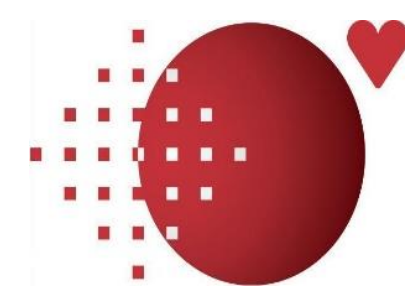


APPLICATION OF A NEW EMPIRICAL ANTIBIOTIC THERAPY PROTOCOL IN THE HOSPITAL MANAGEMENT OF THE SEPTIC PATIENT

A. Iezzi¹, M. S. Doronzo^{1,3}, G. Ballardini¹, F. De Giorgi¹, M. Vacca¹, B. Rossi¹, D. Bavaro², E. Omodeo Salé¹

1. IRCCS Monzino Cardiology Center (CCM), Milan
2. IRCCS Humanitas Research Hospital, Milan
3. University of Bari (BA), Postgraduate School of Hospital Pharmacy



Centro Cardiologico
Monzino



WHY WAS IT DONE?

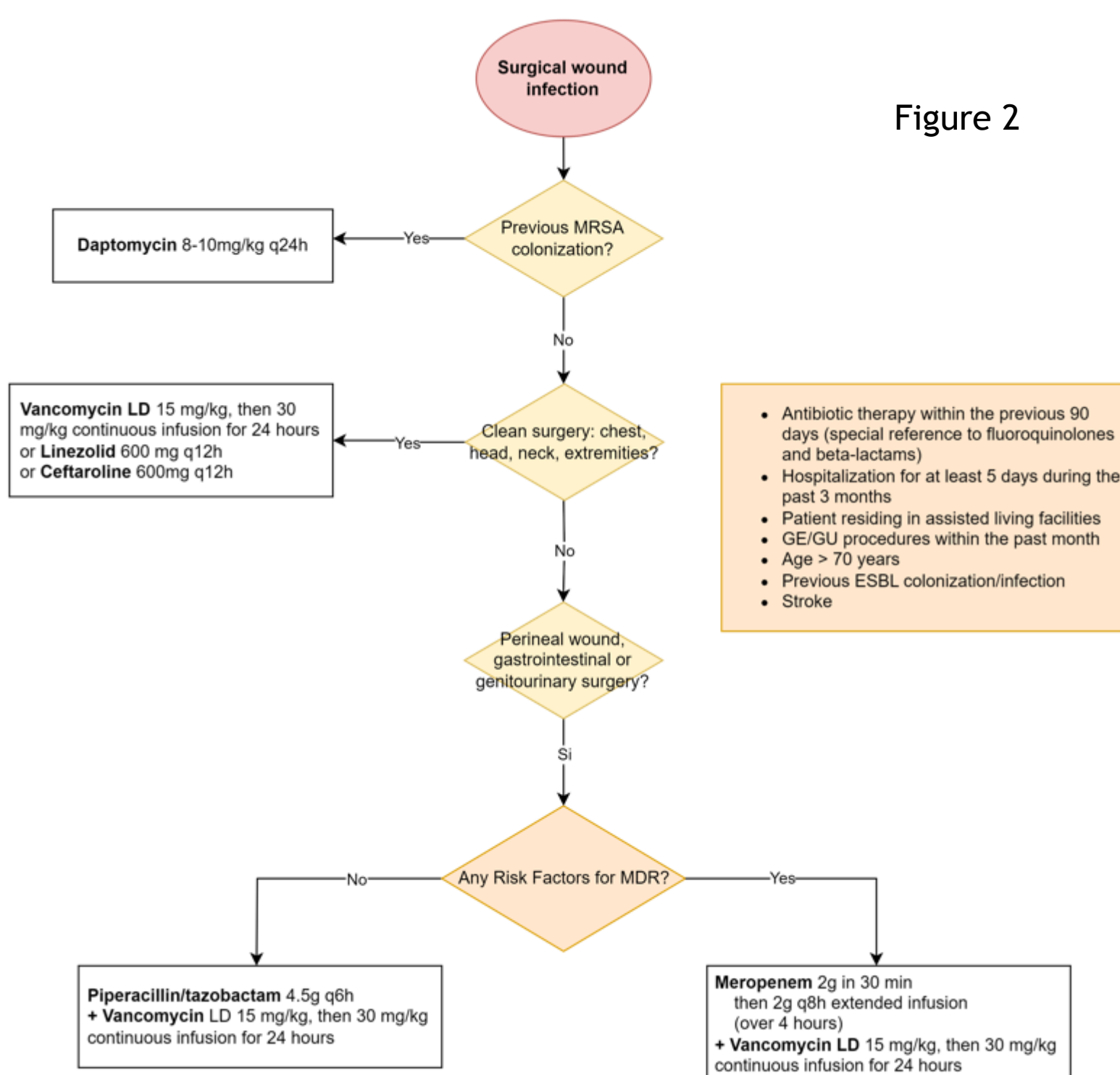
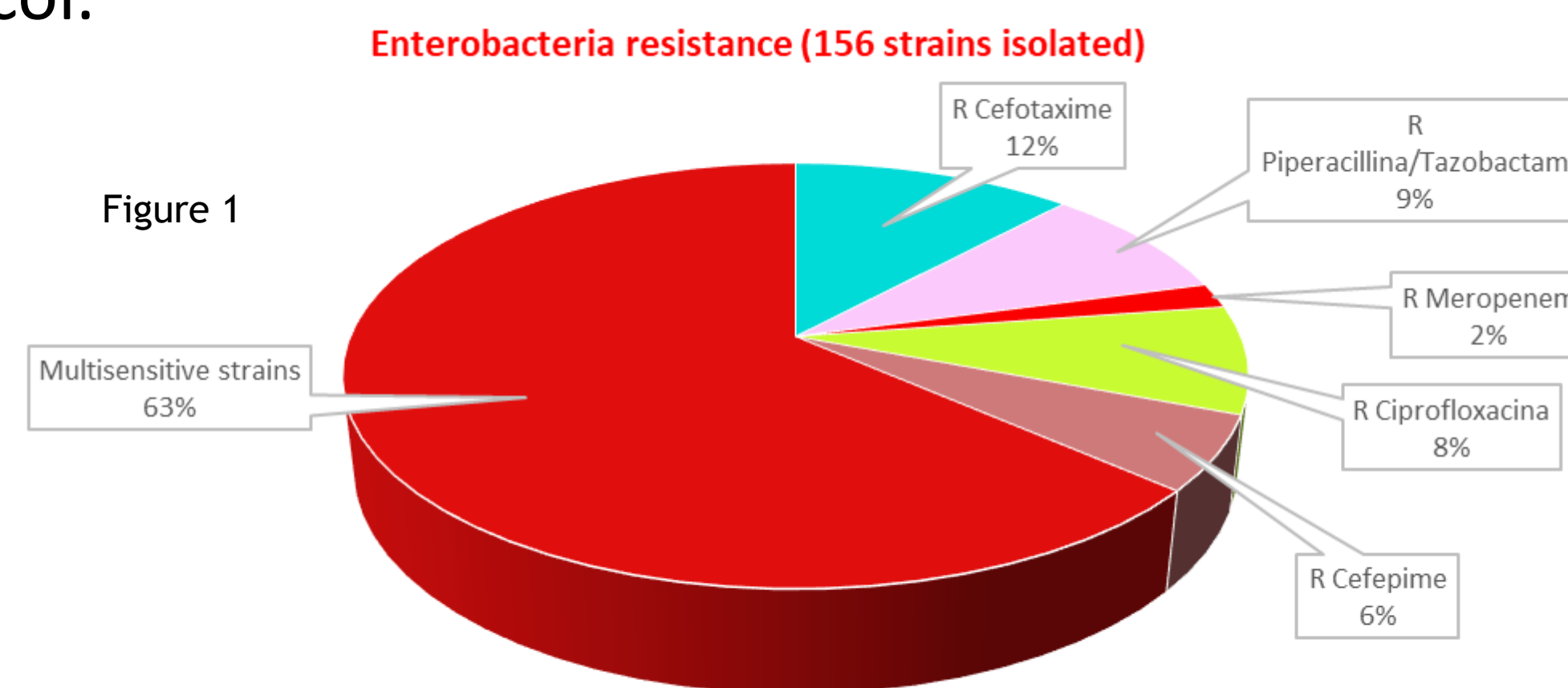
Approximately 49 million cases of sepsis occur worldwide each year. One out of 5 deaths is sepsis-related for an amount of 11 million of deaths per year, which is one death every 2.8 seconds. The Lombardia Region has developed guidelines for a diagnostic-therapeutic-assistance pathway (so called PDTA) including recommendations, prevention and diagnostic tools, in order to significantly reduce sepsis-related mortality. Therefore, our Hospital Pharmacy joined a multidisciplinary team of infectivologists, microbiologists and hygiene specialists, to draft a targeted therapy protocol.

WHAT WAS DONE?

An empirical antibiotic-therapy protocol based on solid scientific data, designed to be both clinically effective and ready to use for physicians, with a distinctive focus on the infection site.

HOW WAS IT DONE?

