

## Commentary

# Going to Study at School or University in the UK? – New UK Meningococcal Vaccination Policies: What This Means for You

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The incidence of meningococcal disease (MD) in Hong Kong is relatively low<sup>1,2</sup>. Over the past five years, the number of cases has decreased significantly since the mid 1980s, where currently, there is approximately five cases per annum, equating to an incidence of 0.04 cases/100,000 population. Comparable data from mainland China has shown that the incidence of disease in Hong Kong is similar to neighboring provinces, with a rate of 0.003-0.05 cases/100,000 population.<sup>3</sup> As a result, there is currently no provision for routine meningococcal vaccination within the Child Immunisation Programme,<sup>4</sup> however there is provision for vaccination in certain groups, including travellers to Saudi Arabia and sub-Saharan Africa and vaccination during outbreak situations. Currently, the incidence of MD in the UK is approximately 25-fold higher (1 case/100,000 population).<sup>5</sup>

Worldwide, there are six main virulent serogroups which cause the majority of clinical cases, including MenA, B, C, X, W135 and Y. Most of the meningococcal cases in recent years in Hong Kong have been due to serogroup B.<sup>4</sup> Presently, there are four licensed meningococcal vaccines in Hong Kong, three of which cover serogroups A, C, W135 & Y (MENACTRA [SANOFI-AVENTIS HONG KONG Ltd; HK-60659], MENCEVAX ACWY [PFIZER

CORPORATION HONG KONG Ltd; HK-48475] & NIMENRIX [PFIZER CORPORATION HONG KONG Ltd; HK-62095]) and one which covers serogroups A & C (MENINGOCOCCAL A+C POLYSACCHARIDE [SANOFI-AVENTIS HONG KONG Ltd; HK-36398]).<sup>6</sup> At present, there is no licensed vaccine against serogroup B in Hong Kong, although such vaccines do exist and are licensed elsewhere.

The UK remains a popular choice with Hong Kong parents, as a country to send their children for higher education. In academic year 2014/2015, there were 29,705 students from Hong Kong, who were studying wholly in the UK, comprising of 25,035 undergraduate and 4,760 postgraduates. In the same year, 16,215 Hong Kong students entered a UK Higher Educational institution for the first time.<sup>7</sup> Over the period 2012/2013 to 2014/2015, there has been a 24.1% increase in first-time Hong Kong students in the UK. Overall, to put this into context, there are more Hong Kong students taking up university places each year in the UK, than any other individual EU country, such as France or Germany. Reasons for this popularity has been suggested to include confidence in the academic freedom and rigorous standards of the British education system.<sup>8</sup> Additionally, there has been an increase in children aged 14-15 years, travelling to the UK for completion of their secondary education, many of whom are boarders at private secondary schools.<sup>8</sup>

Hong Kong students arriving in the UK for the first time do so, without having a protective meningococcal childhood immunisation programme in place locally, to a country with a higher incidence of disease and a highly elaborate active national immunisation programme. So what does this mean for the health and wellbeing of the Hong Kong student arriving in the UK?

As of 2014/2015, Public Health England reported that serogroup B accounted for the majority of capsular-associated cases (n=418; 57.7%), followed by serogroups

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W135 (24.3%), Y (12.9%), C (3.9%) and others (1.2%).<sup>9</sup> Of concern has been the recent increase of serogroup W135 in the UK, due to the expansion of a single endemic hypervirulent strain belonging to the sequence type 11 clonal complex.<sup>10</sup> In response to this, the UK Department of Health has introduced a new national meningococcal vaccination policy, targeting vaccination of adolescents with the MenACWY glycoconjugate vaccine.<sup>10</sup>

Following the initial introduction of the MenACWY vaccine in August 2015, which targeted university entrants in the UK, we undertook pilot surveillance at two UK universities, through the completion of a voluntary questionnaire following short presentations on meningitis awareness and vaccination. Responses were analysed to ascertain levels of disease and vaccine awareness in recently arrived new university entrants to the UK from Hong Kong. Students were aged 19-23 years (n=22), with a mean age of 20.3 years, of which 96% of students lived in communal university-controlled accommodation. Survey response rate amongst Hong Kong students was extremely high (90.9%). Regarding meningitis disease awareness, 36% of respondents did not know what meningitis was, nor did they know the signs and symptoms. 18% of students believed that if vaccinated, they could not contract meningitis. Regarding vaccination awareness, 96% of students were not aware of the UK MenACWY vaccination programme for new university entrants and as such had not receive the vaccine prior to entering university. Initially, 68% of students wished to receive the vaccine, however, after attending the presentations, 91% of students intended to obtain the vaccine. A final vaccination uptake rate of 96% was recorded in this student cohort. When this surveillance was undertaken, none of the Hong Kong students had registered with a UK General Practitioner (GP). However, following the presentations, all students subsequently registered with a local GP. In addition, all students indicated that presentations on disease and vaccine awareness from healthcare professionals were useful in informing newly arrived students, followed by information posters.

Given the contrasting incidence of meningococcal disease and vaccination policies in Hong Kong and the UK, it is of utmost importance that Hong Kong students arriving in the UK to commence further and higher education at UK academic institutions are made fully aware about this disease, as well as available vaccine provision. In the UK, there are considerable resources available to arriving students, to help them learn more about the signs and symptoms of meningococcal infection. In particular,

*Meningitis Now* and the *Meningitis Research Foundation* (MRF) are UK-based patient charities, with extensive and elaborate resources to help with this ([www.meningitisnow.org/how-we-help/campaigns/uni/](http://www.meningitisnow.org/how-we-help/campaigns/uni/) & [www.meningitis.org](http://www.meningitis.org)).

Current UK vaccination policy regarding meningococcal immunisation is set out in the UK Department of Health's "Green Book", which is available freely online at [www.gov.uk/government/publications/meningococcal-the-green-book-chapter-22](http://www.gov.uk/government/publications/meningococcal-the-green-book-chapter-22).

Current provision of meningococcal vaccination in the UK for newly arriving students from Hong Kong, allows that "*Children and young adults aged 10 years to less than 25 years (including students up to 25 years attending university for the first time) may also be eligible, or will shortly become eligible, for the teenage MenACWY conjugate vaccine. Those in this group who have never received a MenC-containing vaccine should be offered a single dose of the MenACWY conjugate vaccine. No further vaccination is then required*".

In contrast to the USA where MenACWY vaccination is mandatory, prior to admission of new undergraduate students to many universities, meningococcal vaccination in the UK for new students is voluntary. It is, however, highly recommended that foreign students register with a local GP and avail of the freely available healthcare provision, including the various vaccination programmes.

Additionally, the 4CMenB (Bexsero<sup>®</sup>, GSK Ltd) vaccine is licensed in the UK. Currently, this is available to babies <1 year old, as part of the UK National Routine Childhood Immunisation Programme. This vaccine is available to young adults privately at a cost at certain pharmacies and private clinics.

Meningococcal infection still remains a relatively rare disease in the UK. It is hoped that this commentary will help to guide Hong Kong General Practitioners, students and their families in preparations for study in the UK.

## Declaration of Interests

None

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