**Online Supplement: literature search strategies, by database**

**Pubmed**

("Foreskin"[Mesh] OR prepuce[tw] OR circumcision[tw] OR circumcisions[tw] OR circumcise[tw] OR circumcision-related[tw] OR "Circumcision, Male"[Mesh] OR “voluntary medical male circumcision”[tw] OR VMMC[tw] OR “traditional male circumcision”[tw] OR “medical male circumcision”[tw])

**AND**

("Patient Safety"[Mesh] OR safe[tw] OR safety[tw] OR adverse event[tw] OR adverse events[tw] OR adverse effect[tw] OR adverse effects[tw] OR complication[tw] OR complications[tw] OR injury[tw] OR injuries[tw] OR "Circumcision, Male/adverse effects"[Mesh] OR "Postoperative Complications"[Mesh:NoExp] OR "Patient Harm"[Mesh] OR post-circumcision [tw] OR "Wound Infection"[Mesh] OR Bleeding [tw] OR "Hemorrhage"[Mesh] OR pain[tw] OR "Pain"[Mesh] OR discomfort [tw] OR “Device displacement” OR "Equipment and Supplies/adverse effects"[Mesh] OR Scarring [tw] OR disfigurement[tw] OR “poor cosmetic outcome” [tw] OR “poor cosmetic result” [tw] OR “cosmetic appearance” [tw] OR “penile torsion” [tw] OR “penile skin” [tw] OR “Insufficient skin removal” [tw] OR “Insufficient skin removed” [tw] OR “Excess skin removal” [tw] OR “Excess skin removed” [tw] OR “penis Injury” [tw] OR "Penis/injuries"[Mesh] OR “Glans amputation” [tw] OR Sexual effects[tw] OR “sensory changes”[tw] OR “Diminished Sensation” [tw] OR "Somatosensory Disorders"[Mesh] OR “Wound disruption” [tw] OR “wound destruction” [tw] OR Swelling[tw] OR "Inflammation"[Mesh] OR hematoma[tw] OR "Hematoma"[Mesh] OR “Difficulty urinating” [tw] OR “Urinary obstruction” [tw] OR "Urethral Obstruction"[Mesh])

**AND**

(aide [tw] OR aides[tw] OR “advanced level associate clinician” [tw] OR “advanced practice clinician”[tw] OR “advance practice nurse” [tw] OR “advanced practice provider”[tw] OR “assistant clinician” [tw] OR “assistant medical officer”[tw] OR “associate clinician” [tw] OR “associate medical officer”[tw] OR “auxiliary midwife”[tw] OR “auxiliary midwives”[tw] OR “auxiliary nurse” [tw] OR “auxiliary nurse midwife”[tw] OR “auxiliary nurse-midwife”[tw] OR auxiliaries[tw] OR “BS nurse”[tw] OR cadre [tw] OR cadres [tw] OR circumcisionist[tw] OR “clinical assistant”[tw] OR “clinical assistants”[tw] OR “clinical associate”[tw] OR “clinical associates”[tw] OR “clinical nurse specialist” [tw] OR “clinical officer”[tw] OR “clinical officers”[tw] OR “community based skilled birth attendant” [tw] OR “community based worker”[tw] OR “community-based worker”[tw] OR “community based workers”[tw] OR “community-based workers”[tw] OR “community health worker”[tw] OR “community health workers”[tw] OR “community midwife” [tw] OR “community midwives” [tw] OR “diploma nurse” [tw] OR “enrolled nurse” [tw] OR “health associate”[tw] OR “health officer”[tw] OR “healthcare professional”[tw] OR “health care professional”[tw] OR “healthcare professionals”[tw] OR “health care professionals”[tw] OR “health professional”[tw] OR “health professionals”[tw] OR “health service provider”[tw] OR “health service providers”[tw] OR “health team”[tw] OR “health worker” [tw] OR “health workers” [tw] OR “Interdisciplinary team”[tw] OR “Interdisciplinary teams”[tw] OR “lay health worker”[tw] OR “lay health workers”[tw] OR “licensed nurse” [tw] OR “licensed practitioner”[tw] OR “medical assistant” [tw] OR “medical assistants” [tw] OR “medical officer” [tw] OR “medical officers” [tw] OR midlevel [tw] OR mid-level [tw] OR midlevels [tw] OR mid-levels [tw] OR midwife[tw] OR midwives[tw] OR midwifery[tw] OR “medical licentiate practitioner”[tw] OR “medical technician” [tw] OR “medical technicians” [tw] OR nonphysician[tw] OR nonphysicians[tw] OR non-physician [tw] OR non-physicians [tw] OR “non-physician clinician” [tw] OR “non-specialist doctor” [tw] OR nurse [tw] OR nurses [tw] OR “nurse assistant”[tw] OR “nurse clinician”[tw] OR “nurse-midwife”[tw] OR “nurse midwife”[tw] OR “nurse-midwives”[tw] OR “nurse midwives”[tw] OR “nurse practitioner” [tw] OR “physician assistant” [tw] OR “practice nurse” [tw] OR practioner[tw] OR promotores [tw] OR provider[tw] OR providers[tw] OR “registered midwife” [tw] OR “registered nurse” [tw] OR “substitute health worker”[tw] OR “surgical technician” [tw] OR “traditional birth attendant”[tw] OR “traditional medicine”[tw] OR “traditional midwife” [tw] OR “traditional midwives” [tw] OR “traditional practitioner”[tw] OR “traditional practitioners”[tw] OR “treatment supporter”[tw] OR “village health worker”[tw] OR “village health workers”[tw])

