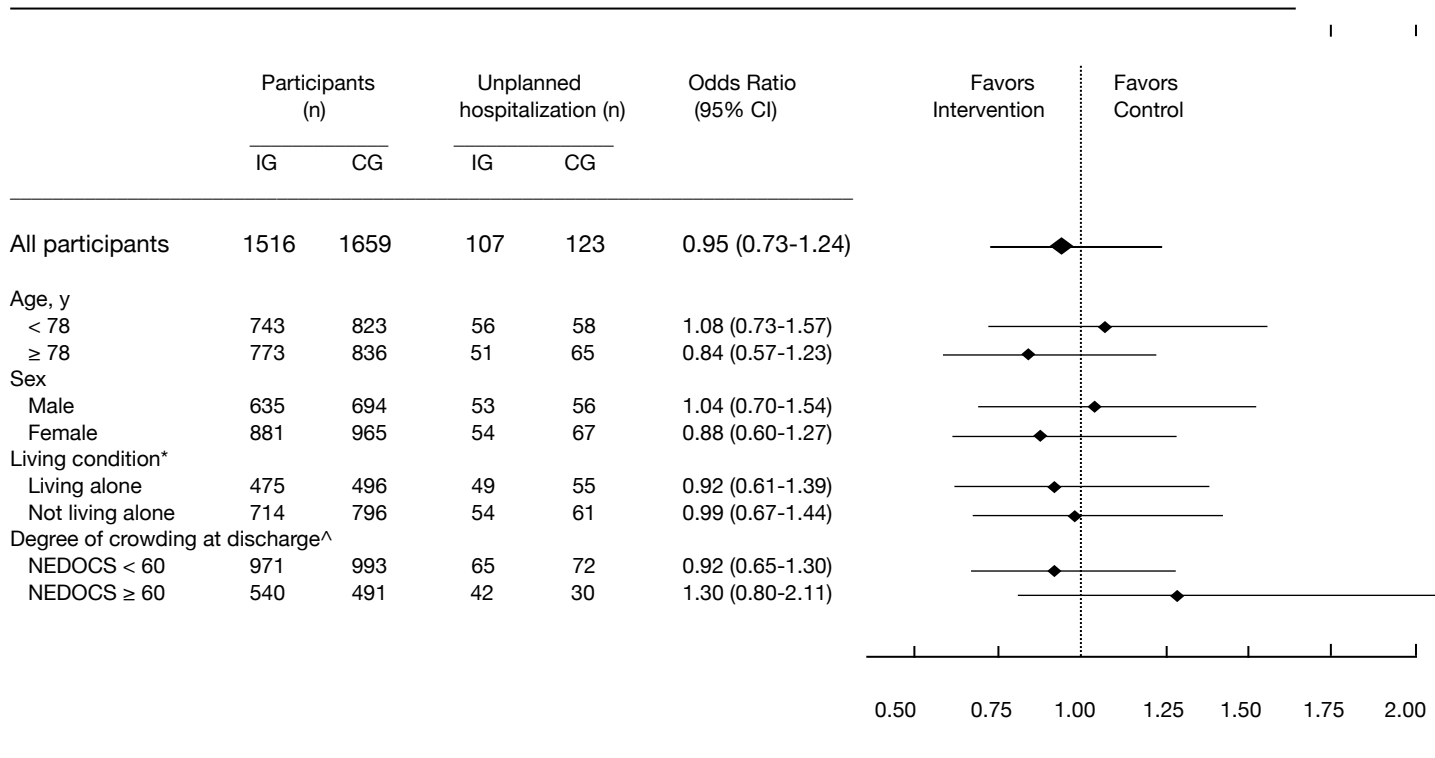
