

DAFTAR PUSTAKA

1. Global Burden Disease Collaborators. Global, regional, and national age–sex specific all-cause and cause-specific mortality for 240 causes of death, 1990-2013: A systematic analysis for the global burden of disease study 2013. *Lancet*. 2014;385(9963):117–71.
2. Kemenkes RI. Laporan nasional riskesmas 2018. Balitbangkes; 2019.
3. World Health Organization. World health statistics 2019: Monitoring health for the SDGs, sustainable development goals. Geneva. 2019.
4. Sari A, Safitri I. Studi penggunaan antibiotik pasien pneumonia anak di RS. PKU Muhammadiyah Yogyakarta dengan metode defined daily dose (DDD). *J Ilm Ibnu Sina*. 2016;1(2):151–62.
5. Nugroho F & Pri IU. Evaluasi penggunaan antibiotik pada penyakit pneumonia di Rumah Sakit Umum Daerah Purbalingga. *J Chem Inf Model*. 2011;08(01):140–52.
6. Cilloniz C, Loeches IM, Vidal CG, Jose AS, Torres A. Microbial etiology of pneumonia: Epidemiology, diagnosis and resistance patterns. *Int J Mol Sci*. 2016;17(12).
7. José RJ, Perisneris JN, Brown JS. Community-acquired pneumonia. *Curr Opin Pulm Med*. 2015;21(3):212–8.
8. Yulia R, Mariza JW, Soedarsono, Herawati F. Bacterial profile and antibiotic use in pneumonia patients at Dr. Soetomo General Hospital. *Curr Respir Med Rev*. 2020;16(1):21–7.
9. Narlis N, Nasrul E, Efrida E. Pola kuman dan uji kepekaan pada pasien community acquired pneumonia di RSUP Dr. M. Djamil Padang tahun 2016. *J Kesehat Andalas*. 2019;8(3):553.
10. Sutanegara AAPPD, Artana IGNB, Andrika P. Pola kuman penyebab community-acquired pneumonia (CAP) dan kepekaannya terhadap antibiotika di RSUP Sanglah Denpasar. *J Med Udayana*. 2019;41(2).
11. Vishak KA, Mahesha P, Unnikrishnan B, Anand R, Preethm RA and DJJ. Microbiological profile and drug sensitivity pattern among community acquired pneumonia patients in tertiary care centre in Mangalore, Coastal Karnataka, India. *J Clin Diagnostic Res*. 2014;8(6).
12. Wells BG, Schwinghammer TL, DiPiro JT. *Pharmacotherapy handbook*. 10th ed. McGraw-Hill Education Medical; 2017.
13. Long W, Deng X, Zhang Y, Lu G, Xie J, Tang J. Procalcitonin guidance for reduction of antibiotic use in low-risk outpatients with community-acquired pneumonia. *Respirology*. 2011;16(5):819–24.
14. Postma DF, van Werkhoven CH, van Elden LJR, Thijsen SFT, Hoepelman AIM, Kluytmans JAJW, et al. Antibiotic treatment strategies for community-acquired pneumonia in adults. *N Engl J Med*. 2015;372(14):1312–23.
15. Torres A, Cillóniz C, Ferrer M, Gabarrús A, Polverino E, Villegas S, et al. Bacteraemia and antibiotic-resistant pathogens in community acquired