Using a dedicated software, data of the most frequent locally isolated bacterial strains during the 2022-2023 period were extracted. Starting from the antibiograms, resistance and sensitivity profiles of well tested and recognized antibiotics were processed and good sensitivity profile drugs were selected, involving specific infection sites. The epidemiological data report (Figure 1) showed only a limited part of the locally isolated bacterial strains were resistant to Meropenem (2%), Cefepime (6%), Cefotaxime (12%), Piperacillin/Tazobactam (9%), and Ciprofloxacin (8%) which appeared to be the lowest antibiotic resistance profile drugs. Therefore, dedicated antibiotic therapy flow charts were realized for specific infection sites like surgical wounds and urinary tract.



WHAT HAS BEEN ACHIEVED?

Evaluating the possible risk factors, flowcharts (Figure 2, 3) were developed using a web-based diagram software in order to help physicians choose the most appropriate therapy for each individual patient, thus considering the infection site. Additionally, possible dosage adjustments for patients with renal or hepatic impairment were included, according to the Official Summaries of Product Characteristics (SmPC).

WHAT NEXT?

Current data will be compared to future reports in order to evaluate the effectiveness of the PDTA. We aim at providing a quick and useful tool for physicians to ensure the septic patient's treatment continuity. Indeed, it is a good starting point which may lead to a clear and well-refined hospital procedure.