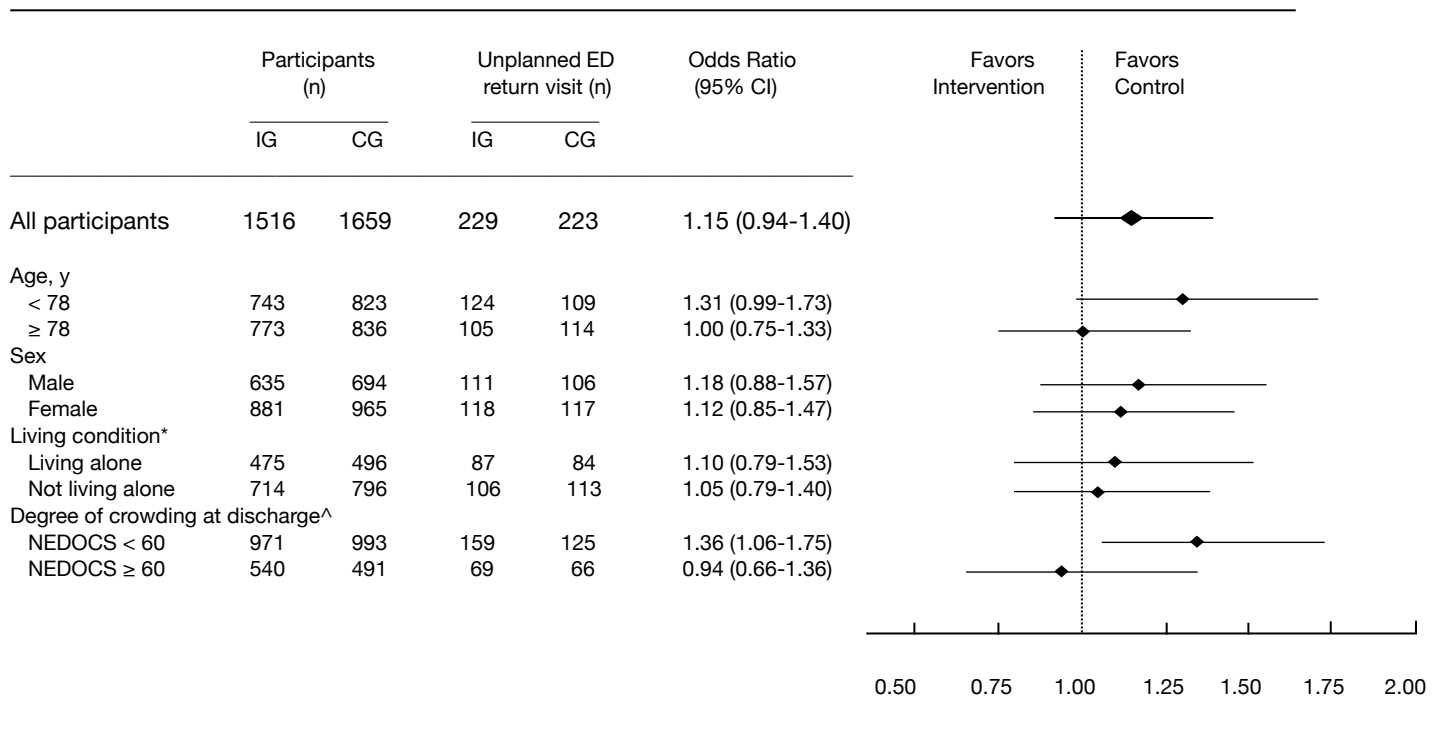