- pneumonia: Risk and prognosis. *Eur Respir J*. 2015;45(5):1353–63.
16. Luchsinger V, Ruiz M, Zunino E, Martínez MA, Machado C, Piedra PA, et al. Community-acquired pneumonia in Chile : The clinical relevance in the detection of viruses and atypical bacteria. *Thorax*. 2013;1000(6).
 17. Abelenda-alonso G, Rombauts A, Gudiol C, Meije Y, Ortega L, Clemente M, et al. Influenza and bacterial coinfection in adults with community-acquired pneumonia admitted to conventional wards : Risk factors ,clinical features , and outcomes. *Op For Infect Dis*. 2020;200(3):359-369.
 18. Aston SJ, Ho A, Jary H, Huwa J, Mitchell T, Ibitoye S, et al. Etiology and risk factors for mortality in an adult community-acquired pneumonia cohort in Malawi. *Am J of Respir and Critic Car Med*. 2019;200:359–69.
 19. Muthumbi E, Lowe BS, Muyodi C, Getambu E, Gleeson F, Scott JAG. Risk factors for community-acquired pneumonia among adults in Kenya : A case – control study. *Bio Med Cent*. 2017;1–9.
 20. Francesca M, Pasquale D, Sotgiu G, Gramegna A, Radovanovic D, Terraneo S, et al. Prevalence and etiology of community-acquired pneumonia in immunocompromised patients. *Clin Infect Dis*. 2019;68(9):1482-1493.
 21. Luan Y, Sun Y, Duan S, Zhao P, Bao Z. Pathogenic bacterial profile and drug resistance analysis of community-acquired pneumonia in older outpatients with fever. *J Int Med Res*. 2018;46(11):4596-4604.
 22. Torres A, Blasi F, Peetermans WE, Viegi G, Welte T. The aetiology and antibiotic management of community-acquired pneumonia in adults in Europe: A literature review. *Eur J Clin Microbiol Infect Dis*. 2014;33(7):1065–79.
 23. Le P, Huong T, Hien PT, Thi N, Lan P, Binh TQ, et al. First report on prevalence and risk factors of severe atypical pneumonia in Vietnamese children aged 1 – 15 years. *BMC Pub Health*. 2014;14(1):1–8.
 24. File TM, Eckburg PB, Talbot GH, Llorens L, Friedland HD. Macrolide therapy for community-acquired pneumonia due to atypical pathogens : Outcome assessment at an early time point. *Int J Antimicrob Agents*. 2017;50(2):247–51.
 25. Basha NRE, Shaaban HH, Atroush HA El, Sherif MM, Kholy AA El. The use of multiplex PCR for the detection of atypical pathogens in Egyptian children with CAP : A high rate of *Bordetella pertussis* in early infancy. *J Egypt Pub Health Ass*. 2019;94(1):1-7.
 26. Joseph T. DiPiro, Robert L. Talbert, Gary C. Yee, Gary R. Matzke, Barbara G. Wells LMP. *Pharmacotherapy: A pathophysiologic approach*. 8th ed. McGraw-Hill Medical; 2011.
 27. Outcome C, Tirtonegoro S. Prevalensi multidrug-resistant klebsiella pneumoniae dan evaluasi kesesuaian antibiotik empiris berdasarkan nilai prediksi farmakokinetik terhadap outcome klinis di RSUP Dr . Soeradji Tirtonegoro Klaten. *Maj Farm*. 2020;16(1):27–33.
 28. Rammaert B, Goyet S, Beauté J, Hem S, Te V, Try PL, et al. *Klebsiella pneumoniae* related community- acquired acute lower respiratory infections in Cambodia : Clinical characteristics and treatment. *Bio Med Cent*.

