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JAC-Antimicrobial Resistance

Leveraging local public health to advance antimicrobial stewardship (AMS) implementation and mitigate antimicrobial resistance (AMR): a scoping review

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Objective: To explore the role of local public health organisations in antimicrobial stewardship (AMS) and antimicrobial resistance (AMR) surveillance.

Methods: A scoping review was conducted. Peer-reviewed and grey literature from countries within the organisation for economic co-operation and development was searched between 1999 and 2023 using the concepts of local public health, AMR and AMS. Thematic analysis was performed to identify themes.

Results: There were 63 citations illustrating 122 examples of AMS and AMR surveillance activities with local public health involvement. Common AMS activities ($n=105$) included healthcare worker education ($n=22$), antimicrobial use (AMU) evaluation ($n=21$), patient/public education ($n=17$), clinical practice guidelines ($n=10$), and antibiograms ($n=10$). Seventeen citations described local public health activities in AMR surveillance; the majority focussed on communicable diseases ($n=11$) and/or AMR organisms ($n=6$).

Conclusions: Local public health capabilities should be leveraged to advance high-impact activities to mitigate AMR, particularly in the areas of knowledge translation/mobilisation, optimising surveillance and establishing strategic collaborations.

Policy implications: Future work should focus on better understanding barriers and facilitators, including funding, to local public health participation in these activities.

Introduction

Antimicrobial resistance (AMR) is a global public health threat requiring collective action across the healthcare system and beyond. Antimicrobial overuse is a unique challenge because it has clinical implications not only for individual patients (including adverse effects and selection for AMR organisms) but also for the broader population (due to transmission of resistant pathogens between individuals).[1] To adequately address this, effective and comprehensive antimicrobial stewardship (AMS) strategies necessitate partnership and coordination between healthcare systems and public health, which aims to protect and improve

the health of populations.[2,3] National action plans provide a roadmap for governments' AMS policy and generally include public health as a partner however there is limited specific guidance on how these organisations should be involved.[4–6]

As part of an overarching one health strategy, efforts to improve appropriate prescribing and reduce unnecessary use of antimicrobials can help to limit AMR and there are well-known recommendations on how healthcare professionals in acute care, long-term care and primary care settings can participate in AMS activities. However, the role of public health in AMS is less entrenched.[7–12] In describing the alignment between public health services and AMS functions, both Trivedi et al. and Evans et al. emphasized important opportunities for all levels of public health (i.e. federal, state and local) to be involved but mostly describe national or state-level activities, particularly in education, surveillance and promotion of AMS including supporting awareness campaigns.[2,3] The CDC Core Elements of Antibiotic Stewardship for Health Departments highlights many examples of AMS initiatives led by state health departments but very few from local counterparts.[13]

Public health organisations involved in delivering local public health services have direct relationships with the healthcare system and other key partners that can be potentially leveraged to advance the AMS mandate.[3] Although there are differences in how public health is organized in different jurisdictions, coordinated local public health involvement may augment available resources to help drive and increase the reach of implementation of AMS activities. Identifying early adopters and innovators from this setting may provide insights into the next steps required to scale up AMS and AMR mitigation efforts. We, therefore, performed a scoping review to describe examples of how local public health these types of organisations are involved in AMS activities and AMR surveillance.

Methods

Protocol and registration

This scoping review was registered with the centre for Open Science (https://doi.org/10.17605/OSF.IO/Z94H8). The results are reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) checklist.[14]

Eligibility and search strategy

Published peer-reviewed literature (1999 to 24 November 2023) and grey literature in the English language and from the 38 countries belonging to the organisation for economic co-operation and development were eligible for inclusion.[15] Grey literature (information produced outside of traditional publishing and distribution channels, such as conference abstracts, online documents and organisational websites was included to capture AMS activities and AMR surveillance being performed by local public health.[16] The intention of this scoping review was to identify examples and themes rather than being exhaustive.

Searches of published and grey literature were conducted in collaboration with a medical librarian. General search concepts included AMS- and/or AMR-related policies, standards, protocols, supports, practices, or examples of activities/interventions and local public health. MEDLINE, Embase, Global Health and International Pharmaceutical Abstracts were searched on 24 November 2023. Web searches using Google search strategies provided by a medical librarian were conducted between 30 November and 12 December 2023. For each search string, the first 50 records (i.e. 5 pages) were reviewed.[16] Due to the volume of literature identified, forward and backward citation searching was not performed. However, to ensure that key information was included, expert suggestions on relevant grey literature were reviewed for inclusion. The full search strategy is included in the supplement.

