S5 Table: Surveillance systems in place, by country***.*** *We identified 19 examples of surveillance systems in place across 12 geographical areas from MoH websites, as outlined in the methodology.*

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Country** | **Geographical coverage (national, regional)** | **Population covered (all ages, specific age groups, special populations)** | **Type of surveillance (active, passive)** | **Type of reporting (compulsory, voluntary, sentinel network)** | **Case definition used** | **Laboratory diagnosis** | **Representativeness** | **Time period or start date** | **References** |
| **Africa** | | | | | | | | | |
| Gabon | National | all ages | active | Sentinel  Physicians; labs | An acute febrile syndrome was characterized by acute fever(>38.5°C) and≥1 of the following symptoms: arthralgia, myalgia, headache, rash, asthenia, nausea, vomiting, diarrhea, jaundice, or bleeding. | RT-PCR | not assessed | Sept 2007-Aug 2010 | [[1) |
| Mayotte, Comoros archipelago | Regional | all ages | passive | Voluntary  Health care providers and hospitals | Suspected case: any person with incapacitating polyarthralgia and a history of sudden onset of fever (body temperature ≥38.5 ◦C) possibly associated with myalgia, headache, skin rash or conjunctival injection in the absence of Plasmodium species infection checked by the rapid diagnostic test (OptiMAL, Flow Inc.,Portland, OR, USA).  Confirmed case: suspected case with at least one of the following laboratory criteria: (i) detection of the CHIK virus genome in a fluid sample (blood, exudate, cerebrospinal fluid) by RT-PCR; (ii) demonstration of specific anti-CHIK virus IgM in a fluid sample regardless of the presence of specific anti-CHIK virus IgG by ELISA. | MAC-ELISA; RT-PCR | not assessed | since 2005 | (2) |
| Mayotte, Comoros archipelago |  | maternofetal cases | active | Voluntary  Hospital based | Maternoneonatal CHIK fever case is defined as a new-born with laboratory confirmed CHIK fever within the first 9 days of life whom the mother had had confirmed CHIK fever during the last month of pregnancy. ‘Severe form’ was defined as laboratory confirmed patients over 9 days old who had at least one organic involvement other than articular manifestation and requiring the maintenance of at least one vital function | MAC-ELISA; RT-PCR | not assessed | since 2006 | (2) |
| Reunion island | National | all ages >10 days | active | NA | Fever, arthralgia |  | not assessed |  | (3) |
| Reunion island | National | all ages | active | Sentinel  Physicians; labs; GPs; patients | Suspected case: rapid onset of fever over 38.5°C with incapacitating joint pain  Confirmed by the detection of anti-chikungunya virus IgM and/or detection of viral ARN by RT-PCR or virus isolation | RT-PCR | not assessed | ongoing | (4) |
| Reunion island | National | all ages | active | Sentinel  Labs, private physicians, patients | Suspected case: Sudden onset of fever > 38.5°C accompanied by incapacitating joint pain.  Confirmed case: positive IgM serologic results and/or the chikungunya genome detected by reverse chain reaction (RT-PCR). | RT-PCR | yes | since Mar-2005 | (5) |
| **Asia** | | | | | | | | | |
| India | National | all ages | active | Sentinel | Chikungunya suggesting syndrome (fever, arthralgia, myalgia, rash), definition by National CDC of India 2006 | MAC ELISA | not assessed |  | (6) |
| India | National | all ages | active | lab based | Acute Febrile Illness with rash, arthralgia or haemorrhagic manifestations are investigated for dengue as well as chikungunya | MAC ELISA | Predominantly urban areas | since 2013 | (7) |
| India | National | all ages | active | local health units | Patients with fever or arthralgia presented at medical camp on or after June 20, 2006 | ELISA | urban | ongoing | (8) |
| Singapore | National | all ages | active | Sentinel  Lab based | Acute febrile illness of at least 37.5C, with or without joint pain, and whose blood sample was either tested positive for CHIKV by RT-PCR or showed a four-fold rise in anti-CHIKV IgG antibody titres from acute and convalescent samples taken at least 14 days apart; clinically compatible cases with a positive anti-CHIKV IgM result if they were epidemiologically linked to a laboratory-confirmed case | RT-PCR | not assessed | Dec-06 | (9) |
| Singapore | National | all ages | passive | Compulsory | Acute febrile illness of at least 37.5C, with or without joint pain, and whose blood sample was either tested positive for CHIKV by RT-PCR or showed a four-fold rise in anti-CHIKV IgG antibody titres from acute and convalescent samples taken at least 14 days apart; clinically compatible cases with a positive anti-CHIKV IgM result if they were epidemiologically linked to a laboratory-confirmed case | RT-PCR | not assessed | Dec-08 | (9) |
| **South America** | | | | | | | | | |
| Brazil | Regional | all ages | active | Compulsory | Suspected case: acute onset of fever, severe arthralgia and/or arthritis, residing or having visited epidemic areas within the last 15 days before symptom onset  Confirmed case: lab confirmation through cell culture, RNA detection or serology. | RT-PCR | not assessed | ongoing | (10) |
| Colombia | National | all ages | active | Compulsory | Clinically suspected cases with presence of a rash and an elevation of axillary body temperature greater than 37.2 °C; non-purulent conjunctivitis or conjunctival hyperaemia, arthralgia or myalgias and headache or general malaise | rRT-PCR | not assessed | ongoing | (11) |
| Jamaica | National | all ages | active and passive | Sentinel  Sites at primary health care centers, and all major hospitals  Medical practitioners | Suspected case: fever of acute onset of > 101.3°F (38.5°C) *and* severe arthralgia (or arthritis) not explained by other medical conditions in a person who resides in or had visited an epidemic or endemic area within 2 weeks prior to symptom onset  Confirmed case: a suspected case with a positive result by any of the following CHIKV specific laboratory tests: viral isolation, detection of viral RNA by RT-PCR, detection of IgM in a single serum sample (collected during acute or convalescent phase), or 4-fold increase in CHIKV-specific antibody titers (samples collected at least 2 – 3 weeks apart). | RT-PCR | not assessed | ongoing | (12) |
| Suriname | National | all ages | active | Voluntary  Lab based | Suspected case: fever >38.5C and severe arthralgia/arthritis not explained by other medical conditions who is residing or has visited epidemic areas within 15 days prior to onset of symptoms.  Confirmed case: suspected patient meeting laboratory confirmation criteria, which are either virus culture, RT-PCR, IgM antibody assay in single sample, or four-fold increase in CHIKV-specific antibody titers IgG (Pan American Health Organization 2015). | ELISA, FRNT, RT-PCR | not assessed | From Oct 2014 | (13) |
| **North America** | | | | | | | | | |
| Puerto Rico | National | all ages | passive | Compulsory  Physician based | Clinically suspected (no precise definition is noted) | MAC ELISA, RT-PCR | not assessed | since the late 1960s | (14) |
| Puerto Rico | National | all ages | active | Compulsory  Health care facility based | Febrile patients suspected for the infection and presenting at a health care facility | MAC ELISA, RT-PCR | not assessed | since 2012 | (14) |
| Puerto Rico | National | all ages | combined | Compulsory | Premortem lab criteria  Forensic physicians reports combined with pre- and post-mortem serum samples | RT-PCR | not assessed | since 2010 | (14) |
| USA | National | all ages | passive | Compulsory  Local public health departments  Hospitals  Laboratories  Health care providers | CDC standard definitions | not available | not assessed | ongoing | (15) |

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