

Infection control, oltre l'ospedale
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Ruolo degli infermieri nella stewardship antimicrobica: barriere, facilitatori e promozione del cambiamento. Una metasintesi.

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Diapositiva 1

W1

Buon pomeriggio, sono A. Volpon e sarò la portavoce di uno dei gruppi di lavoro, costituito da 7 ex studenti e dai 2 tutors che con noi hanno condiviso questo percorso, del master di rischio infettivo dell'Università di Parma, conclusosi il 21 marzo scorso ed andrò a presentare i risultati della ns metasintesi qualitativa

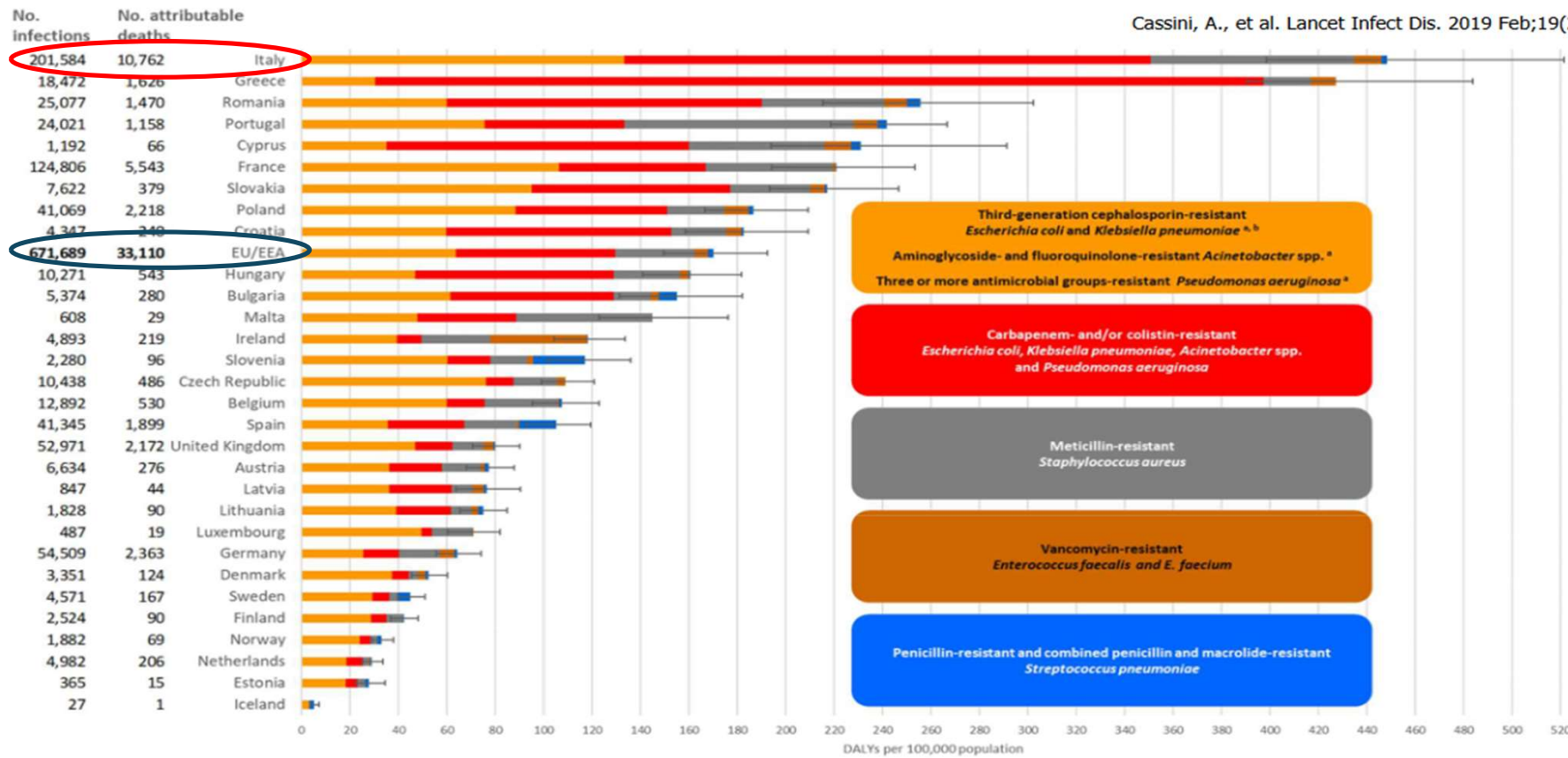
Win10; 01/09/2024



Musicare 2019 – AMR in Europa



Cassini, A., et al. Lancet Infect Dis. 2019 Feb;19(2):129-130.