In general, national public health institutions play a strategic role whereas regional public health organisations are involved in coordinating and planning services and local public health institutions usually provide services. However, there is a high degree of variability in the structure of public health organisations and some regional public health organisations are also involved in delivering services.[17] Since our primary interest for this review is in public health organisations directly involved with service delivery; we defined local public health as an organisation, which delivers public health programmes and services. These distinctions were made based on available literature and by study authors for their respective jurisdictions.[4,17–19]

Any literature describing local public health involvement in AMS activities or AMR surveillance was eligible for inclusion except for study protocol descriptions. Literature describing One Health approaches was eligible; however, studies focused solely on animals, agriculture or environmental sampling were excluded. Whether an activity was considered AMS was determined using Public Health Ontario, US Centers for Disease Control and Prevention, and Public Health England (now United Kingdom (UK) Health Security Agency) guidance on AMS for hospital, long-term care, outpatient and dental settings.[20–22] Literature solely describing infection prevention and control activities was excluded. To be eligible for inclusion, AMR surveillance was defined as an ongoing initiative using approaches beyond laboratory data (i.e. inclusion of demographic or clinical variables) targeting a local population (i.e. more than one site if hospital or long-term care focused) with an explicit focus on AMR organisms.[23]

Study screening

Two-stage screening was performed independently by two authors (V.L. and B.L.) using citation management software (Covidence, Melbourne, Australia): (i) screening of title and abstract for eligible studies, and (ii) screening of full-text studies identified from title and abstract screening. Reviewers were provided a list of eligibility criteria to ensure consistency; any disagreements were resolved by discussion between reviewers to reach a consensus.

Data extraction and synthesis

Data extraction was conducted by one author (V.L.) and verified by a second author (B.L.) using a data extraction form that was piloted on a small number of studies and modified based on author consensus. We examined author affiliations and performed an inductive thematic analysis of relevant text extracted from studies/citations describing the roles of local public health in AMS and AMR surveillance activities. The thematic analysis process includes initial familiarisation with data, generating initial codes, generating themes based on coding and then an iterative process of reviewing and refining each theme.[24] This was performed by one author (V.L.) and then reviewed independently by a second author (B.L.).

Critical appraisal

As the intent of scoping reviews is to provide a comprehensive overview of the existing literature rather than assess their rigour, we did not conduct critical appraisal or risk of bias assessment of the included sources.[25]

Results

The database search strategy yielded 2307 articles; of these, 256 were included in full-text screening, and 41 were included in the review. An additional 22 articles were identified from expert

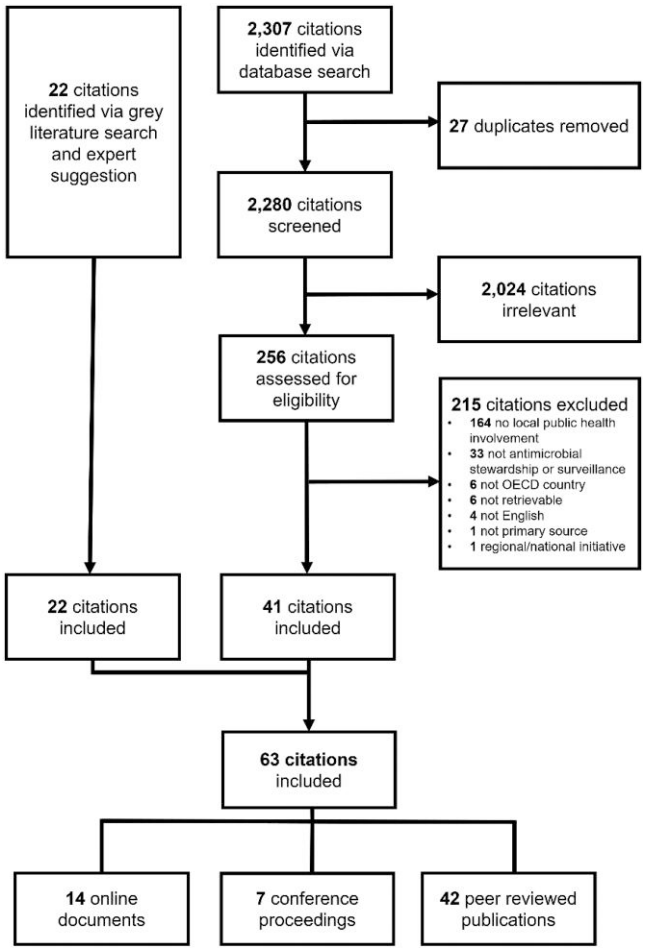

Figure 1. PRISMA diagram. Note: MEDLINE, Embase, Global Health and International Pharmaceutical Abstracts were searched on 24 November 2023. Grey literature searches were conducted between 30 November and 12 December 2023.