**AND**

("Male"[Mesh] OR male[tw] OR males[tw] OR men[tw] OR boy OR boys OR “adolescent male”)

**AND**

("Ethiopia"[Mesh] OR "Kenya"[Mesh] OR "Rwanda"[Mesh] OR "Swaziland"[Mesh] OR "Zambia"[Mesh] OR "Zimbabwe"[Mesh] OR "Botswana"[Mesh] OR "Lesotho"[Mesh] OR "Malawi"[Mesh] OR "Mozambique"[Mesh] OR "Namibia"[Mesh] OR "South Africa"[Mesh] OR "Tanzania"[Mesh] OR "Uganda"[Mesh] OR "South Sudan"[Mesh] OR Botswana OR Ethiopia OR Kenya OR Lesotho OR Malawi OR Mozambique OR Namibia OR Rwanda OR South Africa OR South Sudan OR Swaziland OR eSwatini OR Tanzania OR Uganda OR Zambia OR Zimbabwe)

AND ("2007/01/01"[PDAT] : "3000/12/31"[PDAT])

**Embase**

('prepuce'/exp OR 'circumcision'/exp OR foreskin OR circumcisions OR circumcise OR “male circumcision” OR circumcision-related OR “voluntary medical male circumcision” OR VMMC OR “traditional male circumcision” OR “medical male circumcision”)

**AND**

('patient safety'/exp OR 'procedural site reaction'/exp OR 'adverse event'/de OR 'wound complication'/exp OR 'peroperative complication'/exp OR 'complication'/de OR ‘postoperative complication'/exp OR 'postoperative infection'/exp OR 'postoperative pain'/exp OR 'wound hemorrhage'/exp OR 'bleeding'/de OR 'pain'/de OR 'deformity'/de OR 'swelling'/de OR 'inflammation'/de OR 'hematoma'/de OR 'urinary tract obstruction'/de OR 'scar formation'/exp OR 'injury'/de OR safe OR safety OR adverse event OR adverse events OR adverse effect OR adverse effects OR complication OR complications OR injury OR injuries OR post-circumcision OR Bleeding OR pain OR discomfort OR “Device displacement” OR Scarring OR disfigurement OR “poor cosmetic outcome” OR “poor cosmetic result” OR “cosmetic appearance” OR “penile torsion” OR “penile skin” OR “Insufficient skin removal” OR “Insufficient skin removed” OR “Excess skin removal” OR “Excess skin removed” OR “penis Injury” OR “Glans amputation” OR ‘Sexual effects’ OR “sensory changes” OR “Diminished Sensation” OR "Somatosensory Disorder" OR “Wound disruption” OR “wound destruction” OR Swelling OR Inflammation OR hematoma OR “Difficulty urinating” OR “Urinary obstruction” OR "Urethral Obstruction" OR 'wound healing impairment'/exp OR 'wound dehiscence'/exp OR 'device infection'/de OR 'penile swelling'/exp OR 'medical device complication'/de OR 'circumcision device'/exp/dv\_am)

