

Context

Vaccine uptake by university students is currently a major issue. The critical concern is to prevent spread of COVID-19 infections as students resume normal face-to-face studies. However, there is also the potential that the return of normal activities will lead to an increase in meningococcal disease among students. We aimed to investigate student knowledge of COVID-19 and meningococcal vaccines and to examine potential barriers to vaccine uptake.

Method

An anonymous online questionnaire was circulated by email to all University of Leicester undergraduates in early June 2021. The questionnaire contained 29 questions encompassing attitudes to and knowledge of COVID-19, MenACWY and MMR vaccines. Responses were analysed using univariate statistical tests. Ethical approval was obtained from the UoL Medicine and Biological Sciences Ethics Committee.

Questionnaire Rollout and Demographics

Questionnaire Link Sent to 10,869 Students

827 Respondents (7.6% response rate)

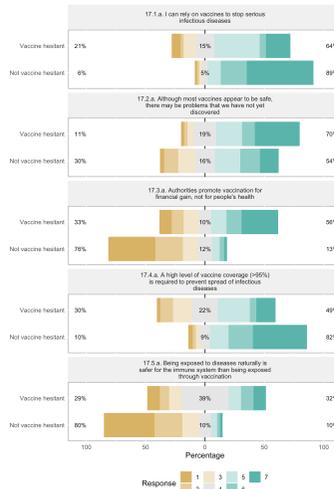
Demographic Analysis
Ages: 94% 18-25 year olds
Gender: 66% female, 31% male, 3% other
Ethnicity: 25% Asian, 8% Black, 58% White, 9% Other
International Students: 10%

COVID-19 Vaccine Uptake, Vaccine Hesitancy and Attitudes

Uptake of a COVID-19 vaccine was reported by 64% of students. When combined with the likelihood for vaccine take up, 87% were classified as non-hesitant and 5% as hesitant.

Figure 1 shows that there was high divergence on natural immunity and herd protection between hesitant and non-hesitant students while both groups were concerned about side effects.

Figure 1. Comparison of Hesitant and Non-Hesitant Students



Student Vaccine Awareness

Table 1 shows that 23% of UK students do not know their status for the MenACWY vaccine and 15% are unaware that this vaccine is free. These proportions are significantly higher among international students. On campus vaccine delivery of MenACWY/MMR vaccines is highly favoured by 43% of UK students and 52% of UK-based international students.

Funding

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Table 1. Assessment of Student Knowledge of Vaccine Status and Access

| Question | Vaccine Types | Possible Answers | UK students (N = 734) | UK-based international students (N = 48) | Non-UK international student (N = 38) | p-value |
|---|--|---------------------|-----------------------|--|---------------------------------------|------------------|
| Qu. 13. Have you received the following vaccines either as a child or adult | 13.1.a. MMR (measles, mumps and rubella) | Yes | 659 (90%) | 28 (58%) | 23 (61%) | <0.001 |
| | | Don't Know | 58 (7.9%) | 19 (40%) | 12 (32%) | |
| | | No | 17 (2.3%) | 1 (2.1%) | 3 (7.9%) | |
| Qu. 14. Are you aware that all of these vaccines are free in the UK for students? | 13.2.a. MenACWY (meningitis) | Yes | 538 (73%) | 17 (35%) | 18 (47%) | <0.001 |
| | | Don't Know | 170 (23%) | 25 (52%) | 17 (45%) | |
| | | No | 26 (3.5%) | 6 (12%) | 3 (7.9%) | |
| Qu. 15. If vaccines were offered on campus, would this affect your decision to be vaccinated? | 14.1.a. MMR/MenACWY | Yes | 623 (85%) | 23 (48%) | 15 (39%) | <0.001 |
| | | Don't Know | 111 (15%) | 25 (52%) | 23 (61%) | |
| | | No | 0 (0%) | 0 (0%) | 0 (0%) | |
| | 14.2.b. COVID-19 | Yes | 693 (94%) | 43 (90%) | 23 (61%) | <0.001 |
| | | Don't Know | 41 (5.6%) | 5 (10%) | 15 (39%) | |
| | | No | 0 (0%) | 0 (0%) | 0 (0%) | |
| 15.1.a. MenACWY/MMR | 15.1.a. MenACWY/MMR | Definitely increase | 313 (43%) | 25 (52%) | 10 (26%) | n/a ¹ |
| | | Somewhat increase | 103 (14%) | 8 (17%) | 9 (24%) | |
| | | Neither | 290 (40%) | 13 (27%) | 18 (47%) | |
| | Somewhat decrease | 2 (0.3%) | 0 (0%) | 0 (0%) | | |
| | Definitely decrease | 2 (0.3%) | 0 (0%) | 1 (2.6%) | | |
| | Don't know | 24 (3.3%) | 2 (4.2%) | 0 (0%) | | |
| 15.2.a. COVID-19 | 15.2.a. COVID-19 | Definitely increase | 331 (45%) | 30 (62%) | 11 (29%) | n/a |
| | | Somewhat increase | 116 (16%) | 6 (12%) | 9 (24%) | |
| | | Neither | 264 (36%) | 10 (21%) | 17 (45%) | |
| | Somewhat decrease | 3 (0.4%) | 2 (4.2%) | 0 (0%) | | |
| | Definitely decrease | 2 (0.3%) | 0 (0%) | 1 (2.6%) | | |
| | Don't know | 18 (2.5%) | 0 (0%) | 0 (0%) | | |

Conclusions

Our key recommendation is for provision of vaccine status information for all vaccines on the NHS app. We also recommend widespread implementation of 'on campus' MenACWY vaccine campaigns to maximise delivery to all students but particularly international students.