suggestion and the grey literature search resulting in a total of 63 articles.[26–88] Of these, 42 were peer-reviewed publications, 7 were conference abstracts and 14 were online documents (Figure 1: PRISMA diagram).

Out of the included articles, there were 51 studies; the others were online documents such as antibiograms, guidelines, or other educational resources. The most frequent study design was retrospective ($n=28$), followed by before-after ($n=10$), cross-sectional ($n=7$), and other prospective study designs ($n=6$). Of these, 25 stated one or more funding sources,[30–33,35–37,41,45,48,52,54–57,62,63,68,71,74,76,80,81,83,87] 11 stated that there was no funding[26,40,42,50,59,70,75,77,78,85,88] and 15 did not have a funding statement.[29,34,38,43,46,49,61,65–67,72,73,82,84,86]

Most articles were from North America ($n=45$), with the majority of these from the USA ($n=39$); 17 were from Europe, and one was from Japan There were notable differences between included jurisdictions as to whether regional and/or local public health were involved in providing public health services. In the USA, there is variability in the organisation and governance of state and local public health departments. State health departments provide population-based public health services. For this review, state departments were excluded to focus on the role of city and municipality public health departments responsible for public health services at the local and individual level.[89] In Canada, direct responsibility for public health programmes and services is generally at the local level with the exception of Prince Edward Island, Northwest Territories, Yukon and Nunavut where public health services are delivered at the provincial or territorial level.[18] In Ireland, there are six regional departments of public health.[90] In England, France and Spain, regional and local authorities are involved in delivery of public health services.[17,91] In Italy, Germany and Japan, public health services are provided by local health authorities.[17,92] In Norway, counties are responsible for public health services.[93]

The number of studies/citations increased over the timeframe of this review; pre-2010 ($n=9$); 2010–2019 ($n=25$); 2020–2023 ($n=29$). The majority of articles related to either the outpatient setting ($n=35$) or multiple settings ($n=16$). There were 8 in the hospital and 4 in the long-term care setting. At least one author was affiliated with a local public health organisation for 71% of the included citations (45/63).[27–33,36–39,44–51,53–55,57–62,64,66,68,69,71,72,79,80,82,87] A total of 122 examples of AMS and AMR surveillance were identified from 63 articles (Table S1, available as Supplementary data at *JAC-AMR* Online).

AMS activities

There were 53 citations that described local public health participation in at least one AMS activity.[26–39,41–51,53–62,64,66–75,79–82,86–88] Selected examples are provided in Table 1. Across all settings, 105 AMS activities were identified, with the most frequent being healthcare worker education ($n=22$), antimicrobial use (AMU) evaluation ($n=21$), public education ($n=17$), clinical practice guidelines ($n=10$) and antibiogram development ($n=10$). Almost all AMS activities were either in the outpatient setting ($n=44$) or across multiple settings ($n=37$), while a small number were focused on acute care hospitals ($n=15$) and in long-term care ($n=8$) (Figure 2).

AMR surveillance

There were 17 citations that described local public health activities related to AMR surveillance.[30,32,37,38,40,52,58,63,65,72,76,78,83–85,87] The majority focussed on communicable diseases: gonorrhoea ($n=6$), tuberculosis ($n=3$), syphilis ($n=1$) and shigellosis ($n=1$). The others were focused on carbapenem-resistant organisms: carbapenem-resistant Enterobacterales and *Acinetobacter baumannii* ($n=3$), MRSA ($n=2$) and multidrug resistant organisms in general ($n=1$). Surveillance occurred mostly in the outpatient setting ($n=11$), with the remaining across multiple settings ($n=4$) and in hospitals ($n=2$).