**AND**

(aide OR aides OR “advanced level associate clinician” OR “advanced practice clinician” OR “advance practice nurse” OR “advanced practice provider” OR “assistant clinician” OR “assistant medical officer” OR “associate clinician” OR “associate medical officer” OR “auxiliary midwife” OR “auxiliary midwives” OR “auxiliary nurse” OR “auxiliary nurse midwife” OR “auxiliary nurse-midwife” OR auxiliaries OR “BS nurse” OR cadre OR cadres OR circumcisionist OR “clinical assistant” OR “clinical assistants” OR “clinical associate” OR “clinical associates” OR “clinical nurse specialist” OR “clinical officer” OR “clinical officers” OR “community based skilled birth attendant” OR “community based worker” OR “community-based worker” OR “community based workers” OR “community-based workers” OR “community health worker” OR “community health workers” OR “community midwife” OR “community midwives” OR “diploma nurse” OR “enrolled nurse” OR “health associate” OR “health officer” OR “healthcare professional” OR “health care professional” OR “healthcare professionals” OR “health care professionals” OR “health professional” OR “health professionals” OR “health service provider” OR “health service providers” OR “health team” OR “health worker” OR “health workers” OR “Interdisciplinary team” OR “Interdisciplinary teams” OR “lay health worker” OR “lay health workers” OR “licensed nurse” OR “licensed practitioner” OR “medical assistant” OR “medical assistants” OR “medical officer” OR “medical officers” OR midlevel OR mid-level OR midlevels OR mid-levels OR midwife OR midwives OR midwifery OR “medical licentiate practitioner” OR “medical technician” OR “medical technicians” OR nonphysician OR nonphysicians OR non-physician OR non-physicians OR “non-physician clinician” OR “non-specialist doctor” OR nurse OR nurses OR “nurse assistant” OR “nurse clinician” OR “nurse-midwife” OR “nurse midwife” OR “nurse-midwives” OR “nurse midwives” OR “nurse practitioner” OR “physician assistant” OR “practice nurse” OR practioner OR promotores OR provider OR providers OR “registered midwife” OR “registered nurse” OR “substitute health worker” OR “surgical technician” OR “traditional birth attendant” OR “traditional medicine” OR “traditional midwife” OR “traditional midwives” OR “traditional practitioner” OR “traditional practitioners” OR “treatment supporter” OR “village health worker” OR “village health workers”)

**AND**

('male'/de OR 'boy'/exp OR boys OR male OR males OR men OR boy OR “adolescent male”)

**AND**

('Ethiopia'/exp OR 'Kenya'/exp OR 'Rwanda'/exp OR 'Swaziland'/exp OR 'Zambia'/exp OR 'Zimbabwe'/exp OR 'Botswana'/exp OR 'Lesotho'/exp OR 'Malawi'/exp OR 'Mozambique'/exp OR 'Namibia'/exp OR 'South Africa'/exp OR 'Tanzania'/exp OR 'Uganda'/exp OR 'South Sudan'/exp OR Botswana OR Ethiopia OR Kenya OR Lesotho OR Malawi OR Mozambique OR Namibia OR Rwanda OR South Africa OR South Sudan OR Swaziland OR eSwatini OR Tanzania OR Uganda OR Zambia OR Zimbabwe)

AND [2007-2019]/py

**Global Health**

(prepuce OR circumcision OR foreskin OR circumcisions OR circumcise OR “male circumcision” OR circumcision-related OR “voluntary medical male circumcision” OR VMMC OR “traditional male circumcision” OR “medical male circumcision”)

**AND**

(“patient safety” OR “procedural site reaction” OR “adverse event” OR “wound complication” OR “peroperative complication” OR complication OR “postoperative complication” OR “postoperative infection” OR “postoperative pain” OR “wound hemorrhage” OR bleeding OR pain OR deformity OR swelling OR 'inflammation” OR 'hematoma” OR “urinary tract obstruction” OR “scar formation” OR “injury” OR safe OR safety OR “adverse event” OR “adverse events” OR “adverse effect” OR “adverse effects” OR complication OR complications OR injury OR injuries OR post-circumcision OR Bleeding OR pain OR discomfort OR “Device displacement” OR Scarring OR disfigurement OR “poor cosmetic outcome” OR “poor cosmetic result” OR “cosmetic appearance” OR “penile torsion” OR “penile skin” OR “Insufficient skin removal” OR “Insufficient skin removed” OR “Excess skin removal” OR “Excess skin removed” OR “penis Injury” OR “Glans amputation” OR “Sexual effects” OR “sensory changes” OR “Diminished Sensation” OR "Somatosensory Disorder" OR “Wound disruption” OR “wound destruction” OR Swelling OR Inflammation OR hematoma OR “Difficulty urinating” OR “Urinary obstruction” OR "Urethral Obstruction" OR “wound healing impairment” OR “wound dehiscence” OR “device infection” OR “penile swelling” OR “medical device complication” OR “circumcision device”)

