Abstract: P764

A quality improvement program for heart failure involving structured patient data, diagnosis and organization of care - results from the 4D heart failure project

Authors:
D. Matan1, U. Lofstrom2, C. Cabrera-Corovic3, B.L. Eriksson4, M. Ekstrom1, C. Hage2, G. Ljunggren4, P. Lynga3, B. Persson5, M.J. Eriksson6, H. Wallen1, B. Janerot Sjoberg7, K. Malmqvist1, C. Linde2, H. Persson1, 1Danderyd University Hospital, Department of Clinical Sciences - Stockholm - Sweden, 2Karolinska Institute, Department of Medicine - Stockholm - Sweden, 3South Hospital Stockholm, Department of Clinical Science and Education - Stockholm - Sweden, 4Karolinska Institute, Department of Neurobiology, Care Sciences and Society (NVS) - Stockholm - Sweden, 5Uppsala University, Department of Cell and Molecular Biology, Science for Life Laboratory - Upssala - Sweden, 6Karolinska Institute, Department of Molecular Medicine and Surgery (MMK) - Stockholm - Sweden, 7Karolinska Institute, Department of Clinical Science, Intervention and Technology (CLINTEC) - Stockholm - Sweden.

Topic(s):
Chronic Heart Failure: Multidisciplinary Interventions

Citation:
European Heart Journal (2019) 40 (Supplement ), 366

Background: Heart failure (HF) management is suboptimal in Sweden despite available evidence-based treatments.

Purpose: We hypothesized that a comprehensive organizational improvement programme could improve HF management, treatment and outcome.

Methods: Between 2012 and 2017 a HF improvement programme (the 4D Heart Failure project) was conducted in an urban region in Sweden (>2.2 million inhabitants). The steering committee led working groups 2012–17 including all health care providers with 250 primary care centers to build a standardized care process. HF outpatient care was centralized at five hospital-based HF clinics and included multidisciplinary health care teams.

The outcomes were: 1) prescription withdrawals of HF medication (RAS-inhibitors and beta-blockers, MRA) per year, expressed as percentage (%), 2) one-year all-cause mortality or heart failure readmission by multivariable Cox regression, 3) total number of admitted HF patients, subdivided by new-onset and previously known HF, per million inhabitants and year.

Results: Between 2012 and 2017, yearly visits to the five HF clinics increased 3.5 times from 3200 to 11700, to a total of 47400 visits or 15800 patients (average 3 visits/patient). Prescription withdrawals of MRAs for readmitted HF patients increased from 37% to 60%, of beta-blockers and RAS-inhibitors from 80 to 90%. Similar increases were noted for all admitted patients. One-year mortality or HF readmission was 48% (n=17124/35880) over the period and decreased significantly (adjusted HR 0.98 per year, 95% CI 0.97–0.99, p<0.001). Number of admitted HF patients, new-onset or readmitted HF patients decreased by 16%, 13% and 20%, respectively (p<0.0001, Figure).

Conclusion: A comprehensive standardized care HF management programme in an urban region substantially increased access to multidisciplinary hospital-based HF clinics, and increased use of evidence-based medications. HF admissions and readmissions were reduced, as was the risk of one-year mortality or HF rehospitalization.
Abstract: A quality improvement program for heart failure involving structured patient data, diagnosis and organization of care - results from the 4D heart failure project


Topic(s): Chronic Heart Failure: Multidisciplinary Interventions

Citation: European Heart Journal (2019) 40 (Supplement), 366

Background: Heart failure (HF) management is suboptimal in Sweden despite available evidence-based treatments.

Purpose: We hypothesized that a comprehensive organizational improvement programme could improve HF management, treatment and outcome.

Methods: Between 2012 and 2017 a HF improvement programme (the 4D Heart Failure project) was conducted in an urban region in Sweden (>2.2 million inhabitants). The steering committee led working groups 2012–17 including all health care providers with 250 primary care centers to build a standardized care process. HF outpatient care was centralized at five hospital-based HF clinics and included multidisciplinary health care teams.

The outcomes were: 1) prescription withdrawals of HF medication (RAS-inhibitors and beta-blockers, MRA) per year, expressed as percentage (%), 2) one-year all-cause mortality or heart failure readmission by multivariable Cox regression, 3) total number of admitted HF patients, subdivided by new-onset and previously known HF, per million inhabitants and year.

Results: Between 2012 and 2017, yearly visits to the five HF clinics increased 3.5 times from 3200 to 11700, to a total of 47400 visits or 15800 patients (average 3 visits/patient). Prescription withdrawals of MRAs for readmitted HF patients increased from 37% to 60%, of beta-blockers and RAS-inhibitors from 80 to 90%. Similar increases were noted for all admitted patients. One-year mortality or HF readmission was 48% (n=17124/35880) over the period and decreased significantly (adjusted HR 0.98 per year, 95% CI 0.97–0.99, p<0.001). Number of admitted HF patients, new-onset or readmitted HF patients decreased by 16%, 13% and 20%, respectively (p<0.0001, Figure).

Conclusion: A comprehensive standardized care HF management programme in an urban region substantially increased access to multidisciplinary hospital-based HF clinics, and increased use of evidence-based medications. HF admissions and readmissions were reduced, as was the risk of one-year mortality or HF rehospitalization.

Numbers of admitted patients 2012-2017