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Section of Microbiology

Department of Pathology and Laboratory Medicine

SUMMARY:

Publication	232
Book Chapters	06
CONTRIBUTIONS TO REPORTS, GUIDELINES AND POLICY	34
DOCUMENTS:	

Publications:

Year 2024:

1. Addressing conflict of interest driving irrational prescribing of antibiotics in pluralistic health systems: an interventional study in Pakistan. **Dr Rumina Hasan** and Dr Sadia Shakoor were part of the group that led a recently released JPMA supplement https://jpma.org.pk/index.php/public_html/issue/view/98.
2. Physicians' inclination towards standard guidelines and regulations on incentive based prescribing practices in Karachi. A mixed methods study design. Khan MS, Shepherd AR, Azizullah Z, Khan SS, Noor MN, Mark NV, Shakoor S, **Hasan R**, Siddiqui AR. A mixed methods study design. J Pak Med Assoc. 2024 Nov;74(11 (Supple-12)):S6-S10. https://jpma.org.pk/index.php/public_html/article/view/22842.
3. Incentive-linked prescribing and the plights of patients: a qualitative study in Pakistan. Noor MN, Azizullah Z, Abbasi HS, Mark NV, Shepherd AR, Siddiqui AR, Khan MS, **Hasan R**, Shakoor S. J Pak Med Assoc. 2024 Nov;74(11 (Supple-12)):S19-S23. DOI: [10.47391/JPMA.AKU-EPP-05](https://doi.org/10.47391/JPMA.AKU-EPP-05)
4. Evaluation of a point-of-care multiplex immunochromatographic assay for the diagnosis of typhoid: results from a retrospective diagnostic accuracy study. **Hasan R**, Azizullah Z, Shams H, Dittrich S, Andrews JR, Charles RC, Esfandiari J, Gunasekera D, Tetteh KK, and Sapkota J. 2024. Journal of clinical microbiology, e0042824. Advance online publication. <https://doi.org/10.1128/jcm.00428-24>
5. Global burden of bacterial antimicrobial resistance 1990-2021: a systematic analysis with forecasts to 2050. GBD 2021 Antimicrobial Resistance Collaborators. Lancet. 2024 Sep 28;404(10459):1199-1226. doi: 10.1016/S0140-6736(24)01867-1. Epub 2024 Sep 16. [https://doi.org/10.1016/S0140-6736\(24\)01867-1](https://doi.org/10.1016/S0140-6736(24)01867-1). Collaborator: Drs **Rumina Syeda Hasan** and Sadia Shakoor.
6. Linezolid-resistant Enterococcus faecium clinical isolates from Pakistan: a genomic analysis. Nasir SAR, Zeeshan M, **Hasan R**, Farooqi J, Jabeen K, Khan E, Ghanchi N. et al. BMC Microbiol 24, 347. 2024. <https://doi.org/10.1186/s12866-024-03491-2>
7. Temporary persistence of bedaquiline-resistant mycobacterium tuberculosis Isolates under bedaquiline pressure as a model to explore resistance mechanisms. Saeed DK, Shakoor S, Hasan Z, Razzak SA, Ashraf J, Azizullah Z, Kanji A, and **Hasan R**. Department of Pathology and Laboratory Medicine. 2024. https://doi.org/10.4103/ijmy.ijmy_121_24

