

Additional files**search strategy 1: MEDLINE (PubMed)**

<p>1 Developing Countries OR Africa OR Africa, Northern OR Africa South of the Sahara OR Africa, Central OR Africa, Eastern OR Africa, Southern OR Africa, Western OR Angola OR Benin OR Botswana OR Burkina Faso OR Burundi OR Cameroon OR Cape Verde OR Central African Republic OR Chad OR Comoros OR Congo OR Cote d'Ivoire OR Djibouti OR "Democratic Republic of the Congo" OR Eritrea OR Ethiopia OR Gabon OR Gambia OR Ghana OR Guinea OR Guinea-Bissau OR Kenya OR Lesotho OR Liberia OR Libya OR Madagascar OR Malawi OR Mali OR Mauritania OR Mauritius OR Mozambique OR Namibia OR Niger OR Nigeria OR Rwanda OR Senegal OR Seychelles OR Sierra Leone OR Somalia OR South Africa OR Sudan OR Swaziland OR Tanzania OR Togo OR Uganda OR Zambia OR Zimbabwe</p>
<p>2 Madagascar OR Malawi OR Mali OR Mauritania OR Mauritius OR Mozambique OR Namibia OR Niger OR Nigeria OR Rwanda OR Sao Tome OR Senegal OR Seychelles OR Sierra Leone OR Somalia OR Sudan OR Swaziland OR Tanzania OR Togo OR Uganda OR Zambia OR Zimbabwe OR Rhodesia</p>
<p>3 Africa OR Angola OR Benin OR Botswana OR Burkina Faso OR Burkina Faso OR Upper Volta OR Burundi OR Cameroon OR Cape Verde OR Central African Republic OR Chad OR Comoros OR Comoro Islands OR Comores OR Mayotte OR Congo OR Zaire OR Cote d'Ivoire OR Ivory Coast OR Djibouti OR Somalia OR Ethiopia OR Gabon OR Gabonese Republic OR Gambia OR Ghana OR Guinea OR Guiana OR Kenya OR Lesotho OR Liberia OR Libya</p>
<p>4 "developing country" OR "developing countries" OR "developing nation" OR "developing nations" OR "developing population" OR "developing populations" OR "developing world" OR "less developed country" OR "less developed countries" OR "less developed nation" OR "less developed nations" OR "less developed population" OR "less developed populations" OR "less developed world" OR "lesser developed country" OR "lesser developed countries" OR "lesser developed nation" OR "lesser developed nations" OR "lesser developed population" OR "lesser developed populations" OR "lesser developed world" OR "under developed country" OR "under developed countries" OR "under developed nation" OR "under developed nations" OR "under developed population" OR "under developed populations" OR "under developed world" OR "underdeveloped country" OR "underdeveloped countries" OR "underdeveloped nation" OR "underdeveloped nations" OR "underdeveloped population" OR "underdeveloped populations" OR "underdeveloped world" OR "middle income country" OR "middle income countries" OR "middle income nation" OR "middle income nations" OR "middle income population" OR "middle income populations" OR "low income country" OR "low income countries" OR "low income nation" OR "low income nations" OR "low income population" OR "low income populations" OR "lower income country" OR "lower income countries" OR "lower income nation" OR "lower income nations" OR "lower income population" OR "lower income populations" OR "underserved country" OR "underserved countries" OR "underserved nation" OR "underserved nations" OR "underserved population" OR "underserved populations" OR "underserved world" OR "underserved country" OR "underserved countries" OR "underserved nation" OR</p>

	"underserved nations" OR "underserved population" OR "underserved populations" OR "underserved world" OR "deprived country" OR "deprived countries" OR "deprived nation" OR "deprived nations" OR "deprived population" OR "deprived populations" OR "deprived world" OR "poor country" OR "poor countries" OR "poor nation" OR "poor nations" OR "poor population" OR "poor populations" OR "poor world" OR "poorer country" OR "poorer countries" OR "poorer nation" OR "poorer nations" OR "poorer population" OR "poorer populations" OR "poorer world" OR "developing economy" OR "developing economies" OR "less developed economy" OR "less developed economies" OR "lesser developed economy" OR "lesser developed economies" OR "under developed economy" OR "under developed economies" OR "underdeveloped economy" OR "underdeveloped economies" OR "middle income economy" OR "middle income economies" OR "low income economy" OR "low income economies" OR "lower income economy" OR "lower income economies" OR "low gdp" OR "low gnp" OR "low gross domestic" OR "low gross national" OR "lower gdp" OR "lower gnp" OR "lower gross domestic" OR "lower gross national" OR "lami" OR "lamic" OR "third world" OR "lami country" OR "lami countries" OR "transitional country" OR "transitional countries"
5	1 OR 2 OR 3 OR 4
6	"yellow fever" OR "yellow jack"
7	prevalence OR "Prevalence"
8	5 AND 6 AND 7

