

Table 2
Summary of the reported information on human health impact associated with arboviruses listed in Table 1.

Family	Genus	Virus	Symptoms ^a	Incubation period	Vaccine	Circ. ^b	Reported in travelers	Reported seroprevalance in local population	Background info available	Considered under diagnosed	Human-to-human transmission reported	Ref.
Bunyaviridea												
<i>Nariovirus</i>		Crimean-Congo hemorrhagic fever	FD, HS, (NS)	1–3 (1–9)	Yes	R	Yes	High: 5–13%	Yes	Yes	Yes	14,17,29,50,149
<i>Orthobunyavirus</i>		Bwamba virus	FD, AR, (NS)	1–14	No	R	No	High: 2, 6–80%	Little	Yes	No	26,27,61
		Bunyamwera virus	FD, AR, (NS)	Unknown	No	R	No	High: up to 100%	Little	Yes	No	25,121
		Guaroa virus	FD, AR	Unknown	No	R	No	High: 13–18%	Little	Yes	No	57,60
		Ilesha virus	FD, AR (NS, HS)	Unknown	No	R (U)	Yes	High: 38–54%	Little	Yes	No	62,120
		Ngari virus	FD, AR, HS	Unknown	No	R	No	Unknown: in a recent RVFV outbreak 27% of infections turnout to be NRIV	Little	Yes	No	121,122
		La cross virus	FD, NS	5–15	No	R	No	High: 2–13%	Yes	Yes	No	52,123,150–152
		Tahyna virus	FD, AR, (NS) conjunctivitis, bronchopneumonia	3–7	No	U	No	High: 60–80%	Little	Yes	No	53,124,125,153
		Oropouche virus	FD, AR, (NS)	4–8	No	R, U	No	High: 15–60%	Yes	Yes	No	51,58,60
<i>Phlebovirus</i>		Tataguine virus	FD, AR	Unknown	No	R	No	High: one of the five most isolated viruses in West Africa in humans	Little	Yes	No	64,127
		Toscana virus	FD, NS, (AR)	2–14	No	R	Yes	High: 5–51%	Yes	No	No	54,154
		Sandfly fever Naples/Sicilian	FD	2–14	No	R	Yes	High: 3–36%	Yes	No	No	55,155
	Rift valley fever virus	FD, HS, NS, hepatitis	1–7	No	R	Yes	High: 2–14%	Yes	No	Yes (contact with animal products)	13,50,128,156–159	
Flavivirus												
<i>Flavivirus</i>		Dengue virus	FD, HS, AR	4–7 (3–14)	No	R, U	Yes 3–8% travelers returning with FD	High: most diagnosed arbovirus disease world-wide	Yes	Yes	Yes	5–7,69,160–162
		Japanese encephalitis virus	FD, NS	5–14	Yes	R, U	Yes 1 in a million or 1 in 20,000	High: >45,000 cases annually world-wide	Yes	Yes	No	103,163
		West Nile virus	FD, NS, (AR)	3–5 (2–14)	No	R, U	Yes	High: One of the most common arbovirus diseases world-wide	Yes	No	Yes	19,20,131,164
		St. Louis encephalitis virus	FD, NS	2–21	No	R, U	No	High: 3–13%	Yes	Yes	No	134,152

	Murray Valley virus	FD, NS	1–28	No	R	Yes	High: up to 40%	Yes	No	No	135,165–167
	Kyasanur Forest disease virus	FD, HS, conjunctivitis, pneumonia	3–8	Yes	R	No	Unknown: local monkey population 18–50% positive	Yes	No	No	136,137
	Alkhurma hemorrhagic fever virus	FD, HS	3–12	No	R	Yes	Low: 1, 3%	Yes	No	No	138,168,169
	Tick-borne encephalitis virus	FD, NS, (HS)	7–14	Yes	R	Yes	High: incidence rate of 0.1 to >5: 100.000 in endemic countries	Yes	Yes	Yes	170–173
	Ilheus virus	FD, NS	Unknown	No	R	No	High: 3, 4–26%	Little	Yes	No	174,175
	Yellow fever virus	FD, HS, hepatitis	3–6	Yes	R, U	Yes	High: 200.000 cases annually world-wide	Yes	No	Yes	29,50,176–179
						1:280 Africa 1:2800 SA in epidemic areas					
Reoviridea											
<i>Coltivirus</i>	Colorado tick fever virus	FD, NS, AR, HS	3–5 (0–20)	No	R	Yes	Unknown: 200–400 reported cases annually	Yes	Yes	Yes	36,180,181
<i>Seadronvirus</i>	Banna virus	FD, AR, NS	Unknown	No	R	No	Unknown	Little	Yes	No	38
Togaviridea											
<i>Alphaviruses</i>	Barmah Forest virus	FD, AR	7–9 (5–2)	No	R, U	No	High: incidence rate of 4 to 40: 100.000 annually. 500–800 reported cases annually	Yes	No	No	135,140
	Eastern equine encephalitis virus	FD, NS	3–10	No	R	Yes	Unknown: 3–21 cases annually in the US	Little	No	No	182
	Chikungunya virus	FD, AR, (HS, NS) conjunctivitis	3–7 (1–12)	No	R, U	Yes	High: up to 75%	Yes	No	No	4,145,183–186
	Mayaro virus	FD, AR, (HS)	6–12 (3–12)	No	R, U	Yes	High: 5–60%	Yes	Yes	No	60,89,187–189
	O’Nyong Nyong virus	FD, AR	>8	No	R, U	No	High: 31–68%	Little	No	No	144,145
	Ross river virus	FD, AR, (HS)	7–9 (3–21)	No	R, U	Yes	High: 8–65%	Yes	No	No	91,135,140
						100 per year to New Zealand					
	Sindbis virus	FD, AR	1–7	No	R	Yes	High: 5–27%	Yes	Yes	No	53,82,83,146
	Western equine encephalitis virus	FD, NS	2–10	No	R	No	Unknown: <10 cases annually in US	Little	No	No	40,127,147
	Venezuelan equine encephalitis virus	FD, NS	<1–5	No	R	No	High: 30–50% during an epidemic. 23% outside epidemics. Up to 10% of dengue cases are thought to be VEEV in the Americas	Little	Yes	No	40,60,148,190,191

^a Symptoms: FD, febrile disease; AR, arthralgia and/or rash; HS, hemorrhagic syndrome; NS, neurological syndrome.

^b Circulation: R, rural; U, urban.