8. The Second International Collaborative Mycology Conference: evidence-informed fight against fungal diseases in Pakistan. Farooqi J, Bongomin F, **Hasan R**, Nasir N, Irfan M, Mahmood SF, Zafar A, Mir F, Nizamuddin S, and Jabeen K. *Ther Adv Infect Dis*. 2024 Sep 6;11:20499361241272510. DOI: [10.1177/20499361241272510](https://doi.org/10.1177/20499361241272510)
9. A successful UN High-Level Meeting on antimicrobial resistance must build on the 2023 UN High-Level Meeting on tuberculosis. Cirillo D, Anthony R, Gagneux S, Horsburgh CR Jr, **Hasan R**, Darboe S, Laniado-Laborin R, Probandari A, Tukvadze N, Arcêncio RA, Bimba JS, Brighenti S, Chesov D, Chiang CY, Kalmambetova G, Knight G, Konstantynovska O, Kruse A, Lange C, Mayanja-Kizza H, McBryde E, Min J, Sanchez-Montalva A, Sulis G, Tsogt B, Van Der Walt M, Yeboah-Manu D and Hauser J. *Lancet Glob Health*. 2024 Aug;12(8):e1225-e1226. DOI: [10.1016/S2214-109X\(24\)00229-8](https://doi.org/10.1016/S2214-109X(24)00229-8)
10. Healthcare consumers' perceptions of incentive-linked prescribing: A scoping review. Noor MN, Abbasi HS, van Der Mark N, Azizullah Z, Linton J, Rahman-Shepherd A, Siddiqui AR, Khan MS, **Hasan R** and Shakoor S. *PLOS Glob Public Health*. 2024 Jun 27;4(6):e0003026. DOI: [10.1371/journal.pgph.0003026](https://doi.org/10.1371/journal.pgph.0003026).
11. Value of 3-D-Printed Swabs for Respiratory Sampling and Testing. Hasan Z, Iqbal A, Ahmed I, Khan MA, Jabeen K, Islam N, Khan E and Sayani S. Received: 28 June 2023 / Accepted: 24 July 2023. *Biomedical Materials & Devices*. <https://doi.org/10.1007/s44174-023-00120-w>.
12. Efflux pump gene single nucleotide variants associated with resistance in Mycobacterium tuberculosis isolates with discrepant drug genotypes. Hasan Z, Razzak SA, Kanji A, Shakoor S, and **Hasan R**. *J Glob Antimicrob Resist*. 2024 May 22:S2213-7165(24)00095-X. DOI: [10.1016/j.jgar.2024.05.006](https://doi.org/10.1016/j.jgar.2024.05.006).
13. "Caught In Each Other's Traps": Factors Perpetuating Incentive-Linked Prescribing Deals Between Physicians and the Pharmaceutical Industry. Khan MS, Rahman-Shepherd A, Noor MN, Siddiqui AR, Goodman C, Wiseman V, Isani AK, Aftab W, Sharif S, Shakoor S, Siddiqui S and **Hasan R**. *Int J Health Policy Manag*. 2024 Mar 17. DOI: [10.34172/ijhpm.2024.8213](https://doi.org/10.34172/ijhpm.2024.8213).
14. GBD 2021 Tuberculosis Collaborators. Global, regional, and national age-specific progress towards the 2020 milestones of the WHO End TB Strategy: a systematic analysis for the Global Burden of Disease Study 2021. *Lancet Infect Dis*. 2024 Mar 19:S1473-3099(24)00007-0. DOI: [10.1016/S1473-3099\(24\)00007-0](https://doi.org/10.1016/S1473-3099(24)00007-0). Collaborator: **Rumina Syeda Hasan**
15. Estimating the subnational prevalence of antimicrobial resistant Salmonella enterica serovars Typhi and Paratyphi A infections in 75 endemic countries, 1990-2019: a modelling study. GRAM Typhoid Collaborators. *Lancet Glob Health*. 2024 Mar;12(3):e406-e418. DOI: [10.1016/S2214-109X\(23\)00585-5](https://doi.org/10.1016/S2214-109X(23)00585-5). Collaborator: **Rumina Hasan**.
16. What happens when private general practitioners receive incentivisation offers from pharmaceutical sales representatives? A qualitative study in Pakistan. Noor MN, Rahman-Shepherd A, Khan SS, **Hasan R**, Siddiqui AR, Azam I, Bhutto F, Isani AK, Siddiqui S, Khan RI, Shakoor S and Khan M. 2024 Feb 1:13558196241230853. *J Health Serv Res Policy*. DOI: [10.1177/13558196241230853](https://doi.org/10.1177/13558196241230853).

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18. Target product profiles: tests for tuberculosis treatment monitoring and optimization. Gupta-Wright A, den Boon S, MacLean EL, Cirillo D, Cobelens F, Gillespie SH, Kohli M, Ruhwald M, Savic R, Brigden G, Gidado M, Goletti D, Hanna D, **Hasan R**, Hewison C, Koura KG, Lienhardt C, Lungu P, McHugh TD, McKenna L, Scott C, Scriba T, Sekaggya-Wiltshire C, Kasaeva T, Zignol M, Denkinger CM, and Falzon D. Bull World Health Organ. 2023 Nov 1;101(11):730-737. DOI: [10.2471/BLT.23.290901](https://doi.org/10.2471/BLT.23.290901)
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20. The healthcare field as a marketplace: general practitioners, pharmaceutical companies, and profit-led prescribing in Pakistan. Noor MN, Liverani M, Bryant J, Rahman-Shepherd A, Sharif S, Aftab W, Shakoor S, Khan M and **Hasan R**. Health Sociol Rev. 2023 Jul;32(2):198-212. DOI: [10.1080/14461242.2022.2139628](https://doi.org/10.1080/14461242.2022.2139628)
21. Incentivisation practices and their influence on physicians' prescriptions: A qualitative analysis of practice and policy in Pakistan. Khan M, Rahman-Shepherd A, Noor MN, Sharif S, Hamid M, Aftab W, Isani AK, Khan RI, Hasan R, Shakoor S, Siddiqi S. PLOS Glob Public Health. 2023 Jun 29;3(6):e0001890. DOI: [10.1371/journal.pgph.0001890](https://doi.org/10.1371/journal.pgph.0001890)
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23. Laboratory service relocation: experience and lessons learned from relocating a biosafety level-3 clinical mycobacteriology service to a new facility. Shakoor S, Ahmed I, Wahab K, **Shafiq S**, Shahid A, Chishti S, Ghulam H and **Hasan R**. Int J Mycobacteriol. 2023 Apr-Jun;12(2):184-191. DOI: [10.4103/ijmy.ijmy_98_23](https://doi.org/10.4103/ijmy.ijmy_98_23)
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26. The Landscape of Stem Cell Research in Pakistan. Ahmad S, Zeeshan S, Hussain A, **Hasan R**, Ghias K, Mian A and Enam SA. J Pak Med Assoc. 2023 Feb;73(Suppl 1)(2):S19-S24. DOI: [10.47391/JPMA.AKUS-04](https://doi.org/10.47391/JPMA.AKUS-04).