Obiettivo

Valutare le conoscenze degli infermieri sull'antimicrobial stewardship e analizzare la percezione che hanno gli stessi rispetto alle barriere e i facilitatori che influenzano la loro presenza nei programmi di stewardship



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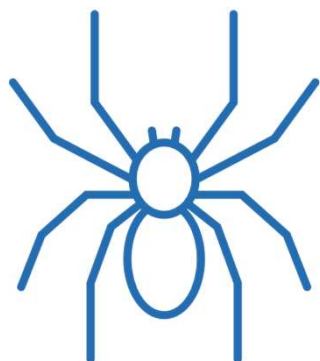
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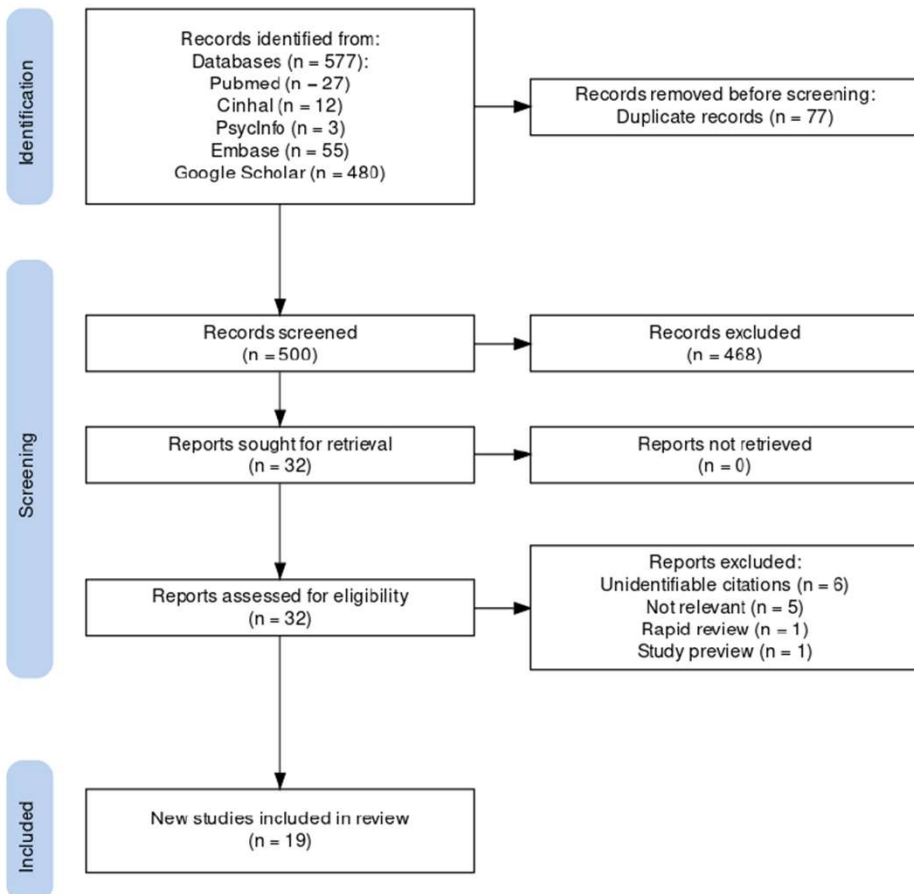
STRATEGIA DI RICERCA



- **S (sample):** Nurs*
- **PI (phenomenon of interest):** Antimicrobial Stewardship
- **D (design):** Focus group, observation, interview
- **E (evaluation):** Knowledge, Barriers, Facilitators, Attitudes, Perceived attitudes, Perceived barriers
- **R (research type):** All qualitative studies



Identification of new studies via databases and registers



CNSP

Critical Appraisal
Skills Programme

ConQual Process

Levels of confidence

Level	Definition
High	A high level of confidence in the synthesised finding that underpins the recommendations for practice.
Moderate	A moderate level of confidence in the synthesised finding that underpins the recommendations for practice.
Low	A low level of confidence in the synthesised finding that underpins the recommendations for practice.
Very low	A very low level of confidence in the synthesised finding that underpins the recommendations for practice.



