

The Vaccine Knowledge Project: An analysis of website use, January 2013 - December 2016

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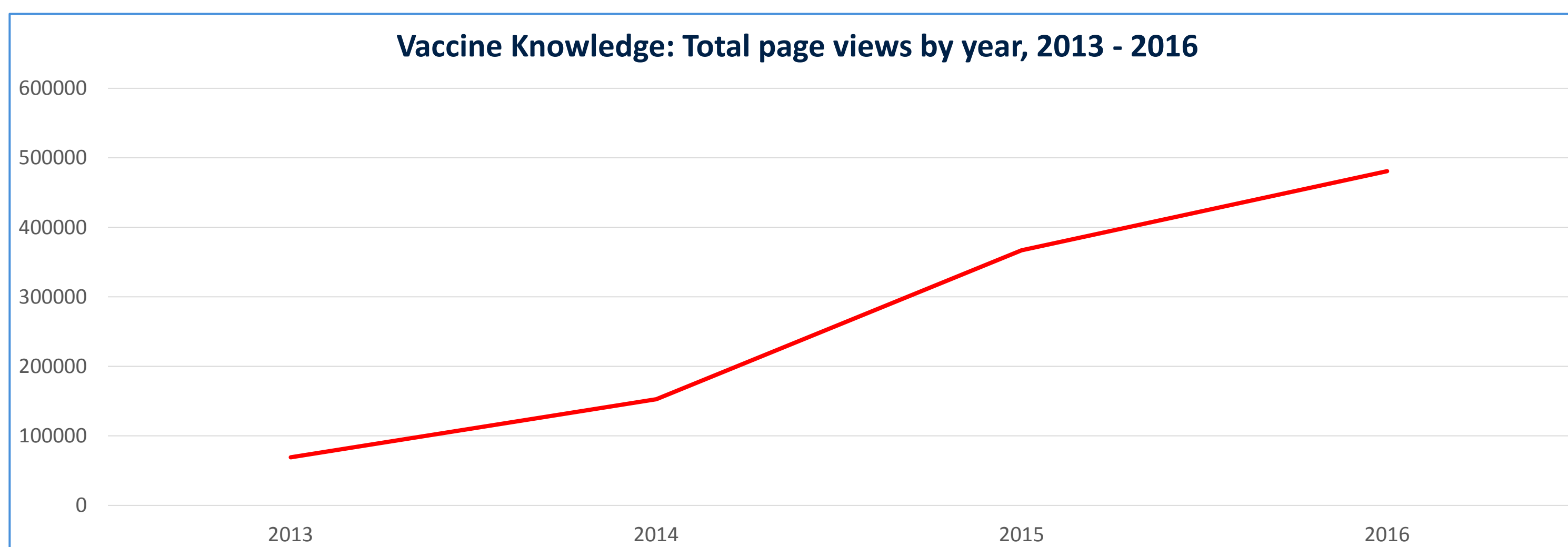


Background: The World Health Organization regards vaccine safety as a high priority (1) and has set up the Vaccine Safety Net (VSN) (2), an international network of websites which provide reliable information on vaccine safety. Vaccine misinformation on the internet can easily be found, especially by using 'negative' search terms (3). The Vaccine Knowledge Project (VKP) (4) is a vaccine information website embedded in an academic research group. It is a member of the VSN and provides evidence-based information to address concerns about vaccine safety. Much of this is relevant worldwide, and the VKP gets many international visitors.