Search strategy 2: Scopus

(((TITLE-ABS-KEY (((Developing Countries OR Africa OR Africa, Northern OR Africa South of the Sahara OR Africa, Central OR Africa, Eastern OR Africa, Southern OR Africa, Western OR Angola OR Benin OR Botswana OR Burkina Faso OR Burundi OR Cameroon OR Cape Verde OR Central African Republic OR Chad OR Comoros OR Congo OR Cote d'Ivoire OR Djibouti OR "Democratic Republic of the Congo" OR Eritrea OR Ethiopia OR Gabon OR Gambia OR Ghana OR Guinea OR Guinea-Bissau OR Kenya OR Lesotho OR Liberia OR Libya OR Madagascar OR Malawi OR Mali OR Mauritania OR Mauritius OR Mozambique OR Namibia OR Niger OR Nigeria OR Rwanda OR Senegal OR Seychelles OR Sierra Leone OR Somalia OR South Africa OR Sudan OR Swaziland OR Tanzania OR Togo OR Uganda OR Zambia OR Zimbabwe))))

AND

((TITLE-ABS-KEY (yellow fever) OR TITLE-ABS-KEY (yellow jack) OR TITLEABS-KEY (yellow fevers) OR (haemorrhagic fever)

AND

("prevalence" OR "Prevalence")

AND

("outbreak" OR "Burden of disease" OR "Incidence")

Search strategy 3: Web of Science

((((Developing Countries OR Africa OR Africa, Northern OR Africa South of the Sahara OR Africa, Central OR Africa, Eastern OR Africa, Southern OR Africa, Western OR Angola OR Benin OR Botswana OR Burkina Faso OR Burundi OR Cameroon OR Cape Verde OR Central African Republic OR Chad OR Comoros OR Congo OR Cote d'Ivoire OR Djibouti OR "Democratic Republic of the Congo" OR Eritrea OR Ethiopia OR Gabon OR Gambia OR Ghana OR Guinea OR Guinea-Bissau OR Kenya OR Lesotho OR Liberia OR Libya OR Madagascar OR Malawi OR Mali OR Mauritania OR Mauritius OR Mozambique OR Namibia OR Niger OR Nigeria OR Rwanda OR Senegal OR Seychelles OR Sierra Leone OR Somalia OR South Africa OR Sudan OR Swaziland OR Tanzania OR Togo OR Uganda OR Zambia OR Zimbabwe)))) AND

TOPIC: ((“yellow fever” OR “yellow jack” OR “yellow fevers”)) AND

TOPIC: ((“prevalence” OR "Prevalence")) AND

TOPIC: ((outbreak OR “Burden of disease” OR “Incidence”)

Search strategy 4: EBSCOhost

S1

Developing Countries OR Africa OR Africa, Northern OR Africa South of the Sahara OR Africa, Central OR Africa, Eastern OR Africa, Southern OR Africa, Western OR Angola OR Benin OR Botswana OR Burkina Faso OR Burundi OR Cameroon OR Cape Verde OR Central African Republic OR Chad OR Comoros OR Congo OR Cote d'Ivoire OR Djibouti OR "Democratic Republic of the Congo" OR Eritrea OR Ethiopia OR Gabon OR Gambia OR Ghana OR Guinea OR Guinea-Bissau OR Kenya OR Lesotho OR Liberia OR Libya OR Madagascar OR Malawi OR Mali OR Mauritania OR Mauritius OR Mozambique OR Namibia OR Niger OR Nigeria OR Rwanda OR Senegal OR Seychelles OR Sierra Leone OR Somalia OR South Africa OR Sudan OR Swaziland OR Tanzania OR Togo OR Uganda OR Zambia OR Zimbabwe

S2

Madagascar OR Malawi OR Mali OR Mauritania OR Mauritius OR Mozambique OR Namibia OR Niger OR Nigeria OR Rwanda OR Sao Tome OR Senegal OR Seychelles OR Sierra Leone OR Somalia OR Sudan OR Swaziland OR Tanzania OR Togo OR Uganda OR Zambia OR Zimbabwe OR Rhodesia

