Introduction

- New university students are at increased risk of invasive meningococcal disease (IMD).
- Group W, a particularly aggressive strain, is increasing in prevalence and the high case-fatality rate among adolescents is concerning.
- MenACWY vaccine has been recommended for this age group since 2015.
- National uptake has been low.
- Previous research showed vaccine coverage at UK universities is variable, and is particularly low among older or international students.

Aims:
- Quantify uptake of MenACWY vaccine at a London-based university with a high proportion of international students.
- Investigate knowledge of IMD and vaccination views.
- Quantify MMR uptake.

Methods

Mixed methods:
- Questionnaire (n = 144) using SurveyGizmo
- Follow-up interviews (n = 13)
- Eligibility criteria were first year students, undergraduates and over the age of 18.
- Statistical tests, including multiple logistic regression.
- Interviews analysed thematically.

Participant recruitment:
- Questionnaire distributed via a university email newsletter and university social media pages.
- Posters containing a QR code linking to the questionnaire posted around campus.
- Interview participants recruited through the questionnaire.

Table 1: A table showing the MenACWY vaccine coverage at other UK universities, reported by previous research in comparison with the findings of this study

<table>
<thead>
<tr>
<th>University</th>
<th>Year</th>
<th>MenACWY Vaccine Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Nottingham</td>
<td>2015</td>
<td>31%</td>
</tr>
<tr>
<td>University of Liverpool</td>
<td>2016</td>
<td>68.1%</td>
</tr>
<tr>
<td>Universities across NI</td>
<td>2015</td>
<td>Age 18: 90.7%/87.3% (f/m)</td>
</tr>
<tr>
<td>University of Edinburgh</td>
<td>2016</td>
<td>71.5%</td>
</tr>
<tr>
<td>University College London</td>
<td>2019</td>
<td>84%</td>
</tr>
</tbody>
</table>

Limitations

- Small number in sub-groups
- Participants were skewed towards medical students, female students and students from a more advantaged socioeconomic background.

Results

- Response rate cannot be calculated as denominator unknown.
- MenACWY vaccine uptake was 84%, higher than at other universities in previous studies.
- Students from more socioeconomically disadvantaged backgrounds were less likely to be vaccinated (aOR = 0.117, p = 0.006).
- Most students thought vaccines were safe (95.1%) and important (97.2%).
- Students with above average knowledge were more likely to be vaccinated (OR = 3.057, p = 0.019).
- Students unaware that meningitis can be fatal were less likely to be vaccinated (aOR = 0.173, p = 0.035).
- Vaccination views of interview participants were positive and knowledge level was moderate to high.
- Some interview participants believed incorrectly that vaccination with the MenACWY vaccine prevents any cause of meningitis.

Reasons for vaccination include:
- Influence of authority figures and peers
- To avoid disease
- Trust of vaccines

Reasons for non-vaccination include:
- Temporary illness
- Laziness
- Forgetfulness
- Difficulty with GP access

Table 3: A table showing the vaccination views of respondents, with the percentage that believe vaccines to be generally safe and important

<table>
<thead>
<tr>
<th>Reasons for non-vaccination</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary illness</td>
<td>85.7%</td>
</tr>
<tr>
<td>Laziness</td>
<td>74.2%</td>
</tr>
<tr>
<td>Forgetfulness</td>
<td>89.6%</td>
</tr>
</tbody>
</table>

Conclusions

- Uptake at this London university in 2019 was higher than at other universities in previous studies.
- This may be due to the university’s vaccination campaign, or due to the higher national uptake since initial studies were conducted.
- Contrary to other studies, under-vaccination of international students was not seen in this study, suggesting that the university’s direct targeting of international students with awareness campaigns was successful.
- Findings regarding socioeconomic status were unique and concerning.
- Student views of vaccination were positive but knowledge was variable, with misunderstanding of key facts reported.
- This research highlights several areas for further study and raises questions about inequality of vaccine uptake.
- The higher MenACWY uptake in this study is promising, but uptake needs to be increased further and across all demographic groups to ensure students are adequately protected.