**Supplementary files**

Supplementary Table 1. Classification of endemic and re-emerging diseases based on their epidemiology.

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| --- | --- | --- | --- |
| **Disease** | **Prevalence** | **Current treatments** | **Vaccine available?** |
| Dengue fever | In 2000, 505,430 cases of dengue were reported worldwide. The mortality rate was a 0.2% (960 deaths). Currently, dengue is endemic in more than 100 countries worldwide. In 2019, 4.2 million of cases of dengue were reported, an 8-fold increase compared to 2000. The highest number of cases (3.1 million) was reported in Brazil and Ecuador, followed by the Philippines (420,000 cases) and Vietnam (320,000 cases) [1]. | Treat symptoms (paracetamol administration) [2] | Yes [3] |
| West Nile fever | West Nile virus (WNV) is endemic in Asia, Africa, and the Middle East. WNV was first identified in Uganda, in 1937. A number of outbreaks occurred in Africa from the 1950s to the 1980s. In 1950, a serological study in Cairo demonstrated that WNV is widespread in the population, mostly in children. Another seropositivity study in Egypt demonstrated that WNV is endemic in this region. In 1951, there were 417 serologically confirmed WNV cases in Israel with a fatality rate of 8.3% (35 deaths), and every subsequent summer has seen outbreaks of different sizes. In 1996, there was a WNV outbreak in Romania, with 343 positive cases reported and a mortality of 5% (17 deaths). In 1999, a WNV outbreak occurred in Russia, with 183 reported cases and a mortality of 21.9% (40 deaths) [4]. In 1999, it was introduced to the USA [5]. In 2018, 2647 infections were reported in the USA, with a mortality of 6.2% (165 deaths) [6]. | Treat symptoms (headaches control, antiemetic therapy and rehydration) [7] | No |
| Yellow fever | Yellow fever is endemic in 33 countries in Africa and 11 countries in South America [8]. In 1961, more than 100,000 yellow fever cases were reported in Ethiopia with 30,000 deaths. From 1986 to 1994 there was a major yellow fever outbreak in Nigeria, and 20,495 cases were reported with a mortality rate of 30% [9]. A modeling study estimated that in 2013 in Africa there were 84,000-170,000 severe cases of yellow fever with 29,000-60,000 deaths [8]. From December 2015 to October 2016, 884 cases were reported with 121 deaths. From December 2016 to May 2017, 792 cases were reported with a mortality rate of 35%. A further 723 cases and 274 deaths were reported until February 2018 [9]. | Supportive treatment (hydration, treat liver and kidney failure and fever) and antibiotics (if bacteria-associated infections) [8] | Yes [8,9] |
| Rabies | Rabies is endemic worldwide [10]. It is estimated that rabies causes 59,000 human deaths each year in 150 countries, 95% of the cases occur in Asia and Africa. In Asia, the estimated human deaths per year is 35,152, and in Africa is 21,476 [11]. The incidence of rabies 2.33 cases per 100,000 humans was estimated [12]. | Rabies vaccine, dose of human rabies immune globulin and wound treatment [13,14] | Yes [15–17] |
| Malaria | Malaria mostly occurs in poor, tropical and subtropical areas. Africa is the most affected region, with 94% of all malaria deaths [18]. In 2019, 229 million cases of malaria were estimated worldwide, with 0.18% mortality (409,000 deaths). The global incidence of malaria decreased by 25% from 2010 to 2016. | Oral antimalarials (if uncomplicated malaria) or parenteral antimalarial therapy (if severe malaria) [20] | Yes [21,22] |
| Tuberculosis | In 2018, 7,600,000 cases of tuberculosis were reported, many in China (1,430,000 cases), India (1,350,000 cases), and Indonesia (268,000 cases). A small, but increasing number of multidrug-resistant tuberculosis cases has been recorded in recent years [23]. | Antibiotics [24] | Yes [23,25] |
| **Re-emerging or rare/neglected diseases** | | | |
| Cholera | In 2016, 131,121 cases of cholera were reported worldwide, with a mortality of 1.8% (2,420 deaths). Africa reported 54% of the cases, followed by Hispaniola (32%) and Asia (13%) [26]. In 2017, 71 countries reported 1,227,391 cholera cases with a mortality of 0.5% (5,654 deaths). Yemen reported 84% of all cases and 41% of all deaths [27]. | Rehydration solution [28] | Yes [29] |
| Measles | In 2000, there were 145 cases of measles per million people with an estimated 550,000 deaths. This was reduced after the first dose of measles vaccine, and the incidence in 2016 was 19 cases per one million people with 89,780 deaths [30]. In 2014-2015, the estimated global measles cases were 9.7 million with 134,200 deaths, most of the cases were reported in the African region (98,621 cases) followed by the Western Pacific Region (65,176 cases) and the South-East Asian region (29,109 cases) [31]. In 2019, the cases had risen by 300% compared to 2018 in regions with low vaccination rates (some parts of Europe and the USA) [30] | Supportive and symptom treatments and vitamin A treatment (if children severe measles) [32] | Yes [33-35] |
| Crimean-Congo hemorrhagic fever (CCHF) | From 1953 to 2010, 6000 cases of CGHF were reported in south eastern Europe [36]. Until 2016, the mortality rate was 32.4%. More than 1000 cases are reported each year in Turkey and south eastern Europe [37]. | Ribavirin therapy [38] | Yes [39] |

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