Meeting

Survey of Infectious Intestinal Disease during COVID-19

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Background

1. The Food Standards Agency (FSA) usually tracks Infectious Intestinal Disease (IID) rates for major pathogens using confirmed laboratory reports as a proxy. While there is known to be underreporting, as not everyone who gets ill goes to their GP, these underreporting rates are assumed to be stable over time. During the COVID-19 pandemic such an assumption was unlikely still to hold as contacts with GPs and other health care professionals were expected to be reduced. In addition, changes in behaviour during the pandemic period could also change IID rates.

2. To better understand this impact the FSA and Food Standards Scotland (FSS) commissioned Ipsos UK to undertake nationally representative online panel surveys to explore the impact of the COVID-19 pandemic on the prevalence of IID among the general population

3. In the end there were six waves of the survey examining the prevalence of self-reported IID during the pandemic. The waves took place at times when different restrictions were in place nationally or locally (for example limited access to schools, retail and hospitality and workplaces).

4. There were separate surveys for Adults and Children with fieldwork carried out at the same time for the first four waves, with the final waves run separately [1] (Wave 5 with adults only and Wave 6 with children only). See timings and number of respondents below:

- Wave 1 (27 August – 17 September 2020): adults 8,545 and children 1,988
- Wave 2 (2 December – 18 December 2020): adults 8,993 and children 2,297

- Wave 3 (15 February – 3 March 2021): adults 8,916 and children 2,445
- Wave 4 (26 August – 20 September 2021): adults 9,000 and children 2,363
- Wave 5 (9 December 2021 – 5 January 2022): adults only 8,933
- Wave 6 (15 February – 10 March 2022): children only 2,459

5. A further objective of this research was to test the hypothesis that behavioural changes during the pandemic, either due to restrictions or voluntary had an impact on the prevalence of IID. Examples of such behavioural changes include reduced travel, less eating out, leaving the house less often and frequency of hand washing.

Key findings

Prevalence of IID

6. An estimate for the prevalence of domestic IID in the UK was calculated after excluding some self-reported causes (on the basis that these were not directly related to IID), and removing those who had COVID-19 at the time of their symptoms[2] or who had travelled outside the UK in the two weeks before their symptoms started

7. The overall estimate for domestic IID among UK adults in the previous 28 days was statistically significantly higher in Wave 4 (7.8%), and Wave 5 (6.5%) compared to the previous three waves (W1 5.6%, W2 5.7%, W3 5.2%). Restrictions put in place to manage COVID-19 infections changed over time but were being eased nationally when Waves 4 and 5 were carried out.

8. The overall estimate for domestic IID among UK children in the previous 28 days were significantly higher in Wave 6 (12.7%) compared to the previous four waves (W1 6.4%, W2 8.1%, W3 7.8%, W4 7.2%). The fieldwork for Wave 6 happened during term time and when most COVID-19 restrictions had been lifted. Prevalence rates in Wave 2 and Wave 3 were both significantly higher than Wave 1.

Medical care and test results

9. Overall, there was a significant increase from Wave 1 in the proportion of adults with domestic IID seeking medical help for their illness, with 22% in Wave 1, rising to 34% reporting doing so in Wave 5. Adults with domestic IID were more likely to attend their usual GP practice in person in Wave 4 (5%) and Wave 5 (6%)

compared with Wave 3 (2%). Similarly, adults were also less likely to consult with a pharmacist in Wave 1 (5%), compared with Wave 2, Wave 3 and Wave 5 (all 8%).

10. Significantly more parents of children with domestic IID reported seeking medical help during their child's most recent bout of illness in Wave 6 (54%), as most restrictions were lifted, compared with Wave 1 (41%) and Wave 2 (44%). The proportion of children that attended a GP practice during their most recent bout of illness was higher in Wave 6 (14%) compared with Wave 3 (6%). Parents were less likely to consult with their GP on the phone or online in Wave 1 (11%) compared with Wave 3 (20%), Wave 4 (22%) and Wave 6 (20%). They were also less likely to consult a pharmacist in Wave 4 (10%) compared with Wave 3 (17%).

11. The proportion of adults with domestic IID that reported attending hospital during their illness ranged between 4% and 6% (W1 to W3 all 4%, W4 5%, W5 6%), with no statistically significant differences between survey waves. Similarly, among parents of children with domestic IID there were no statistically significant differences in the percentage of children that attended hospital in each wave (W1 4%, W2 7%, W3 8%, W4 and W6 both 7%).

12. Overall, similar proportions of those with domestic IID provided a stool or blood sample across all waves, both among adults (W1 7%, W2 10%, W3 9%, W4 7%, and W5 9%) and among children (W1 9%, W2 7%, W3 and W4 both 9%, W5 10%). These differences are not statistically significant.

Behavioural and contextual comparisons

13. Findings about behavioural and contextual comparisons are included to give an indication of the overall similarities and differences between those with domestic IID and the comparison group (adults and children that did not report IID symptoms). The FSA is undertaking further analysis to understand the relationship between these behaviours and IID symptoms, and the differences described do not on their own provide evidence of causation. It is also worth noting that many of the behaviours themselves will be correlated. For example, those leaving the house less often will be less likely to use public transport, eat out, and so on.