	Turner et al. 2023	Currie et al. 2020	Ierano et al. 2022	Nair et al. 2019	Ramly et al. 2020	Carter et al. 2018	Mula et al. 2019	Goulopoulos et al. 2019	Harbin et al. 2022	Jeffis et al. 2020	Wong et al. 2020	Ayton et al. 2022	Van Gulik et al. 2021	Dowson et al. 2020	Rout et al. 2020	Hall et al. 2022	Tadzong – Awasum 2023	Groumoutis et al. 2023	Bridey et al. 2023
Was there a clear statement of the aims of the research?	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Is a qualitative methodology appropriate?	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Was the research design appropriate to address the aims of the research?	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Was the recruitment strategy appropriate to the aims of the research?	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Was the data collected in a way that addressed the research issue?	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Has the relationship between researcher and participants been adequately considered?	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Have ethical issues been taken into consideration?	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Was the data analysis sufficiently rigorous?	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Was the data analysis sufficiently rigorous?	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

● Yes, ● Can't tell, ● No

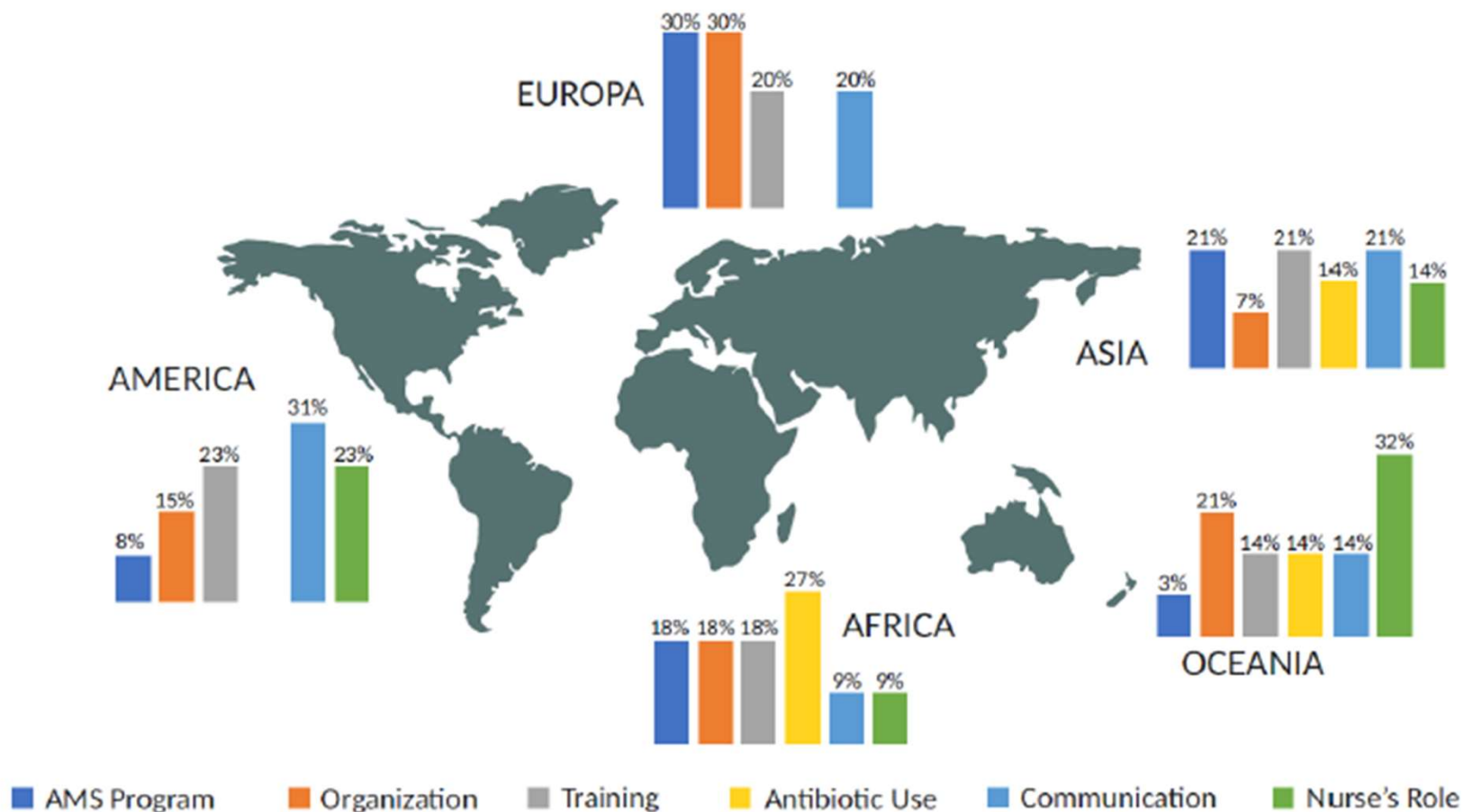


METASINTESI

Macro-aree	<i>Findings</i>	Categorie
Programma AMS	10	3
Organizzazione contesto e risorse	14	6
Formazione, conoscenze ed educazione	13	4
Uso degli antibiotici	9	3
Comunicazione e relazione	14	3
Ruolo infermieri	15	5
Totale Macro-aree = 6	Totale <i>findings</i> = 75	Totale categorie = 24



Antimicrobial stewardship in healthcare: Exploring the role of nurses in promoting change, identifying barrier elements and facilitator – A metasynthesis					
Synthesized finding	Type of research	Dependability	Credibility	ConQual Score	Comments
AMS Program	Qualitative	High	High	High	Dependability: all studies scored high dependability. Credibility: given the results obtained (10 U)a high level of credibility was declared.
Organization, context, and resources	Qualitative	High	Moderate (Downgraded one level)	Moderate	Dependability: all studies scored high dependability. Credibility: Given the results obtained, it was downgraded by one level (11 U - 3 C) .
Training, knowledge, and education	Qualitative	High	High	High	Dependability: all studies scored high dependability. Credibility: given the results obtained (13 U)a high level of credibility was declared
Antibiotic use	Qualitative	Moderate (Downgraded one level)	High	Moderate	Dependability : Five studies scored high reliability and 2 scored moderate reliability Credibility: given the results obtained (9 U)a high level of credibility was declared
