

DAFTAR PUSTAKA

- Agochukwu-Mmonu, N., Pop-Busui, R., Wessells, H., & Sarma, A. V. (2020). Autonomic neuropathy and urologic complications in diabetes. *Autonomic Neuroscience*, 229, 102736. <https://doi.org/10.1016/j.autneu.2020.102736>
- Alam, I., Almajwal, A. M., Alam, W., Alam, I., Ullah, N., Abulmeaty, M., Razak, S., Khan, S., Pawelec, G., & Paracha, P. I. (2019). The immune-nutrition interplay in aging – facts and controversies. *Nutrition and Healthy Aging*, 5(2), 73–95. <https://doi.org/10.3233/NHA-170034>
- AL-Hazmi, H. (2015). Role of duration of catheterization and length of hospital stay on the rate of catheter-related hospital-acquired urinary tract infections. *Research and Reports in Urology*, 41. <https://doi.org/10.2147/RRU.S75419>
- Alkhawaldeh, R., Abu Farha, R., Abu Hammour, K., & Alefishat, E. (2022). The Appropriateness of Empiric Treatment of Urinary Tract Infections in a Tertiary Teaching Hospital in Joran: A Cross-Sectional Study. *Antibiotics*, 11(5), 629. <https://doi.org/10.3390/antibiotics11050629>
- Alnaeem, M., & Abuatallah, A. (2019). Invasive Procedures and Length of Stay among Critically Ill Patients in ICU over Three Years: A Retrospective Study. *Open Journal of Nursing*, 09(07), 765–778. <https://doi.org/10.4236/ojn.2019.97058>
- Anggi, A., Wijaya, D. W., & Ramayani, O. R. (2019). Risk Factors for Catheter-Associated Urinary Tract Infection and Uropathogen Bacterial Profile in the Intensive Care Unit in Hospitals in Medan, Indonesia. *Open Access Macedonian Journal of Medical Sciences*, 7(20), 3488–3492. <https://doi.org/10.3889/oamjms.2019.684>

- Azoulay, E., Soares, M., & Benoit, D. (2016). Focus on immunocompromised patients. *Intensive Care Medicine*, 42(3), 463–465. <https://doi.org/10.1007/s00134-016-4224-8>
- Barchitta, M., Maugeri, A., Favara, G., Riela, P. M., La Mastra, C., La Rosa, M. C., San Lio, R. M., Gallo, G., Mura, I., Agodi, A., Brusaferro, M., Fenaroli, S., Sicoli, E., Montagna, M. T., Squeri, R., Di Bartolo, R. M., Tribastoni, S., Mattaliano, A. R., Bellocchi, P., ... Farruggia, P. (2021). Cluster analysis identifies patients at risk of catheter-associated urinary tract infections in intensive care units: Findings from the SPIN-UTI Network. *Journal of Hospital Infection*, 107, 57–63. <https://doi.org/10.1016/j.jhin.2020.09.030>
- Berbudi, A., Rahmadika, N., Tjahjadi, A. I., & Ruslami, R. (2020). Type 2 Diabetes and its Impact on the Immune System. *Current Diabetes Reviews*, 16(5), 442–449. <https://doi.org/10.2174/1573399815666191024085838>
- Blot, S., Ruppé, E., Harbarth, S., Asehnoune, K., Poulakou, G., Luyt, C.-E., Rello, J., Klompas, M., Depuydt, P., Eckmann, C., Martin-Loeches, I., Povoa, P., Bouadma, L., Timsit, J.-F., & Zahar, J.-R. (2022). Healthcare-associated infections in adult intensive care unit patients: Changes in epidemiology, diagnosis, prevention and contributions of new technologies. *Intensive and Critical Care Nursing*, 70, 103227. <https://doi.org/10.1016/j.iccn.2022.103227>
- Bonkat, G., Bartoletti, R., Bruyère, F., Cai, T., Geerlings, S. E., Köves, B., Kranz, J., Schubert, S., Pilatz, A., Veeratterapillay, R., & Wagenlehner, F. (2023). *EAU Guidelines on Urological Infections*. <https://d56bochluxqznz.cloudfront.net/documents/full-guideline/EAU-Guidelines-on-Urological-infections-2023.pdf>
- Bouwman, W., Verhaegh, W., & Stolpe, A. V. D. (2021). Androgen Receptor Pathway Activity Assay for Sepsis Diagnosis and Prediction of Favorable

