# Diagnosis, mortality, and professional life in patients with heart failure

Akademisk avhandling

som för avläggande av medicine doktorsexamen vid Sahlgrenska akademin, Göteborgs universitet kommer att offentligen försvaras i lokal Arvid Carlsson, Academicum, Medicinaregatan 3, Göteborg, den 16 mars 2023, klockan 09.00

av Sofia Ekestubbe

Fakultetsopponent: professor Stefan Söderberg Umeå universitet, Avdelningen för medicin, Institutionen för folkhälsa och klinisk medicin, Umeå

## Avhandlingen baseras på följande delarbeten

- I Schaufelberger Maria, Ekestubbe Sofia, Hultgren Simon, Persson Hans, Reimstad Ann, Schaufelberger Mattias, Rosengren Annika. Validity of heart failure diagnoses made in 2000-2012 in western Sweden. ESC Heart Failure 2020; 7: 37-46
- II Ekestubbe S, Fu M, Giang KW, Lindgren M, Rosengren A, Schioler L, Schaufelberger M. Increasing home-time after a first diagnosis of heart failure in Sweden, 20 years trends.
  ESC Heart Failure 2022; 9: 555-563
- III Ekestubbe S, Lindgren M, Basic C, Giang KW, Rosengren A, Thunström E, Schiöler L, Schaufelberger, M. Decreasing time on sickness benefit days for patients with heart failure over two decades. *In manuscript*
- IV Ekestubbe S, Lindgren M, Giang KW, Rosengren A, Schaufelberger M. Impact of heart failure on professional life, in young adults. In manuscript

SAHLGRENSKA AKADEMIN INSTITUTIONEN FÖR MEDICIN



# Diagnosis, mortality, and professional life in patients with heart failure

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#### Abstract

#### Background:

Heart failure (HF) is a common and severe disease with an increasing incidence among young adults. An emerging composite endpoint is home-time. Little is known, on how living with HF affects professional life.

### Methods and results:

In Paper I, we used medical records of 965 of patients 20-100 years with HF 2000-2012 to validate the diagnosis according to the European Society of Cardiology's current guidelines. The diagnosis was validated as definite, probable, and miscoded HF in 601 (62.3%), 310 (32.1%) and 54 (5.6%) cases, respectively. In Paper II and III, we used the National patient register, the Cause of Death Register, and the Longitudinal integrated database for health insurance and labour market studies (LISA). In Paper II, home-time during 4-years follow-up was calculated for 388 775 patients 18-84 years, 1992-2012. Home-time increased over the study period for both age groups. Patients 18-64 years had more home-time than those 65-84 years (83.8% vs. 68.2%), mainly due to lower 4-year mortality rate (14.2% vs. 29.7%). In Paper III, time on sickness benefit during 2-year follow-up was estimated for patients and controls 18-60 years, 1995-2016. Sickness benefit time declined over the study period for both groups, with a steeper decline for patients. In Paper IV, patients 16-<55 years diagnosed with HF or dilated cardiomyopathy 1997-2016, had their records examined and 294 patients still alive and living nearby, participated. Two thirds of patients were male, mean BMI was elevated. Patients in blue-collar, compared to white-collar occupations were significantly more weighed down by thoughts of work at home, and had a lower working capacity in relation to physical demands, but were not more often on current sick leave.

### Conclusion:

Validity of the HF-diagnosis was high, supporting the use of this register in HF-research. Patients with HF in Sweden had an increasing home-time over two decades and young patients had more home-time than older patients. Time on sickness-benefit was higher for HF-patients than for controls and decreased in both groups, but steeper in patients than controls. Most young adults with HF were male, had an elevated BMI and patients of blue-collar occupations reported more job strain than patients of white-collar occupations.

Keywords: Heart failure, young adults, home-time, sick leave, working condition

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