

Table S1 PICO framework for systematic reviews

Criterion	Included	Excluded
Population	• LMIC populations • Persons Seeking Facilities based Healthcare ◦ Sub-populations based on specific settings (acute care, inpatient care or longitudinal care) Or • HIVST in community populations ◦ Sub-populations based on specific settings	• Inpatient care settings • Non-LMIC
Intervention	• Digital Health Exposure for HIVST programming ◦ Stratify by type digital health platforms (mHealth, SMS, telehealth, etc.)	
Control	• HIVST programming without Digital health component	
Outcomes (≥1 outcome of interest required)	• Uptake/Completion of HIVST ◦ With stratification (if possible) for: ▪ Index participants ▪ Sexual partners ▪ Social networks • Identification of PLWIV • Linkage to care among index participants ◦ Retention in care (clinic visit or ART treatment compliance)	• Knowledge/education-based outcomes • Health System outcomes • Disease Prevention
Study type	• Randomized trials • Observational studies with a control / reference comparator group • Observation studies with a pre/post design • Qualitative studies	• Case reports • Case series • Opinion/editorial papers • Descriptive papers (White papers) • Review Articles
Language	English Language	
Year of Publication	January1, 1990-January 4, 2024 (start time point of HIVST availability)	

Table S2 Search strategy	
Database	Search Terms
PubMed	HIV: (“HIV”[MeSH] OR “hiv”[TIAB] OR “HIV Infections”[MeSH] OR “human immunodeficiency virus”[TIAB]) AND Digital Health: (“Digital technology” [TIAB] OR “Mobile health”[TIAB] OR “mHealth”[TIAB] OR “mobile phone*”[TIAB] OR “mobile devices”[TIAB] OR “telecommunications”[MESH] OR “cellular phone*”[TIAB] OR “smart phone*”[TIAB] OR “smartphone*”[TIAB] OR “SMS”[TIAB] OR “text”[TIAB] OR “SMS”[TIAB] OR “telemedicine”[TIAB] OR “digital”[TIAB] OR “online”[TIAB] OR “web”[TIAB] OR “website-based”[TIAB] OR “social media”[TIAB] OR “mobile applications”[TIAB] OR “digital vending machines”[TIAB]) AND Self-Testing: (“self-test”[TIAB] OR “self-testing”[TIAB] OR “self-sampling”[TIAB] OR “Mass Screening”[MeSH] OR “test kit”[TIAB] OR “Reagent Kits, Diagnostic”[MeSH] OR “Diagnostic Self Evaluation”[MeSH])
EMBASE	HIV: [elsevier] hiv:ti,ab OR “human immunodeficiency virus”:ti,ab OR ‘Human immunodeficiency virus’/exp OR ‘Human immunodeficiency virus infection’/exp [ovid] hiv.tw. OR “human immunodeficiency virus”.tw. OR ‘Human immunodeficiency virus’/exp OR ‘Human immunodeficiency virus infection’/exp AND Digital Health: [elsevier] (“Digital technology”:ti,ab OR “Mobile health”:ti,ab OR mHealth:ti,ab OR “mobile phone*”:ti,ab OR “mobile devices OR “cellular phone*”:ti,ab OR “smart phone*”:ti,ab OR smartphone*:ti,ab OR SMS:ti,ab OR text:ti,ab OR SMS:ti,ab OR telemedicine:ti,ab OR digital:ti,ab OR online:ti,ab OR web:ti,ab OR website-based:ti,ab OR “social