Supplementary figure 1. Risk of unplanned hospitalization within 30 days depending on study group



Supplementary figure 2. Risk of unplanned ED return visit within 30 days depending on study group



ED: Emergency Department, CI: Confidence Interval, IG: Intervention Group, CG: Control Group, NEDOCS: National Emergency Department OverCrowding Scale

* Living condition unknown in 327 intervention group patients and 367 control group patients

[^] NEDOCS at discharge unknown in 5 intervention group patients and 175 control group patients

Supplementary table 1. Number of unplanned and planned hospital admissions depending on study group

Hospital admissions per study group, n	Unplanned hospital admissions, n= 230	Planned hospital admissions, n= 198	p-value	OR (95% CI)
Intervention group, n= 203/1516	107 (53%)	96 (47%)	0,685	0.92 (0.63-1.35)
Control group, n=225/1659	123 (55%)	102 (45%)		

n: number, OR: odds ratio, CI: confidence interval

Supplementary table 2. Number of unplanned and planned ED return visits depending on study group

ED return visits per study group, n	Unplanned ED return visits, n= 452	Planned ED return visits, n= 27	p-value	OR (95% CI)
Intervention group, n= 242/1516	229 (95%)	13 (5%)	0,800	1.11 (0.51-2.41)
Control group, n= 237/1659	223 (94%)	14 (6%)		

ED: Emergency Department, n: number, OR: odds ratio, CI: confidence interval

Follow-up call (intervention group)

"You were/Mr./Mrs./Ms. was at the Emergency Department yesterday. I would like to ask how you are/he/she is doing. Is this okay with you?"

- Permission to participate with telephone follow-up call: Yes No

[Here the nurse indicates whether or not the patient gives permission to participate. If the nurse clicks "Yes", the subsequent questions of the questionnaire will appear.]

[If the nurse clicks "No", the following text will appear:]

- No consent for participation. Wish the patient a good day and end the conversation.
-

[If the patient has consented to participate, the nurse continues with the following question. In case the nurse does not talk to the patient, but to someone else, "you" is replaced by the patient's name. After the nurse has listened to the interviewee's answer, he/she asks which of the following 5 answers fits best with the interviewee's experience.]

- "You were at the Emergency Department yesterday. How are you doing today?"

- Very well Reasonable Very bad
- Well Bad

[Now the nurse has to indicate whether or not he/she notices a language barrier, hearing impairment or other communication problem while talking to the interviewee.]

Is there a language barrier, hearing impairment or other problem with communication?

- Language barrier Other communication problem
- Hearing impairment No problems noticed

- "Did you experience any problems?" No Some Yes

- Explanation: *[space for free text]*

[“Explanation” and space for free text appears if the nurse clicks “Some” or “Yes”. Here the nurse can fill in which problems the patient has experienced.]

- "To what extent did you understand the advice that you received?"

[The nurse asks which of the following 5 answers fits best with the interviewee's experience.]

- Very well Reasonable Very bad
- Well Bad

- "Can you tell me what the doctor has advised you?"

- Very well Reasonable Not at all
- Well Not quite

[Here the nurse scores to what extent the interviewee is able to repeat the information and advice that has been given in the emergency department by comparing the interviewee's answer with the discharge information and instructions reported in the patient's medical records. If it becomes clear that the interviewee has not properly understood or remembered certain instructions or information, the nurse provides further explanations and repeats or clarifies instructions.]

[If something has been changed in the patient's medication (e.g. new medication was started, change of dose) the nurse asks the next question. Nurses were taught to ask whether the interviewee has understood the new dosing schedule, indication for the medication change, what the medication is for and whether the

patient will be able to acquire the medication. If the patient is not able to acquire the medication, the nurse explores why this is not possible and helps to find a solution. E.g. he/she can offer to phone the pharmacy to ask them to deliver the medication at the patient's home.]

- “I see something has been changed in your medication. Do you have any questions about that?”

[space to fill in the interviewee's answer and to register any problems]

[Besides the next question, the nurse checks whether the interviewee has understood whether, when and where the patient has a follow-up appointment. The nurse checks in the EHS whether follow-up appointments are scheduled and if not, he/she can arrange to schedule one. The nurse also checks whether the interviewee has understood what to do if he/she notices alarm symptoms or signs. If the patient reports alarm symptoms, the nurse advises to contact the general practitioner, to return to the ED or, when in doubt, asks the emergency physician on call to contact the patient.]

- “Do you have any questions about follow-up appointments?”

[space to fill in the interviewee's answer and to register any problems]

- “Do you know when you have to contact your general practitioner or the emergency department?”

