**S1 File. National dengue surveillance system summaries**

**Indonesia**

Reporting of DHF in Indonesia is mandatory within 72 hours of diagnosis but is acknowledged by Indonesian experts to be incomplete and to vary widely between provinces and islands. Routine passive surveillance reports from sub-district health centers (*Puskesmas*) or other healthcare facilities are aggregated at district/municipal health offices and compiled weekly at provincial and national levels, with corresponding feedback to inform outbreak responses [1]. During outbreaks, the frequency of reporting may be increased[2]. Laboratory confirmation of dengue is rare, especially in health services with limited facilities. Diagnoses therefore tend to be based on clinical criteria accompanied by basic hematology laboratory results. Health centers and public/private hospitals continue to use 1997 WHO case definitions: only DHF/DSS cases should be reported. Genotypic and serological surveillance has been undertaken on a project basis by some Indonesian institutions [3–5]. Surveillance data at the national level are not reported publically; Jakarta municipality maintains an epidemiological surveillance website [6].

**Malaysia**

Malaysia’s first recorded dengue cases were in 1901, in Penang, and the disease has since become endemic nationwide [7]. Dengue suspected and confirmed case reporting is mandatory within 24 hours, both from inpatient and outpatient settings, to the district health office [8,9]. In 2010, the surveillance system was updated to the real-time, electronic “eDengue” system, enabling prompt and automated outbreak response [10]. Serotype confirmation is conducted on a subset of clinical samples from sentinel sites, allowing monitoring of both serotypes and genotypes and the country contributes to UNITEDengue, a regional surveillance and laboratory confirmation network [11]. Reporting is according to clinical and laboratory diagnosis and since 2014, rapid diagnostic tests have been available at public health facilities, increasing the number and proportion of confirmed cases in the country [12]. A combination of WHO 1997 and 2009 case definitions are applied clinically and in the surveillance system, where data are publically available [13,14].

**Philippines**

Dengue has been a notifiable disease in the Philippines since 1958, in 2008 transitioning from a sentinel (National Epidemic Sentinel Surveillance System) to an all-case reporting system (Philippines Integrated Disease Surveillance and Response System [PIDSR]), with >1,500 disease reporting units [15]. Suspected, probable, or confirmed cases are electronically reported at health centers, district, provincial and regional hospitals and aggregated at sub-national and national levels, and publically disseminated[16]. Dengue incidence is particularly high in regions NCR, I, III, Iva, VI, VII, and XI (average incidence rate 2010 - 2014: 188.4/100,000), and most cases are <20 years old [17]. Both the 1997 and 2009 WHO classification systems are used for dengue clinical management and case reporting [15,18]. A sub-sample of suspected cases is submitted to a national reference laboratory for laboratory confirmation by RT-PCR and by IgG and IgM ELISA. In 2014, the Philippines initiated systematic serotype surveillance at 20 sentinel hospitals [10,18].

**Thailand**

Dengue was first reported in Thailand in 1949 and was followed in 1958 by the first DHF epidemic, after which disease reporting became mandatory [19]. The passive dengue surveillance system was functioning by 1974, and is augmented by active components (case investigation; vector/virus surveillance) during outbreaks [10,20]. Suspected, probable and confirmed cases according to adapted WHO 1997 case definitions must be reported within 24 hours to the district health offices after which they are aggregated at provincial health offices and the Bureau of Epidemiology [10,21,22]. The system is supervised by five Regional Epidemiological Centers to improve accuracy [20]. Electronic or paper report forms contain the age, sex, day of onset, and address where the case occurred [20]. Summaries are published on the Bureau of Epidemiology website [23]. Nearly 90% of cases are reported from public health facilities, mostly from community hospitals, general hospitals, and regional hospitals [24].

**Vietnam**

Dengue surveillance is conducted by The National Program for Dengue Control, which was established following an outbreak in 1998 [25]. The program is supported by four regional institutes that provide technical and laboratory support: the National Institute for Hygiene and Epidemiology (NIHE) in Hanoi (Northern), the Tay Nguyen Institute for Hygiene and Epidemiology (Central Highlands), the Nha Trang Pasteur Institute (Central), and the Ho Chi Minh Pasteur Institute (Southern). The surveillance system is designed to detect dengue cases at the commune health service level in a timely (≤ 24 hours) and standardized manner. Since 2011, the WHO 2009 dengue classification has been used for case management and reporting [26,27]. Data are predominantly from inpatient clinics of public hospitals, and cases from private facilities are under-reported [10]. Data are aggregated according to severity and to two age groups (≤15 years old and >15 years old) and regularly reported to lower-level healthcare systems [10,28]. Viral surveillance is conducted in sentinel hospitals and from routine surveillance: 10% of confirmed cases are serotyped and 3% are confirmed by virus isolation [10,25].

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