

stood, which can further impact the Brazilian health system, since this type of coinfection is more likely to develop sequelae and complicate the clinical evolution. Moreover, barriers to rapid and complete diagnosis and management for both TB and COVID-19 may be an aggravating in long-term consequences in economic, social and health sectors in all Brazilian society and public health,¹⁰ which requires urgent actions and the need of more research for the prevalence of coinfections in the Brazilian scenario.

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Conflict of interest

FFT is a CNPq researcher. The other authors declared no competing interests.

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Rational use of antimicrobials in home hospitalisation[☆]



Uso racional de antimicrobianos en hospitalización a domicilio

Dear Editor,

In the article published by Sánchez Fabra et al.,¹ the authors draw attention to the margin for improvement in the quality of prescribing of antimicrobial agents in hospital at home (HaH) for patients with pneumonia, mainly in terms of de-escalation (reduction of the antimicrobial spectrum) and sequential therapy (change from intravenous to oral).

For some years now, a range of studies have drawn attention to the inappropriate use of outpatient parenteral antimicrobial treatment,^{2–6} particularly in care models in which the clinical monitoring and maintenance of parenteral therapy is not in the hands of experienced professionals, but rather depends on outsourced agencies or services used in an attempt to facilitate early discharge from hospitals. Moreover, several publications have also warned of an unusually high number of complications of outpatient intravenous treatment, particularly associated with venous access.⁷

The hospital-based model of HaH does not appear to be exposed to the level of risk of inappropriate antimicrobial treatment and complications that other studies describe.⁸ However, as Sánchez Fabra et al point out, the fact that about half of the patients in the study did not have de-escalation or sequential therapy when indi-

cated is no trivial matter. Analysing this situation and adapting to the recommendations of the guidelines is a requirement for any healthcare model –no less for hospital at home– and it has been shown that there is room for improvement.

Nonetheless, the study leaves unanswered questions that deserve a more detailed analysis. As the authors argue, there could be circumstances not included in the medical records which might require IV antibiotic therapy to continue for longer than recommended in the clinical practice guidelines. As far as de-escalation is concerned, at times, reducing the spectrum of antimicrobial activity can mean the use of drugs with greater frequency of administration, and this may be a limitation, depending on the organisation, resources and coverage hours of the hospital-at-home units. That may not be a sufficient reason to continue an antibiotic with a higher spectrum of activity, but the alternative may sometimes be for the patient to remain in hospital, an option which is also not without risk.

In addition, the authors observed that patients coming from Accident and Emergency (A&E) had a better quality of prescription (request for tests, adequacy of the prescription, de-escalation, sequential therapy, duration of treatment) than those who came from the ward. This difference would be worrying if the assignment to a conventional admission or hospital at home directly from A&E had been random. However, this was not the case, and the fact that the patients admitted directly from A&E were younger and had less comorbidity does not allow us to conclude that the differences are due to the care by a single physician (for the HaH) being more ideal than the care by two (ward and HaH). As the

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authors argue, in the case of readmissions at 30 days, the aspect that seemed to weigh most heavily on the quality of the prescription were the characteristics of the patient and not the dynamics of the HaH.

The study does not specify whether or not the mean hospital stay of 2.5 days included patients admitted directly to hospital at home from A&E. If they were not included, the stay was short enough for the HaH practitioner to have made the decision about de-escalation or sequential therapy with the same diligence as previously non-hospitalised patients, and would be another argument in favour of the differences observed being due to the profile of the patients. If the calculation of the mean stay included patients admitted from A&E (in which case the mean stay would be longer, considering only conventionally hospitalised patients), the deficiency in the treatment could have already occurred on the inpatient ward.

In summary, this is a necessary article alerting to the need to implement programmes for rational use of antimicrobials in hospital at home with the same rigour as in hospitals.

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Reply to “Rational use of antimicrobials in home hospitalization”[☆]



Respuesta a «Uso racional de antimicrobianos en hospitalización a domicilio»

Dear Editor,

In response to the published Letter to the Editor by Mirón Rubio,¹ we would like to respond with the following paper to clear up the questions, comments and clarifications which have emerged from our study.

First of all, as we acknowledged in the discussion, there may have been loss of information, as occurs in all observational studies involving review of medical records. Secondly, in relation to your comment on the potential increase in the antimicrobial spectrum when adapting treatments from conventional hospitalisation (CH) to hospital at home (HaH), we consider that there is a real risk of this treatment inertia occurring. It is for this reason that we consider it essential that physicians master the rational use of antibiotics and have adequate knowledge about the pharmacological properties of antibiotics, especially with regard to oral bioavailability. Also, the availability of a good nursing team and the appropriate medical devices (electronic and elastomeric pumps) would contribute towards making the use of antimicrobials in HaH comparable to that of CH. This issue is linked to the next point referred to in your letter, which calls into question our findings on the improvement in antibiotic management in patients who are transferred to HaH from Accident and Emergency. We acknowledge that the cases were not randomised and that no multivariate analysis was per-

formed, but in defence of our conclusion, we believe it needs to be taken into account that our variable of good prescribing quality used objective and subjective data and that it was protected by other variables such as tolerance to the oral route, the likelihood of resistance and clinical stability. Once again, we would like to point out that it is possible that good overall management of the patient by the same doctor, particularly if the dates for changes in treatment and the processes of good prescribing quality are established in a relatively automatic way at the beginning of admission on the premise that “the patient is doing well”, could lead to optimisation in the use of antimicrobials. It should be noted that several studies have already examined this type of measure, with surprising conclusions.^{2–4} In the prescribing of antimicrobials there are many cognitive biases that undermine their optimisation, like for example, considering the prototype of the older, comorbid patient in our study, the fact that the frailty of the patient and the general deterioration caused by pneumonia can be confused with the determining infectious factors. In other words, the patient is not going to heal faster because of more antibiotics, perhaps mobilisation measures,⁵ early discharge,⁶ nutritional counselling or respiratory rehabilitation may be more important. We also hope to have stimulated consideration as to whether there are occasions when administration of intravenous antibiotics is used to justify admitting a patient to HaH. We would like to stress that it is perfectly possible to admit a patient to HaH with oral antibiotic therapy, i.e. for all those patients who have infectious conditions but whose reason for admission may be frailty, the need for other treatments or close supervision by a hospital specialist with the ability to identify treatment failure faster.

Last of all, as regards the uncertainty about how the hospital stay was measured, we can clarify that patients who went directly to HaH from A&E were included. We have no doubt that a proportion of the factors determining poor prescribing quality occurred during the CH.

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