**AND**

(“advanced practice provider” OR cadre OR circumcisionist OR “health workers” OR midlevel OR non-physician OR nurse OR nurses OR “nurse assistant” OR “nurse clinician” OR “nurse-midwife” OR “registered midwife” OR “registered nurse” OR “substitute health worker” OR “traditional practitioner” OR “village health worker”)

**AND**

(male OR boy OR males OR men OR boys OR “adolescent male”)

**AND**

(Botswana OR Ethiopia OR Kenya OR Lesotho OR Malawi OR Mozambique OR Namibia OR Rwanda OR South Africa OR South Sudan OR Swaziland OR eSwatini OR Tanzania OR Uganda OR Zambia OR Zimbabwe)

**African Index Medicus**

**FU**

(circumcision OR circumcision-related OR “voluntary medical male circumcision” OR VMMC)

**AND**

(male OR boy OR males OR men OR boys OR “adolescent male”)

**~~AND~~**

(circumcision OR circumcision-related OR “voluntary medical male circumcision” OR VMMC)

**AND**

 (“adverse event” OR “wound complication” OR “peroperative complication” OR complication OR “postoperative complication” OR “postoperative infection” OR “postoperative pain” OR “wound hemorrhage” OR bleeding OR pain OR deformity OR swelling OR 'inflammation” OR 'hematoma” OR “scar formation” OR “adverse effect” OR “adverse effects” OR complications OR injury OR injuries OR post-circumcision OR discomfort OR “Device displacement” OR Scarring OR disfigurement OR “cosmetic outcome” OR “cosmetic result” OR “cosmetic appearance” OR “penile torsion” OR “penile skin” OR “Insufficient skin removal” OR “Insufficient skin removed” OR “Excess skin removal” OR “Excess skin removed” OR “penis Injury” OR “Glans amputation” OR “Sexual effects” OR “sensory changes” OR “Diminished Sensation” OR "Somatosensory Disorder" OR hematoma OR "Urethral Obstruction" OR “wound healing impairment” OR “wound dehiscence” OR “device infection” OR “penile swelling” OR “medical device complication” OR “circumcision device”)

**AND**

(“advanced practice provider” OR cadre OR circumcisionist OR “health workers” OR midlevel OR midwife OR midwives OR non-physician OR nurse OR nurses OR “nurse assistant” OR “nurse clinician” OR “nurse-midwife” OR “registered midwife” OR “registered nurse” OR “substitute health worker” OR “traditional practitioner” OR “village health worker”)

**AND**

(male OR boy OR males OR men OR boys OR “adolescent male”)

**AND**

(Botswana OR Ethiopia OR Kenya OR Lesotho OR Malawi OR Mozambique OR Namibia OR Rwanda OR South Africa OR South Sudan OR Swaziland OR eSwatini OR Tanzania OR Uganda OR Zambia OR Zimbabwe)

**CINAHL**

(Foreskin OR prepuce OR MH "Circumcision" OR circumcision OR circumcisions OR circumcise OR circumcision-related OR “voluntary medical male circumcision” OR VMMC OR “traditional male circumcision” OR “medical male circumcision” OR MH "Circumcision/AE/ES/PF")

**AND**

(MH "Adverse Health Care Event" OR "Patient Safety" OR safe OR safety OR adverse event OR adverse events OR adverse effect OR adverse effects OR complication OR complications OR injury OR injuries OR "Postoperative Complications" OR "Patient Harm" OR post-circumcision OR "Wound Infection" OR Bleeding OR "Hemorrhage" OR pain OR discomfort OR “Device displacement” OR Scarring OR disfigurement OR “poor cosmetic outcome” OR “poor cosmetic result” OR “cosmetic appearance” OR “penile torsion” OR “penile skin” OR “Insufficient skin removal” OR “Insufficient skin removed” OR “Excess skin removal” OR “Excess skin removed” OR “penis Injury” OR MH "Penis/IN" OR “Glans amputation” OR Sexual effects OR “sensory changes” OR “Diminished Sensation” OR MH "Somatosensory Disorders" OR “Wound disruption” OR “wound destruction” OR Swelling OR MH "Inflammation" OR hematoma OR "Hematoma" OR “Difficulty urinating” OR “Urinary obstruction” OR "Urethral Obstruction")