- Prognosis. *Frontiers in Medicine*, 8, 767145.
<https://doi.org/10.3389/fmed.2021.767145>
- Czajkowski, K., Broś-Konopielko, M., & Teliga-Czajkowska, J. (2021). Urinary tract infection in women. *Menopausal Review*, 20(1), 40–47.
<https://doi.org/10.5114/pm.2021.105382>
- Deepthi, B., Gopika, K., Samyuktha, K., Priyanka, R., & Sharmila, S. (2017). Nosocomial Urinary Tract. *iMedPub Journals*, 2(1). <https://skin-diseases-and-skin-care.imedpub.com/nosocomial-urinary-tract-infections.pdf>
- Departemen Kesehatan RI. (2014). *Survei Demografi dan Kesehatan Indonesia* [dataset].
- Dimitrijevic, Z., Paunovic, G., Tasic, D., Mitic, B., & Basic, D. (2021). Risk factors for urosepsis in chronic kidney disease patients with urinary tract infections. *Scientific Reports*, 11(1), 14414. <https://doi.org/10.1038/s41598-021-93912-3>
- D'Incau, S., Atkinson, A., Leitner, L., Kronenberg, A., Kessler, T. M., & Marschall, J. (2023). Bacterial species and antimicrobial resistance differ between catheter and non-catheter-associated urinary tract infections: Data from a national surveillance network. *Antimicrobial Stewardship & Healthcare Epidemiology*, 3(1), e55. <https://doi.org/10.1017/ash.2022.340>
- Dougherty, J. M., & Aedula, N. R. (2022). Male Urinary Retention. *StatPearls*.
<https://www.ncbi.nlm.nih.gov/books/NBK538499/>
- Empaire, G. D., Guzman Siritt, M. E., Rosenthal, V. D., Pérez, F., Ruiz, Y., Díaz, C., Di Silvestre, G., Salinas, E., & Orozco, N. (2017). Multicenter prospective study on device-associated infection rates and bacterial resistance in intensive care units of Venezuela: International Nosocomial Infection Control Consortium (INICC) findings. *International Health*, 9(1), 44–49. <https://doi.org/10.1093/inthealth/ihw049>

- Farsi, A. H. (2021). Risk Factors and Outcomes of Postoperative Catheter-Associated Urinary Tract Infection in Colorectal Surgery Patients: A Retrospective Cohort Study. *Cureus*. <https://doi.org/10.7759/cureus.15111>
- Flores-Mireles, A., Hreha, T. N., & Hunstad, D. A. (2019). Pathophysiology, Treatment, and Prevention of Catheter-Associated Urinary Tract Infection. *Topics in Spinal Cord Injury Rehabilitation*, 25(3), 228–240. <https://doi.org/10.1310/sci2503-228>
- Flores-Mireles, A. L., Walker, J. N., Caparon, M., & Hultgren, S. J. (2015). Urinary tract infections: Epidemiology, mechanisms of infection and treatment options. *Nature Reviews Microbiology*, 13(5), 269–284. <https://doi.org/10.1038/nrmicro3432>
- Gould, C. V., Umscheid, C. A., Agarwal, R. K., Kuntz, G., & Pegues, D. A. (2019). *Guideline for Prevention of Catheter-Associated Urinary Tract Infections (2009)*.
- Gultom, R., & Famaugu, P. (2018). Analisis Kateterisasi Terhadap Kejadian Infeksi di Saluran Kemih Pada Pasien Ruang Rawat Inap RSU Imelda Pekerja Indonesia (IPI) Medan Tahun 2017. *Jurnal Ilmiah Keperawatan Imelda*, 4(1), 25–31. <https://doi.org/10.52943/jikeperawatan.v4i1.280>
- Haque, M., Sartelli, M., McKimm, J., & Abu Bakar, M. B. (2018). Health care-associated infections – an overview. *Infection and Drug Resistance, Volume 11*, 2321–2333. <https://doi.org/10.2147/IDR.S177247>
- Hariati, H., Suza, D. E., & Tarigan, R. (2019). Risk Factors Analysis for Catheter-Associated Urinary Tract Infection in Medan, Indonesia. *Open Access Macedonian Journal of Medical Sciences*, 7(19), 3189–3194. <https://doi.org/10.3889/oamjms.2019.798>
- Hermin, H. (2015). *Hubungan Teknik Pemasangan Kateter dan Perawatan Kateter dengan Kejadian Chateter Assosiated Urinary Tract Infection (CAUTI) di*

