Conclusions

We have found limitations to incorporate collecting and analyzing of data that were not significantly different. RCT with AMR-focused design such as active surveillance of AMR for bacteremia between short- and long-course antibiotic treatment should be performed.

References

AMR Clinical Reference Center. (2019). Nippon AMR one health report (NAOR). Retrieved from https://amr-onehealth.ncgm.go.jp/en

Balshem, H., Helfand, M., Schünemann, H. J., Oxman, A. D., Kunz, R., Brozek, J., . . . Norris, S. (2011). GRADE guidelines: 3. rating the quality of evidence. *Journal of Clinical Epidemiology, 64*(4), 401-406. doi:10.1016/j.jclinepi.2010.07.015

Cassini, A., Högberg, L. D., Plachouras, D., Quattrocchi, A., Hoxha, A., Simonsen, G. S., . . . Cecchini, M. (2019). Attributable deaths and disability-adjusted life-years caused by infections with antibiotic-resistant bacteria in the EU and the European Economic Area in 2015: A population-level modelling analysis. *The Lancet Infectious Diseases, 19*(1), 56-66.

Centers for Disease Control and Prevention, (CDC). (2019). Antibiotic resistance threats in the United States 2019. *Atlanta, GA.,* Retrieved from https://www.cdc.gov/drugresistance/biggest-threats.html

Chotiprasitsakul, D., Han, J. H., Cosgrove, S. E., Harris, A. D., Lautenbach, E., Conley, A. T., . . . Tamma, P. D. (2018). Comparing the outcomes of adults with Enterobacteriaceae

bacteremia receiving short-course versus prolonged-course antibiotic therapy in a

multicenter, propensity score–matched cohort. *Clinical Infectious Diseases, 66*(2), 172-177.

doi:10.1093/cid/cix767

Cold Spring Harbor Laboratory. (n.d.). medRxiv, the preprint server for health sciences.

Retrieved from https://www.medrxiv.org/

Elle Kline. (Feb 2020). Short versus prolonged course of antibiotic treatment for gram-negative

blood stream infections. Paper presented at the *The 2019 ACCP Annual Meeting *

Chicago, IL.*, 3*(1) 145-391. doi:10.1002/jac5.1204 Retrieved from

https://www.accp.com/docs/meetings/abstracts/2019_annual.pdf

Germanos, G. J., Trautner, B. W., Zoorob, R. J., Salemi, J. L., Drekonja, D., Gupta, K., &

Grigoryan, L. (2019). No clinical benefit to treating male urinary tract infection longer than

seven days: An outpatient database study. *Open Forum Infectious Diseases, 6*(6)

doi:10.1093/ofid/ofz216

Hanretty, A. M., & Gallagher, J. C. (2018). Shortened courses of antibiotics for bacterial

infections: A systematic review of randomized controlled trials. *Pharmacotherapy, 38*(6),

674-687. doi:10.1002/phar.2118

Hayashi, Y., & Paterson, D. L. (2011). Strategies for reduction in duration of antibiotic use in

hospitalized patients. *Clinical Infectious Diseases, 52*(10), 1232-1240.

doi:10.1093/cid/cir063

Higgins, J., Thomas, J., Chandler, J., Cumpston, M., Li, T., Page M., Welch, V. (2020).

    Cochrane handbook for systematic reviews of interventions. Retrieved from

    https://training.cochrane.org/handbook/current

Higgins, J. & Green, S. (2011). Cochrane handbook for systematic reviews of

    Interventions Version 5.1.0 [updated March 2011]. Retrieved from https://handbook-5-

    1.cochrane.org/chapter_8/8_assessing_risk_of_bias_in_included_studies.htm

Kim, S. Y., Park, J. E., Lee, Y. J., Seo, H., Sheen, S., Hahn, S., . . . Son, H. (2013). Testing a tool

    for assessing the risk of bias for nonrandomized studies showed moderate reliability and

    promising validity. *Journal of Clinical Epidemiology, 66*(4), 408-414.

    doi:10.1016/j.jclinepi.2012.09.016

Kimura, Y., Fukuda, H., Hayakawa, K., Ide, S., Ota, M., Saito, S., . . . Ohmagari, N. (2019).