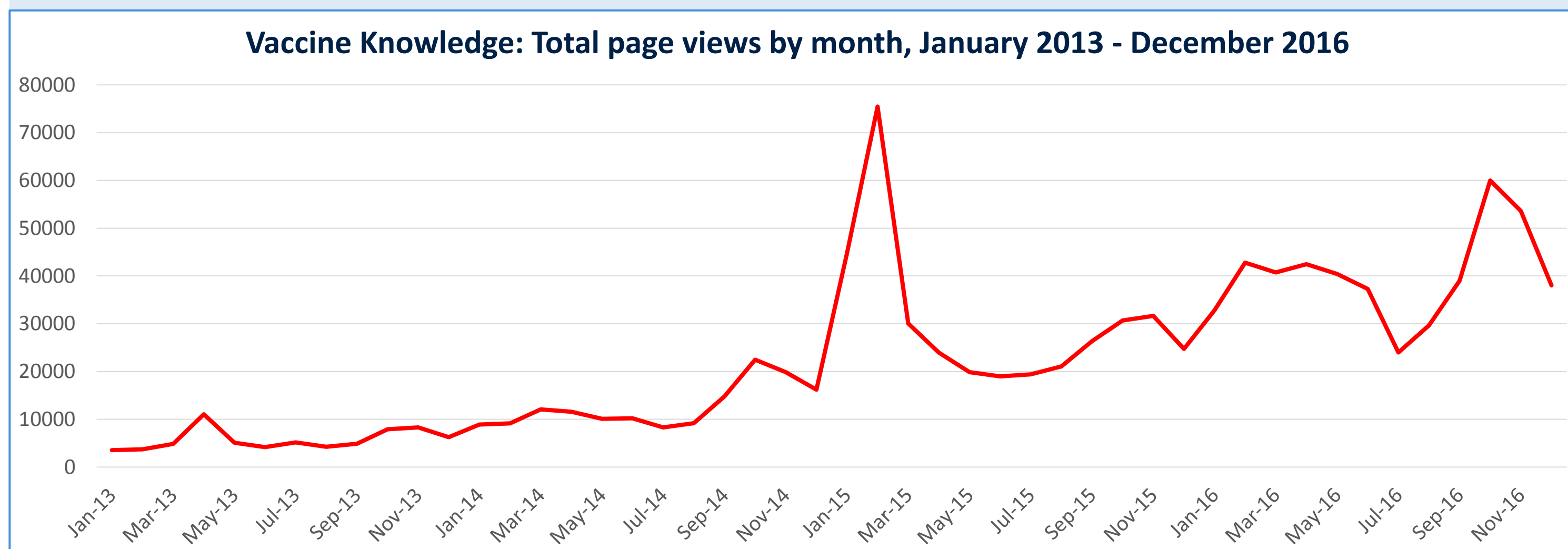
Aims: To identify triggers that increased use of the VKP website between 2013 and 2016.

Method: We used Google Analytics to investigate trends in overall website traffic and visits to individual pages. Where peaks occurred we looked at vaccine-related news and events to attempt to explain them.