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27. Comparative Analysis of Commercially Available Typhoid Point-of-Care Tests: Results of a Prospective and Hybrid Retrospective Multicenter Diagnostic Accuracy Study in Kenya and Pakistan. Sapkota J, **Hasan R**, Onsare R, Arafah S, Kariuki S, Shakoor S, Qamar F, Mundalo S, Njeru F, Too R, Ndegwa E, Andrews JR and Dittrich S. *J Clin Microbiol.* 2022 Nov 30:e0100022. DOI: [10.1128/jcm.01000-22](https://doi.org/10.1128/jcm.01000-22).
28. Genomic analysis of sewage from 101 countries reveals global landscape of antimicrobial resistance. Munk P, Brinch C, Møller FD, Petersen TN, Hendriksen RS, Seyfarth AM, Kjeldgaard JS, Svendsen CA, van Bunnik B, Berglund F; Global Sewage Surveillance Consortium, Larsson DGJ, Koopmans M, Woolhouse M, Aarestrup FM. *Nat Commun.* 2022 Dec 1;13(1):7251. DOI: [10.1038/s41467-022-34312-7](https://doi.org/10.1038/s41467-022-34312-7). Collaborator **Rumina Hasan**
29. Impact of a multifaceted intervention on physicians' knowledge, attitudes and practices in relation to pharmaceutical incentivisation: protocol for a randomised control trial. Noor MN, Khan M, Rahman-Shepherd A, Siddiqui AR, Khan SS, Azam I, Shakoor S and **Hasan R**. 2022 Nov 4;12(11):e067233. DOI: [10.1136/bmjopen-2022-067233](https://doi.org/10.1136/bmjopen-2022-067233).
30. The healthcare field as a marketplace: general practitioners, pharmaceutical companies, and profit-led prescribing in Pakistan. Noor MN, Liverani M, Bryant J, Rahman-Shepherd A, Sharif S, Aftab W, Shakoor S, Khan M and **Hasan R**. *Health Sociol Rev.* 2022 Nov 2:1-15. DOI: [10.1080/14461242.2022.2139628](https://doi.org/10.1080/14461242.2022.2139628).
31. Exploring stakeholders' experiences and perceptions regarding barriers to effective surveillance of communicable diseases in a rural district of Pakistan: a qualitative study. Naeem I, Siddiqui S, Siddiqui AR, and **Hasan R**. *BMJ Open.* 2022 Nov 11;12(11):e067031. DOI: [10.1136/bmjopen-2022-067031](https://doi.org/10.1136/bmjopen-2022-067031).
32. Bedaquiline resistant Mycobacterium tuberculosis clinical isolates with and without rv0678 mutations have similar growth patterns under varying BDQ drug pressure. Saeed DK, Ashraf J, Hasan Z, Shakoor S, Kanji A and **Hasan R**. *Tuberculosis (Edinb).* 2022 Sep 28;137:102266. DOI: [10.1016/j.tube.2022.102266](https://doi.org/10.1016/j.tube.2022.102266).
33. Variants associated with Bedaquiline (BDQ) resistance identified in Rv0678 and efflux pump genes in Mycobacterium tuberculosis isolates from BDQ naïve TB patients in Pakistan. Saeed DK, Shakoor S, Razzak SA, Hasan Z, Sabzwari SF, Azizullah Z, Kanji A, Nasir A, Shafiq S, Ghanchi NK and **Hasan R**. *BMC Microbiol.* 2022 Feb 25;22(1):62. DOI: [10.1186/s12866-022-02475-4](https://doi.org/10.1186/s12866-022-02475-4).
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36. Bedaquiline Drug Resistance Emergence Assessment in MDR-TB (DREAM): a 5-Year Prospective In-Vitro Surveillance Study of Bedaquiline and Other Second-Line Drug Susceptibility Testing in MDR-TB Isolates. Kaniga K, **Hasan R**, Jou R, Vasiliauskienė E, Chuchottaworn C, Ismail N, Metchock B, Miliauskas S, Viet Nhung N, Rodrigues C, Shin S, Simsek H, Smittikarn S, Ngoc ALT, Boonyasopun J, Kazi M, Kim S, Kamolwat P,

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