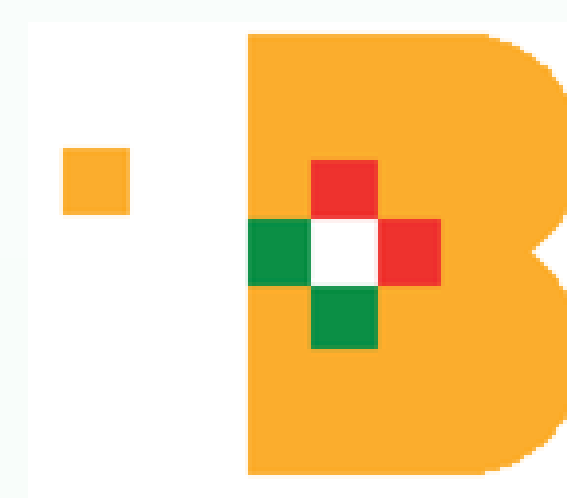




Pharmacist-led antimicrobial stewardship in the management of COVID-19 patients



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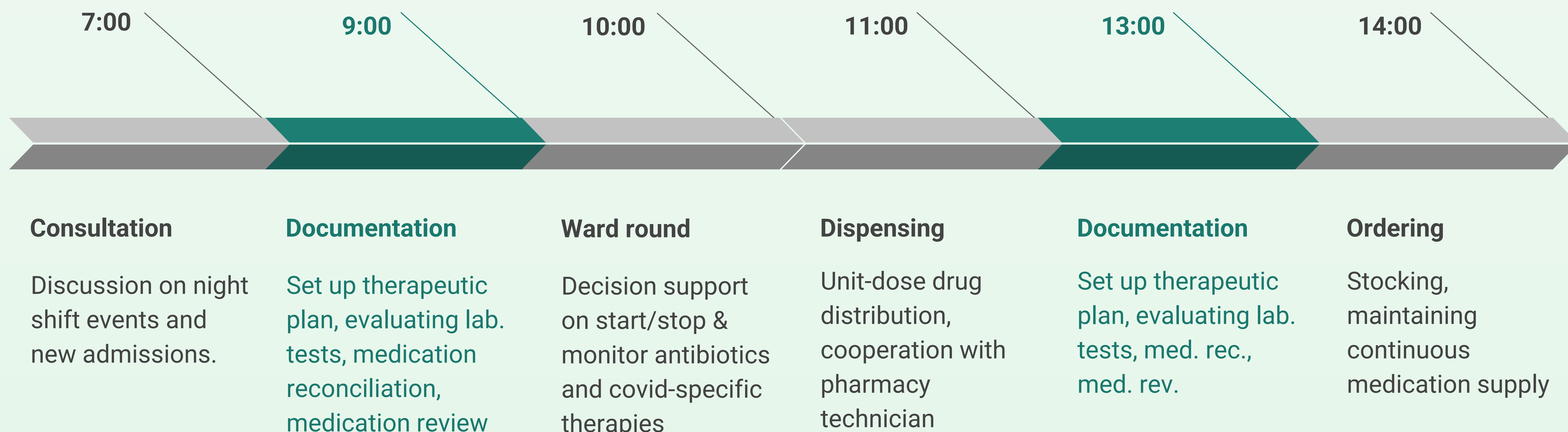
What was done?

Clinical pharmacist participated in the therapeutic decision making of COVID-19 patients treated in our institution in order to ensure the optimal choice of medicines with special regard to the use of antibiotics.

How was it done?