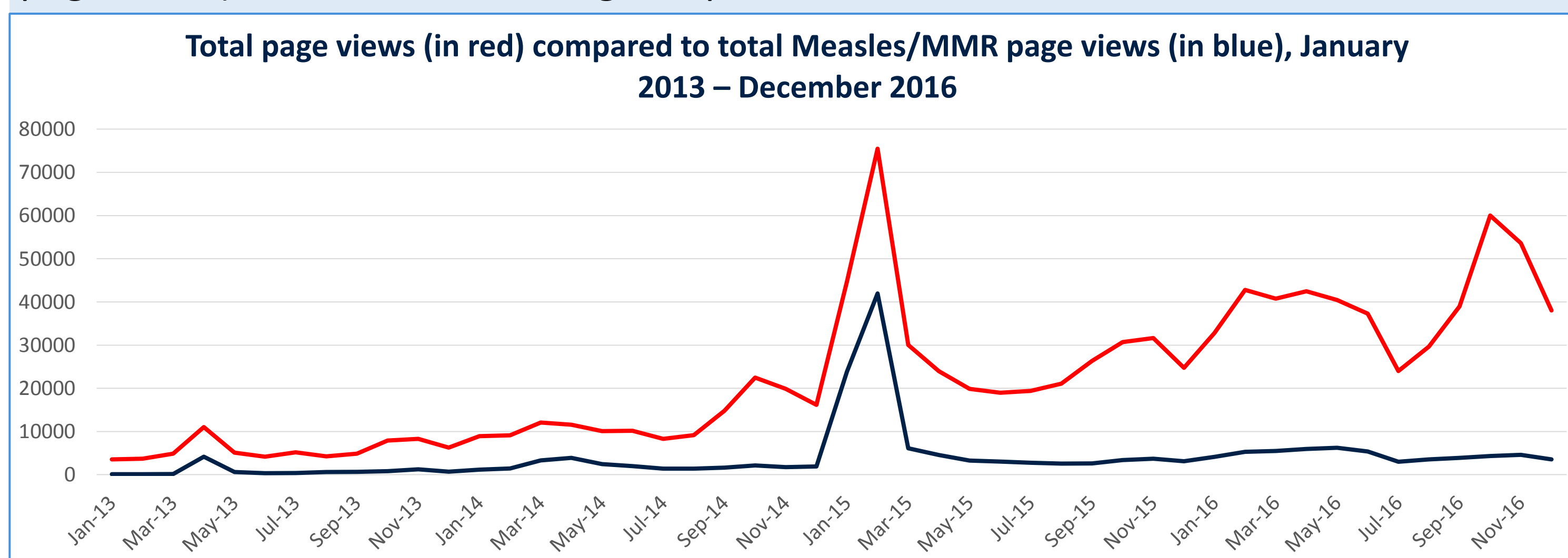
Results: Website traffic increased nearly seven-fold between 2013 and 2016, from nearly 70,000 page views in to over 480,000 page views.



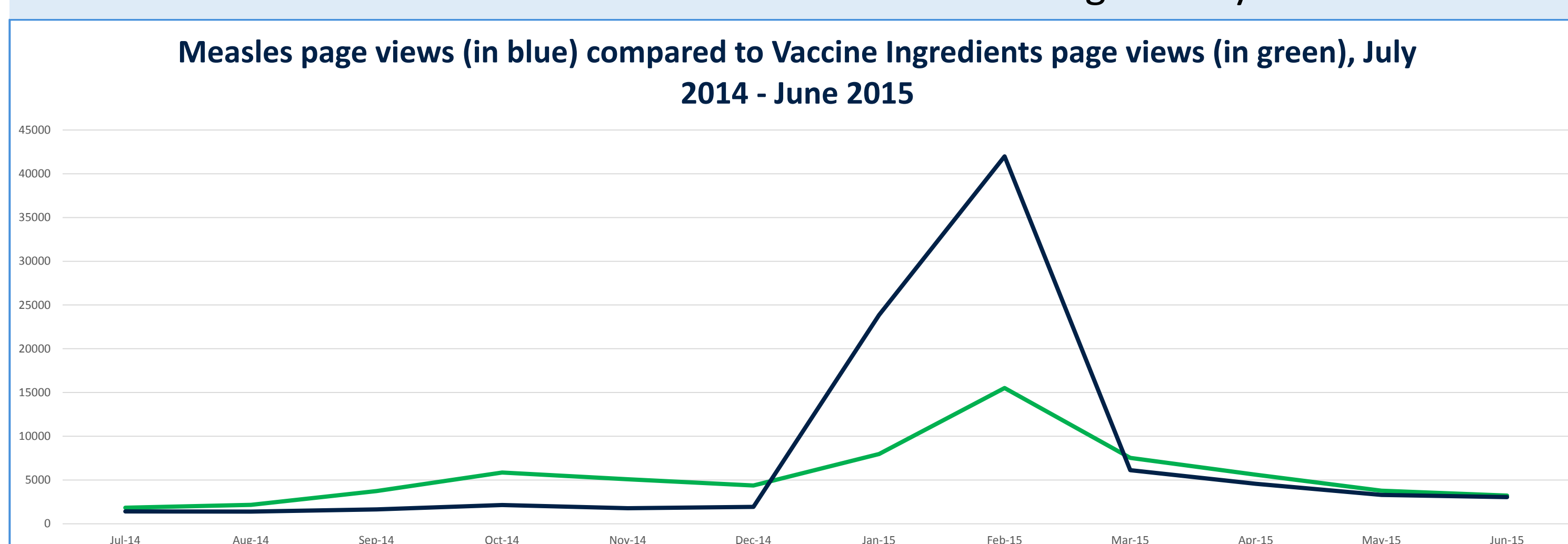
When looking at monthly page views it is clear that there have been a number of peaks and troughs, some of which may relate to current issues. Website traffic always dips in December, and another significant dip occurred in July 2016, when we changed website platforms.