- 2012;12(3):1-7.
29. Barbara G. Wells, Joseph T. DiPiro, Terry L. Schwinghammer CVD. *Pharmacotherapy Handbook*. 9th ed. McGraw-Hill Education Medical; 2015.
 30. Charles W. Lanks, Ali I. Musani DWH. Community-acquired pneumonia and hospital-acquired pneumonia. *Med Clin North Am*. 2019;103(3):487–501.
 31. Cao B, Huang Y, Cheng DSQ, Fan H, Xu XTJ, Zhang J, et al. Diagnosis and treatment of community-acquired pneumonia in adults : 2016 clinical practice guidelines by the Chinese Thoracic Society, Chinese Medical Association. *Clin Respir J*. 2017;12(4):1320–60.
 32. Boyles TH, Brink A, Calligaro GL, Cohen C, Dheda K, Maartens G, et al. South African guideline for the management of community- acquired pneumonia in adults. *J Thorac Dis*. 2017;9(6):1469–502.
 33. Athlin S, Lidman C, Lundqvist A, Naucler P, Anna C, Spindler C, et al. Management of community-acquired pneumonia in immunocompetent adults : Updated Swedish guidelines 2017. *Infect Dis (Auckl)*. 2018;50(4):247–72.
 34. Vugt SF Van, Broekhuizen BDL, Ieven M, Butler CC. Use of serum C reactive protein and procalcitonin concentrations in addition to symptoms and signs to predict pneumonia in patients presenting to primary care with acute cough : Diagnostic study. *BMJ*. 2013;346(2450):1–12.
 35. Joshua P. Metlay, Grant W. Waterer AC, Long, et al. Diagnosis and treatment of adults with community-acquired pneumonia an official clinical practice guideline of the American Thoracic Society and Infectious Diseases Society of America. *Am J Respir Crit Care Med*. 2019;200(7):45–67.
 36. Uematsu H, Hashimoto H, Iwamoto T, Horiguchi H. Impact of guideline-concordant microbiological testing on outcomes of pneumonia. *Int J Qual Heal care*. 2014;26(1):1–8.
 37. Jean S, Liao C, Sheng W, Lee W, Hsueh P. Comparison of commonly used antimicrobial susceptibility testing methods for evaluating susceptibilities of clinical isolates of Enterobacteriaceae and nonfermentative gram-negative bacilli to cefoperazone e sulbactam. *J Microbiol Immunol Infect*. 2017;50(4):454–63.
 38. Farida H, Gasem MH, Suryanto A, Keuter M, Zulkarnain N, Satoto B, et al. Viruses and gram-negative bacilli dominate the etiology of community-acquired pneumonia in Indonesia , a cohort study. *Int J Inf Dis*. 2015;38:101–7.
 39. Rodrigues CMC, Groves H. Community-acquired pneumonia in children: The challenges of microbiological diagnosis. *J Clin Mic*. 2018;56(3).
 40. Gadsby NJ, Russell CD, Mchugh MP, Mark H, Morris AC, Laurenson IF, et al. Comprehensive molecular testing for respiratory pathogens in community-acquired pneumonia. *Clin Infect Dis*. 2016;62(7):817–823.
 41. Olson G, Davis AM. Diagnosis and treatment of adults with community-acquired pneumonia. *JAMA*. 2020;323(9):885–886.

42. Outcomes M, Registration T. Duration of antibiotic treatment in community-acquired pneumonia: A multicenter randomized clinical trial. *JAMA Int Med.* 2016;176(9):1257–1265.
43. Clarke RS, Ha KP, Edwards AM. RexAB Promotes the survival of *Staphylococcus aureus* exposed to multiple classes of antibiotics. *Ant Agents Chem.* 2021;65(10).
44. Gerber JS, Ross RK, Bryan M, Localio AR, Szymczak JE, Wasserman R, et al. Association of broad-vs narrow-spectrum antibiotics with treatment failure, adverse events, and quality of life in children with acute respiratory tract infections. *JAMA.* 2017;318(23):2325–36.
45. Hadjipavlou M, Eragat M, Kenny C, Pantelidou M, Mulhem W, Wood C, et al. Effect of augmented antimicrobial prophylaxis and rectal swab culture-guided targeted prophylaxis on the risk of sepsis following transrectal prostate biopsy. *Eur Urol Focus.* 2018;6(1):95–101.
46. Meije Y, Pigrau C, Clemente M, Sanz X, Loureiro-amigo J, Ayestaran A, et al. Non-intravenous carbapenem-sparing antibiotics for definitive treatment of bacteraemia due to Enterobacteriaceae producing extended-spectrum β -lactamase (ESBL) or AmpC β -lactamase: A propensity score study. *Int J Antimic Agents.* 2019;54(2):189-196
47. Richter MF, Hergenrother PJ. The challenge of converting gram-positive-only compounds into broad-spectrum antibiotics. *Ann NY Acad Sci.* 2020;1435(1):18–38.
48. Queen MA, Myers AL, Hall M, Shah SS, Williams DJ, Auger KA, et al. Comparative effectiveness of empiric antibiotics for community-acquired pneumonia. *J Am Acad Ped.* 2014;133(1):1-7
49. Stokes JM, Lopatkin AJ, Lobritz MA, Collins JJ. Perspective bacterial metabolism and antibiotic efficacy. *Cell Metab.* 2019;1–9.
50. Apaydın S, Torok M. Sulfonamide derivatives as multi-target agents for complex diseases. *Bioorg Med Chem Lett.* 2019;29(16):2042-2050.
51. World Health Organization. Global antimicrobial resistance surveillance system (GLASS) report. 2018.
52. Holmes AH, Moore LSP, Steinbakk M, Regmi S, Karkey A, Guerin PJ, et al. Antimicrobials: Access and sustainable effectiveness to understanding the mechanisms and drivers of antimicrobial resistance. 2015;6736(15).
53. Zhou Z, Feng W, Han Y, Zheng J, Chen T, Wei Y, et al. Prevalence and transmission of antibiotic resistance and microbiota between humans and water environments. *Environ Int.* 2018;121(2):1155–1161.
54. Solomon SL, Oliver B, Disease C. Antibiotic resistance threats in the United States: Stepping back from the Brink. *Am Fam Phys.* 2014;89(12):939-941.
55. Pehrsson EC, Tsukayama P, Patel S, Mejía-bautista M, Sosa-soto G, Navarrete KM, et al. Interconnected microbiomes and resistomes in low-income human habitats. *Nature.* 2016;533(7602):212–6.
56. Tillotson G, Lodise T, Classi P, Mildvan D, Mckinnell JA. Antibiotic treatment failure and associated outcomes among adult patients with community-acquired pneumonia in the outpatient setting: A real-world US