- Rumah Sakit Mitra Keluarga Surabaya* [Universitas Muhammadiyah Gresik]. <http://eprints. umg.ac.id/4165/>
- Hoste, E. A. J., Bagshaw, S. M., Bellomo, R., Cely, C. M., Colman, R., Cruz, D. N., Edipidis, K., Forni, L. G., Gomersall, C. D., & Govil, D. (2015). Epidemiology of acute kidney injury in critically ill patients: The multinational AKI-EPI study. *Intensive Care Med*, 41, 1411–1423. <https://doi.org/10.1007/s00134-015-3934-7>
- IAUI. (2020). *Tata Laksana Infeksi Saluran Kemih dan Genitalia Pria 2020* (3rd ed.). <https://iaui.or.id/guidelines/ISK%20202021.pdf>
- Ismail, F. D., & Handayani, D. Y. (2022). *Hubungan Pengetahuan Personal Hygiene Dengan Terjadinya Gejala Infeksi Saluran Kemih Pada Remaja Wanita FK UISU Angkatan 2020*. 21.
- Jameson, J. L., Loscalzo, J., Hauser, S. L., Fauci, A. S., Longo, D. L., & Kasper, D. L. (2018). *Harrison's Principles of Internal Medicine, 20th Edition (Volume I&II)* (Vol. 20th).
- Juanjuan, D., TianTian, Z., Yue, D., Lili, W., Ping, X., & Xu, H. (2021). Analysis of Etiology and Risk Factors of Catheter-Associated Urinary Tract Infection in Critically Ill Patients and Research on Corresponding Prevention and Nursing Measures. *Applied Bionics and Biomechanics*, 2021, 1–7. <https://doi.org/10.1155/2021/8436344>
- Kandarini, Y., Mahadita, W., & Marciyasa, P. A. (2020). Profil kuman pada infeksi saluran kemih di Rumah Sakit Umum Pusat Sanglah Bali tahun 2019-2020. *Open Access*, 4(2).
- KGIDO. (2012). KDIGO Clinical Practive Guideline for Acute Kidney Injury. *Kidney International Supplements*, 2(1), 1. <https://doi.org/10.1038/kisup.2012.1>

- Kusbaryanto & Listiowati. (2021). *Risk Factors for of Urinary Tract Infection in Catheter Installation in Hospitals*. <https://doi.org/10.18196/icosi.v3i1.30>
- Kuwa, Y., Regasa Dadi, B., Seid, M., Biresaw, G., & Manilal, A. (2021). Catheter-Associated Urinary Tract Infection: Incidence, Associated Factors and Drug Resistance Patterns of Bacterial Isolates in Southern Ethiopia. *Infection and Drug Resistance, Volume 14*, 2883–2894. <https://doi.org/10.2147/IDR.S311229>
- Ladhani, H. A., Tseng, E. S., Claridge, J. A., Towe, C. W., & Ho, V. P. (2020). Catheter-Associated Urinary Tract Infections among Trauma Patients: Poor Quality of Care or Marker of Effective Rescue? *Surgical Infections, 21(9)*, 752–759. <https://doi.org/10.1089/sur.2019.211>
- Lakbar, I., Einav, S., Lalevée, N., Martin-Loeches, I., Pastene, B., & Leone, M. (2023). Interactions between Gender and Sepsis—Implications for the Future. *Microorganisms, 11(3)*, 746. <https://doi.org/10.3390/microorganisms11030746>
- Lardo, S., & Prasetyo, B. (2016). Infection Control Risk Assessment (ICRA). *Cermin Dunia Kedokteran, 43*, 215–219. <https://doi.org/10.55175/cdk.v43i3.35>
- Lestari, D. A., Wijaya, V., & Kuncoro, H. (2018). Karakteristik dan Penggunaan Antibiotik Pasien Sepsis di Rumah Sakit Abdul Wahab Sjahranie Periode 2017. *Proceeding of Mulawarman Pharmaceuticals Conferences, 7*, 1–7. <https://doi.org/10.25026/mpc.v7i1.283>
- Letica-Kriegel, A. S., Salmasian, H., Vawdrey, D. K., Youngerman, B. E., Green, R. A., Furuya, E. Y., Calfee, D. P., & Perotte, R. (2019). Identifying the risk factors for catheter-associated urinary tract infections: A large cross-sectional study of six hospitals. *BMJ Open, 9(2)*, e022137. <https://doi.org/10.1136/bmjopen-2018-022137>