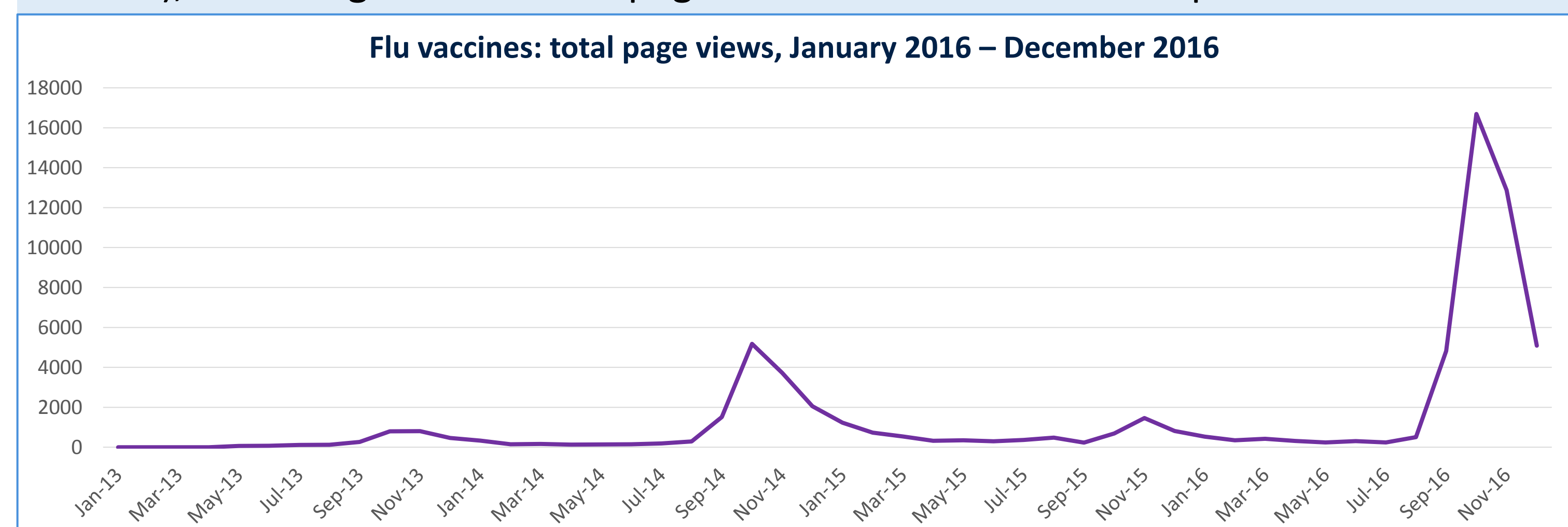
By far the biggest peak in website traffic occurred in January/February 2015, following the US Disneyland measles outbreak. There was a surge in visits to Measles and MMR pages, with a very significant impact on total page views (over half of all page views). Most visitors during this period were from the US.



