DAFTAR PUSTAKA

1. *World Health Organization.* Global report on infection prevention and control. *Geneva: WHO; 2022. Available from: http://apps.who.int/bookorders*
2. Wah Goh LP, Marbawi H, Goh SM, Abdul Asis AK bin, Gansau JA. The prevalence of hospital-acquired infections in Southeast Asia (1990-2022). *J Infect Dev Ctries*. 2023;17(2):139-146. doi:10.3855/JIDC.17135
3. Rudd KE, Johnson SC, Agesa KM, et al. Global, regional, and national sepsis incidence and mortality, 1990–2017: analysis for the Global Burden of Disease Study. *Lancet*. 2020;395(10219):200. doi:10.1016/S0140-6736(19)32989-7
4. Li A, Ling L, Qin H, et al. Epidemiology, Management, and Outcomes of Sepsis in ICUs among Countries of Differing National Wealth across Asia. *Am J Respir Crit Care Med*. 2022;206(9):1107-1116. doi:10.1164/rccm.202112-2743OC
5. Purba AKR, Mariana N, Aliska G, et al. The burden and costs of sepsis and reimbursement of its treatment in a developing country: an observational study on focal infections in Indonesia. *Int J Infect Dis*. 2020;96:211–218. doi:10.1016/j.ijid.2020.04.075
6. Centers for Disease Control and Prevention. Healthcare-associated infections (HAIs): reports and data. Atlanta: Centers for Disease Control and Prevention; 2024 Oct 25 [cited 2025 Sep 2]. Available from: https://www.cdc.gov/healthcare-associated-infections/php/data/
7. Devian MK, Suranadi IW, Hartawan IGAGU, Aryabiantara IW. Bacterial Patterns and Sensitivity to Antibiotics in Patients Treated with Ventilators at the Intensive Care Unit of Sanglah Hospital Denpasar, Bali, Indonesia. *Open Access Maced J Med Sci*. 2022;10:250-254. doi:10.3889/oamjms.2022.8139
8. Anggraini D, Santosaningsih D, Saharman YR, et al. Distribution of Carbapenemase Genes among Carbapenem-Non-Susceptible Acinetobacter baumanii Blood Isolates in Indonesia: A Multicenter Study. *Antibiotics*. 2022;11(3). doi:10.3390/antibiotics11030366

9. RSUP Dr. M. Djamil Padang. Antibiogram RSUP Dr. M. Djamil Padang tahun 2024. Padang; 2024.
10. Vincent JL, Sakr Y, Singer M, et al. Prevalence and outcomes of infection among patients in intensive care units in 2017. *JAMA*. 2020;323(15):1478–1487. doi:10.1001/jama.2020.2717
11. Limato R, Nelwan EJ, Mudia M, et al. A multicentre point prevalence survey of patterns and quality of antibiotic prescribing in Indonesian hospitals. *JAC Antimicrob Resist*. 2021;3(2). doi:10.1093/jacamr/dlab047
12. Li A, Ling L, Qin H, et al. Prognostic evaluation of quick sequential organ failure assessment score in ICU patients with sepsis across different income settings. *Crit Care*. 2024;28(1). doi:10.1186/s13054-024-04804-7
13. Hanif RS, Hamdi T, Kadri A, Megawati ER. Initial SOFA score and mortality of sepsis patients in the intensive care unit of Haji Adam Malik Hospital Medan: does it correlate? *Indones J Anesthesiol Reanim*. 2024;6(2):73–79. doi:10.20473/ijar.v6i22024.73-79
14. Kang C, Choi S, Jang EJ, et al. Prevalence and outcomes of chronic comorbid conditions in patients with sepsis in Korea: a nationwide cohort study from 2011 to 2016. *BMC Infect Dis*. 2024;24(1). doi:10.1186/s12879-024-09081-x
15. Weiss SL, Peters MJ, Alhazzani W, et al. Executive summary: surviving sepsis campaign international guidelines for the management of septic shock and sepsis-associated organ dysfunction in children. *Pediatr Crit Care Med*. 2020;21(2):186–195. doi:10.1097/PCC.0000000000002197
16. Zhao K, Zhang Z, Liang Y, Wang Y, Cai Y. Effect of antimicrobial de-escalation strategy on 14-day mortality among intensive care unit patients: a retrospective propensity score-matched cohort study with inverse probability-of-treatment weighting. *BMC Infect Dis*. 2023;23(1):503. doi:10.1186/s12879-023-08491-7
17. Fadrian. *Antibiotik,Infeksi, Dan Resistensi*. Andalas University Press; 2023.
18. Bronkhorst E, Maboa R, Skosana P. Antimicrobial stewardship principles in the evaluation of empirical carbapenem antibiotics in a private hospital in South Africa. *JAC Antimicrob Resist*. 2025;7(2). doi:10.1093/jacamr/dlaf025