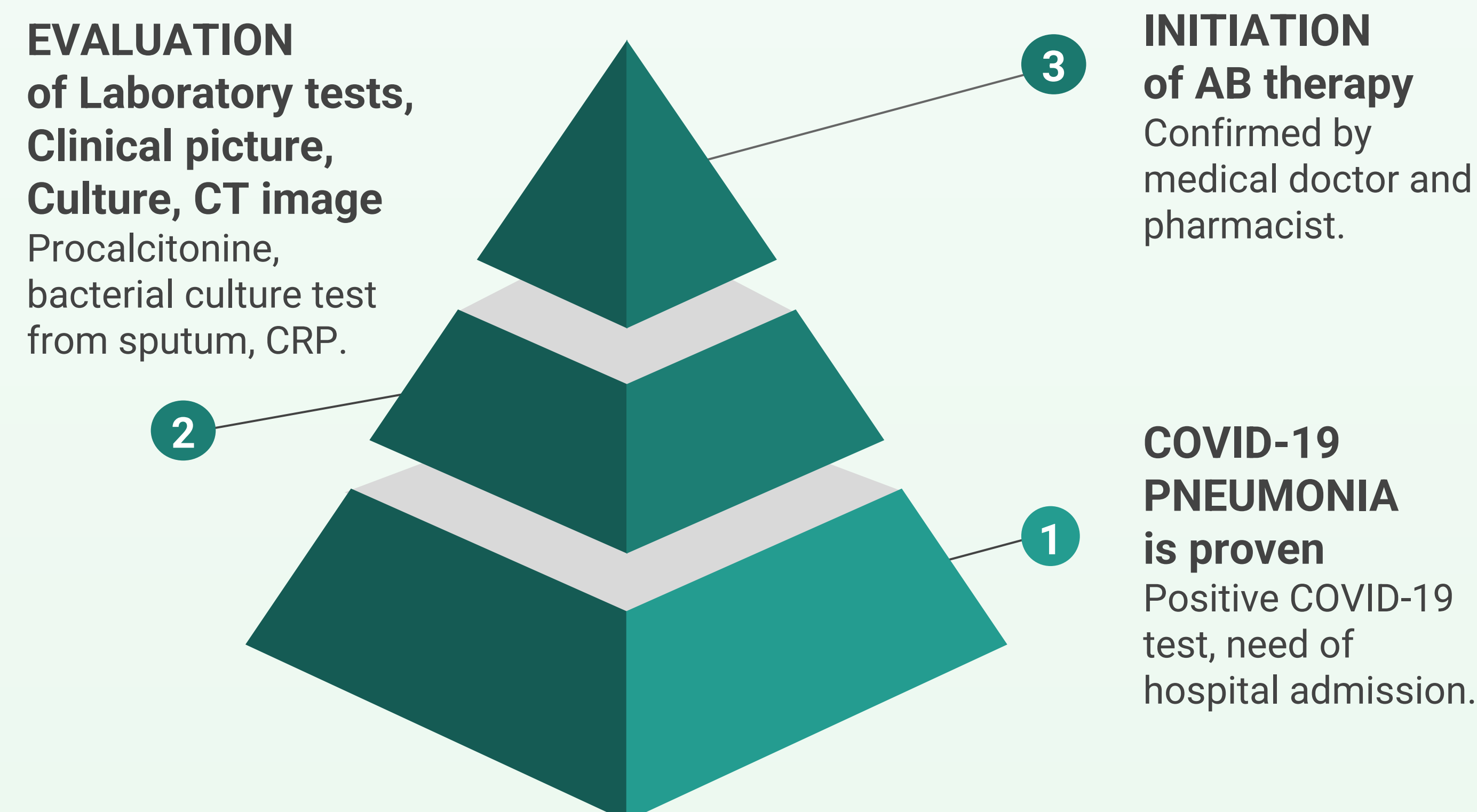
A daily therapeutic discussion was started in the quarantine department from 2021, with the participation of clinical pharmacists, during which all therapy initiation were consulted. The pharmacist was involved in the walk-arounds and reviewed the medication therapies of each patient daily. The clinical pharmacist advised on the starting, or, if it was considered unnecessary, the stopping of the antibiotic therapies, as well as the monitoring required. The choice and dosage of antibiotics were also consulted.