Outcome evaluation

There was wide variability in the outcomes reported by the 51 studies. Prescribing outcomes (e.g. AMU, appropriateness of prescribing, duration of therapy, use of delayed prescriptions) were evaluated in 26 studies.[29,31,32,35–37,42,45,48,49,54–56,59,62,66–68,70,74,75,80,82,84,87,88]

Table 1. Selected examples of local public health organisation involvement in AMS activities

AMS Activity	Examples
HCW Education, Public Commitment, Communication Skills Training	The Los Angeles County Department of Public Health partnered with 20 primary care and 3 urgent care clinics to implement and evaluate the impact of a multi-faceted outpatient ASP called the Targeting Appropriate Prescribing in Outpatient settings (TAP OUT) programme. This includes office posters conveying clinician commitment to prescribing antibiotics judiciously.[58]
Public Education, HCW Education, Clinical Practice Guidelines	In Spain, a health department assessed the impact of annual awareness and rational use campaigns directed at the public and medical professionals on the consumption of antibiotics.[74]
Public Education	In the UK, local authorities supported the development and delivery of a public education campaign to increase awareness of the threat of AMR, appropriate use of antibiotics and safe disposal of unused or expired antibiotics through community pharmacies.[26]
HCW Education, Audit and Feedback	In Norway, municipal Chief Medical Officers acted as facilitators for continuing medical education group meetings during which primary care physicians discuss their individual prescription reports.[81]
AMU Evaluation	In Italy, a local health authority conducted a regional AMU evaluation to assess variability in antibiotic consumption and expenditure as compared with national patterns of AMU to help identify potential areas for improvement.[88] Another local health authority performed a cross-sectional study on antibiotic use in long-term care facilities.[75]
Clinical Practice Guidelines	In the UK, a local health authority surveyed hospitals and health authorities to obtain and evaluate antibiotic prescribing policies with respect to content, quality, evidence base and usefulness in order to identify gaps and opportunities for improvement.[86]
Antibiogram Development	In the USA, the Los Angeles County Department of Public Health created regional antibiograms, including hospital and long-term acute care data, for the purposes of comparing susceptibility patterns and informing public health actions.[61] The New York City Department of Public Health collaborates with stakeholders to develop and publish borough and citywide antibiograms; these include an invasive *Streptococcus pneumoniae* antibiogram and an outpatient urinary tract infection antibiogram.[64] In Canada, the Saskatoon antimicrobial stewardship programme used a mobile app to incorporate local resistance patterns into antibiotic prescribing guidance.[67] A regional AMS committee in St. John's, Newfoundland, also used a mobile app to incorporate antibiogram information into antimicrobial prescribing guidelines and disseminate this to clinicians.[45]
ASP Evaluation	In the USA, the Los Angeles County Department of Public Health surveyed of LA County hospitals to characterize the structure and practices of ASPs to identify opportunities for improvement.[50] Similarly, the Allegheny County Health Department surveyed acute care and long-term care facilities to determine the existence of and components of ASPs, including interventions, programme measures, and barriers.[28]

AMU, antimicrobial use; ASP, Antimicrobial Stewardship Program; HCW, healthcare provider; IV, intravenous; PO, oral.

AMS Activity	Healthcare worker Education	AMU Evaluation	Public Education	Clinical Practice Guidelines	Antibiogram Development	ASP Evaluation	Public Commitment	Improved Diagnostics	Audit & Feedback	Intravenous to Oral Switch	Antibiotic Timeout	Other*
All Settings (N=105)	22	21	17	10	10	5	4	3	3	2	2	6
Outpatient (n=44)	10	14	11	3	1	0	1	1	2	0	0	2
Multiple Settings (n=37)	9	4	5	5	5	2	2	1	1	1	0	2
Hospital (n=15)	2	1	1	1	3	2	1	1	0	0	1	2
Long-Term Care (n=8)	1	2	0	1	1	1	0	0	0	1	1	0

*Other category: 1 example of each of the following activities was identified: Communications Training (Outpatient), Duration/Regimen Optimization (Outpatient), Advocacy (Multiple Settings), supporting existing AMS practices/programs (Multiple Settings), De-escalation & Streamlining (Hospital) and Interfacility transfer communication improvement initiative (Hospital).

Number of examples identified: 0 | 1-5 | 6-10 | 11-15 | 16-20 | > 20

Figure 2. Participation of local public health organisations in AMS activities. Note: MEDLINE, Embase, Global Health and International Pharmaceutical Abstracts were searched on 24 November 2023. Grey literature searches were conducted between 30 November and 12 December 2023.