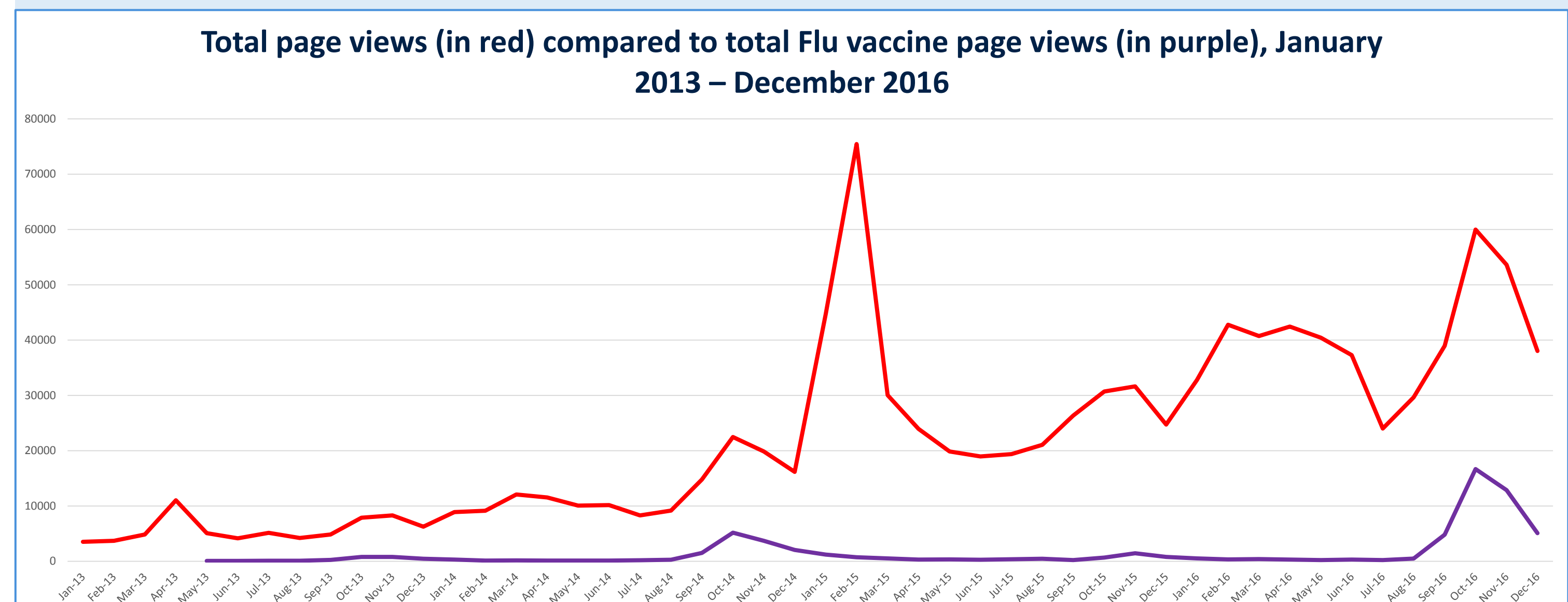
The increase in visits to Measles pages had a noticeable knock-on effect for the Vaccine Ingredients page in January and February 2015, suggesting that visitors might have been seeking information about ingredients in the MMR vaccine, as well as information about measles and the MMR vaccine more generally.



