## Epidemiology of Measles

Despite the availability of a safe, effective and free vaccine in the primary healthcare centers and dispensaries, Lebanon remains endemic to measles virus (genotype D8) and outbreaks are expected periodically every 4 to 5 years. Measles outbreaks pose a serious challenge to the global WHO elimination efforts. Data shows an increasing trend in measles cases with 39 cases reported in 2015, 44 in 2016, 126 in 2017 and 459 so far in 2018 - a typical trend observed in countries prior to a measles outbreak.

The latest measles outbreak in Lebanon was in 2013 with 1,760 confirmed cases detected. Since the beginning of 2018, the epidemiological surveillance unit at the MoPH has noticed a significant increase in measles cases with 496 reported rash cases, of which 459 ( $92.5 \%$ ) were classified as measles cases. There is a potential of under-reporting of sub-clinical measles cases as almost $90 \%$ of reported cases are clinical: $56 \%$ from hospitals, and $31 \%$ from mobile clinics/units. A total of 75 cases (16\%) were lab-confirmed, 57 (12\%) epi-linked, and 327 (71\%) clinically confirmed.

Figure 1: Incidence of total measles cases per million population in Lebanon, Jan 2010 - May 2018


Measles cases are observed in all provinces, most prominently in Bekaa with an attack rate of 31/100000, Baalbeck/Hermel (26/100000), and Mount Lebanon (5.5/100000). Children younger than 10 years of age are the most affected by the current measles outbreak with an attack rate of 44.6/100000 and 16.5/100000 for those aged under 5 years and 5 to 9 years respectively. Cases are distributed among Lebanese (69\%) and Syrians (31\%); no cases were reported among Palestinians. Most of the children were not vaccinated or with unspecified vaccination status.

Figure 2: Number of cases by time: weekly histogram (Jan - May 2018)


Figure 3: Age and Vaccination Status of Confirmed Measles Cases, (Jan-April 2018)


Figure 4: Distribution of Confirmed Measles Cases by place (January - April 2018)


## Outbreak Response

In order to prevent a further expansion of this outbreak and further measles outbreaks over the coming years and in view of the measles elimination target, rapid response was conducted on several levels:

- Training sessions for ESU peripheral team
- 29 training sessions for health centers and hospitals
- Publishing a weekly bulletin on measles surveillance on MOPH website
- Developing advocacy material, including brochures, pens, agendas, SOPs, posters
- 9,400 measles doses were given to children from 9 months to 15 years of age through an accelerated immunization activity in Shatila between March 15 and 19, 2018
- 502 measles doses and 12,882 MMR doses were given to children from 6 to 11 months and 1 to 15 years of age respectively through an accelerated immunization activity in Zahle between March 18 and April 4, 2018
- 42 measles doses and 938 MMR doses were given to children from 6 to 11 months and 1 to 15 years of age respectively through an accelerated immunization activity in Jnah and Ouzai between April 14 and 22, 2018
- Other preventive interventions were conducted in areas with no dispensaries and in which accelerated immunization activities (AIA) did not previously cover
- Continuation of accelerated immunization activities in vulnerable areas to strengthen routine immunization
- EPI technical committee meeting will be held to discuss the need for a campaign targeting all children with measles containing vaccine (MCV) to contain the measles transmission
- Discussion to conduct a massive and sustained media campaign to raise community awareness and improve vaccination behavior
Weekly report available on MOPH website www.moph.gov.lb


Data and figures are courtesy of the MoPH EPI and ESU units