- Leung, A. K. C., Wong, A. H. C., Leung, A. A. M., & Hon, K. L. (2019). Urinary Tract Infection in Children. *Recent Patents on Inflammation & Allergy Drug Discovery*, 13(1), 2–18.
<https://doi.org/10.2174/1872213X13666181228154940>
- Ligon, M. M., Joshi, C. S., Fashemi, B. E., Salazar, A. M., & Mysorekar, I. U. (2023). Effects of aging on urinary tract epithelial homeostasis and immunity. *Developmental Biology*, 493, 29–39.
<https://doi.org/10.1016/j.ydbio.2022.11.003>
- Ludden, C., Coll, F., Gouliouris, T., Restif, O., Blane, B., Blackwell, G. A., Kumar, N., Naydenova, P., Crawley, C., Brown, N. M., Parkhill, J., & Peacock, S. J. (2021). Defining nosocomial transmission of Escherichia coli and antimicrobial resistance genes: A genomic surveillance study. *The Lancet Microbe*, 2(9), e472–e480. [https://doi.org/10.1016/S2666-5247\(21\)00117-8](https://doi.org/10.1016/S2666-5247(21)00117-8)
- Makhlough, A., & Hamidi Nava, Z. (2023). Evaluation of Kidney Function in Patients with COVID-19 Hospitalized in Imam Khomeini Hospital, Sari, Iran. *Journal of Health Reports and Technology*, 9(2).
<https://doi.org/10.5812/jhrt-136983>
- Maki, D. G., & Tambyah, P. A. (2001). Engineering Out the Risk for Infection with Urinary Catheters. *Emerging Infectious Diseases*, 7(2).
- Manrique-Caballero, C. L., Del Rio-Pertuz, G., & Gomez, H. (2021). Sepsis-Associated Acute Kidney Injury. *Critical Care Clinics*, 37(2), 279–301.
<https://doi.org/10.1016/j.ccc.2020.11.010>
- Maskoen, T. T., & Akbar, D. (2023). Injuri Ginjal Akut Akibat Sepsis pada Pasien di ICU. *JAI (Jurnal Anestesiologi Indonesia)*, 15(1), 69–85.
<https://doi.org/10.14710/jai.v0i0.49464>