19. Tanzarella ES, Cutuli SL, Lombardi G, et al. Antimicrobial de-escalation in critically ill patients. *Antibiotics (Basel)*. 2024;13(4):375. doi:10.3390/antibiotics13040375
20. Lukito JI. Antibiotik profilaksis pada tindakan bedah. *Cermin Dunia Kedokteran*. 2019;46(12):863–867.
21. Fitratiara D, Puspitasari I, Nuryastuti T. Evaluasi kesesuaian penggunaan antibiotik profilaksis terhadap kejadian infeksi luka operasi pada pasien bedah digestif di salah satu rumah sakit tipe B Kabupaten Sleman. *Maj Farm*. 2022;18(2):109–116. doi:10.22146/farmaseutik.v18i2.63691
22. World Health Organization. *Antimicrobial stewardship interventions: a practical guide*. Geneva: World Health Organization; 2019.
23. Redfield RR, Khabbaz R. Core elements of hospital antibiotic stewardship programs. Atlanta: Centers for Disease Control and Prevention; 2019. Available from: https://www.cdc.gov/antibiotic-use/core-elements/hospital.html
24. Abdel Hadi H, Eltayeb F, Al Balushi S, Daghfal J, Ahmed F, Mateus C. Evaluation of hospital antimicrobial stewardship programs: implementation, process, impact, and outcomes—review of systematic reviews. *Antibiotics (Basel)*. 2024;13(3):253. doi:10.3390/antibiotics13030253
25. Suri N, Junando M, Afriyana R. A comprehensive evaluation of antibiotic usage: establishing a foundation for effective antimicrobial stewardship. *J Farm Ilmu Kefarm Indones*. 2024;11(3):298–311. doi:10.20473/jfiki.v11i32024.298-311
26. Qibtiyah M, Wahyuhadi J, Khotib J. The impact of antimicrobial stewardship on reserve antibiotic use and procuring cost. *Pharmacy Education*. 2023;23(4):149-153. doi:10.46542/pe.2023.234.149153
27. Oxford University Clinical Research Unit Indonesia. Gaps identified in Indonesian hospital antibiotic stewardship programmes. Oxford: OUCRU; 2025 [cited 2025 Sep 13]. Available from: https://www.oucru.org/indonesia-ams-gaps/
28. Ture Z, Güner R, Alp E. Antimicrobial stewardship in the intensive care unit. *J Intensive Med*. 2023;3(3):244–253. doi:10.1016/j.jointm.2022.10.001

29. Suberviola B, Andaluz-Ojeda D. Antimicrobial stewardship in critical care. *Antibiotics (Basel)*. 2025;—:—. doi:10.3390/antibiotics
30. Limato R, Broom A, Nelwan EJ, Hamers RL. A qualitative study of barriers to antimicrobial stewardship in Indonesian hospitals: governance, competing interests, cost, and structural vulnerability. *Antimicrob Resist Infect Control*. 2022;11(1). doi:10.1186/s13756-022-01126-7
31. Limato R, Lazarus G, Dernison P, et al. Optimizing antibiotic use in Indonesia: a systematic review and evidence synthesis to inform opportunities for intervention. *Lancet Reg Health Southeast Asia*. 2022;2:100013. doi:10.1016/j.lansea.2022.100013
32. Indriasari, Aditya R, Al-Haq MM. Mortality risk factors and ventilator-associated pneumonia in the ICU of a tertiary hospital in Indonesia. *Anaesth Pain Intensive Care*. 2024;28(2):206–213. doi:10.35975/apic.v28i2.2324
33. Gach MW, Lazarus G, Simadibrata DM, et al. Antimicrobial resistance among common bacterial pathogens in Indonesia: a systematic review. *Lancet Reg Health Southeast Asia*. 2024;26:100414. doi:10.1016/j.lansea.2024.100414
34. World Health Organization. *Global antimicrobial resistance and use surveillance system (GLASS) report 2022*. Geneva: World Health Organization; 2022.
35. Luo Y, Guo Z, Li Y, et al. Appropriateness of empirical antibiotic therapy in hospitalized patients with bacterial infection: a retrospective cohort study. *Infect Drug Resist*. 2023;16:4555–4568. doi:10.2147/IDR.S402172
36. Tićac M, Grubić Kezele T, Bubonja Šonje M. Impact of appropriate empirical antibiotic treatment on the clinical response of septic patients in intensive care unit: a single-center observational study. *Antibiotics (Basel)*. 2024;13(6):569. doi:10.3390/antibiotics13060569
37. Ferrer R, Martin-Loeches I, Phillips G, et al. Empiric antibiotic treatment reduces mortality in severe sepsis and septic shock from the first hour: results from a guideline-based performance improvement program. *Crit Care Med*. 2014;42(8):1749–1755. doi:10.1097/CCM.0000000000000330