**AND**

(aide OR aides OR “advanced level associate clinician” OR “advanced practice clinician” OR “advance practice nurse” OR “advanced practice provider” OR “assistant clinician” OR “assistant medical officer” OR “associate clinician” OR “associate medical officer” OR “auxiliary midwife” OR “auxiliary midwives” OR “auxiliary nurse” OR “auxiliary nurse midwife” OR “auxiliary nurse-midwife” OR auxiliaries OR “BS nurse” OR cadre OR cadres OR circumcisionist OR “clinical assistant” OR “clinical assistants” OR “clinical associate” OR “clinical associates” OR “clinical nurse specialist” OR “clinical officer” OR “clinical officers” OR “community based skilled birth attendant” OR “community based worker” OR “community-based worker” OR “community based workers” OR “community-based workers” OR “community health worker” OR “community health workers” OR “community midwife” OR “community midwives” OR “diploma nurse” OR “enrolled nurse” OR “health associate” OR “health officer” OR “healthcare professional” OR “health care professional” OR “healthcare professionals” OR “health care professionals” OR “health professional” OR “health professionals” OR “health service provider” OR “health service providers” OR “health team” OR “health worker” OR “health workers” OR “Interdisciplinary team” OR “Interdisciplinary teams” OR “lay health worker” OR “lay health workers” OR “licensed nurse” OR “licensed practitioner” OR “medical assistant” OR “medical assistants” OR “medical officer” OR “medical officers” OR midlevel OR mid-level OR midlevels OR mid-levels OR midwife OR midwives OR midwifery OR “medical licentiate practitioner” OR “medical technician” OR “medical technicians” OR nonphysician OR nonphysicians OR non-physician OR non-physicians OR “non-physician clinician” OR “non-specialist doctor” OR nurse OR nurses OR “nurse assistant” OR “nurse clinician” OR “nurse-midwife” OR “nurse midwife” OR “nurse-midwives” OR “nurse midwives” OR “nurse practitioner” OR “physician assistant” OR “practice nurse” OR practioner OR promotores OR provider OR providers OR “registered midwife” OR “registered nurse” OR “substitute health worker” OR “surgical technician” OR “traditional birth attendant” OR “traditional medicine” OR “traditional midwife” OR “traditional midwives” OR “traditional practitioner” OR “traditional practitioners” OR “treatment supporter” OR “village health worker” OR “village health workers”)

**AND**

(MH "Male" OR male OR males OR men OR boy OR boys OR “adolescent male”)

**AND**

(Botswana OR Ethiopia OR Kenya OR Lesotho OR Malawi OR Mozambique OR Namibia OR Rwanda OR South Africa OR South Sudan OR Swaziland OR eSwatini OR Tanzania OR Uganda OR Zambia OR Zimbabwe)

IAS International AIDS Society via Embase

'international aids society':nc AND ('voluntary medical male circumcision' OR vmmc)

CROI Conference on Retroviruses and Opportunistic Infections via Embase = 20

'conference on retroviruses':nc AND 'opportunistic infections':nc AND ('voluntary medical male circumcision' OR vmmc)

ICASA International Conference on AIDS and STIs in Africa via Embase and Scopus = 0

**Popline**

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| --- | --- |
|  | [(( ( ( “voluntary medical male circumcision” ) OR ( VMCC ) OR ( circumcision\-related ) OR ( male circumcision ) ) ) AND ( ( ( “advanced practice provider” ) OR ( cadre ) OR ( circumcisionist ) OR ( “health workers” ) OR ( midlevel ) OR ( midwife ) OR ( midwives ) OR ( non\-physician ) OR ( nurse ) OR ( “nurse\-midwife” ) OR ( “traditional practitioner” ) OR ( “substitute health worker” ) OR ( “village health worker” ) ) ) AND ( ( ( adverse event ) OR ( complication ) OR ( injury ) OR ( pain ) OR ( bleeding ) ) )) AND ( ( is\_field\_document\_year\_int:[2007 TO \*] ) )](https://www.popline.org/advancedsearch/vKYjR5uhCYasyuRmHVKiCDKQq) |

**Africa-Wide Information ‘National Inquiry Services Centre’**

(prepuce OR circumcision OR foreskin OR circumcisions OR circumcise OR “male circumcision” OR circumcision-related OR “voluntary medical male circumcision” OR VMMC OR “traditional male circumcision” OR “medical male circumcision”)

