

Heart failure in nursing home residents

Citation for published version (APA):

van der Velden - Daamen, M. (2016). *Heart failure in nursing home residents: Prevalence, diagnosis and treatment*. [Doctoral Thesis, Maastricht University]. Datawyse / Universitaire Pers Maastricht.
<https://doi.org/10.26481/dis.20161012mv>

Document status and date:

Published: 01/01/2016

DOI:

[10.26481/dis.20161012mv](https://doi.org/10.26481/dis.20161012mv)

Document Version:

Publisher's PDF, also known as Version of record

Please check the document version of this publication:

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Valorization Addendum

In this chapter, the findings of this thesis on heart failure (HF) in nursing home residents and their societal value are addressed. Consecutively, the relevance of the problem of HF in nursing homes, the diagnosis of HF in nursing home residents and the findings regarding the treatment of HF in nursing home residents, respectively, are briefly described. Attention will also be paid to the significance of the participation of nursing home residents in research. This chapter ends with the description of the dissemination of results.

Currently, 17% of all inhabitants in the Netherlands are above the age of 65. It is expected that this number will rise up to 26% in 2040, due to the 'baby boom generation' of 1945-1970 and the higher survival rates due to developments in medical care and technology. The Dutch government encourages a policy of "aging in place", meaning that people live at home as long as possible, even if they get frail and disabled. However by aging, the risk of onset of diseases and limitations in performing activities of daily living is increasing.

When the need of care services is beyond the range of informal and formal regular home care services, admission to a nursing home is inevitable. Thereby, nursing home residents represent a specific group of older persons. These residents can be described as old and considerably disabled persons, with either progressive chronic somatic or psychogeriatric diseases, resulting in multimorbidity and polypharmacy.

The main focus of the care for these residents is not on the healing of these diseases, which often is not possible anymore, but on providing adequate care and symptom relief to add to the quality of the rest of their life.

Because of their heterogeneous clinical profile, they are often excluded from clinical and epidemiological studies, which makes it difficult to determine clear diagnostic and treatment strategies. That's why it is very important to get more insight in the presentation and course of chronic diseases in this target group of multimorbid nursing home residents, to derive adequate indications for diagnosis and treatment.

One of the main findings of this thesis is that research in nursing home residents is possible, if prepared very well and if adequate attention is paid to the aspect of communication with the residents themselves and/or their legal representatives. This even applies to residents with dementia, who nearly always are excluded from scientific studies by using the easy motive of "why bothering them.....?" In the media and also in daily practice however, there are often discussions about the insufficiency of knowledge and the quality of care provided in nursing homes. Tailoring high quality care for both somatic and psychogeriatric nursing home residents, therefore, can bene-

fit largely from studies done in the target group itself and this should be taken into account when developing future research programs in frail and disabled older persons.

We found that HF is very prevalent in nursing home residents and therefore a relevant problem in daily practice of nursing home care. Thereby, this thesis supports the assertion that improving knowledge and skills of the nursing home team, especially the nursing home physicians may contribute in offering proper care to residents with HF, fitting in their needs and improving their quality of life. This study clearly reveals that it is important that nursing home physicians are trained well to adequately recognize, diagnose and treat HF in nursing home residents. This study showed that trained nursing home physicians are fairly capable to diagnose HF in nursing home residents by using available tools such as anamnesis, physical examination, laboratorial testing and electrocardiography. The training program used in this study can easily be incorporated in the postgraduate training program to become a nursing home physician.

For the nursing staff of the nursing home it is important to be trained in recognizing relevant signs and symptoms at an early stage and to subsequently inform the nursing home physician about their observations. The knowledge of relevant signs and symptoms of HF acquired in this study can be taken up in regular educational nursing programs.

In diagnosing HF, echocardiography must be recommended when there is doubt about the diagnosis or to determine the underlying cause of HF. Moreover, knowing left-ventricular ejection fraction may be relevant to apply proper treatment. Normally, residents have to visit the hospital or a specialized unit to undergo an echocardiography but in this study it appeared that echocardiography can be done easily in the nursing home itself by using a hand-held device. Because of the logistic problems and inconvenience that often are associated with ambulatory visits or admissions of nursing home residents to hospitals it can be advised strongly for nursing homes to arrange adequate collaboration with a neighboring hospital department of cardiology, to achieve a situation in which the total diagnostic process of HF including echocardiography can be performed in the nursing home itself. The residents will clearly benefit from this, as also will the collaborative approach of this relevant disease.

Looking to the treatment of HF, the results of this thesis showed that there is incompliance to the current guidelines on HF, regarding both the pharmacological and non-pharmacological treatment. As suggested this incompliance with the guidelines may be a conscious decision because the profile of nursing home residents is challenging to cope with in the traditional health care model which is mainly single disease oriented and based on disease specific guidelines, strongly promoting an evidence based approach that is based on large randomised controlled trials. This approach often causes fragmentation of care because it asks for homogeneous patient groups and not for multimorbid heterogeneous ones such as nursing home residents, who therefore are mostly excluded from these trials.

It might be difficult, therefore, to apply guidelines that are not aligned with a target group, which is far beyond the single disease status. In addition, the currently available guidelines on treatment of HF may not be well applicable to very frail and disabled older persons with a profile of polypharmacy, due to the high chance of adverse drug reactions, side effects and significant interactions. This study stresses the need and necessity of specific guidelines for this target group of multimorbid patients. Therefore, future research on appropriate (non)-pharmacological treatment of HF in nursing home residents should get high priority to get more customized and tailored guidelines for very frail and disabled older persons, contributing to patient's safety and quality of life.

DISSEMINATION

Next to the scientific value of this thesis, of which all chapters have been published in international scientific journals, the results of this thesis also have concrete societal value. In addition to relevant aspects already mentioned above, they may be used to raise awareness of the problem of HF in nursing homes; e.g. the manuscript about the prevalence of HF has been published also in a Dutch journal (*Nederlands Tijdschrift voor Geneeskunde*) entitled as Heart failure in nursing home residents; a difficult diagnosis?, to reach the largest part of the target group of Dutch nursing home physicians and hospital geriatricians. This awareness will be further raised by presentations on congresses.

Second, the results of this thesis can and will be used in the development and provision of educational training programs for nursing home physicians and nursing staff.

Third, the results of this thesis will actually be used during the updating of the current Dutch guideline on HF.

Finally, the approach used in this thesis can be applied also to do more in-depth research on other relevant diseases in nursing home residents, but also on other HF populations not yet well studied.