Microbial outcomes (e.g. AMR, hospital-acquired infection rate, community-acquired infections rate) were included in 21 studies.[29,30,32,37,40,45,49,52,61,63,65,68,72,73,75,76,83–85,87] Patient-centred outcomes (e.g. symptom resolution, clinical cure or failure, adverse events, patient knowledge and attitudes) were included in 20 studies.[29,32,37,38,42,46,48,49,52,54,59,62,68,72,75,76,78,80,84,87] Ten studies reported on cost outcomes (e.g. expenditures, staffing, and/or materials to

Table 2. Impact of interventional studies on AMU and AMR

Author, year	Type of literature	Public Health Organisation, Country	AMS activity/AMR surveillance	Setting	Outcome(s) and directionality
Belongia, 2005[35]	Indexed, Retrospective Cohort Study	Local public health agencies, USA	AMU Evaluation, Public Education, HCW Education	Outpatient	Decreased antimicrobial prescribing
Currenti, 2020[42]	Indexed, Quasi-experimental	57 local health departments in New York State, USA	AMU Evaluation, HCW Education	Outpatient	Increased appropriateness of antibiotic prescribing for treatment of gonorrhea
Doyle, 2021[45]	Indexed, Quasi-experimental Before–After Study	Newfoundland and Labrador—Eastern Health, Canada	Antibiogram Development, Clinical Practice Guidelines	Hospital	Decreased AMU; trend towards increased appropriateness
Formoso, 2013[48]	Indexed, Non-randomized controlled study	Local health authorities, Italy	Public Education, HCW Education	Outpatient	Decreased antibiotic prescribing
Garcia, 2022[49]	Grey Literature (conference abstract), Quasi-experimental Before–After Study	Baltimore City Health, USA	Improved diagnostics	Outpatient	Increased appropriateness of antibiotic prescribing for treatment of *Chlamydia trachomatis* and *Neisseria gonorrhoeae*
Inoue, 2022[54]	Indexed, Quasi-experimental	Public health centres in Ishinomaki Medical Zone (IMZ), Japan	HCW Education, Antibiogram Development, Guidelines	Multiple	Decreased oral AMU, decreased rates of ESBL *Escherichia coli* and MRSA Bacteremia
Lambert, 2007[56]	Indexed, Controlled Before-After Study	North East Primary Care Trusts, UK	Public Education	Outpatient	Decreased antimicrobial prescribing
McNulty, 2010[62]	Indexed, Controlled Before-After Study	Health promotion units, UK	Public Education	Outpatient	No improvement in antibiotic use
OYong, 2018[66]	Grey Literature (conference abstract), Quasi-experimental Before–After Study	Los Angeles County Department of Public Health, USA	HCW Education, Audit and Feedback, Public Commitment, Communication Skills Training	Outpatient	Decreased inappropriate antibiotic prescribing rate for upper respiratory infection
Peermohamed, 2019[67]	Grey Literature (website), Quasi-experimental Before–After Study	Saskatoon Antimicrobial Stewardship Program, Canada	Antibiogram Development, Clinical Practice Guidelines	Hospital	Decreased total and antipseudomonal AMU
Perz, 2002[68]	Indexed, Non-randomized controlled study	Knox County Health Department, USA	HCW Education, Public Education	Outpatient	Decreased antibiotic prescription rates, no change in *S. pneumoniae* resistance rates
Powell, 2017[70]	Indexed, Quasi-experimental Before–After Study	Cornwall Foundation Trust, UK	AMU Evaluation, Public Education; HCW Education, Improved Diagnostics	Multiple	Decreased antibiotic consumption in primary care; decreased antibiotic prescription rates in secondary care
Redfield and Dawson, 2008[72]	Indexed, Retrospective Cohort	Chelan, Douglas, Grant, Kittitas, and Okanogan county health departments, USA	Public Education, MRSA infection surveillance	Multiple	Decreased antibiotic use
Rojas García, 2020[74]	Indexed, Interrupted time series	Health Department of the Government of La Rioja, Spain	Public Education, HCW education, Clinical Practice Guidelines	Outpatient	Mixed results: decreased antibiotic consumption in 2/4 annual campaigns

ESBL *E. coli*, extended-spectrum beta-lactamase-producing *Escherichia coli*.

