



# Tackling the preventable impact of chickenpox in the UK

Although a mild disease for most, chickenpox still puts UK families and the NHS under pressure. This does not have to be the case: chickenpox has been a vaccine-preventable disease for over thirty years.<sup>1</sup>

Against a backdrop of severe and long-lasting repercussions for both children and the NHS caused by the COVID-19 pandemic, it is more important now than ever that the UK 'stops the spots' by putting in place a chickenpox National Immunisation Programme.

Chickenpox is estimated to infect **over 90% of the UK population** at some point<sup>2</sup>



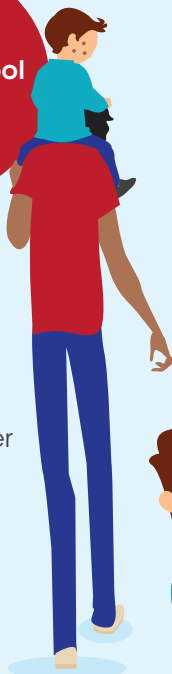
## What is the burden of chickenpox on UK families and the NHS?

Chickenpox is a common childhood disease, estimated to infect **over 90% of the UK population** at some point.<sup>2</sup> Although it is a mild disease for most, it still has a material impact on UK families and the NHS, with over 650,000 UK cases of chickenpox each year<sup>3</sup> leading to around 5,600 hospitalisations,<sup>4</sup> 125,000 GP appointments in 2016/17,<sup>5</sup> and an average 18.5 deaths from 2004/05 to 2013/14.<sup>6</sup>

The wider burden of chickenpox is often underestimated. In 2019, MSD undertook a survey of more than 1,700 UK parents to understand the wider impacts of chickenpox and found that:<sup>7</sup>

**5.5**  
days of school  
missed on  
average

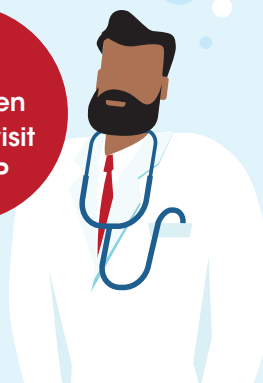
On average, each child with chickenpox **misses 5.5 days of school** due to the virus – every extra school day missed was associated with a lower educational attainment outcome for children at Key Stage 2 (Year 3-6)<sup>8</sup>



**50% of children with chickenpox had to visit their GP**, and a third of these saw the GP more than once

Nearly **20% had more serious consequences** including requiring antibiotics, time in hospital, and scarring that may impact their future

**50%**  
of children  
need to visit  
their GP



**£493**  
of family  
income lost  
on average

Parents lost on average **£493 in income and £146.50 in other associated costs** per child who had chickenpox, with **women, single parents and lower-income families bearing the brunt of chickenpox's wider societal impacts**



## How can the impact of chickenpox be reduced?

The UK has a deserved reputation for a world-leading immunisation system, demonstrable through the leadership, innovation and commitment seen in the development, adoption and roll-out of the COVID-19 vaccination programme. However, chickenpox is one of the areas where the UK lags behind other countries, like Australia, the USA and Germany – just three of the 35+ countries who have introduced a chickenpox national immunisation programme (NIP) as part of their childhood immunisation schedules.<sup>9,10</sup> Some of the benefits observed include:



### Australia

Following the introduction of routine childhood immunisation, chickenpox-related hospitalisations reduced by 72.5% for children aged 1-4 years<sup>11</sup>



### USA

Following the CDC's recommendation in 1996, there was a 97% estimated reduction in newly reported chickenpox cases in 2013-2014 compared to 1993-1995.<sup>12</sup> Hospitalisations and deaths from chickenpox have also fallen substantially, and were 86%-93% and 87% respectively lower in 2013/14 than 1993/1995<sup>12</sup>



### Germany

in 2015, mathematical modelling based on 11 years of surveillance data, predicted an 89% decrease in chickenpox cases since the start of routine childhood immunisation against chickenpox in 2004<sup>13</sup>



## Why has the UK not yet implemented a chickenpox NIP?

The Joint Committee on Vaccination and Immunisation (JCVI) last reviewed the potential introduction of a chickenpox NIP in 2010. At the time, it did not recommend the introduction of a chickenpox NIP, although it has since been keeping the decision under review.<sup>14</sup>

**Over ten years later, while evidence from other countries has continued to demonstrate the effectiveness of chickenpox NIPs in reducing the burden of chickenpox on families and health systems, the JCVI is still not in a position to make a decision on introducing a chickenpox NIP in the UK.**

At the JCVI's recent meetings on the childhood immunisation schedule in June and December 2021, it discussed the need to consider introducing a chickenpox programme as part of a wider review of the childhood immunisation schedule.<sup>15,16</sup> The July minutes make clear that the barrier to a decision now, is the lack of JCVI modelling capacity and this has subsequently been confirmed in an answer to a parliamentary question.<sup>17</sup>

The JCVI relies on technical expertise from academic groups as well as the UK Health Security Agency to carry out the modelling it needs to inform its decisions. Unlike the National Institute for Health and Care Excellence (NICE), the JCVI does not consider modelling developed by the manufacturers of vaccines as part of its final decision making.<sup>18</sup> However, with COVID-19 requiring substantially more modelling than the JCVI would typically need at non-pandemic time, routine modelling, including for chickenpox, has been continually delayed.