media”:ti,ab OR “mobile applications”:ti,ab OR “digital vending machines”:ti,ab) [ovid] (“Digital technology”.tw. OR “Mobile health”.tw. OR mHealth.tw. OR “mobile phone*”.tw. OR “mobile devicesOR “cellular phone*”“.tw. OR “smart phone*”.tw. OR smartphone*.tw. OR SMS.tw. OR text.tw. OR SMS.tw. OR telemedicine.tw. OR digital.tw. OR online.tw. OR web.tw. OR website-based.tw. OR “social media”.tw. OR “mobile applications”.tw. OR “digital vending machines”.tw. OR ‘mass communication’/exp) AND Self-Testing: [Elsevier]: (self-test:ti,ab OR self-testing:ti,ab OR self-sampling:ti,ab OR “test kit”:ti,ab OR ‘mass screening’/exp OR ‘diagnostic kit’/exp OR ‘self evaluation’/exp) [Ovid]: (self-test.tw. OR self-testing.tw. OR self-sampling.tw. OR “test kit”.tw. OR ‘mass screening’/exp OR ‘diagnostic kit’/exp OR ‘self evaluation’/exp)
CINAHL	HIV: (TI hiv OR AB hiv) OR (TI “human immunodeficiency virus” OR AB “human immunodeficiency virus” OR (MH “HIV Infections+”) OR (MH “Human Immunodeficiency Virus+”) AND Digital Health: ((TI “Digital technology” OR AB “Digital technology”) OR (TI “Mobile health” OR AB “Mobile health”) OR (TI mHealth OR AB mHealth) OR (TI “mobile phone*” OR AB “mobile phone*”) OR (TI “mobile devicesOR “cellular phone*”“ OR AB “mobile devicesOR “cellular phone*”“) OR (TI “smart phone*” OR AB “smart phone*”)OR (TI smartphone* OR AB smartphone*) OR (TI SMS OR AB SMS) OR (TI text OR AB text) OR (TI SMS OR AB SMS) OR (TI telemedicine OR AB telemedicine) OR (TI digital OR AB digital) OR (TI online OR AB online) OR (TI web OR AB web) OR (TI website-based OR AB website-based) OR (TI “social media” OR AB “social media”) OR (TI “mobile applications” OR AB “mobile applications”) OR (TI “digital vending machines” OR AB “digital vending machines”) (MH “Telecommunications+”) OR (MH “Wireless Communications”) OR (MH “Telehealth+”) OR (MH “Telefacsimile”) OR (MH “Remote Consultation”) OR (MH “Teleconferencing”)) AND Self-Testing: ((TI self-test OR AB self-test) OR (TI self-testing OR AB self-testing) OR (TI self-sampling OR AB self-sampling) OR (TI “test kit” OR AB “test kit”)) OR (MH “Reagent Kits, Diagnostic+”) OR (MH “Home Diagnostic Tests”) OR (MH “Diagnostic Tests, Routine”) OR (MH “Self Assessment”)
Global Health	HIV: (TI hiv OR AB hiv) OR (TI “human immunodeficiency virus” OR AB “human immunodeficiency virus” OR DE “HIV infections” OR DE “HIV-1 infections” OR DE “HIV-2 infections” OR DE “HIV-1 infections” OR DE “HIV-2 infections” AND Digital Health: ((TI “Digital technology” OR AB “Digital technology”) OR (TI “Mobile health” OR AB “Mobile health”) OR (TI mHealth OR AB mHealth) OR (TI “mobile phone*” OR AB “mobile phone*”) OR (TI “mobile devicesOR “cellular phone*”“ OR AB “mobile devicesOR “cellular phone*”“) OR (TI “smart phone*” OR AB “smart phone*”)OR (TI smartphone* OR AB smartphone*) OR (TI SMS OR AB SMS) OR (TI text