38. Xu S, Song Z, Han F, Zhang C. Effect of appropriate empirical antimicrobial therapy on mortality of patients with Gram-negative bloodstream infections: a retrospective cohort study. *BMC Infect Dis*. 2023;23(1). doi:10.1186/s12879-023-08329-2

39. Rhee C, Chen T, Kadri SS, et al. Trends in Empiric Broad-Spectrum Antibiotic Use for Suspected Community-Onset Sepsis in US Hospitals. *JAMA Netw Open*. 2024;7(6):e2418923. doi:10.1001/jamanetworkopen.2024.18923

40. Sieswerda E, Bax HI, Hoogerwerf JJ, et al. The 2021 Dutch Working Party on Antibiotic Policy (SWAB) guidelines for empirical antibacterial therapy of sepsis in adults. *BMC Infect Dis*. 2022;22(1). doi:10.1186/s12879-022-07653-3

41. Ginting F, Sugianli AK, Barimbing M, et al. Appropriateness of diagnosis and antibiotic use in sepsis patients admitted to a tertiary hospital in Indonesia. *Postgrad Med*. 2021;133(6):674-679. doi:10.1080/00325481.2020.1816755

42. Al-Sunaidar KA, Abd Aziz N, Hassan Y. Appropriateness of empirical antibiotics: risk factors of adult patients with sepsis in the ICU. *Int J Clin Pharm*. 2020;42(2):527-538. doi:10.1007/S11096-020-01005-4

43. von Beck LM, Rapszky GA, Kiss VE, et al. Empiric antibiotic therapy resistance and mortality in emergency department patients with bloodstream infection: a retrospective cohort study. *BMC Emerg Med*. 2025;25(1). doi:10.1186/s12873-025-01177-0

44. Pertiwi KM, Wulandari KK, Rodja HA, Urjiyah UG, Fibriani E, Putri FA. Teknik diagnostik konvensional dan lanjutan untuk infeksi bakteri dan resistensi antibakteri di Indonesia. *J Widya Biologi*. 2021;12(2):98–116.

45. Delost ME. Traditional culture and identification methods. In: *Clinical microbiology and parasitology*. Hoboken: Wiley; 2022.

46. Ahmad S, Lohiya S, Taksande A, Meshram RJ, Varma A, Vagha K. A Comprehensive Review of Innovative Paradigms in Microbial Detection and Antimicrobial Resistance: Beyond Traditional Cultural Methods. *Cureus*. Published online June 1, 2024. doi:10.7759/cureus.61476

47. Hou F, Qiao Y, Qiao Y, et al. A retrospective analysis comparing metagenomic next-generation sequencing with conventional microbiology testing for the identification of pathogens in patients with severe infections. *Front Cell Infect Microbiol*. 2025;15. doi:10.3389/fcimb.2025.1530486
48. Pan HW, Li W, Li RG, Li Y, Zhang Y, Sun EH. Simple sample preparation method for direct microbial identification and susceptibility testing from positive blood cultures. *Front Microbiol*. 2018;9(MAR). doi:10.3389/fmicb.2018.00481
49. Ligozzi M, Bernini C, Bonora MG, De Fatima M, Zuliani J, Fontana R. Evaluation of the VITEK 2 system for identification and antimicrobial susceptibility testing of medically relevant gram-positive cocci. *J Clin Microbiol*. 2002;40(5):1681-1686. doi:10.1128/JCM.40.5.1681-1686.2002
50. Nimer NA, Al-Saa'da RJ, Abuelaish O. Accuracy of the VITEK® 2 system for rapid and direct identification and susceptibility testing of Gram-negative rods and Gram-positive cocci in blood samples. *East Mediterr Health J*. 2016;22(6):—.
51. Brown L, Rautemaa-Richardson R, Mengoli C, et al. Polymerase chain reaction on respiratory tract specimens of immunocompromised patients to diagnose *Pneumocystis* pneumonia: a systematic review and meta-analysis. *Clin Infect Dis*. 2024;79(1):161–168. doi:10.1093/cid/ciae239
52. Melo-Vallès A, Ballesté-Delpierre C, Vila J. Review of the microbiological diagnostic approaches of COVID-19. *Front Public Health*. 2021;9:592500. doi:10.3389/fpubh.2021.592500
53. Mohtar J, Mallah H, Mardirossian JM, et al. Enhancing enteric pathogen detection: implementation and impact of multiplex PCR for improved diagnosis and surveillance. *BMC Infect Dis*. 2024;24(1). doi:10.1186/s12879-024-09047-z
54. Alsharksi AN, Sirekbasan S, Gürkök-Tan T, Mustapha A. From tradition to innovation: diverse molecular techniques in the fight against infectious diseases. *Diagnostics (Basel)*. 2024;14(24):2876. doi:10.3390/diagnostics14242876