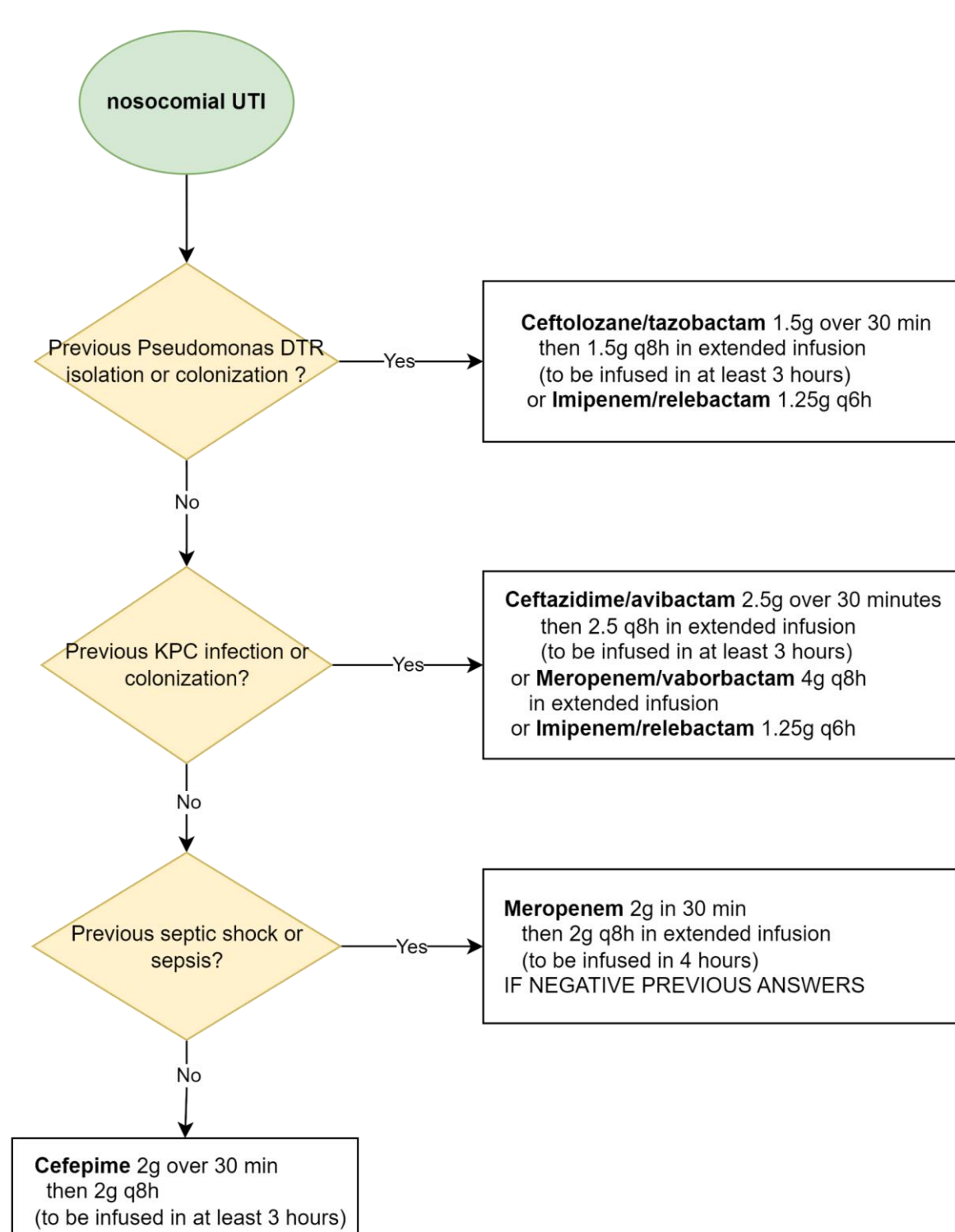
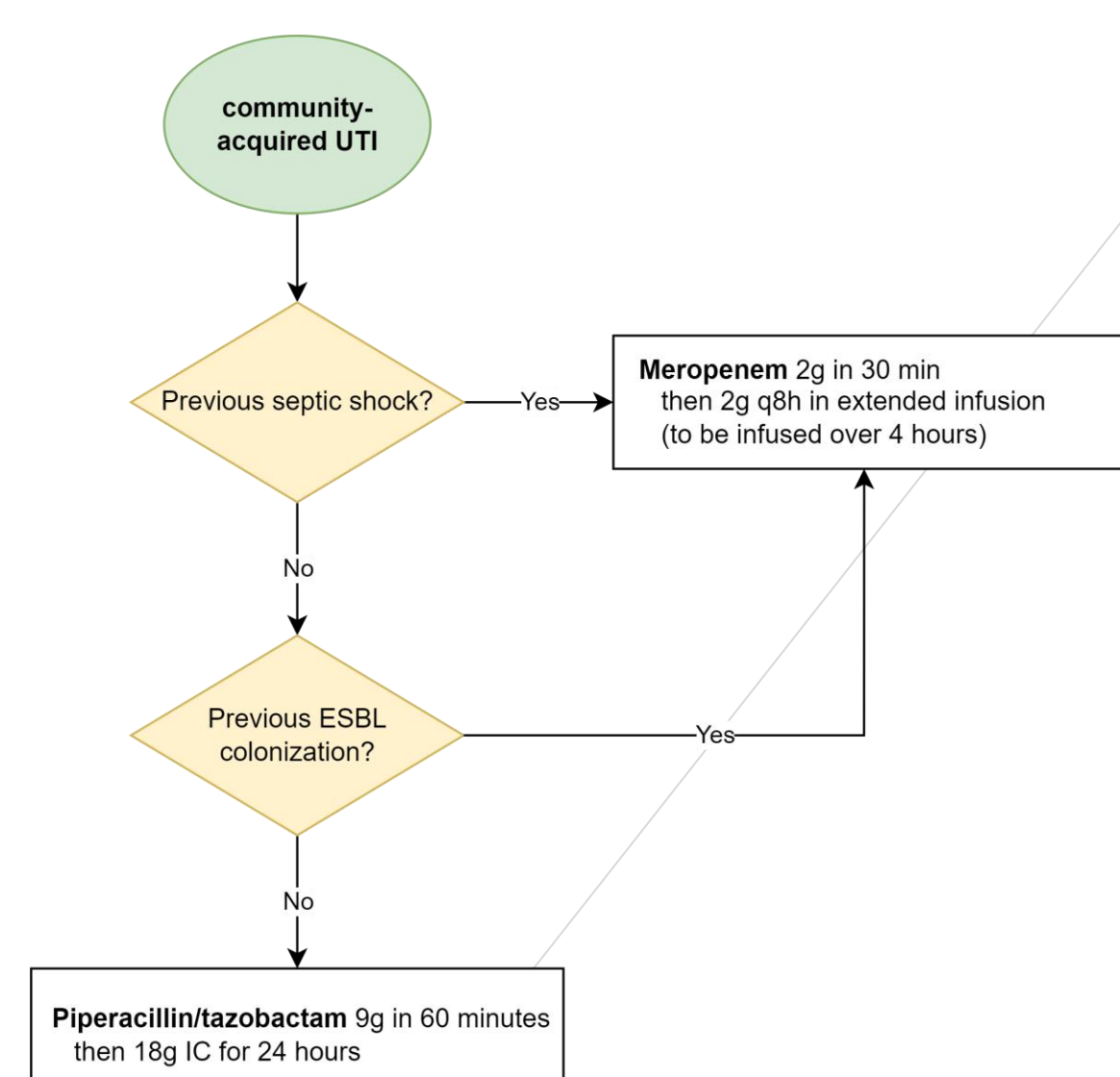


Figure 3



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Our contact:

farmacia@cardiologicomonzino.it

REFERENCES

1. Sito ufficiale del Ministero della Salute (<https://www.salute.gov.it/portale/malattiefettive/dettaglioNotizieMalattiefettive.jsp?lingua=italiano&menu=notizie&p=dalministero&id=6344>)