OR AB text) OR (TI SMS OR AB SMS) OR (TI telemedicine OR AB telemedicine) OR (TI digital OR AB digital) OR (TI online OR AB online) OR (TI web OR AB web) OR (TI website-based OR AB website-based) OR (TI “social media” OR AB “social media”) OR (TI “mobile applications” OR AB “mobile applications”) OR (TI “digital vending machines” OR AB “digital vending machines”) OR (DE “telecommunications” OR DE “internet”) AND Self-Testing: ((TI self-test OR AB self-test) OR (TI self-testing OR AB self-testing) OR (TI self-sampling OR AB self-sampling) OR (TI “test kit” OR AB “test kit”))
Web of Science Advanced	HIV: (TI=hiv OR AB=hiv) OR (TI=“human immunodeficiency virus” OR AB=“human immunodeficiency virus”) OR (ALL=(HIV) OR ALL=(HIV infections)) AND Digital Health: (TI=“Digital technology” OR AB=“Digital technology”) OR (TI=“Mobile health” OR AB=“Mobile health”) OR (TI=mHealth OR AB=mHealth) OR (TI=“mobile phone*” OR AB=“mobile phone*”) OR (TI=“mobile device*”OR TI=“cellular phone*” OR AB=“mobile devices” OR AB= “cellular phone*”) OR (TI=“smart phone*” OR AB=“smart phone*”) OR (TI=smartphone* OR AB=smartphone*) OR (TI=SMS OR AB=SMS) OR (TI=text OR AB=text) OR (TI=SMS OR AB=SMS) OR (TI=telemedicine OR AB=telemedicine) OR (TI=digital OR AB=digital) OR (TI=online OR AB=online) OR (TI=web OR AB=web) OR (TI=website-based OR AB=website-based) OR (TI=“social media” OR AB=“social media”) OR (TI=“mobile applications” OR AB=“mobile applications”) OR (TI=“digital vending machines” OR AB=“digital vending machines”) OR ALL=(telecommunications) AND Self-testing: hiv:ti,ab OR “human immunodeficiency virus”:ti,ab OR (HIV):kw OR (HIV Infections):kw ((TI=self-test OR AB=self-test) OR (TI=self-testing OR AB=self-testing) OR (TI=self-sampling OR AB=self-sampling) OR (TI=“test kit” OR AB=“test kit”)) OR ALL=(mass screening) OR ALL=(reagent kits, diagnostic) OR ALL=(diagnostic self evaluation))
Cochrane Library	Run query using the database combined function (“Search Manager”) Query: [1] AND [2] AND [3] AND [4] [1] hiv:ti,ab OR “human immunodeficiency virus”:ti,ab OR (HIV):kw OR (HIV Infections):kw [2] (“Digital technology”:ti,ab OR “Mobile health”:ti,ab OR mHealth:ti,ab OR (“mobile” NEXT phone):ti,ab OR (“mobile devices OR “cellular” NEXT phone*”:ti,ab OR (“smart” NEXT phone*):ti,ab OR smartphone*:ti,ab OR SMS:ti,ab OR text:ti,ab OR SMS:ti,ab OR telemedicine:ti,ab OR digital:ti,ab OR online:ti,ab OR web:ti,ab OR website-based:ti,ab OR “social media”:ti,ab OR “mobile applications”:ti,ab OR “digital vending machines”:ti,ab OR (telecommunications):kw [3] (self-test:ti,ab OR self-testing:ti,ab OR self-sampling:ti,ab OR “test kit”:ti,ab OR (Mass Screening):kw OR (Reagent Kits, Diagnostic):kw OR (Diagnostic Self Evaluation):kw #1 AND #2 AND #3

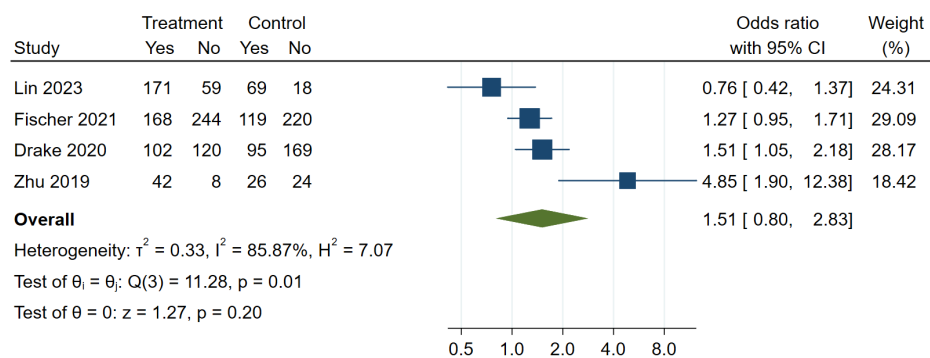


Figure S1 Forest plot of HIVST use with Logie et al. excluded.