

## DATA SUPPLEMENT 2

**Table.** Quality assessment of selected randomized trials on non-ED interventions to reduce ED use using the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) criteria

Possible limits of randomized trials		
1. Lack of allocation concealment		
2. Lack of blinding		
3. Incomplete accounting of patients and outcome events		
4. Selective outcome reporting bias		
5. Other limitations (e.g., early termination, use of unvalidated outcomes, and recruitment bias)		
First Author (reference)	Existing limitations	Overall quality of evidence
Patient Education		
Rettig (12)	2, 3	Moderate
Rector (14)	1, 3	Moderate
Prehospital Diversion		
Snooks (26)	1, 2	Moderate
Managed Care		
Schillinger (38)	1, 3	Moderate
Patient Financial Incentives		
O'Grady (41)	1,2,3,5	Low

**Table.** Quality assessment of selected observational studies on non-ED interventions to reduce ED use using the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) criteria

Possible limits of observational studies		
<ol style="list-style-type: none"> <li>1. Failure to develop and apply appropriate eligibility criteria (inclusion of control population)</li> <li>2. Flawed measurement of both exposure and outcome</li> <li>3. Failure to control confounders and to measure all known prognostic factors</li> <li>4. Imprecision of outcomes (i.e., wide confidence intervals)</li> <li>5. Incomplete follow-up</li> </ol>		
First Author (reference)	Existing limitations	Overall quality of evidence
<b>Patient Education</b>		
Glavan (10)	1, 3, 4	Very low
McWilliams (11)	1, 3	Very low
Schonlau (13)	1, 3	Very low
<b>Non-ED Capacity Increase</b>		
Chalder (22)	1, 2, 3	Very low
Hsu (24)	1, 3, 4	Very low
Hudec (15)	1, 3, 4	Very low
O’Kelly (16)	1, 2, 3, 4	Very low
Philips (23)	1, 2, 3	Very low
Rust (19)	1, 2, 3	Very low
Solberg (20)	1,2,3	Very low
Solberg (21)	1,2,3,4	Very low
van Uden (17)	1, 2, 3	Very low
Wang (18)	2, 3	Very low
<b>Prehospital Diversion</b>		
Schaefer (25)	1, 3, 5	Very low
<b>Managed Care</b>		
Badgett (27)	1, 3, 4	Very low
Catalano (28)	1, 3	Very low
Catalano (29)	1,3, 4	Very low
Dickey (30)	1, 3, 4	Very low
Franco (31)	1, 2, 3	Very low
Glazier (32)	1, 3	Very low
Hurley (33)	1, 2, 3, 4	Very low
Josephson (34)	1,3, 4	Very low
Murphy (35)	1, 3	Very low
Piehl (36)	3, 4	Very low
Price (37)	2, 4	Very low
<b>Patient Financial Incentives</b>		
Hsu (39)	3	Very low
Lowe (47)	1, 2, 3	Very Low
Lowe (40)	2, 3	Very Low
Mortensen (48)	1, 2, 3, 5	Very Low
Selby (42)	3	Very low
Wallace (43)	3	Very low
Waters (45)	2, 3,4	Very Low
Wharam (44)	1,3,5	Very Low
Wilson (46)	2, 3	Very Low