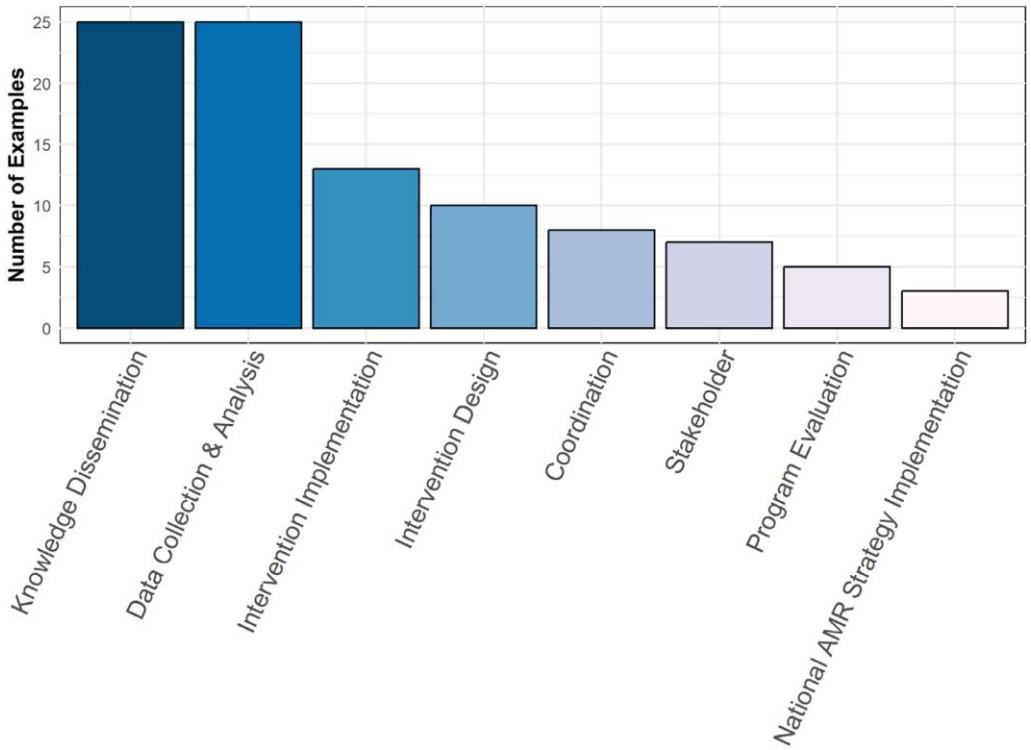

Figure 3. Roles of local public health organisations in AMS and AMR surveillance activities. Note: MEDLINE, Embase, Global Health and International Pharmaceutical Abstracts were searched on 24 November 2023. Grey literature searches were conducted between 30 November and 12 December 2023.

support AMS or surveillance activities).[34,35,41,42,45,47,48,50,56,58,66,68–70,72,74,88]

A subset of interventional studies ($n=14$) reported impact on the broader population health outcomes of AMU or AMR.[35,42,45,48,49,54,56,62,66–68,70,72,73,74] There were nine studies that reported decreased AMU[45,48,54,56,66–68,70,72] and three that reported increased appropriateness of AMU[42,45,49]; most of these were multi-faceted interventions frequently with an education component. There were two studies of public education campaigns that reported no difference in AMU[35,62] and one study of public/healthcare worker education campaign plus clinical practice guideline dissemination reporting mixed results.[74] Of the two studies that evaluated the impact on AMR, one found a decrease in AMR,[54] whereas one reported no change[68] (Table 2).

Role of local public health organisations

Local public health organisations were most frequently involved in knowledge dissemination (e.g. developing tools and resources, participating in the delivery of education and training) ($n=25$) and data collection and analysis (e.g. AMU data, patient demographics, clinical outcomes) ($n=25$). Local public health also played a role in intervention implementation ($n=13$), intervention design (e.g. of AMS activities) ($n=10$), coordination (e.g. bringing together and facilitating collaboration between key stakeholders) ($n=8$), as an advisor (e.g. as part of an advisory committee or as a consultant on specific AMS or AMR surveillance initiatives) ($n=7$), in programme evaluation (e.g. of existing AMS programmes and activities) ($n=5$) and in implementation of a national AMR strategy or action plan ($n=3$) (Figure 3).

Discussion

In this scoping review, we found numerous examples of local public health participation in AMS activities related to education, AMU evaluation, clinical practice guidelines and antibiogram development and dissemination. Most articles had one or more authors affiliated with a local public health organisation, signalling the important contributions of public health practitioners in these initiatives.