## Why do we need to Stop the Spots?

Although the UK's focus understandably remains on recovering from the COVID-19 pandemic, we should also be mindful of the importance of continuing to invest in the UK's routine childhood immunisation schedule. Resilient and sustainable immunisation programmes have the ability to anticipate, contain, mitigate and manage threats, such as potential vaccine-preventable outbreaks.

With COVID-19 likely to continue placing a strain on the NHS in the months and years ahead, it is crucial that the UK's childhood immunisation schedule is leveraging every available tool to protect children from vaccine-preventable diseases and their burdens. By doing so, we can maximise efforts to protect both the NHS and society, including the most vulnerable groups: comprehensive childhood immunisation promotes children's health and wellbeing from birth, and is vital for giving all children the best start in life.<sup>19</sup>

A chickenpox NIP would help to reduce the pressure on the NHS as it deals with the backlog, improve the health of our children, and mitigate societal inequalities – all paramount priorities as we approach the close of the pandemic. Currently however, we are missing opportunities to leverage these benefits.

**Children across the UK, and our NHS, should not have to wait any longer.**

**The time to act on chickenpox – and stop the spots – is now.**

## How can I help to Stop the Spots?

You can help to amplify our campaign by:

- **Tabling Parliamentary Questions** exploring how the Government intends to enhance the protection offered to children from the range of vaccine-preventable childhood diseases, including chickenpox
- **Writing to the Secretary of State for Health and Social Care and Minister for Prevention, Public Health and Primary Care** to highlight the barriers currently hindering the UK's introduction of a chickenpox NIP, and the urgent need to address these as children continue to navigate the consequences of COVID-19
- **Utilise your own channels and networks** to raise awareness of the Stop the Spots campaign, and help ensure that protecting children's health is central to future policymaking on immunisation

## Further information

If you would like to know more about our work or discuss our campaign to Stop the Spots, we would be delighted to provide further information. Please do not hesitate to contact Shannon Lacombe, Associate Director, Vaccines Policy and Communications at MSD: [shannon.lacombe@msd.com](mailto:shannon.lacombe@msd.com).

**REFERENCES** All accessed April 2022 **1** US Centers for Disease Control and Prevention, [The Epidemiology and Prevention of Vaccine-Preventable Diseases – 14th Edition, Chapter 22: Varicella](#), August 2021. **2** NHS Inform, [Chickenpox](#). **3** Brisson M et al., [Epidemiology of Varicella-Zoster Virus in England and Wales](#), 2003. **4** Lopez-Bernal et al., [Burden of varicella complications in secondary care, England, 2004 to 2017](#), 2019. **5** Royal College of General Practitioners (RCGP), Research and Surveillance Centre Weekly Returns Services Annual Report 2016/17. **6** Hobbelen et al., [The burden of hospitalization for varicella and herpes zoster in England from 2004 to 2013](#), 2016. **7** MSD 2019 Survey, Data on File GB-VVX-00068. **8** Department for Education, [The link between absence and attainment at KS2 and KS4, 2013/2014 academic year](#), 2016. **9** Department of Health and Social Care, [International and UK vaccination schedules comparison tool](#), 2019. **10** Varela et al., [Global impact of varicella vaccination programs](#), December 2018. **11** Heywood et al., [Varicella and herpes zoster hospitalizations before and after implementation of one-dose varicella vaccination in Australia: an ecological study](#), 2014. **12** Lopez et al., [Epidemiology of Varicella During the 2-Dose Varicella Vaccination Program – United States, 2005–2014](#), 2016. **13** Horn et al., [Current and future effects of varicella and herpes zoster vaccination in Germany – Insights from a mathematical model in a country with universal varicella vaccination](#), 2016. **14** JCVI, [Statement on varicella and herpes zoster vaccines](#), March 2010. **15** JCVI, [Minute of the meeting held on 22 June 2021](#). **16** JCVI, [Minute of the meeting held on 15 December 2021](#). **17** Parliamentary Question for Department of Health and Social Care, [Chickenpox: Vaccination](#), UIN 86580, tabled on 3 December 2021 **18** JCVI, [Code of Practice June 2013](#). **19** Public Health England, [PHE Immunisations Inequalities Strategy](#), February 2021.