55. Sy R, Rothman RE, Yang S. PCR-based diagnostics for infectious diseases: uses, limitations, and future applications in acute-care settings. *Lancet Infect Dis*. 2004;4:—. Available from: http://infection.thelancet.com
56. Singhal N, Kumar M, Kanaujia PK, Virdi JS. MALDI-TOF mass spectrometry: an emerging technology for microbial identification and diagnosis. *Front Microbiol*. 2015;6:791. doi:10.3389/fmicb.2015.00791
57. Calderaro A, Chezzi C. MALDI-TOF MS: a reliable tool in the real life of the clinical microbiology laboratory. *Microorganisms*. 2024;12(2):322. doi:10.3390/microorganisms12020322
58. Chen XF, Hou X, Xiao M, et al. Matrix-assisted laser desorption/ionization time-of-flight mass spectrometry analysis for the identification of pathogenic microorganisms: a review. *Microorganisms*. 2021;9(7):1536. doi:10.3390/microorganisms9071536
59. Kementerian Kesehatan Republik Indonesia. *Pedoman teknis ruang perawatan intensif rumah sakit*. Jakarta: Kementerian Kesehatan RI; 2012.
60. Brücker W, Mahabadi AA, Hüschen A, et al. Clinical characteristics and determinants of mortality in coronavirus disease 2019 patients on an intensive care unit: a retrospective explorative 1-year all-comers study. *J Thorac Dis*. 2022;14(5):1319–1331. doi:10.21037/jtd-21-1713
61. Al-Otaiby M, Almutairi KM, Vinluan JM, et al. Demographic characteristics, comorbidities, and length of stay of COVID-19 patients admitted into intensive care units in Saudi Arabia: a nationwide retrospective study. *Front Med (Lausanne)*. 2022;9:893954. doi:10.3389/fmed.2022.893954
62. Rascado Sedes P, Ballesteros Sanz MA, Bodí Saera MA, et al. Contingency plan for the intensive care services for the COVID-19 pandemic. *Med Intensiva*. 2020;44(6):363–370. doi:10.1016/j.medin.2020.03.006
63. Wilhelms SB, Wilhelms DB. Emergency department admissions to the intensive care unit: a national retrospective study. *BMC Emerg Med*. 2021;21(1):140. doi:10.1186/s12873-021-00517-0
64. Bremen K, Wirtz TH, Brozat JF, et al. Patients requiring ICU treatment for acute poisoning: a 20-year single-center retrospective study. *Med Klin*