Quarantine Department; Pharmacist's daily schedule



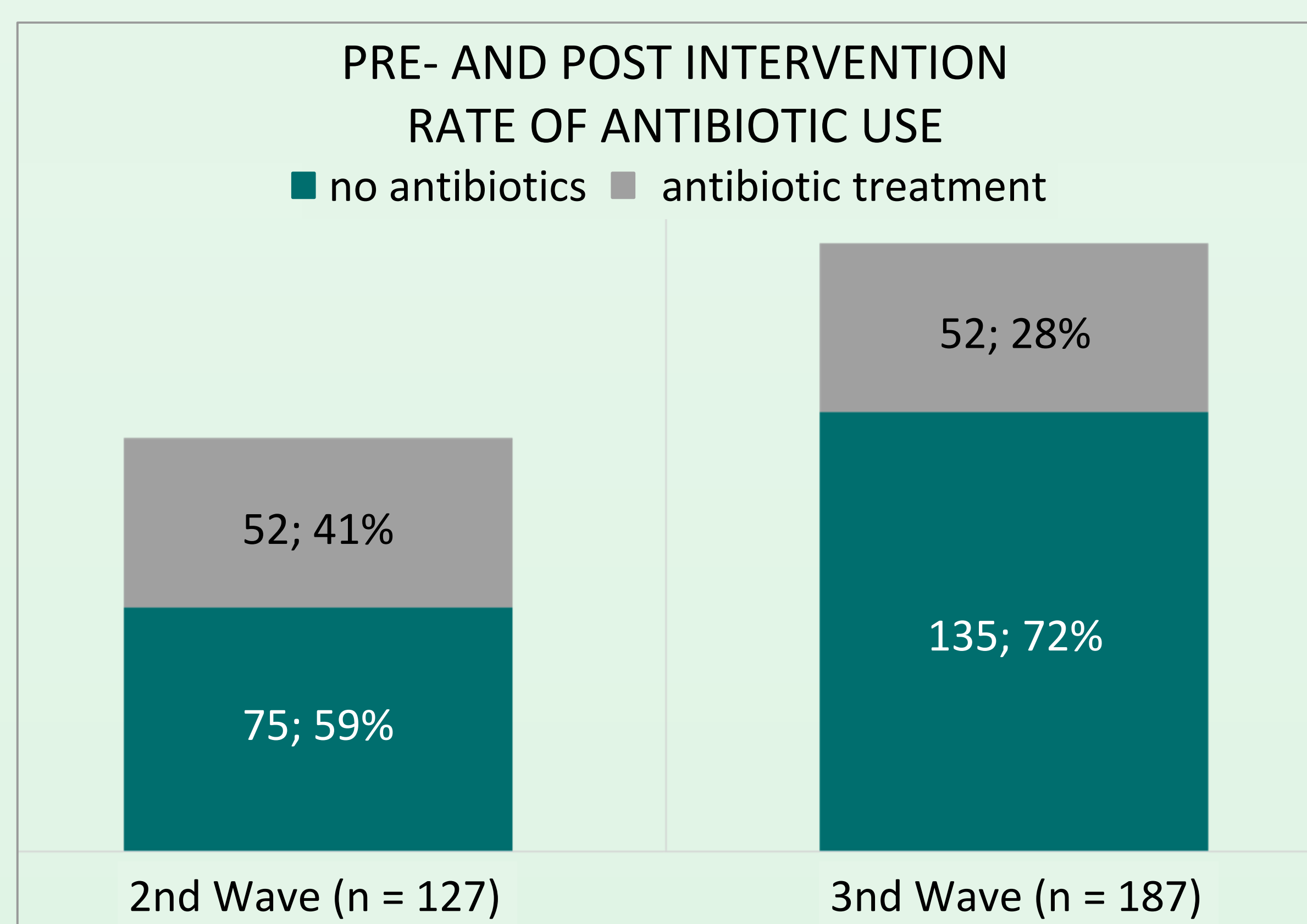
Why was it done?

Evidence suggests that the rate of bacterial co-infection among COVID-19-infected patients is low. However, routine use of antibiotics was common in the early stages of the treatment.



What have been achieved?

Of the 314 patients treated in the Quarantine Department of our institution between September 2020 and May 2021 104 (33%) received antibiotic therapy during treatment, with 73% of cases initiated within 72 hours of admission. In 68 cases, bacterial superinfection was the indication for antibiotic therapy, of which only 9 cases had radiologist-confirmed bacterial co-infection. The rate of antibiotic usage has decreased after the intervention was started. During the second wave of the coronavirus epidemic (until February 2021), 41% of patients received antibiotics, while during the third wave (from March 2021), 28% of patients.



What is next?

The pharmacist involvement, along with increasing experience and evidence for the clinical management of COVID-19, have moderated antibiotic use, however antibiotic overuse is still significant. Our Department of Pharmacy developed a local COVID-19 treatment guideline with emphasis on antibiotic use requirements. The education and promotion of this guideline will be undertaken by clinical pharmacists. Multidisciplinary therapeutic decision-making and strengthening of antibiotic stewardship programs are necessary for proper antibiotic use practices in the treatment of coronavirus patients.

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