- insurance claims database study. *Op For Infect Dis*. 2020;7(3).
57. Lopes M, Silva GA, Nogueira RF, Marado D, Athayde C, Silva D, et al. Incidence of antibiotic treatment failure in patients with nursing home-acquired pneumonia and community acquired pneumonia. *Infect Dis Rep* 2021;13:33–44.
 58. Baker S, Thomson N, Holt KE. Genomic insights into the emergence and spread of antimicrobial-resistant bacterial pathogens. *Sci*. 2018;360(6390):733–8.
 59. Wang H, Hou L, Liu Y, Liu K, Zhang L, Huang F, et al. Horizontal and vertical gene transfer drive sediment antibiotic resistome in an urban lagoon system. *J Environ Sci*. 2021;102:11–23.
 60. Schillaci D, Spanò V, Parrino B, Carbone A, Barraja P, Diana P, et al. Pharmaceutical approaches to target antibiotic resistance mechanisms. *J Med Chem*. 2017;60(20):8268-8297
 61. Maclean BRC, Millan AS. The evolution of antibiotic resistance. *Sci*. 2019;365(6458):1082-1083.
 62. Papkou A, Hedge J, Maclean RC. Efflux pump activity potentiates the evolution of antibiotic resistance across *S. aureus* isolates. *Nat Commun*. 2020.
 63. Chen J, Quiles-puchalt N, Chiang YN, Bacigalupe R, et al. Genome hypermobility by lateral transduction. *Sci*. 2018;362:1–6.
 64. Kaweeteerawat C, Ubol PN, Sangmuang S, Maniratanachote R. Mechanisms of antibiotic resistance in bacteria mediated by silver nanoparticles. *J Toxicol Environ Heal Part A*. 2017;80(23-24):1–14.
 65. Ali J, Rafiq QA, Ratcliffe E. Antimicrobial resistance mechanisms and potential synthetic treatments. *Future Sci*. 2018;4(4).
 66. Lee C, Lee JH, Park M, Park KS, Bae IK. Biology of *Acinetobacter baumannii*: Pathogenesis, antibiotic resistance mechanisms and prospective treatment options. *Front Cell Infect Mic*. 2017;7(55).
 67. Yelin I, Kishony R. SnapShot: Antibiotic Resistance. *Cell*. 172(5):1136-1136.
 68. Lin J, Nishino K, Roberts MC, Tolmasky M, Aminov RI, Zhang L. Mechanisms of antibiotic resistance. *Front Mic*. 2015;6(4):1-3
 69. Markley JL, Wencewicz TA. Tetracycline-Inactivating Enzymes. *Front Mic*. 2018;9(1058):1–22.
 70. Virawan H, Nuryastuti T, Nirwati H. Multidrugresistant *Klebsiella pneumoniae* from clinical isolates at dr. Soeradji Tirtonegoro central hospital Klaten. *J Kedokt dan Kesehat Indones*. 2020;11(2):109–20.
 71. Faisal F, Burhan E, Aniwidyaningsih W, Kekalih A. Penilaian respons pengobatan empiris pada pasien rawat inap dengan pneumonia komunitas. *J Respir Indo*. 2014;34(2):60–70.
 72. Bramantono, Rachman BE, Marfiani E, Kurniati ND, Arifijanto MV, Jearanaiwitayakul T. The bacterial pneumonia characteristics based on climate and meteorological parameters in Indonesia, the Tropical Country: A Preliminary Study. *Bio Heal Sci J*. 2021;04(01):15–21.
 73. Martin RM, Cao J, Brisse S, Passet V, Wu W, Zhao L, et al. Molecular