Intensivmed Notfmed. 2023;118(4):283–292. doi:10.1007/s00063-022-00937-1

65. Michetti CP, Fakhry SM, Brasel K, et al. Trauma ICU prevalence project: the diversity of surgical critical care. *Trauma Surg Acute Care Open*. 2019;4(1):e000288. doi:10.1136/tsaco-2018-000288
66. Sakr Y, Jaschinski U, Wittebole X, et al. Sepsis in intensive care unit patients: Worldwide data from the intensive care over nations audit. *Open Forum Infect Dis*. 2018;5(12). doi:10.1093/ofid/ofy313
67. Rayhandika, Jufan AY, Widyastuti Y, Kurniawaty J. Validation of the APACHE IV score for ICU mortality prediction in Dr. Sardjito Hospital during the pandemic era. *Indones J Anesthesiol Reanim*. 2023;5(2):72–80. doi:10.20473/ijar.v5i22023.72-80
68. Chaudhry S, Laleka M, Khan H, et al. Factors associated with prolonged length of intensive care unit stay following mechanical thrombectomy for acute ischemic stroke. *Neurology*. 2024;102(7 Suppl 1):3694. doi:10.1212/WNL.0000000000205319
69. Rodrigues AR, Oliveira A, Vieira T, et al. A prolonged intensive care unit stay defines a worse long-term prognosis: insights from the critically ill mortality by age study. *Aust Crit Care*. 2024;37(5):734–739. doi:10.1016/j.aucc.2024.03.001
70. Roepke RML, Besen BAMP, Daltro-Oliveira R, et al. Predictive performance for hospital mortality of SAPS 3, SOFA, ISS, and new ISS in critically ill trauma patients. *J Intensive Care Med*. 2024;39(1):44–51. doi:10.1177/08850666231188051
71. Simanjuntak SP, Pradian E, Sitanggang RH. Lama penggunaan ventilator, ICU length of stay, dan mortalitas pasien ventilated hospital-acquired pneumonia dan ventilated community-acquired pneumonia. *J Anestesi Perioperatif*. 2024;12(1):44–55. doi:10.15851/jap.v12n1.3551
72. Society of Critical Care Medicine. Critical care statistics. Schaumburg: SCCM; 2025 [cited 2025 May 26]. Available from: https://sccm.org/communications/critical-care-statistics

73. Halim IJ, Manggala SK, Kaunang WFP. The economic burden on private hospitals in treating ICU vs non-ICU patients in Indonesia.
74. Gonçalves-Pereira J, Oliveira A, Vieira T, et al. Critically ill patient mortality by age: long-term follow-up. *Ann Intensive Care*. 2023;13(1):102. doi:10.1186/s13613-023-01102-3
75. Basiri R, Ahmadi Hekmatikar H, Najafzadeh MJ, Baniasad A. Evaluation of the performance of disease severity indices for mortality prediction in COVID-19 ICU patients. *BMC Infect Dis*. 2025;25(1):—. doi:10.1186/s12879-025-11045-8
76. Arbous SM, Termorshuizen F, Brinkman S, et al. Three-year mortality of ICU survivors with sepsis, infection, or inflammatory illness. *Crit Care*. 2024;28(1):—. doi:10.1186/s13054-024-05165-x
77. Antonio e Silva LG, Dantas de Maio Carrilho CM, Talizin TB, et al. Risk factors for hospital mortality in intensive care unit survivors. *Acute Crit Care*. 2023;38(1):68–75. doi:10.4266/acc.2022.01375
78. Hasswa MK, Elshazly M, Osman MN, Tantawy AA. Risk factors and associated outcomes of respiratory ICU readmission. *Egypt J Bronchol*. 2025;19(1):—. doi:10.1186/s43168-025-00402-5
79. Ardiansyah F, Widyastuti Y, Jufan Y, et al. Identifikasi faktor risiko kematian di ICU RSUP Dr. Sardjito. *J Komplikasi Anestesi*. 2022;9
80. Liu X, Hu P, Yeung W, et al. Illness severity assessment of older adults in critical illness using machine learning. *Lancet Digit Health*. 2023;5(10):e657–e667. doi:10.1016/S2589-7500(23)00128-0
81. Oliveira AM, Oliveira A, Vidal R, Gonçalves-Pereira J. Infectious foci, comorbidities, and outcomes of septic critically ill patients. *Microorganisms*. 2024;12(8):1705. doi:10.3390/microorganisms12081705
82. Moitra VK, Guerra C, Linde-Zwirble WT, Wunsch H. Relationship between ICU length of stay and long-term mortality for elderly ICU survivors. *Crit Care Med*. 2016;44(4):655–662. doi:10.1097/CCM.0000000000001480
83. Venkatesh K, Schlub TE, Barreto SG, et al. A prediction model for ICU mortality or prolonged ICU stay in acute pancreatitis. *Crit Care*. 2025;29(1):347. doi:10.1186/s13054-025-05590-6

84. Deniz M, Ayvat P. Factors affecting outcomes of older adults followed in the intensive care unit. *J Surg Med*. 2023;7(9):602–606. doi:10.28982/josam.7925

85. Abuhasira R, Anstey M, Novack V, et al. Intensive care unit capacity and mortality in older adults. *Ann Intensive Care*. 2022;12(1):—. doi:10.1186/s13613-022-00994-x