Communication and relationship	Qualitative	High	Moderate (Downgraded one level)	Moderate	Dependability: all studies scored high dependability. Credibility: Given the results obtained, it was downgraded by one level (12 U - 2 C results)
Nurses' role	Qualitative	Moderate (Downgraded one level)	High	Moderate	Dependability : Seven studies scored high reliability and 1 scored moderate reliability Credibility: given the results obtained (15 U)a high level of credibility was declared





USE OF ANTIBIOTICS

The unregulated sale of antibiotics and their easy accessibility further contribute to the problem of antibiotic resistance.

“Such medications are sold everywhere. You can just go to the pharmacy and tell them you need this or that antibiotic and you will have it” (Tadzong-Awasum et al.)

COMMUNICATION AND RELATIONSHIP

Interprofessional communication, both with the various healthcare actors and with patients and caregivers, represents an opportunity for constructive discussion and development in the context of appropriate antibiotic management (AMS).

“Good communication between the treating teams and ED (Emergency Department) doctors...” (Goulopoulos et al.)

AMS PROGRAMS

Promotion and participation in appropriate antibiotic stewardship (AMS) programs are widely recognized as critically important globally.

“The decision making related to use of antibiotics is the doctors’ role, it’s not the nurses’ role” (Van Gulik et al)

“I’m just at ward level giving out the antibiotics that are prescribed” (Currie et al.)



ROLE OF THE NURSE

Workflow facilitator and promoter of patient safety.

"We have the guidelines online and then we can print them out... Even though we can't actually be part of the actual decision to prescribe, we can be part of the discussion and bring that up. And then, I guess, that would initiate a culture of change..." (Ierano et al.)

TRAINING

Challenge to promote skills, stimulate interest and standardize professional behaviors in order to reduce AMR and decrease the spread of HAIs.

"I work in orthopaedics so we have a lot of resistance... even in the last 12 to 24 months we see a lot more coming through... resistance to multiple things and other infections occurring in patients' wounds. I remember when we first got our first VRE patient on the orthopaedic unit, and it would have been probably 9 or 10 years ago.... [now] it's kind of like everyone seems to have VRE. Everyone, I know! ... it's like the boy who cried wolf. It doesn't shock you anymore." (Ayton et al)

ORGANIZATION

Nursing shortages, workload, and high patient turnover hinder the implementation of AMS. In some contexts, limited economic and instrumental resources are added.