S3

Africa OR Angola OR Benin OR Botswana OR Burkina Faso OR Burkina Faso OR Upper Volta OR Burundi OR Cameroon OR Cape Verde OR Central African Republic OR Chad OR Comoros OR Comoro Islands OR Comores OR Mayotte OR Congo OR Zaire OR Cote d'Ivoire OR Ivory Coast OR Djibouti OR Somalia OR Ethiopia OR Gabon OR Gabonese

Republic OR Gambia OR Ghana OR Guinea OR Guiana OR Kenya OR Lesotho OR Liberia
OR Libya

S4

TI (low 3 middle N3 countr*) OR AB (low 3 middle N3 countr*) OR SU (low 3 middle N3
countr*)

S5

TI ((developing or less* N1 developed or "under developed" or underdeveloped or "middle
income" or low* N1 income) N1 (economy or economies)) OR AB ((developing or less* N1
developed or "under developed" or underdeveloped or "middle income" or low* N1 income)
N1 (economy or economies)) OR SU ((developing or less* N1 developed or "under
developed" or underdeveloped or "middle income" or low* N1 income) N1 (economy or
economies))

S6

yellow fever OR yellow jack OR yellow fevers

S7

prevalence OR Prevalence

S8

“outbreak” OR “Burden of disease” OR “Incidence”

Search strategy 5: Embase and CINAHL

Controlled vocabulary (subject headings)

Table S2: Characteristics of included studies of yellow fever in Africa

Study ID/Region	Year of assessment (duration)	Country	Mode of transmission	Population	Study design/type	Outcomes	Hospital vs field based	Rural / urban/mixed
Thonnon 1998a// Ribo-Escale and Guente-Pate	1995(1 month)	Senegal	Intermediate	Cases: 110 All ages	Case detection and sero-survey	Death: 46 Attack rate: 0,0126 Incidence per 100000: 1267,6 Case fatality rate (%): 41.8 Mortality per 100000: 530,1	Hospital & field	Rural
Thonnon 1998b/ Kounghoul & Affrine	1995(8 days)	Senegal	Sylvatic	Cases: 128 All ages	Case finding & surveillance	Death: 36 Attack rate: 0,059095106 Incidence per 100000: 5909,5 Case fatality rate (%):28,1 Mortality per 100000: 1662	Hospital & field	Rural
Lilay et al. 2017/ South Omo zone	2013(2 months)	Ethiopia	Sylvatic	Cases: 141 All ages	Case finding & survey	Death: 43 Attack rate: 0,0004 Incidence per 100000: 40 Case fatality rate (%): 30,5 Mortality per 100000: 12.2	Hospital & field	Mixed
Sanders et al. 1998/ Kerio Valley	1993(6 months)	Kenya	Sylvatic	Cases: 55 10 – 70 years	Retrospective and prospective case surveillance	Death: 34 Attack rate: 0,000274 Incidence per 100000: 27,4 Case fatality rate (%): 61,8 Mortality per 100000: 16.9	Hospital	Rural
Wamala et al. 2012/ Northern Uganda	2010 (1 month)	Uganda	Sylvatic	Cases: 125 3 months - 83 yrs	Case series	Death: 38 Attack rate: 0,00013 Incidence per 100000: 13 Case fatality rate (%): 30.4 Mortality per 100000: 4	Hospital & field	Rural

Kwagonza et al. 2018/ Masaka, Kalungu, Kalangala & Rukungire	2018(3months)	Uganda	Sylvatic	Cases: 42 3 – 64 years	Case control	Death: 14 Attack rate: 0,000026 Incidence per 100000: 2.6 Case fatality rate (%): 33.3 Mortality per 100000: 0.9	Hospital & field	Rural
Monath et al. 1980/ Upper river	1979 (1month)	Gambia	Sylvatic	Cases: 244 All ages	Retrospective case finding and surveillance	Death: 65 Attack rate: 0,04565 Incidence per 100000: 45,7 Case fatality rate (%): 26.6 Mortality per 100000: 12.2	Hospital & field	Rural
Agadzi et al. 1984 Upper Volt	N/A	Ghana	Urban	Cases: 136 All ages	Surveillance	Death: 34 Case fatality rate (%):25	Hospital	Rural
Agadzi et al. 1984 Eastern Region	N/A	Ghana	Urban	Cases: 207 All ages	Surveillance	Death: 44 Attack rate: 0,04565 Incidence per 100000: 10,350 Case fatality rate (%): 21,6 Mortality per 100000: 2200	Hospital	Rural
Agadzi et al. 1984 Volta Region	N/A	Ghana	Urban	Cases: 340 All ages	Surveillance	Death: 52 Case fatality rate (%): 15.29	Hospital	Rural

