

Noninvasive Remote Telemonitoring for Ambulatory Patients With Heart Failure and Emergency Department Services. Response

Telemonitorización no invasiva en pacientes con insuficiencia cardíaca y servicios de urgencias hospitalarios. Respuesta

To the Editor,

It was with great interest that we read the letter from Llorens et al.¹ about the risk profile and predisposing factors leading to hospitalization for heart failure (HF) in the 30 days following a visit to the emergency room for HF.

Our results in the CARME study² cannot be extrapolated to the population described by Llorens et al. Our study was not conducted in the emergency room context nor following admission in all cases; only a small percentage of patients had required hospitalization in the previous year and recruitment was not immediate. In fact, most participants were outpatients who regularly attended scheduled appointments in the HF unit. This contrasts with other published series that recruited patients immediately following discharge.

Llorens et al.¹ reveal the importance of being able to detect the subgroups of patients at greatest risk of readmission. We were unable to identify the patient profile that benefited most from telemonitoring, although our results may indicate that patients with HF who receive better treatment and health education are those who benefit most from telemonitoring—but this remains a speculation. As we recognized when describing the limitations of our study, to determine which patients would benefit more from any specific telemonitoring system we would have needed a broader-based sample that enabled us to conduct subgroup analyses. Although the CARME study² obtained highly positive results in terms of fewer admissions and fewer days' hospitalization for HF, the review of the literature on noninvasive telemonitoring showed that results vary; hence the great importance of selecting those patients at higher risk of readmission. For example, the discrepancies between recently published studies (eg, Chaudry et al.³) or conference presentations (eg, the Telemedical Interventional Monitoring in Heart Failure trial⁴) and the generally positive data described in the Cochrane review.⁵ The ability to detect the patients at greater risk of readmission does not necessarily imply they are really those who would benefit most from a telemonitoring program. However, subgroup analysis in some studies does suggest those who would benefit most might well be the patients who are most seriously affected. Consequently,

although Llorens et al's hypothesis that patients with a history of chronic HF decompensated by precipitating factors like anemia or high blood pressure could benefit more from a telemonitoring program is of interest, more studies are needed to establish precisely which patients should be selected for this type of intervention, and even which type of intervention would most benefit each patient.

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REFERENCES

- Llorens P, Martín-Sánchez FJ, Herrero P, Perelló R. Telemonitorización no invasiva en pacientes con insuficiencia cardíaca y servicios de urgencias hospitalarios. *Rev Esp Cardiol.* 2011;64:948.
- Domingo M, Lupón J, González B, Crespo E, López R, Ramos A, et al. Telemonitorización no invasiva en pacientes ambulatorios con insuficiencia cardíaca: efecto en el número de hospitalizaciones, días de ingreso y calidad de vida. Estudio CARME (Catalan Remote Management Evaluation). *Rev Esp Cardiol.* 2011;64:277-85.
- Chaudhry S, Matterna J, Curtis J, Spertus J, Herrin J, Lin Z, et al. Telemonitoring in patients with heart failure. *N Engl J Med.* 2010;363:2301-9.
- Koehler F, Winkler S, Schieber M, Sechtem U, Stangl K, Böhm M, et al., TIM-HF Investigators. Telemedical Interventional Monitoring in Heart Failure (TIM-HF), a randomized, controlled intervention trial investigating the impact of telemedicine on mortality in ambulatory patients with heart failure: study design. *Eur J Heart Fail.* 2010;12:1354-62.
- Inglis SC, Clark RA, McAlister FA, Ball J, Lewinter C, Cullington D, et al. Structured telephone support or telemonitoring programmes for patients with chronic heart failure. *Cochrane Database Syst Rev.* 2010;8:CD007228.

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Malnutrition and Heart Failure

Desnutrición e insuficiencia cardíaca

To the Editor,

We would like to congratulate Bonilla et al.¹ on their study on malnutrition and mortality in hospitalized patients, which was recently published in *Revista Española de Cardiología*. We would also like to make some practical observations.

From a methodological point of view, we would like to point out that there may have been a sample selection bias. The study selection criteria excluded patients who were not able to stand up to be weighed or measured or who were not able to undergo the

Mini Nutritional Assessment[®] (MNA[®]) due to functional deterioration prior to admission or which developed during the hospital stay. The exclusion of patients with worse function probably resulted in a prevalence of malnutrition that was lower than the actual situation. Given that the demographic and comorbidity characteristics were not compared between the excluded and included patients, we cannot discount the possibility that there were differences, which constitutes a study limitation. We also think that it would be appropriate to clarify whether skinfold and circumference measurements were taken by one or several observers, as this could affect reproducibility and consistency.

The authors assessed the impact on survival of several isolated comorbidities. However, they did not measure the impact on survival of the comorbidities as a whole (Charlson index) or of the patients' functional situation, which have been reported in other