- Mobalen, O., & Maryen, Y. (2019). *Perbedaan Pemasangan Kateter Dengan Menggunakan Jelly Yang Dimasukkan Uretra Dan Jelly Yang Dioleskan Di Kateter Terhadap Tingkat Nyeri Pasien.*
- Nababan, T. (2020). Pemasangan Kateter Dengan Kejadian Infeksi Saluran Kemih Pada Pasien Di Ruang Rawat Inap. *Jurnal Keperawatan Priority*, 3(2), 23–30. <https://doi.org/10.34012/jukep.v3i2.961>
- Najmah. (2017). *Statistik Kesehatan Aplikasi Stata dan SPSS*. https://repository.unsri.ac.id/85504/1/2017_Statistika%20Kesehatan_Najmah.pdf
- Ndomba, A. L. M., Laisser, R. M., Silago, V., Kidenya, B. R., Mwanga, J., Seni, J., & Mshana, S. E. (2022). Urinary Tract Infections and Associated Factors among Patients with Indwelling Urinary Catheters Attending Bugando Medical Centre a Tertiary Hospital in Northwestern Tanzania. *Microorganisms*, 10(2), 473. <https://doi.org/10.3390/microorganisms10020473>
- Notoatmodjo, S. (2018). *Metodologi Penelitian Kesehatan*.
- Omer, S. A., Zahran, F. E., Ibrahim, A., Sidahmed, L. A., Karam, G., Almulhim, F., & Soltan, S. A. (2020). Risk Factors for Catheter Associated Urinary Tract Infections (CAUTI) in Medical Wards and Intensive Care Units (ICU). *Journal of Microbiology Research*.
- Peerapornratana, S., Manrique-Caballero, C. L., Gómez, H., & Kellum, J. A. (2019). Acute kidney injury from sepsis: Current concepts, epidemiology, pathophysiology, prevention and treatment. *Kidney International*, 96(5), 1083–1099. <https://doi.org/10.1016/j.kint.2019.05.026>
- PERKENI. (2021). *Pedoman pengelolaan dan pencegahan diabetes melitus tipe 2 dewasa di INDONESIA - 2021*.

- Putri, R. A., Armiyati, Y., & Supriyanto, M. (2012). Faktor-faktor yang Berpengaruh terhadap Kejadian Infeksi Saluran Kemih pada pasien Rawat Inap Usia 20 tahun ke Atas dengan Kateter Menetap di RSUD Tugurejo Semarang. *Karya Ilmiah S. I Ilmu Keperawatan*.
- Rahardjo, H. E. (2019). *Kateterisasi Berkala Pada Dewasa dan Anak*. [https://iaui.or.id/guidelines/\[2019\]20Kateterisasi%20Berkala%20Pada%20Dewasa%20_Anak%20-%20Edisi%201.pdf](https://iaui.or.id/guidelines/[2019]20Kateterisasi%20Berkala%20Pada%20Dewasa%20_Anak%20-%20Edisi%201.pdf)
- Ramita, G. R., Gama, S. I., & Ramadhan, A. M. (2018). Hubungan Ketepatan Pemilihan Antibiotik Empiris dengan Outcome Terapi pada Pasien Sepsis Di Instalasi Rawat Inap Beberapa Rumah Sakit. *Proceeding of Mulawarman Pharmaceuticals Conferences*, 8, 220–228. <https://doi.org/10.25026/mpc.v8i1.327>
- RSPAD Gatot Soebroto. (2019). *RSPAD Gatot Soebroto*. <https://rspadgs.mil.id/id/page/sejarah>
- Ruru, R. I., Citraningtyas, G., & Uneputty, J. P. (2018). *Analisis Efektifitas Biaya (Cost Effectiveness Analysis) Pengobatan Infeksi Saluran Kemih Menggunakan Antibiotik Seftriakson dan Siprofloksasin Di RSUP Prof. Dr. R. D. Kandou*. 7(3).
- Salminen, A. (2022). Clinical perspectives on the age-related increase of immunosuppressive activity. *Journal of Molecular Medicine*, 100(5), 697–712. <https://doi.org/10.1007/s00109-022-02193-4>
- Sari, E. W. P., & Satyabakti, P. (2015). Perbedaan Risiko Infeksi Nosokomial Saluran Kemih Berdasarkan Kateterisasi Urin, Umur, dan Diabetes Melitus. *Jurnal Berkala Epidemiologi*, 3, 205–216.
- Scherberich, J. E., Fünfstück, R., & Naber, K. G. (2021). Urinary tract infections in patients with renal insufficiency and dialysis – epidemiology, pathogenesis,