86. Ismail AJ, Hassan WMNW, Nor MBM, Shukeri WFWM. The impact of age on mortality in the intensive care unit. *Acute Crit Care*. 2024;39(3):390–399. doi:10.4266/acc.2024.00640

87. Vallet H, Guidet B, Boumendil A, et al. Impact of age-related syndromes on ICU process and outcomes in very old patients. *Ann Intensive Care*. 2023;13(1):—. doi:10.1186/s13613-023-01160-7

88. Merdji H, Long MT, Ostermann M, et al. Sex and gender differences in intensive care medicine. *Intensive Care Med*. 2023;49(10):1155–1167. doi:10.1007/s00134-023-07194-6

89. Amacher SA, Zimmermann T, Gebert P, et al. Sex disparities in ICU care and outcomes after cardiac arrest. *Crit Care*. 2025;29(1):—. doi:10.1186/s13054-025-05262-5

90. Zettersten E, Jäderling G, Bell M, Larsson E. A cohort study investigating the occurrence of differences in care provided to men and women in an intensive care unit. *Sci Rep*. 2021;11(1). doi:10.1038/s41598-021-02815-w

91. Algethamy HM, Alhazmi RN, Alghalayini FK, et al. Predictors of sepsis, ICU admission, and death in complicated skin and soft tissue infections. *SAGE Open Med*. 2025;13:20503121251336069. doi:10.1177/20503121251336069

92. Oami T, Imaeda T, Nakada T, et al. Mortality analysis among sepsis patients in and out of intensive care units in Japan. *J Intensive Care*. 2023;11(1):—. doi:10.1186/s40560-023-00650-x

93. Mandal L, Rijal G, Singh R, et al. Sepsis among patients admitted to the intensive care unit of a tertiary care centre. *J Nepal Med Assoc*. 2023;61(265):691–694. doi:10.31729/jnma.8275

94. Atumanya P, Agaba PK, Mukisa J, et al. Characteristics and outcomes of patients admitted to intensive care units in Uganda. *Sci Rep*. 2024;14(1):—. doi:10.1038/s41598-024-59031-5

95. Bekele T, et al. Duration of intensive care unit stay among critically ill patients in selected hospitals in Africa. *Sci Rep*. 2024;14:64911. Available from: https://www.nature.com/articles/s41598-024-64911-x

96. Evans L, Rhodes A, Alhazzani W, et al. Surviving Sepsis Campaign: international guidelines for management of sepsis and septic shock 2021. *Intensive Care Med*. 2021;47(11):1181–1247. doi:10.1007/s00134-021-06506-y

97. Mokrani D, Chommeloux J, Pineton de Chambrun M, Hékimian G, Luyt CE. Antibiotic stewardship in the ICU: time to shift into overdrive. *Ann Intensive Care*. 2023;13(1):—. doi:10.1186/s13613-023-01134-9

98. Silaban PTG, Tarigan EVT. Analisis indikator rasio angka kematian di ruang ICU/ICCU pada rumah sakit. *Sehat Rakyat J Kesehat Masy*. 2024;3(1):14–24. doi:10.54259/sehatrakyat.v3i1.2151

99. Fadrian F, Decroli E, Ahmad A, et al. In-hospital mortality and its determinant factors among patients with sepsis. *Universa Med*. 2025;44(1):3–15. doi:10.18051/univmed.2025.v44.3-15

100. Ghosh S, Singh A, Lyall A. Modification of initial empirical antibiotic prescription and its impact on patient outcome. *Indian J Crit Care Med*. 2023;27(8):581–587. doi:10.5005/jp-journals-10071-24505

101. Puryanti DA, Kristin E, Ratmasari D. Analisis faktor yang berpengaruh terhadap mortalitas pasien intensive care unit (ICU) di RSUD Dr. Soedirman Kebumen. *J Manaj Pelayanan Kesehat*. 2025;28(3):98–104.

102. Purnamasari D, Yasin NM, Andayani TM. Evaluasi penggunaan antibiotik empiris pada pasien sepsis di ICU RSUD Dr. H. Abdul Moeloek Provinsi Lampung. *J Surya Medika*. 2025;11(2):103–109. doi:10.33084/jsm.v11i2.8683

103. Zimmerman JE, Kramer AA, Knaus WA. Changes in hospital mortality for United States intensive care unit admissions from 1988 to 2012. *Crit Care*. 2013;17(2). doi:10.1186/cc12695