

## A comparison of electronic cigarette smokers among urban and rural Malaysia

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### ABSTRACT

**Introduction:** The increasing popularity of electronic cigarettes (ECV) in Malaysia, has made it important to find out its pattern of use. The objective of this study was to determine the pattern of ECV use among urban and rural ECV users in Malaysia. **Methods:** A household population survey was designed to represent Malaysian adults >18 years old by urbanity at national level. A multistage stratified cluster random sampling with probabilities proportional to size (PPS), stratified by state and by urban/rural areas was done. Respondents were from six zones (North, Central, South, East, Sabah and Sarawak) who answered the NECS Questionnaire Survey Form on demographics and characteristics of ECV use. **Results:** A total of 4,288 individuals (72% urban) were recruited. Majority were 25-44 years old (44%), Malay (73%), Muslim (79%), married (68%) and educated to secondary education (69%). Majority (86.5%) of current ECV users started ECV use at age =19 years old. The main reason to use ECV was to experiment (47.0%), to quit tobacco cigarette smoking (16.2%), to reduce tobacco cigarette consumption (9.6%), to reduce the cost of smoking (7.3%), and to replace tobacco smoking (5.4%). Most of the current ECV users preferred third generation devices or mechanical mods (71.9%). Overall, 55.2% of current ECV users shared their ECV liquid among friends, 48.3% obtained ECV liquid from vape shops, 7.7% from online sources, 6.0% from kiosks at shopping centres, and 2.8% from night markets. Chi Square test indicated that the only significant different predictor between urban and rural ECV users was age ( $p=0.03$ ). **Discussion:** The majority of ECV users are young Malay Muslim males who preferred third generation devices and obtained ECV liquid from vape shops. Predictors of ECV use is important when planning public health policy for the prevention of further and future ECV use.

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## A Mumps Outbreak in a Private School in Shah Alam, July 2016

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### ABSTRACT

**Introduction:** In Malaysia, the Measles-Mumps-Rubella (MMR) vaccination was initially given to 1 and 7 year olds. In 2010, the Mumps component was taken out of the MMR vaccination for 7 year olds. This was despite research reporting 2 doses of mumps vaccine to be more effective than a single dose. A mumps outbreak occurred in a private school in Shah Alam in July 2016. Investigations were carried out to identify possible risk factors involved and to recommend preventive measures. **Methods:** A mumps case was defined as anyone at the school who developed salivary gland swelling with or without fever or neck pain. Cases were searched by Active Case Detection (ACD) and Passive Case Detection (PCD). A case control study was conducted to determine the risk factors associated with mumps infection. Inspection of the school premises and measurements of each classrooms, cafeteria and assembly hall were carried out to assess for overcrowding. **Results:** 59 students (attack rate (AR) =13.8%) and 2 teachers (AR=3.8%) were affected by mumps. Only 26.2% (n=16) students had received 2 doses of Mumps vaccination while 44.3% (n=16) received only one dose. Cases were found to be 10 times more likely to have close contacts with other mumps cases (CI=5.1, 20.6). Inspection of the school revealed areas prone to over-crowdedness especially in the classrooms, cafeteria and hallways. **Discussion:** Transmission of mumps in this outbreak was potentially favoured by a lack of herd immunity among the students due to lack of vaccination. The close contact among students in the overcrowded conditions could have further facilitate transmission spread of mumps in this school. Actions to ensure good mumps vaccination coverage for the school and overcoming the issue of overcrowding should follow.

### KEY WORDS:

*Mumps outbreak, mumps vaccination, overcrowding*