Appendix – Tables and Figures

Table S1. Search Strategy with MeSH terms used for databases

Subject	MeSH terms
Organism	
Group A Streptococcus	"Group A Streptococcus" OR "Group A β-haemolytic Streptococcus" OR "Streptococcus pyogenes" OR "GAS"
Emm type/cluster	"Streptococcus pyogenes gene" OR "Group A Streptococcus typing" OR "GAS strains" OR "sequence types" OR "emm cluster typing system" OR "emm cluster" OR "emm typing" OR "emm sequences" OR "M protein" OR "M protein gene" OR "emm"
Infections	
Superficial Infections	"Non-invasive GAS infections" OR "Pharyngitis" OR "sore throat" OR "strep throat" OR "Impetigo" OR "Group A Strep skin infections" OR "Scarlet fever" OR "scarlatina"
Invasive Infections	"Invasive GAS" OR "iGAS" OR "sepsis" OR "septicaemia" OR "Streptococcal toxic shock syndrome" OR "Necrotizing fasciitis" OR "Strep bacteremia" OR "GAS blood infections" or Group A Streptococcal postpartum metritis" OR "Streptococcal postpartum infections"
Region	
Africa	africa[tw] OR africa'[tw] OR africa's[tw] OR africa1[tw] OR africa2[tw] OR africaans[tw] OR africacollaborations[tw] OR africae[tw] OR africaeaustralis[tw] OR africahiv[tw] OR africaid[tw] OR africaid's[tw] OR africain[tw] OR africaine[tw] OR africaine's[tw] OR africaines[tw] OR africains[tw] OR africal[tw] OR african[tw] OR africamum[tw] OR african[tw] OR african'[tw] OR african''[tw] OR african's[tw] OR african1[tw] OR african2[tw] OR africana[tw] OR africanae[tw] OR africanalleles[tw] OR africanamerican[tw] OR africanan[tw] OR africanane[tw] OR africananes[tw] OR africanasian[tw] OR africanastrongylus[tw] OR africancalotropis[tw] OR africander[tw] OR africanders[tw] OR africane[tw] OR africanendemic[tw] OR africanene[tw] OR africanenes[tw] OR africanensis[tw] OR africanenvironment[tw] OR africaner[tw] OR africanes[tw] OR africani[tw] OR africanised[tw] OR africanism[tw] OR africanist[tw] OR africanists[tw] OR africanity[tw] OR africanium[tw] OR africanizada[tw] OR africanization[tw] OR africanization'[tw] OR africanize[tw] OR africanized[tw] OR africanized'[tw] OR africanizing[tw] OR africanjournal[tw] OR africannum[tw] OR africano[tw] OR africanoides[tw] OR africanol[tw] OR africanos[tw] OR africanoside[tw] OR africanpatients[tw] OR africanpiper[tw] OR africans[tw] OR africans'[tw] OR africanton[tw] OR africantrinervitermes[tw] OR africantriol[tw] OR africanum[tw] OR africanum'[tw] OR africanumsp[tw] OR africanumt[tw] OR africanus[tw] OR africanus'[tw] OR africanusgen[tw] OR africanz[tw] OR africare[tw] OR africarice[tw] OR africas[tw] OR africasia[tw] OR africative[tw]) OR Algeria[tw] OR Angola[tw] OR Benin[tw] OR Botswana[tw] OR Burundi[tw] OR Cameroon[tw] OR Chad[tw] OR Comoros[tw] OR Congo[tw] OR Djibouti[tw] OR Egypt[tw] OR Eritrea[tw] OR Ethiopia[tw] OR Gabon[tw] OR Gambia[tw] OR Ghana[tw] OR Guinea[tw] OR Jamahiriya[tw] OR Jamahiriya[tw] OR Kenya[tw] OR Lesotho[tw] OR Liberia[tw] OR Libya[tw] OR Libya[tw] OR Madagascar[tw] OR Malawi[tw] OR Mali[tw] OR Mauritania[tw] OR Mauritius[tw] OR Mayotte[tw] OR Morocco[tw] OR Mozambique[tw] OR Mozambique[tw] OR Namibia[tw] OR Niger[tw] OR Nigeria[tw] OR Principe[tw] OR Reunion[tw] OR Rwanda[tw] OR Senegal[tw] OR Seychelles[tw] OR Somalia[tw] OR Sudan[tw] OR Swaziland[tw] OR Tanzania[tw] OR Togo[tw] OR Tunisia[tw] OR Uganda[tw] OR Zaire[tw] OR Zambia[tw] OR Zimbabwe[tw]

Table S2. Inclusion criteria

Inclusion Criteria	
Study aims	Studies that describes the distribution of *emm*-types or -clusters in a population
Detection method	All study designs in which a GAS *emm*-typing scheme was performed, PCR amplification of the *emm* gene or whole genome sequencing
Participants	All participants with confirmed GAS infection at the time of enrolment
Region	Countries situated within the African continent
Publication types	Published and unpublished studies
Language	All, with full English abstracts

Table S3. Study appraisal for risk of bias for included studies (adapted from Hoy (44) and Werfalli (41)).