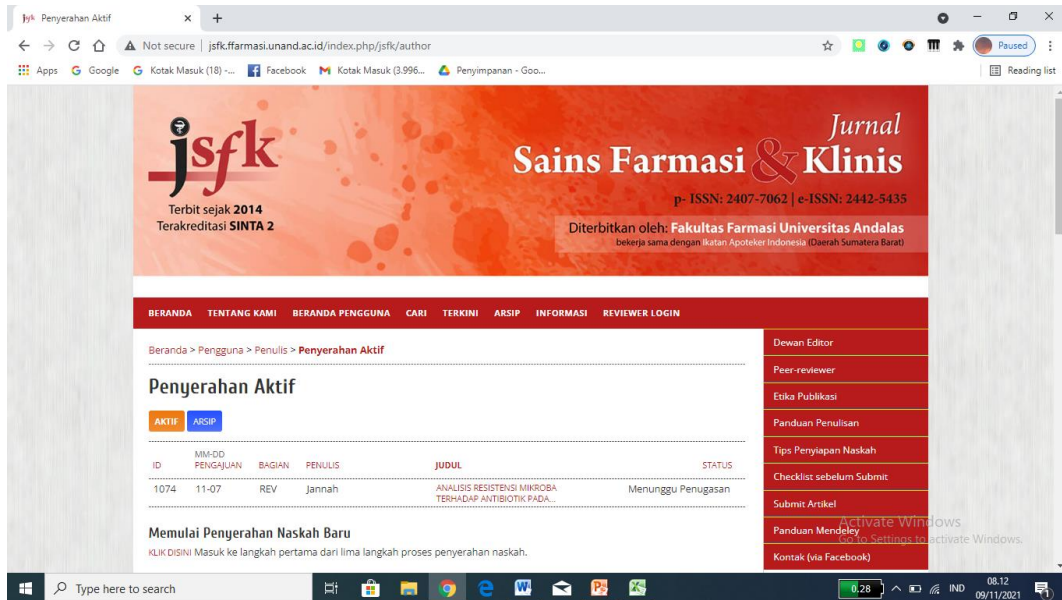
- epidemiology of colonizing and infecting isolates of *Klebsiella*. *Clin Sci Epid.* 2016;1(5):1–12.
74. Mcallister-hollod L, Nadle J, Ray SM, Thompson DL, Wilson LE. Multistate point-prevalence survey of health care–associated infections. *N Eng J Med.* 2014;370(13):1198–1208.
 75. Sader HS, Castanheira M, Shortridge D, Mendes RE, Flamm RK. Antimicrobial activity of Ceftazidime-Avibactam tested against Multidrug-Resistant Enterobacteriaceae and *Pseudomonas aeruginosa* isolates from U.S medical centers, 2013 to 2016. *Antimicrob Agents Chemo.* 2017;61(11):1–11.
 76. Castanheira M, Mendes RE, Jones RN, Sader HS. Changing of the frequencies of β -lactamase genes among Enterobacteriaceae in US Hospitals (2012-2014): Activity of Ceftazidime-Avibactam tested against β -lactamase producing isolates. *Am Soc Mic.* 2016.
 77. Zhang Y, Wang Q, Yin Y, Chen H, Jin L, Gu B, et al. Epidemiology of carbapenem-resistant Enterobacteriaceae infections: Report from the China CRE Network. *Antimicrob Agents Chemo.* 2018;62(2):1–11.
 78. Eichenberger EM, Thaden JT. Epidemiology and mechanisms of resistance of extensively drug resistant gram-negative bacteria. *Antibiotics.* 2019;8(2).
 79. Moujaber GE, Osman M, Rafei R, Dabboussi F, Hamze M. Molecular mechanisms and epidemiology of resistance in *Streptococcus pneumoniae* in the Middle East region. *J Med Mic.* 2017.
 80. Kartasasmita CB, Rezeki S, Nia H. Epidemiology, nasopharyngeal carriage, serotype prevalence, and antibiotic resistance of *Streptococcus pneumoniae* in Indonesia. *Infect Dis Ther.* 2020;9(4):723–36.
 81. Haenni M, Lupo A, Madec J. Antimicrobial Resistance in *Streptococcus* spp. *Microbiol Spectr.* 2018;6(2):1-25
 82. Al-hasan MN, Gould AP, Drennan C, Hill O, Justo JA, Kohn J, et al. Empirical fluoro quinolones versus broad-spectrum beta-lactams for gram-negative bloodstream infections in the absence of antimicrobial resistance risk factors. *J Glob Antimicrob Resist.* 2019;22:87-93