**AND**

(“patient safety” OR “procedural site reaction” OR “adverse event” OR “wound complication” OR “peroperative complication” OR complication OR “postoperative complication” OR “postoperative infection” OR “postoperative pain” OR “wound hemorrhage” OR bleeding OR pain OR deformity OR swelling OR 'inflammation” OR 'hematoma” OR “urinary tract obstruction” OR “scar formation” OR “injury” OR safe OR safety OR “adverse event” OR “adverse events” OR “adverse effect” OR “adverse effects” OR complication OR complications OR injury OR injuries OR post-circumcision OR Bleeding OR pain OR discomfort OR “Device displacement” OR Scarring OR disfigurement OR “poor cosmetic outcome” OR “poor cosmetic result” OR “cosmetic appearance” OR “penile torsion” OR “penile skin” OR “Insufficient skin removal” OR “Insufficient skin removed” OR “Excess skin removal” OR “Excess skin removed” OR “penis Injury” OR “Glans amputation” OR “Sexual effects” OR “sensory changes” OR “Diminished Sensation” OR "Somatosensory Disorder" OR “Wound disruption” OR “wound destruction” OR Swelling OR Inflammation OR hematoma OR “Difficulty urinating” OR “Urinary obstruction” OR "Urethral Obstruction" OR “wound healing impairment” OR “wound dehiscence” OR “device infection” OR “penile swelling” OR “medical device complication” OR “circumcision device”)

**AND**

 (aide OR aides OR “advanced level associate clinician” OR “advanced practice clinician” OR “advance practice nurse” OR “advanced practice provider” OR “assistant clinician” OR “assistant medical officer” OR “associate clinician” OR “associate medical officer” OR “auxiliary midwife” OR “auxiliary midwives” OR “auxiliary nurse” OR “auxiliary nurse midwife” OR “auxiliary nurse-midwife” OR auxiliaries OR “BS nurse” OR cadre OR cadres OR circumcisionist OR “clinical assistant” OR “clinical assistants” OR “clinical associate” OR “clinical associates” OR “clinical nurse specialist” OR “clinical officer” OR “clinical officers” OR “community based skilled birth attendant” OR “community based worker” OR “community-based worker” OR “community based workers” OR “community-based workers” OR “community health worker” OR “community health workers” OR “community midwife” OR “community midwives” OR “diploma nurse” OR “enrolled nurse” OR “health associate” OR “health officer” OR “healthcare professional” OR “health care professional” OR “healthcare professionals” OR “health care professionals” OR “health professional” OR “health professionals” OR “health service provider” OR “health service providers” OR “health team” OR “health worker” OR “health workers” OR “Interdisciplinary team” OR “Interdisciplinary teams” OR “lay health worker” OR “lay health workers” OR “licensed nurse” OR “licensed practitioner” OR “medical assistant” OR “medical assistants” OR “medical officer” OR “medical officers” OR midlevel OR mid-level OR midlevels OR mid-levels OR midwife OR midwives OR midwifery OR “medical licentiate practitioner” OR “medical technician” OR “medical technicians” OR nonphysician OR nonphysicians OR non-physician OR non-physicians OR “non-physician clinician” OR “non-specialist doctor” OR nurse OR nurses OR “nurse assistant” OR “nurse clinician” OR “nurse-midwife” OR “nurse midwife” OR “nurse-midwives” OR “nurse midwives” OR “nurse practitioner” OR “physician assistant” OR “practice nurse” OR practioner OR promotores OR provider OR providers OR “registered midwife” OR “registered nurse” OR “substitute health worker” OR “surgical technician” OR “traditional birth attendant” OR “traditional medicine” OR “traditional midwife” OR “traditional midwives” OR “traditional practitioner” OR “traditional practitioners” OR “treatment supporter” OR “village health worker” OR “village health workers”)

**AND**

 (male OR boy OR males OR men OR boys OR “adolescent male”)

**AND**

(Botswana OR Ethiopia OR Kenya OR Lesotho OR Malawi OR Mozambique OR Namibia OR Rwanda OR South Africa OR South Sudan OR Swaziland OR eSwatini OR Tanzania OR Uganda OR Zambia OR Zimbabwe)

**Web of Science** 

**Google Scholar**

(“voluntary medical male circumcision” OR VMMC) AND (male OR boy) AND (complications OR safety OR injury OR adverse event) AND (“advanced practice provider” OR cadre OR “health workers” OR midlevel OR midwife OR midwives)