

guidelines for the management of HF<sup>2</sup> and the German clinical practice guideline on chronic HF<sup>3</sup> that acknowledge the available evidence of pharmacist care and interdisciplinary care.<sup>4,5</sup> Topics and tasks include prevention of HF, particularly by improving adherence to antihypertensives, providing medication reviews, assuring appropriate self-medication, and improving both medication safety and adherence.<sup>4</sup> We congratulate Kalmanovich *et al.* to their research plan. Their study will hopefully provide additional randomized evidence for the effects of interdisciplinary care in patients with HF.

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doi:10.1002/ejhf.1712

Online publish-ahead-of-print 16 December 2019

## Survival rates in elderly patients with heart failure

We read with interest the article by Jones *et al.*<sup>1</sup> which analysed the survival rates of patients in the community with chronic heart failure (HF). It is notable that in patients aged ≤ 65 years, the rates of survival were almost 10% and 30% better at 1 and 5 years, respectively, when compared to those aged ≥ 75 years. This may be due to co-morbidities in the older population, but another possibility may be due to these patients not being put on adequate HF medications.

Molnar *et al.*<sup>2</sup> have shown that the survival benefit of beta-blockers in chronic HF could be extrapolated to elderly patients with advanced chronic kidney disease (CKD). In a retrospective cohort study involving 5862 elderly patients with advanced CKD, the group showed reduced all-cause mortality with beta-blocker use.

Similarly, Martínez-Milla *et al.*<sup>3</sup> performed a single-centre, observational cohort study on 390 patients aged ≥ 75 years with CKD who were in receipt of angiotensin-converting enzyme inhibitors/angiotensin receptor blockers (ACEi/ARBs) and mineralocorticoid receptor antagonists (MRAs). Their findings showed that ACEi/ARB treatment was associated with fewer cardiovascular events, whilst MRAs did not reduce the number of this nor influence total mortality.

Anaemia, which is common in elderly HF patients, is associated with a worse prognosis, as shown by Savarese *et al.*<sup>4</sup> The group looked at the Swedish Heart Failure registry data of 49 985 patients and found that anaemia is associated with worse prognosis in both HF with preserved ejection fraction and HF with reduced ejection fraction. These patients have received more aggressive treatment with intravenous iron infusions over the last few years. It would be useful to have data, if available from the papers in this meta-analysis, on this correlation and whether treatment improved prognosis, especially in the elderly.

With newer agents such as empagliflozin not yet in wider usage but shown to improve mortality in HF<sup>5</sup> it would be interesting to see

how future data will be affected, particularly in the elderly population who also tend to have more advanced diabetes due to its progression over time.

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[Correction added on 19 March 2020, after first online publication: Ahmed Fathelrahman Awadalla has been added as the second author.]

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doi:10.1002/ejhf.1751

Online publish-ahead-of-print 5 February 2020

## Survival rates in elderly patients with heart failure: reply

We thank Dr Khan for the interest in our systematic review of survival in patients with

chronic heart failure,<sup>1</sup> and agree that prescribing data are important for contextualising heart failure survival. We were precluded from including these analyses in our review due to space limitations but plan to report prescribing data in an upcoming paper.

We believe that Dr Khan's letter highlights three important points. Firstly, the comparatively poor survival rates seen in older patients may not be due to co-morbidities alone. Individual studies demonstrate that older people with heart failure have a significantly worse prognosis than age and sex-matched controls, even when co-morbidity is common in both groups. A recent observational study found the 1, 5 and 10-year survival rates amongst people with chronic heart failure aged between 75 and 84 years were 81.9% (95% confidence interval 81.3–82.4), 49.5% (48.7–50.3) and 23.8% (22.8–24.9) compared to respective survival in age and sex-matched controls of 94.2% (94.0–94.3), 71.9% (71.6–72.2) and 46.0% (45.5–46.6).<sup>2</sup>

Secondly, prescribing of medications with proven prognostic benefit in heart failure remains suboptimal across all age groups, although treatment rates are improving over time.<sup>3</sup> Many patients also do not receive the recommended combination or optimal dose of medications.<sup>3</sup> Older people may be at particular risk of not receiving these medications due to individual patient factors such as treatment intolerance, impaired renal function, or medication interactions. Under-prescribing may, in part, account for the poor survival

rates seen in older people. Although there are few dedicated trials of heart failure treatment in older populations, subgroups analyses from studies such as CONSENSUS and PARADIGM-HF suggest older people derive a similar benefit to younger people from key heart failure medications. Given the prevalence of heart failure is above 10% in people aged over 70 years, improving prescribing in this age group is of particular importance.<sup>4</sup>

Finally, Dr Khan highlights the potential future importance of sodium–glucose cotransporter 2 (SGLT2) inhibitors in heart failure treatment. In a recent randomised controlled trial, people with heart failure and reduced ejection fraction treated with dapagliflozin compared to placebo had a 25% reduced risk of worsening heart failure or cardiovascular mortality (hazard ratio 0.74, 95% confidence interval 0.65–0.85).<sup>5</sup> Thus far, SGLT2 inhibitors have shown a reassuring safety profile and may improve outcomes in both diabetes and renal failure, meaning many older people with heart failure could benefit. Real-world studies including older patients are needed to confirm the prognostic benefit of these treatments across age groups.

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