Table 1: Summary of study selection

Stage	**Number of studies**
Records identified through a PubMed search	433
Records after removal of duplicates	430
Records screened (title and abstract)	430
Full-text articles assessed for eligibility	26
Full-text articles excluded	11
Studies included in the final synthesis	15

Table 2: Characteristics of studies included in the review

Author (Year)	**Country**	**Study design**	**Study population**	**Diagnostic tests assessed**	**Key focus**
Ajayi et al. (2016)	Uganda, Nigeria, Burkina Faso	Observational	Health workers, community health workers	Malaria RDTs	Diagnostic uptake and feasibility
Allwell-Brown et al. (2022)	Uganda	Cross-sectional	Health workers	Malaria RDTs	Antibiotic prescribing patterns
Amuge et al. (2024)	Uganda	Qualitative	Health workers, caregivers	TB diagnostics	Barriers to diagnostic utilisation
Charlie et al. (2021)	Malawi	Programmatic analysis	Health workers	TB diagnostics	Diagnostic and treatment challenges
Compaoré et al. (2023)	Multi-country Africa	Qualitative	Health workers	AMR diagnostics	Diagnostic adherence
Falade et al. (2016)	Multi-country Africa	Observational	Health workers	Malaria RDTs, microscopy	Diagnostic-guided prescribing
Graham et al. (2016)	Zambia	Implementation research	Community health workers	Malaria RDTs	Diagnostic access
Johansson et al.	Sub-Saharan	Observational	Health workers	Malaria RDTs	Adherence to

(2016)	Africa				diagnostic results
Kjærgaard et al. (2019)	Malawi	Implementation study	Health workers	Malaria diagnostics	Fever management
Olliaro et al. (2023)	Sub-Saharan Africa	Observational	Health workers	TB diagnostics	Diagnostic access
Parkes-Ratanshi et al. (2019)	Uganda	Observational	Health workers	TB diagnostics	Laboratory capacity
Singlovic et al. (2016)	Zambia	Observational	Health workers	Malaria diagnostics	Diagnostic adherence
Spearman et al. (2023)	Multi-country Africa	Implementation research	Health workers	Malaria RDTs	Diagnostic stewardship
Cohen et al. (2015)	Uganda	Qualitative	Health workers	Malaria diagnostics	Diagnostic uptake
Musoke et al. (2019)	Uganda	Observational	Health workers	TB diagnostics	Laboratory systems

Table 3: Barriers influencing diagnostic test use in antimicrobial prescribing

Barrier category	**Barrier**	**Supporting studies**
Individual level	Reliance on empirical prescribing	Amuge et al. (2024); Parkes-Ratanshi et al. (2019); Kjærgaard et al. (2019); Singlovic et al. (2016)
Individual level	Non-adherence to negative test results	Falade et al. (2016); Johansson et al. (2016); Spearman et al. (2023)
Individual level	Knowledge and confidence gaps	Charlie et al. (2021); Compaoré et al. (2023)
Institutional level	Stock-outs of diagnostic tests	Ajayi et al. (2016); Graham et al. (2016); Spearman et al. (2023)
Institutional level	Weak laboratory infrastructure	Kjærgaard et al. (2019); Parkes-Ratanshi et al. (2019); Olliaro et al. (2023)

Institutional level	Delays in diagnostic turnaround time	Allwell-Brown et al. (2022); Compaoré et al. (2023)
Health system level	Resource limitations	Ajayi et al. (2016); Graham et al. (2016); Spearman et al. (2023)
Health system level	Policy-practice implementation gaps	Amuge et al. (2024); Parkes-Ratanshi et al. (2019)
Health system level	Patient and caregiver expectations	Amuge et al. (2024); Singlovic et al. (2016)

Table 4: Facilitators influencing diagnostic test use in antimicrobial prescribing

Facilitator category	**Facilitator**	**Supporting studies**
Individual level	Training and supervision	Falade et al. (2016); Spearman et al. (2023)
Individual level	Awareness of antimicrobial resistance	Allwell-Brown et al. (2022); Charlie et al. (2021)
Institutional level	Availability of diagnostic tests	Ajayi et al. (2016); Graham et al. (2016)
Institutional level	Integrated fever management programs	Kjærgaard et al. (2019)
Institutional level	Monitoring diagnostic adherence	Spearman et al. (2023)
Health system level	Strengthened TB and HIV diagnostic programs	Charlie et al. (2021); Olliaro et al. (2023)
Health system level	Community health worker engagement	Ajayi et al. (2016); Graham et al. (2016)