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## Determinants related to the risk of using ED among paediatric patients receiving home care services

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### Introduction:

Pediatric home care services (PHC) are recommended to avoid hospital visits or readmission in children with chronic or complex conditions and to reduce the use of emergency departments. It would be useful to know the association of sociodemographic, clinical and health supply factors with Emergency Department (ED) access by patients receiving PHC.

### Methods:

A cross sectional retrospective cohort study was held from 2012 to 2017 in Pediatric home care services in Italy. Participants are children aged 0-18 years receiving pediatric home care services. Collected data are: sociodemographic variables (sex, age, presence or absence of an unfamiliar caregiver); distance from the ED in minutes; clinical variables (mortality rate at home, mortality rate in the ED, pathology responsible for the PHC activation and pathology determining the ED access); health supply variables (PHC proposed duration as stated by the proponent, subjects directing the patient to the ED, place of discharge after ED access, and arrival time to the ED).

### Results:

A total of 1236 PHC events contributed to 769 ED accesses. Receiving PHC services after hospital discharge (RR:1.26) and longer duration of charge-taking significantly increased the risk of experiencing ED access. The RR significantly decreased among children >5 years-of-age (RR:0.84; RR:0.62; RR:0.57; in 5-9; 10-14; 15-18 years respectively) and among children with neoplastic (RR:0.7), respiratory (RR:0.69), trauma (RR:0.4) or musculoskeletal diseases (RR:0.31) at first evaluation.

### Conclusions:

Confirming that ED accesses are issue present among children receiving home care services, this study has the main strength of demonstrating which risk factors are associated with ED accesses by children using home care services. Knowledge of

them is necessary in order to implement adequate prevention strategies on both management and quality of care.

**Key messages:**

- Determinants associated with the risk of using emergency departments among paediatric patients receiving integrated paediatric home care services.
- ED visit is shown to be an issue among children receiving PHC and some determinants emerged as associated with ED visits by children in PHC.