"We still do (preparing more antibiotics at once) because we keep them in fridge, but it's not recommended. We try to relieve ourselves because of workload so we end up doing shortcuts." (Mula et al.)



CONCLUSIONI:

L'infermiere, svolge un ruolo cruciale nella stewardship antimicrobica anche senza avere potere decisionale sulle prescrizioni e, quindi, può e deve intervenire attivamente e contribuire alle numerose attività dell'AMS.

- **Ruolo centrale dell'infermiere nelle cure del paziente**
- **Presenza di master di primo e secondo livello**
- **Presenza di programmi nazionali (PNCAR)**

- **Mancanza di comunicazione tra professionisti**
- **Mancanza di riconoscimento del ruolo**
- **Mancanza di formazione continua**
- **Mancanza di investimenti in programmi AMS**



3 messaggi da portare a casa:

- **Restano da esplorare le strategie future per far evolvere il ruolo dell'infermiere e renderlo un attore chiave nella stewardship antimicrobica.**
- **Impegnarsi per far rientrare tra i fundamental care il contrasto all'antimicrobico resistenza.**
 - **Supporto legislativo e finanziario per uniformare la lotta all'antibiotico-resistenza in tutte le regioni italiane, garantendo l'attuazione di programmi di stewardship.**



BIBLIOGRAFIA

- Craig Lockwood, Kylie Porritt, Zachary Munn, Leslie Rittenmeyer, Susan Salmond, Merete Bjerrum, Heather Loveday, Judith Carrier, Daphne Stannard. Chapter 2: Systematic reviews of qualitative evidence - JBI Manual for Evidence Synthesis - JBI Global Wiki. Accessed September 21, 2023. <https://jbi-global-wiki.refined.site/space/MANUAL/4688637/Chapter+2%3A+Systematic+reviews+of+qualitative+evidence>
- Cooke A, Smith D, Booth A. Beyond PICO: The SPIDER Tool for Qualitative Evidence Synthesis. *Qual Health Res.* 2012;22(10):1435-1443. doi:10.1177/1049732312452938
- Munn Z, Aromataris E, Tufanaru C, et al. The development of software to support multiple systematic review types: the Joanna Briggs Institute System for the Unified Management, Assessment and Review of Information (JBI SUMARI). *Int J Evid Based Healthc.* 2019;17(1):36-43. doi:10.1097/XEB.000000000000152
- Page MJ, McKenzie JE, Bossuyt PM, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *The BMJ.* 2021;372:n71. doi:10.1136/bmj.n71
- Critical Appraisal Skills Programme (2018). CASP Qualitative Studies Checklist. Date Accessed. December 2023 URL. Accessed: <https://casp-uk.net/checklists/casp-qualitative-studies-checklist-fillable.pdf>. Accessed January 3, 2024. <https://casp-uk.net/checklists/casp-qualitative-studies-checklist-fillable.pdf>
- Munn Z, Porritt K, Lockwood C, Aromataris E, Pearson A. Establishing confidence in the output of qualitative research synthesis: the ConQual approach. *BMC Med Res Methodol.* 2014;14:108. doi:10.1186/1471-2288-14-108
- Ayton D, Watson E, Betts JM, et al. Implementation of an antimicrobial stewardship program in the Australian private hospital system: qualitative study of attitudes to antimicrobial resistance and antimicrobial stewardship. *BMC Health Serv Res.* 2022;22(1):1554. doi:10.1186/s12913-022-08938-8
- Rout J, Brysiewicz P. Perceived barriers to the development of the antimicrobial stewardship role of the nurse in intensive care: Views of healthcare professionals. *South Afr J Crit Care.* 2020;36(1):51. doi:10.7196/SAJCC.2020.v36i1.410
- Ramly E, Tong M, Bondar S, Ford JH, Nace DA, Crnich CJ. Workflow Barriers and Strategies to Reduce Antibiotic Overuse in Nursing Homes. *J Am Geriatr Soc.* 2020;68(10):2222-2231. doi:10.1111/jgs.16632
- Tadzong-Awasum G. Health personnel experiences with antimicrobial resistance: A qualitative phenomenological assessment in a low-resource setting. *Int Public Health J.* 2023;15(2):197-202.
