

Contacts to the healthcare system prior to out-of-hospital cardiac arrests

N. Zylfytari¹, S.G. Moller¹, M. Wissenberg¹, F. Folke², C.A. Barcella¹, A.L. Moller³, E.H.A. Mills⁴, H.L. Tan⁵, L. Kober⁶, F. Lippert², G.H. Gislason⁷, C.T. Pedersen⁸

¹Department of Cardiology, Copenhagen University Hospital Herlev and Gentofte, Hellerup, Denmark; ²Emergency Medical Services and University of Copenhagen, Copenhagen, Denmark; ³Department of Research, Nordsjaellands Hospital, Hillerod, Denmark; ⁴Aalborg University Hospital, Department of Cardiology, Aalborg, Denmark; ⁵Department of Cardiology, Academic Medical Center, University of Amsterdam, Amsterdam, Netherlands (The); ⁶Rigshospitalet - Copenhagen University Hospital, The Heart Center, Copenhagen, Denmark; ⁷The Danish Heart Foundation, Copenhagen, Denmark; ⁸Department of Clinical Investigation and Cardiology, Nordsjaellands Hospital, Hillerod, Denmark

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Background: Patients who suffer a sudden out-of-hospital cardiac arrest (OHCA) may be preceded by warning symptoms and healthcare system contact. Though, is currently difficult early identification of sudden cardiac arrest patients.

Purpose: We aimed to examine contacts with the healthcare system up to two weeks and one year before OHCA.

Methods: OHCA patients were identified from the Danish Cardiac Arrest Registry (2001–2014). The pattern of healthcare contacts (with either general practitioner (GP) or hospital) within the year prior to OHCA of OHCA patients was compared with that of 9 sex- and age-matched controls from the background general population. Additionally, we evaluated characteristics of OHCA patients according to the type of healthcare contact (GP/hospital/both/no-contact) and the including characteristics of contacts, within two weeks prior their OHCA event.

Results: Out of 28,955 OHCA patients (median age of 72 (62–81) years and with 67% male) of presumed cardiac cause, 16,735 (57.8%) contacted

the healthcare system (GP and hospital) within two weeks prior to OHCA. From one year before OHCA, the weekly percentages of contacts to GP were relatively constant (26%) until within 2 weeks prior to OHCA where they markedly increased (54%). In comparison, 14% of the general population contacted the GP during the same period (Figure). The weekly percentages of contacts with hospitals gradually increased in OHCA patients from 3.5% to 6.5% within 6 months, peaking at the second week (6.8%), prior to OHCA. In comparison, only 2% of the general population had a hospital contact in that period (Figure). Within 2 weeks of OHCA, patients contacted GP mainly by telephone (71.6%). Hospital diagnoses were heterogeneous, where ischemic heart disease (8%) and heart failure (4.5%) were the most frequent.

Conclusions: There is an increase in healthcare contacts prior to “sudden” OHCA and overall, 54% of OHCA-patients had contacted GP within 2 weeks before the event. This could have implications for developing future strategies for early identification of patients prior to their cardiac arrest.

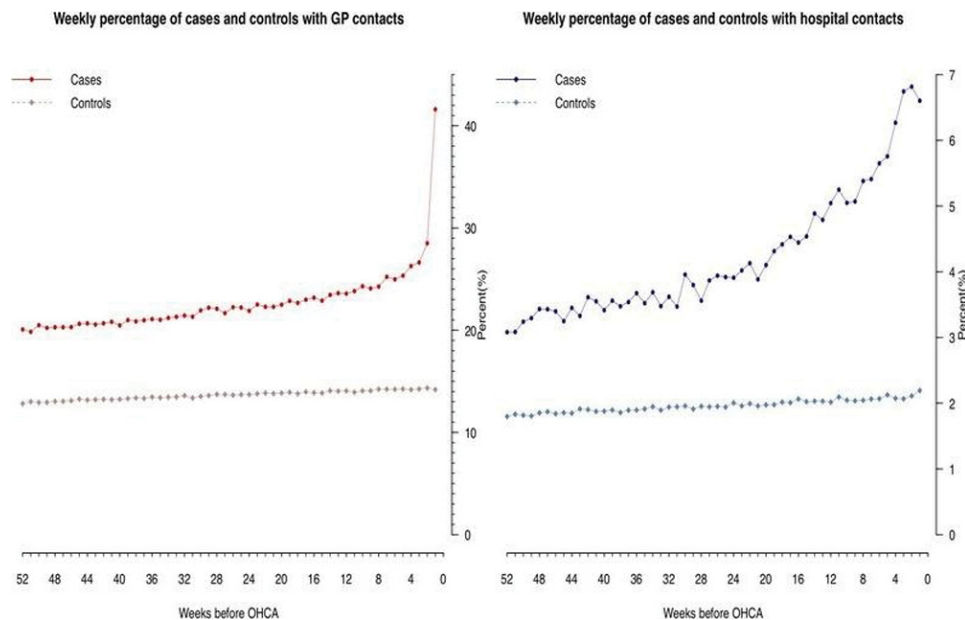


Figure 1. The weekly percentages of contacts to GP (red) and hospital (blue) within one year before OHCA comparing the OHCA cases to the age- and sex-matched control population (N cases = 28,955; N controls = 260,595).