Joint Committee of Vaccination and Immunisation (JCVI), the Medicines and Healthcare Products Regulatory Agency (MHRA), and Health Protection Scotland (HPS). These bodies review studies undertaken across the world on an on-going basis to ensure that the vaccination programmes recommended provide the best protection against communicable diseases. The MHRA are responsible for monitoring vaccine safety across the UK. There have been hundreds of studies testing the alleged connection between the MMR vaccine and autism, and time after time there has been no credible scientific evidence that the two are connected.

In 2012 the Cochrane Library published a review of multiple scientific studies which: “included five randomised controlled trials (RCTs), one controlled clinical trial (CCT), 27 cohort studies, 17 case-control studies, five time-series trials, one case cross-over trial, two ecological studies, six self-controlled case series studies involving in all about 14.7 million children and assessing the effectiveness and safety of MMR vaccine”. The study concluded “ We could assess no significant association between MMR immunisation and the following conditions: autism, asthma, leukaemia, hay fever, type 1 diabetes, gait disturbance, Crohn's disease, demyelinating diseases, or bacterial or viral infections.”

<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD004407.pub3/abstract>

In 2014 an Australian meta-analysis of more than over 1.2 million children from the US, UK, Japan and Denmark found that “vaccinations are not associated with the development of autism or autism spectrum disorder. Furthermore, the components of the vaccines (thimerosal or mercury) or multiple vaccines (MMR) are not associated with the development of autism or autism spectrum”

<http://www.sciencedirect.com/science/article/pii/S0264410X14006367>

In April 2015, a US study of over 95,000 children was published which also showed that there was no link between the MMR vaccine and autism:

<http://jama.jamanetwork.com/article.aspx?articleid=2275444>

The European Centre for Disease Control addresses the alleged connection between MMR and autism on its website, citing studies from 2011:

Q. Does the MMR vaccine cause autism?

A. No. In 1998, a British researcher named Andrew Wakefield raised the notion that the MMR vaccine might cause autism. In the medical journal *The Lancet*, he reported the stories of eight children who developed autism and intestinal problems soon after receiving the MMR vaccine. To determine whether Wakefield's suspicion was correct, researchers performed a series of studies comparing hundreds of thousands of children who had received the MMR vaccine with hundreds of thousands who had never received the vaccine. They found that the risk of autism was the same in both groups. The MMR vaccine didn't cause autism. Furthermore, children with autism were not more likely than other children to have bowel problems (Deer, 2011; IOM, 2011).

<http://ecdc.europa.eu/en/healthtopics/immunisation/comms-aid/q-and-a/Pages/Vaccines-and-autism.aspx>

HPS have conducted a literature review from 2002 on and confirmed that "No epidemiological evidence was found from the literature search that suggests an association with the MMR vaccine and autism".

The studies cited above are representative of the many carried out since 2002 which consistently and overwhelmingly demonstrate no causal link between the MMR vaccine with autism. The weight of evidence suggests therefore that there is no need for a new expert group to be convened to examine the issue.

Yours sincerely

MIKE STEVENS
Head of CSO