Agadzi et al. 1984 Brong Ahafo	N/A	Ghana	Urban	Cases: 104 All ages	Surveillance	Death: 44 Case fatality rate (%): 42.3%	Hospital	Rural
Otshudie ma et al. 2017	2016(1month)	DR Congo	Sylvatic	Cases: 410 0 – 72 years	Case based surveillance	Death: 42 Attack rate: 0,00013 Incidence per 100000: 13 Case fatality rate (%): 10.2 Mortality per 100000: 1.3	Hospital & field	Urban
Nasidi et al. 1989 Oyo	1987 (N/A)	Nigeria	Urban	Cases: 805 All ages	Survey & case finding	Death: 416 Attack rate: 0,000111 Incidence per 100000: 11 Case fatality rate (%): 52 Mortality per 100000: 6	Hospital & field	Urban
Nasidi et al. 1989 Ogun	1987(N/A)	Nigeria	Urban	Cases: 72 All ages	Survey & case finding	Death: 8 Incidence per 100000: 2.6 Case fatality rate (%): 11 Mortality per 100000: 0.3	Hospital & field	Urban
Nasidi et al. 1989 Ondo	1987(N/A)	Nigeria	Urban	Cases: 9 All ages	Survey & case finding	Death: 3 Incidence per 100000: 0.3 Case fatality rate (%): 33 Mortality per 100000: 0.1	Hospital & field	Urban
Nasidi et al. 1989 Kwara	1987(N/A)	Nigeria	Urban	Cases: 7 All ages	Survey & case finding	Death: 6 Incidence per 100000: 0.2 Case fatality rate (%): 85 Mortality per 100000: 0.2	Hospital & field	Urban
Nasidi et al. 1989 Lagos	1987(N/A)	Nigeria	Urban	Cases: 69 All ages	Survey & case finding	Death: 9 Incidence per 100000: 1.4 Case fatality rate (%): 13 Mortality per 100000: 0.2	Hospital & field	Urban
Social Services Imo	1994(3months)	Nigeria	N/A	Cases: 83 All ages	Survey & case finding	Death: 44 Attack rate: 0,000838 Incidence per 100000: 83,8	Hospital & field	Rural

State 1994						Case fatality rate (%): 53 Mortality per 100000: 44.4		
De Cock et al. 1988/ Cross river	1986(1month)	Nigeria	Sylvatic	Cases: 126 All ages	Epidemiological survey	Death: 59 Attack rate: 0,000838 Incidence per 100000: 63 Case fatality rate (%): 46,8 Mortality per 100000:	Hospital & field	Rural

Table S3: Risk of bias of assessment of included studies (adapted from Hoy et al, 2012)

Study ID	Representation	Sampling	Random selection	Non response bias	Data collection	Case definition	Reliability of tool	Method of data collection	Prevalence period	Numerator and Denominators	Summary assessment
Thonnon 1998a	0	0	0	0	0	0	0	0	1	0	1
Thonnon 1998b	0	0	0	0	0	0	0	0	1	0	1
Lilay et al. 2017	0	0	1	1	0	0	0	0	1	1	4
Sanders et al. 1998	0	1	1	1	0	0	0	0	1	0	4
Wamala et al. 2012	0	1	1	0	0	0	0	0	1	0	3
Kwagonza et al. 2018	0	0	0	1	0	0	0	0	1	0	2
Monath et al. 1980	0	1	1	1	0	0	0	0	1	0	4
Agadzi et al. 1984	0	0	1	1	1	0	0	1	1	1	6

Otshudiema et al. 2017	1	1	1	0	0	0	0	1	1	1	6
Nasidi et al. 1989	0	1	1	1	0	0	0	0	1	0	4
Social service Imo state 1994	0	0	0	0	0	0	0	0	1	0	1
De Cock et al. 1988	0	0	1	1	1	0	0	1	1	0	5

Point scored: Low risk: 0-3; Moderate risk: 4-6 and High risk: 7-9