Our findings are consistent with previous descriptions of alignment between AMS activities and established local public health functions such as outreach, strategic partnerships, education and surveillance.[3,34,94,95] Local public health organisations are well-positioned to promote appropriate AMU to the public, clinicians/healthcare workers, and other partners, however, the impact of education alone on sustained AMS outcomes is limited.[96–98] Standalone education campaigns were associated with mixed outcomes, with some studies reporting improvements in antimicrobial prescribing,[48,56,68] and others reporting no difference[35,62] The disproportionately heavy focus of AMS efforts on

educating clinicians/healthcare workers ($n=22$, 21%) and the public ($n=17$, 16%) suggests opportunities to combine education with other activities to increase the yield of such interventions. Another emerging role of local public health organisations is in the implementation of national AMR action plans.[33,41,70] For example, Powell et al. describe the extensive work of a local public health system in establishing a local AMR working group to develop and implement a coordinated local action plan building on the UK AMR Strategy.[70] This is logical given that established local public health functions, including surveillance, monitoring, and education, are also major areas of focus within the World Health Organization Global Action Plan on AMR and many national AMR strategies.[4,99] To have a meaningful impact, local public health could prioritize combining knowledge dissemination activities with other data-driven interventions such as audit and feedback and ongoing surveillance of AMU data.[33,41,66,70]

Historically, as some AMS activities focus on improving outcomes for individual patients, many public health professionals view this as a clinical domain, potentially limiting their involvement. Strengthening the knowledge and skills of public health professionals to understand the broader population impacts of AMR and advocate for AMS activities could help increase spread and impact.[100] This can be further enhanced by leveraging strategic partnerships, as local public health are already doing as part of their routine activities, in advancing AMS activities in hospitals,[50,73] long-term care facilities[53] and across multiple settings[28,41] as well as taking on a coordination role to bring together partners and resources.[39,54,60] A survey conducted by the National Association of County and City Health Officials (NACCHO) in the USA found that existing relationships between local health departments and their healthcare facility partners are foundational and that about 20% reported supporting existing antibiotic stewardship programmes (ASPs).[34] In France, regional AMS coordination centres relied on pre-existing relationships, including with public health, to facilitate AMS activities and the linking of infection prevention and control with regional AMS activities.[41]

Importantly, heterogeneity in the structure, capacity, governance, mandates, priorities and resources of public health organisations has an impact on involvement in AMS activities.[17–19,91] The variability in the presence or absence of a formal mandate also affects resource allocation to perform these activities; for example, in England, local health authorities are responsible for local public health services, and some have AMS steering groups.[4] While most studies stated that there was funding for ASP or AMR surveillance initiatives, limited details were available (i.e. one-time, ongoing for a period of time or operational). This is important because inconsistent and sporadic funding impacts the extent of local public health engagement in AMS activities, sustainability and the equitable geographical distribution of such activities. For example, in the USA, state health departments are funded for AMS implementation but only a small number of county and city health departments receive funding directly from the US CDC for healthcare-associated infection (HAI)/AMR programmes. This means that some large city health departments (e.g. New York City Department of Health and Mental Hygiene, Los Angeles County Department of Public Health) have the capacity to conduct higher-impact data-driven interventions while local health departments without funding may not.[34,101]

A general limitation of this review is the method used to identify grey literature. To balance workload, we used a Google web search strategy with search strings instead of searching individual local public health organisation websites, which would have missed capturing some relevant grey literature, in particular, online documents. However, rather than being exhaustive, the intention of this scoping review was to identify examples and themes. Limited capacity by local public health to publish in peer-reviewed journals may have reduced the number of studies available for inclusion in this review. Despite these limitations, this review underscores an increasingly important role for local public health in high impact AMS interventions.

Conclusion

This scoping review of AMS and AMR surveillance activities supported by local public health provides insight into ways to leverage local public health expertise and capabilities to mitigate AMR, particularly in the areas of knowledge translation, optimising surveillance, and establishing strategic collaborations with partners, healthcare systems and healthcare workers. Future work should focus on better understanding the barriers, facilitators and potential impact of specific local public health-supported activities, including funding needed to optimize participation of local public health organisations in AMR mitigation efforts.

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Transparency declarations

All authors: none to declare.

Disclaimer

The findings and conclusions in this article are those of the authors and do not necessarily represent the official position of the centres for Disease Control and Prevention or the UK Health Security Agency.

Supplementary data

Table S1 is available as Supplementary data at *JAC-AMR* Online.

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