- Turner R, Hart J, Ashiru-Oredope D, et al. A qualitative interview study applying the COM-B model to explore how hospital-based trainers implement antimicrobial stewardship education and training in UK hospital-based care. *BMC Health Serv Res.* 2023;23(1):770. doi:10.1186/s12913-023-09559-5
- Currie K, Laidlaw R, Ness V, et al. Mechanisms affecting the implementation of a national antimicrobial stewardship programme; multi-professional perspectives explained using normalisation process theory. *Antimicrob Resist Infect Control.* 2020;9(1):99. doi:10.1186/s13756-020-00767-w
- Ierano C, Thursky K, Peel T, Rajkhowa A, Marshall C, Ayton D. Influences on surgical antimicrobial prophylaxis decision making by surgical craft groups, anaesthetists, pharmacists and nurses in public and private hospitals. Gurgel RQ, ed. *PLOS ONE.* 2019;14(11):e0225011. doi:10.1371/journal.pone.0225011
- Nair M, Tripathi S, Mazumdar S, et al. "Without antibiotics, I cannot treat": A qualitative study of antibiotic use in Paschim Bardhaman district of West Bengal, India. *PloS One.* 2019;14(6):e0219002. doi:10.1371/journal.pone.0219002
- Groumoutis JY, Gorman SK, Beach JE. Identifying opportunities for antimicrobial stewardship in a tertiary intensive care unit: A qualitative study. *Can J Crit Care Nurs.* 2023;34(2):8-17. doi:10.5737/23688653-3428
- Gouloupoulos A, Rofe O, Kong D, Maclean A, O'Reilly M. Attitudes and beliefs of Australian emergency department clinicians on antimicrobial stewardship in the emergency department: A qualitative study. *Emerg Med Australas EMA.* 2019;31(5):787-796. doi:10.1111/1742-6723.13251
- Van Gulik N, Hutchinson A, Considine J, Driscoll A, Malathum K, Botti M. Perceived roles and barriers to nurses' engagement in antimicrobial stewardship: A Thai qualitative case study. *Infect Dis Health.* 2021;26(3):218-227. doi:10.1016/j.idh.2021.04.003
- Mula CT, Human N, Middleton L. An exploration of workarounds and their perceived impact on antibiotic stewardship in the adult medical wards of a referral hospital in Malawi: a qualitative study. *BMC Health Serv Res.* 2019;19(1):64. doi:10.1186/s12913-019-3900-0
- Hall J, Hawkins O, Montgomery A, Singh S, Mullan J, Degeling C. Dismantling antibiotic infrastructures in residential aged care: The invisible work of antimicrobial stewardship (AMS). *Soc Sci Med.* 2022;305:N.PAG-N.PAG. doi:10.1016/j.socscimed.2022.115094
- Jeffs L, McIsaac W, Zahradnik M, et al. Barriers and facilitators to the uptake of an antimicrobial stewardship program in primary care: A qualitative study. *PLoS ONE.* 2020;15(3). doi:10.1371/journal.pone.0223822
- Dowson L, Friedman ND, Marshall C, et al. Antimicrobial stewardship near the end of life in aged care homes. *Am J Infect Control.* 2020;48(6):688-694. doi:10.1016/j.ajic.2019.10.010
- Bridey C, Le Dref G, Bocquier A, Bonnay S, Pulcini C, Thilly N. Nurses' perceptions of the potential evolution of their role in antibiotic stewardship in nursing homes: a French qualitative study. *JAC-Antimicrob Resist.* 2022;5(1):dlad008. doi:10.1093/jacamr/dlad008/facilitators of
- Ierano C, Rajkhowa A, Gotterson F, et al. Opportunities for nurse involvement in surgical antimicrobial stewardship strategies: A qualitative study. *Int J Nurs Stud.* 2022;128:N.PAG-N.PAG. doi:10.1016/j.ijnurstu.2022.104186
- Harbin NJ, Lindbæk M, Romøren M. Barriers and appropriate antibiotic use in primary care institutions after an antibiotic quality improvement program – a nested qualitative study. *BMC Geriatr.* 2022;22(1):458. doi:10.1186/s12877-022-03161-w