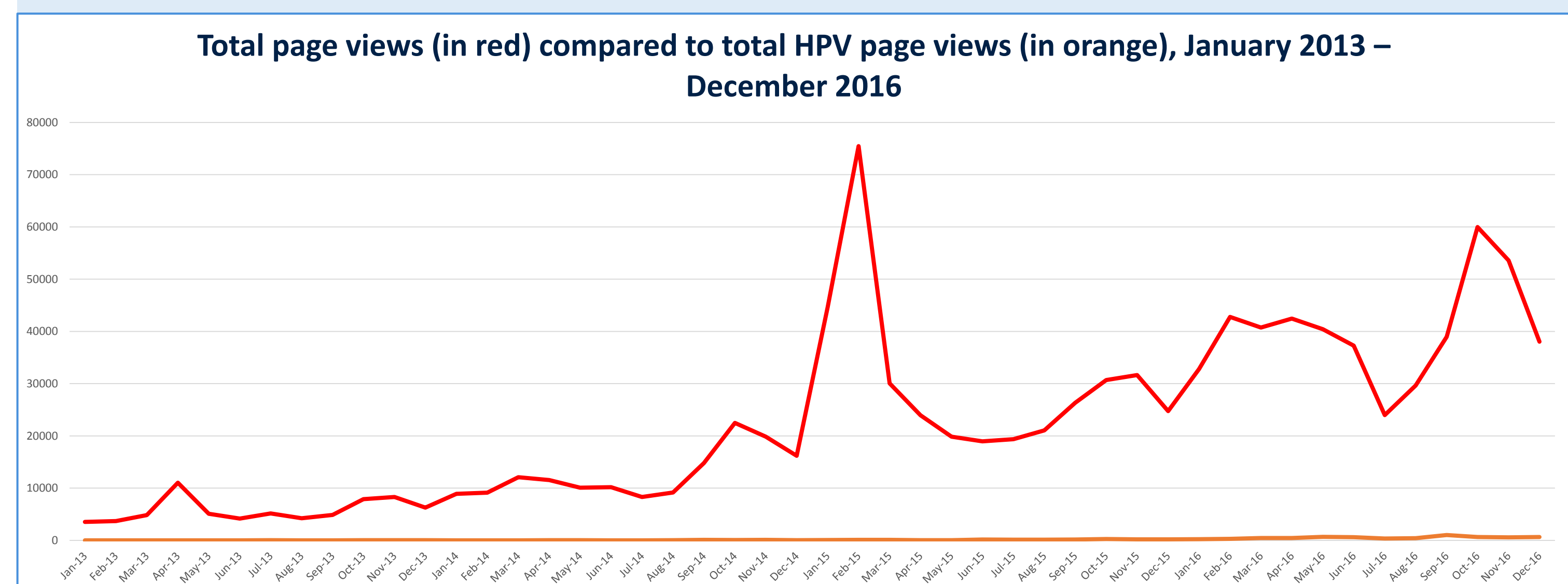
Flu vaccine page views peak in the autumn (October/November), reflecting increased interest during the annual flu season. 26% of all page views in October/November 2016 were of flu vaccine pages. The peak in autumn 2015 was lower than expected because one flu page was split into two (nasal flu vaccine and inactivated flu vaccine), and navigation to these pages took a while to return to previous rates.



Peaks in flu vaccine page views had an impact on total page views, especially in the 2016 season (peak in Jan/Feb 2016 linked to US Disneyland measles outbreak).



In contrast, there have been no noticeable peaks in HPV pages even when the vaccine has been in the news (for example in May 2015, when the Independent ran a significant negative story on the vaccine, or more recently when the vaccine has been in the news in Ireland). Overall numbers of page views are very low, as can be seen when compared to total page views.



Conclusion: Monitoring website traffic helps identify current areas of concern around vaccines. Being embedded in an academic research group enables the Vaccine Knowledge Project to flag up and respond to these concerns quickly by adding and modifying webpage contents.

References

1. The Global Vaccine Safety Initiative (GVSII), World Health Organization, viewed 23 January 2017, <http://www.who.int/vaccine_safety/initiative/en/>
2. Vaccine Safety Net, World Health Organization, viewed 23 January 2017, <http://www.who.int/vaccine_safety/initiative/communication/network/vaccine_safety_websites/en/>
3. Ruiz, J.B. & Bell, R.A. 2014, 'Understanding vaccination resistance: vaccine search term selection bias and the valence of retrieved information', *Vaccine*, Volume 32, Issue 44, 7 October 2014, Pages 5776–5780, viewed 23 January 2017, <[10.1016/j.vaccine.2014.08.042](https://doi.org/10.1016/j.vaccine.2014.08.042)>
4. Vaccine Knowledge Project, Oxford Vaccine Group, University of Oxford, viewed 23 January 2017, <<http://vk.ovg.ox.ac.uk/>>