Items	Quality score
1. Was the study's target population a close representation of the national population in relation to relevant variables?	1 point
2. Was the sampling frame a true or close representation of the target population?	1 point
3. Were data collected directly from the subjects (as opposed to a proxy)?	1 point
4. Was an acceptable case definition used in the study?	1 point
5. Was the study instrument that measured the parameter of interest shown to have validity and reliability?	1 point
6. Was the same mode of data collection used for all subjects?	1 point
7. Authors' reported limitations of study's methods/results	1 point

Risk of assessment	Total	7 points
Quality		**Overall score**
Low risk: Further research is very unlikely to change our confidence in the estimate		6 – 7
Moderate risk: Further research is likely to have an important impact on our confidence in the estimate and may change the estimate		4 - 5
High risk: Further research is very likely to have an important impact on our confidence in the estimate and is like to change the estimate		1 - 3

Table S4. Characteristics of excluded studies

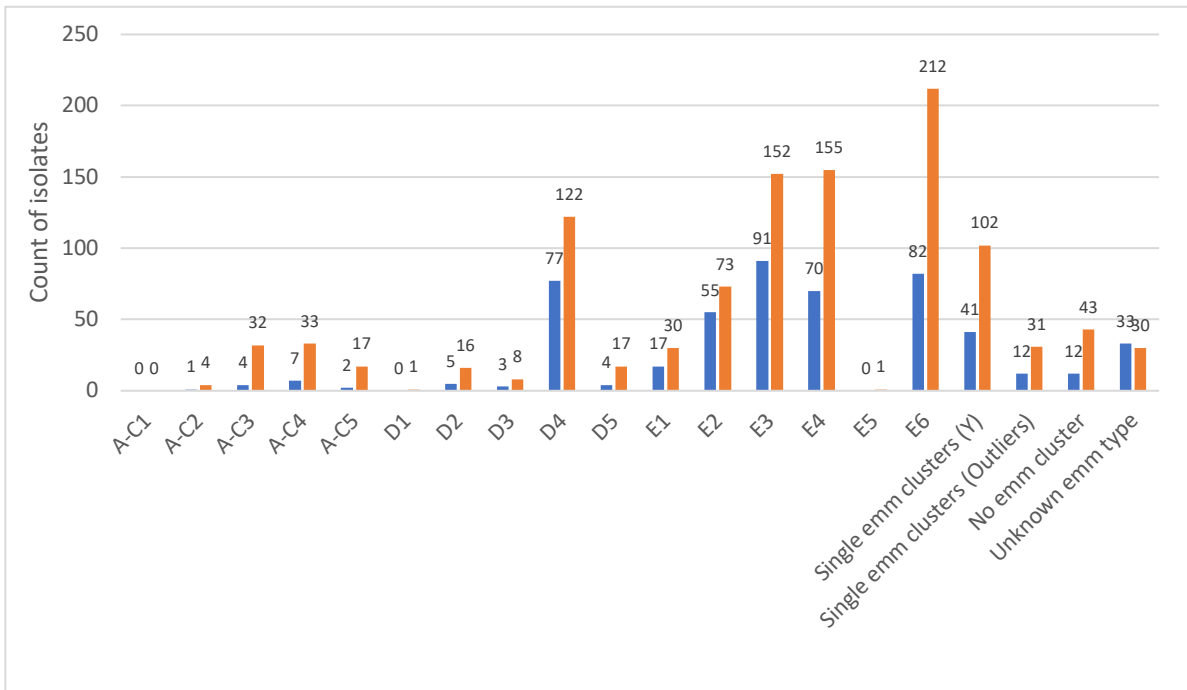| Author	Year	Title	Reason for exclusion
Mnif	2019	A report on the first outbreak of emm89 group A streptococcus invasive infections in a burns unit in Tunisia	Investigation report
Maalej	2018	Post-streptococcal glomerulonephritis in the south of Tunisia: A 12-year retrospective review	Not reporting on prevalence
Abd El-Ghany	2015	Group A beta-hemolytic streptococcal pharyngitis and carriage rate among Egyptian children: a case-control study	Not reporting on prevalence
Gonsu	2015	A comparative study of the diagnostic methods for Group A streptococcal sore throat in two reference hospitals in Yaounde, Cameroon	Not reporting on prevalence
Dale	2013	Potential coverage of a multivalent M protein-based Strep A vaccine	Duplicated dataset as in Tapia 2015
Muhamed	2012	The molecular characterisation of Group A Streptococcus among children with pharyngitis in the Vangaurd Community (Bonteheuwel/Langa), Cape Town, South Africa	Duplicated dataset as in Engel 2014
Abdissa	2011	Throat carriage rate and antimicrobial susceptibility pattern of group A Streptococci (GAS) in healthy Ethiopian school children	Not reporting on prevalence
Braito	2004	Epidemiology of streptococcus group A in school aged children in Pemb	Not reporting on prevalence
Tamburlini	1998	Streptococcal pharyngitis in Egyptian children	Case report

Figure S1. Total prevalence of *emm* clusters categorized on clinical manifestation.

Blue bars, Invasive isolates; orange bars, non-invasive isolates