    Longitudinal trends of and factors associated with inappropriate antibiotic prescribing for

    non-bacterial acute respiratory tract infection in Japan: A retrospective claims database

    study, 2012–2017. *PloS One, 14*(10), e0223835. doi:10.1371/journal.pone.0223835

Lee, C., Hsieh, C., Yang, C., Hong, M., Lee, C., Tang, H., & Ko, W. (2019). Short versus long

    duration antimicrobial treatment for community-onset bacteraemia: A propensity score

    matching study. *International Journal of Antimicrobial Agents, 54*(2), 176-183.

    doi:10.1016/j.ijantimicag.2019.05.014

Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred reporting items for

    systematic reviews and meta-analyses: The PRISMA statement. *Bmj, 339*(jul21 1), b2535.

    doi:10.1136/bmj.b2535

O'Neill, J. (2014). Antimicrobial resistance: Tackling a crisis for the health and wealth of

    nations. review on antimicrobial resistance. *Review on Antimicrobial Resistance, London,*

    United Kingdom, Retrieved from

https://amr-review.org/sites/default/files/AMR%20Review% 20Paper

Ohmagari, N. (2019). National action plan on antimicrobial resistance (AMR) 2016-2020 and

    relevant activities in Japan. *Global Health & Medicine, 1*(2), 71-77.

    doi:10.35772/ghm.2019.01017

Tansarli, G. S., Andreatos, N., Pliakos, E. E., & Mylonakis, E. (2019). A systematic review and

    meta-analysis of antibiotic treatment duration for bacteremia due to Enterobacteriaceae.

    Antimicrobial Agents and Chemotherapy, 63(5) doi:10.1128/aac.02495-18

Tansarli, G. S., & Mylonakis, E. (2018). Systematic review and meta-analysis of the efficacy of

    short-course antibiotic treatments for community-acquired pneumonia in adults.

    Antimicrobial Agents and Chemotherapy, 62(9) doi:10.1128/AAC.00635-18

Tsuzuki, S., Matsunaga, N., Yahara, K., Gu, Y., Hayakawa, K., Hirabayashi, A., . . . Ohmagari,

    N. (2020). National trend of blood-stream infection attributable deaths caused by

    staphylococcus aureus and Escherichia coli in Japan. *Journal of Infection and*

    Chemotherapy, 26(4), 367-371. doi:10.1016/j.jiac.2019.10.017

Von Dach, E., Albrich, W. C., Brunel, A., Prendki, V., Cuvelier, C., Flury, D., . . . Huttner, A.

    (2020). Effect of C-reactive Protein–Guided antibiotic treatment duration, 7-day treatment,

    or 14-day treatment on 30-day clinical failure rate in patients with uncomplicated gram-

negative bacteremia: A randomized clinical trial. *JAMA : The Journal of the American Medical Association, 323*(21), 2160-2169. doi:10.1001/jama.2020.6348

World Health Organization. (2020). Antimicrobial resistance. Retrieved from https://www.who.int/health-topics/antimicrobial-resistance

World Health Organization. (2020). Global antimicrobial resistance and use surveillance system (GLASS) report. Retrieved from https://www.who.int/glass/reported-data/en/

Wozniak, T. M., Barnsbee, L., Lee, X. J., & Pacella, R. E. (2019). *Using the best available data to estimate the cost of antimicrobial resistance: A systematic review* Springer Science and Business Media LLC. doi:10.1186/s13756-019-0472-z

Yahav, D., Franceschini, E., Koppel, F., Turjeman, A., Babich, T., Bitterman, R., . . . Paul, M. (2019). Seven versus 14 days of antibiotic therapy for uncomplicated gram-negative bacteremia: A noninferiority randomized controlled trial. *Clinical Infectious Diseases, 69*(7), 1091-1098. doi:10.1093/cid/ciy1054

Gu, Y. & Ohmagari, N. (2018). Kaigai ni okeru yakuzaitaisei to koukin-yaku no shiyoujoukyou (the global status of antimicrobial-resistant bacteria and antimicrobial consumption). *Japanese Society of Chemotherapy, 67*(1) Retrieved from http://www.chemotherapy.or.jp/journal/jjc/06701/067010013.pdf