[space to fill in the interviewee's answer and to register any problems]

- “Do you have any other questions?”

[space to fill in the interviewee's answer and to register any problems]

[The nurse will fill in the following items]:

Indicate on which topic additional information or care was required:

- | | | |
|---|---|---|
| <input type="checkbox"/> Medication change or use | <input type="checkbox"/> Self-care advice | <input type="checkbox"/> Follow-up appointments |
| <input type="checkbox"/> Alarm symptoms | <input type="checkbox"/> Referral (to e.g. general practitioner, dentist , physiotherapist, | |
| <input type="checkbox"/> Other | home care) | |

Explain what additional information or care was given: *[space for free text]*

-
- “Do you feel insecure now that you are back home?”

[The nurse asks which of the following 3 answers fits best with the interviewee's experience.]

- No A little Yes

- Explanation: *[space for free text]*

[“Explanation” and space for free text appears if the nurse clicks “A little” or “Yes”. Here the nurse can fill in why the patient feels insecure and which actions were undertaken to support the patient. The nurse discusses with the patient whether he/she can help to offer more support. E.g. by contacting the patient's caregiver or general practitioner or by arranging home care.]

- “Do you feel supported?” No A little Yes

- “If you feel supported, by whom do you feel supported?”

- | | | |
|--|---|---------------------------------------|
| <input type="checkbox"/> People around me/caregiver(s) | <input type="checkbox"/> The hospital | <input type="checkbox"/> Pets/animals |
| <input type="checkbox"/> People from home care | <input type="checkbox"/> Mental supporter | <input type="checkbox"/> Nobody |

“Now I would like to ask you some questions about how you experienced the Emergency Department visit.”

- “Did you receive the care that you expected at the Emergency Department?”

[The nurse asks which of the following 4 answers fits best with the interviewee's experience.]

- Yes, completely Mostly A little Not at all

"What score do you give your stay in this Emergency Department of Haaglanden Medical Center (HMC)?"

- | | | | |
|-----------------------------------|-------------------------|-------------------------|-------------------------------------|
| <input type="radio"/> 1, very bad | <input type="radio"/> 4 | <input type="radio"/> 7 | <input type="radio"/> 10, excellent |
| <input type="radio"/> 2 | <input type="radio"/> 5 | <input type="radio"/> 8 | |
| <input type="radio"/> 3 | <input type="radio"/> 6 | <input type="radio"/> 9 | |

"To what extent would you recommend this Emergency Department to relatives and friends if they would need emergency care?"

- | | | | |
|--|-------------------------|-------------------------|-------------------------------------|
| <input type="radio"/> 1, certainly not | <input type="radio"/> 4 | <input type="radio"/> 7 | <input type="radio"/> 10, certainly |
| <input type="radio"/> 2 | <input type="radio"/> 5 | <input type="radio"/> 8 | |
| <input type="radio"/> 3 | <input type="radio"/> 6 | <input type="radio"/> 9 | |

- Remarks [*space for free text*]

[Here the nurse can explain the interviewee's score, for instance if he/she had any complaints or problems and whether these need further action.]

[From September 2018 to March 2019, we asked patients the following question before ending the conversation:]

"Currently we are conducting a scientific study on healthcare use by patients who have visited our Emergency Departments. May we call you again to ask questions about this in one month? The data will be processed anonymously."

- Permission to call again in one month Yes No

Thank the patient for his/her time, wish the patient a good day and end the conversation.

- 1, certainly not 4 7 10, certainly
- 2 5 8
- 3 6 9

- Remarks [*space for free text*]

[Here the nurse can explain the interviewee's score, for instance if he/she has any complaints or problems and whether these need further action.]

[From September 2018 to March 2019, we asked patients the following question before ending the conversation:]

“Currently we are conducting a scientific study on healthcare use by patients who have visited our Emergency Departments. May we call you again about this in one month? The data will be processed anonymously.”

- Permission to call again in one month Yes No

Thank the patient for his/her time, wish the patient a good day and end the conversation.