- clinical symptoms, diagnosis and treatment. *GMS Infectious Diseases* 2021, 9. <https://doi.org/10.3205/id000076>
- Selius, B. A., & Subedi, R. (2008). *Urinary Retention in Adults: Diagnosis and Initial Management*. 77(5).
- Semaradana, W. G. P. (2014). Infeksi Saluran Kemih akibat Pemasangan Kateter – Diagnosis dan Penatalaksanaan. *Continuing Professional Development*, 41(10).
- Shen, T., Levitman, A., Li, Y., Jacobs, M., Xu, K., & Barasch, J. (2019). Urinary defense begins in the kidney. *Kidney International*, 96(3), 537–539. <https://doi.org/10.1016/j.kint.2019.03.031>
- Singer, M., Deutschman, C. S., Seymour, C. W., Shankar-Hari, M., Annane, D., Bauer, M., Bellomo, R., Bernard, G. R., Chiche, J.-D., Coopersmith, C. M., Hotchkiss, R. S., Levy, M. M., Marshall, J. C., Martin, G. S., Opal, S. M., Rubenfeld, G. D., Van Der Poll, T., Vincent, J.-L., & Angus, D. C. (2016). The Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3). *JAMA*, 315(8), 801. <https://doi.org/10.1001/jama.2016.0287>
- Sitepu, W. I. (2019). Pengaruh Penerapan Healthcare Infection Control Practices Advisory Committee Terhadap Kejadian Infeksi Saluran Kemih Terkait Penggunaan Kateter. *Jurnal Administrasi Rumah Sakit Indonesia*, 5(3). <https://doi.org/10.7454/arsi.v5i3.3175>
- Sugiyono. (2019). *Metode penelitian kuantitatif, kualitatif, dan R&D*. Alfabeta.
- Tan, C., & Chlebicki, M. (2016). Urinary tract infections in adults. *Singapore Medical Journal*, 57(09), 485–490. <https://doi.org/10.11622/smedj.2016153>
- Thungklin, B., Khiewkhern, O., & Phitakaramwong, P. (2017). *Factors that Affecting Catheter-associated Urinary Tract Infection among Retained*

- Urinary Catheter Patient, Inpatients Department, Phichit Hospital Authors.*
 32. <https://thaidj.org/index.php/phj/article/view/1220>
- Triana Yudhorini, L. (2022). Evaluasi Penggunaan Antibiotik Pada Pasien Sepsis dengan COVID-19 di Rumah Sakit Umum Pusat Fatmawati Jakarta Periode Januari – Desember 2021. *Jurnal Farmasi Klinik Base Practice*, 1(1), 1–13. <https://doi.org/10.58815/jfklin.v1i1.13>
- Waluyo, W., Kusnanto, K., & Kartini, Y. (2020). Pencegahan Catheter Associated Urinary Tractus Infection Melalui Catheter Maintenance. *Jurnal Penelitian Kesehatan “SUARA FORIKES” (Journal of Health Research “Forikes Voice”)*, 11(3), 291. <https://doi.org/10.33846/sf11314>
- Werneburg, G. T. (2022a). Catheter-Associated Urinary Tract Infections: Current Challenges and Future Prospects. *Research and Reports in Urology*, Volume 14, 109–133. <https://doi.org/10.2147/RRU.S273663>
- Werneburg, G. T. (2022b). Catheter-Associated Urinary Tract Infections: Current Challenges and Future Prospects. *Research and Reports in Urology*, Volume 14, 109–133. <https://doi.org/10.2147/RRU.S273663>
- Weyand, C. M., & Goronzy, J. J. (2016). Aging of the Immune System. Mechanisms and Therapeutic Targets. *Annals of the American Thoracic Society*, 13(Supplement_5), S422–S428. <https://doi.org/10.1513/AnnalsATS.201602-095AW>
- WHO. (2023). *Sepsis*. <https://www.who.int/news-room/fact-sheets/detail/sepsis>
- Zhang, L., Wan, H., Zhang, M., Lu, W., Xu, F., & Dong, H. (2023). Estrogen receptor subtype mediated anti-inflammation and vasorelaxation via genomic and nongenomic actions in septic mice. *Frontiers in Endocrinology*, 14, 1152634. <https://doi.org/10.3389/fendo.2023.1152634>