Leaving the house

14. The proportion of adults with domestic IID that reported they had left the house in the previous four weeks was significantly higher than for the comparison group in all waves of the adult survey – Wave 1 (47% IID vs. 31% comparison),

Wave 2 (53% vs. 39%), Wave 3 (37% vs. 28%), Wave 4 (51% vs. 36%), Wave 5 (61% vs. 50%). The proportion of adults with domestic IID where any member of the household had left the home in the previous four weeks was also significantly higher than the comparison group (W1 65% IID vs. 51% comparison, W2 73% vs. 61%, W3 61% vs. 47%, W4 72% vs. 56%, W5 78% vs.65%).

15. Children with domestic IID were more likely to be reported as having left the house in the previous four weeks than children in the comparison group in Wave 1 (41%, IID vs. 26% comparison), Wave 3 (34% vs. 21%) and Wave 4 (43% vs. 34%). Overall, in Wave 1, Wave 3, Wave 4 and Wave 6 the proportion of children with domestic IID where any member of the household had left the home in the previous four weeks was significantly higher than the comparison group (W1 84% IID vs. 63% comparison, W3 78% vs. 60%, W4 84% vs. 70%, W6 91% vs. 86%).

Using public transport

16. Across all five waves, the proportion of adults with domestic IID that had left the house and had used public transport in the previous four weeks was significantly higher than the comparison group (W1 40% IID vs. 28% comparison, W2 35% vs. 20%, W3 30% vs. 18%, W4 50% vs. 41%, W5 55% vs. 44%).

17. The equivalent proportion of children with domestic IID who had left the house and had used public transport was also significantly higher compared with those children in the comparison group in Waves 1 to 3 (W1 37% IID vs. 23% comparison, W2 27% vs. 18%, W3 32% vs. 10%).

Consuming food outside the home

18. In each survey wave, the proportion of adults with domestic IID that reported consuming food prepared outside the home across a range of settings was generally higher than for those in the comparison group. For example, the proportion of adults with domestic IID who had eaten food provided in workplace or education settings was consistently significantly higher compared with adults that had no IID symptoms (W1 23% IID vs. 15% comparison, W2 29% vs. 18%, W3 31% vs. 15%, W4 37% vs. 24%, W5 30% vs. 23%). This was also the case for adults that had bought and consumed ‘ready to eat’ food (W1 49% IID vs. 31% comparison, W2 42% vs. 31%, W3 51% vs. 23%, W4 50% vs. 36%, W5 53% vs. 35%).

19. The proportion of children with domestic IID consuming food prepared outside the home in the previous four weeks was often higher compared with children with no IID symptoms. A quarter (25%) of children with domestic IID in Wave 2,

Wave 3 and Wave 6, had consumed bought ‘ready to eat’ food when in a work, education or a childcare setting. This was significantly higher than those in the comparison group (W2 9% comparison, W3 8%, W6 13%). In Wave 4, children with domestic IID were significantly more likely than those in the comparison group to eat food provided in the setting (63% IID vs. 46% comparison), across other survey waves the differences for this behaviour were not statistically significant.

Handwashing

20. Questions relating to handwashing behaviours will be subject to a degree of self-reporting and recall bias. Parents may not be able to accurately report on their child’s handwashing behaviours and it is possible that participants will over-report socially desirable handwashing behaviours and under-report socially undesirable behaviours.

21. Across all survey waves, the proportion of adults with domestic IID that reported always washing their hands after going to the toilet was significantly lower compared with those in the comparison group (W1 83% IID vs. 90% comparison, W2 83% vs. 89%, W3 78% vs. 86%, W4 78% vs. 83%, W5 78% vs. 84%). Self-reported handwashing behaviours among adults in the domestic IID group and comparison group were similar in other situations (after a trip outside the home, after blowing their nose or coughing, before cooking/preparing food or eating).

22. Handwashing behaviours reported by parents among children in the domestic IID group and comparison group were broadly similar. However, there were some significant differences between survey waves in reported handwashing behaviours in specific situations. For example, in Wave 2 and Wave 6 children with domestic IID were significantly more likely than those in the comparison group to report that they never washed their hands after blowing their nose, sneezing or coughing into their hands (W2 11% IID vs. 6% comparison, W6 10% vs. 6%). In Wave 1, Wave 2 and Wave 4 the proportion of children with no IID symptoms that always washed their hands after going to the toilet was significantly higher than those with domestic IID (W1 56% IID vs. 69% comparison, W2 58% vs. 68%, W4 43% vs. 67%).

Action

Members of the Committee are invited to comment on the findings of this survey and potential further uses of the data

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[1] Wave 5 with adults only was commissioned rapidly in response to the emergence of the Omicron variant of COVID-19 and to get in a survey prior to any further lockdown restrictions being put in place. A decision had to be made to prioritise the adult survey on the basis that there was only resource to deliver one survey at such short notice. In the end no further lockdown was introduced. Wave 6 with children only was commissioned once the impact of the Omicron variant was better understood and resources pressures had eased.

[2] As vomiting and diarrhoea were also self-reported symptoms associated with COVID-19 these cases were excluded from domestic IID estimates as part of the exclusion criteria.