 83. Taguchi A, Welsh MA, Marmont LS, Lee W, Sjodt M, Kruse AC, et al. FtsW is a peptidoglycan polymerase that is functional only in complex with its cognate penicillin-binding protein. *Nat Microbiol.* 2019;4:587-594
 84. Vázquez-laslop N, Mankin AS. How Macrolide Antibiotics work. *Trends Biochem Sci.* 2018;43(9):668-684.
 85. Jian M, Cheng Y, Chung H, Cheng Y, Yang H. Fluoroquinolone resistance in carbapenem-resistant *Elizabethkingia anophelis*: phenotypic and genotypic characteristics of clinical isolates with topoisomerase mutations and comparative genomic analysis. *J Antimicrob Chemo.* 2019;74(6):1503-1510.
 86. Alnimr AM, Alamri AM. Antimicrobial activity of cephalosporin e beta-lactamase inhibitor combinations against drug-susceptible and drug-resistant *Pseudomonas aeruginosa* strains. *J Taibah Univ Med Sci.* 2020;15(3):203–10.

87. Kemenkes RI. Peraturan Menteri Kesehatan Republik Indonesia tentang program pengendalian resistensi antimikroba di rumah sakit. 2015;
88. Ontong JC, Ozioma NF, Voravuthikunchai SP, Chusri S. Synergistic antibacterial effects of colistin in combination with aminoglycoside, carbapenems, cephalosporins, fluoroquinolones, tetracyclines, Fosfomycin, and piperacillin on multidrug resistant *Klebsiella pneumoniae* isolates. PLoS ONE. 2021;16(1)1–18.



LAMPIRAN

BUKTI SUBMIT MANUSKRIP



Gambar VI.1 Bukti submit manuskrip

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PENDIDIKAN

Universitas Garut (2017-2021)

Pelatihan dan Kegiatan

- Pelatihan Kimia : *Atomic Absorption Spectrophotometer (AAS)*
Fourier Transform Infra Red (FTIR)
- PKL : PT. Berkah Alam Nusantara, Garut
Apotek Assyifa, Garut

SMK Farmasi As-shifa (2012-2015)

Pelatihan dan Kegiatan

- Magang : Puskesmas Pangalengan, Bandung
Puskesmas Cimaung, Bandung
- PKL : Puskesmas Margahayu Raya, Bandung