Supplemental Digital Content 2. Total inpatient days and ED presentations in the periods before (-6 years to day -31, around (-30 to +30 days), and after (+31 days to +4 years) a cardinal event.

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| --- | --- | --- | --- | --- | --- |
|  |  | **Age category** | **Before event**  **(95% CI)** | **Around event**  **(95% CI)** | **After event**  **(95% CI)** |
| ***Total Inpatient days during the period*** | ***Heart failure*** | <55 years | 27.37  (21.67, 33.59) | 8.96  (8.19, 9.72) | 34.97  (28.59, 42.12) |
| 55-64 years | 27.93  (24.31, 31.74) | 9.31  (8.74, 9.87) | 35.19  (30.62, 40.20) |
| 65-74 years | 32.00  (29.04, 35.32) | 10.03  (9.61, 10.44) | 39.09  (36.12, 42.17) |
| 75-84 years | 40.50  (38.67, 42.50) | 11.92  (11.60, 12.27) | 42.73  (40.14, 45.29) |
| 85+ years | 46.78  (44.37, 49.57) | 13.30  (12.91, 13.70) | 34.74  (32.51, 37.03) |
| ***Type2 Diabetes*** | <55 years | 20.80  (18.06, 24.11) | 6.09  (5.66, 6.49) | 32.46  (26.67, 38.59) |
| 55-64 years | 26.18  (23.41, 29.28) | 7.79  (7.31, 8.29) | 37.99  (33.55, 42.85) |
| 65-74 years | 28.85  (26.51, 31.13) | 8.89  (8.44, 9.36) | 45.41  (41.87, 49.14) |
| 75-84 years | 39.17  (36.41, 42.08) | 11.50  (11.05, 12.00) | 45.35  (42.13, 49.02) |
| 85+ years | 47.85  (43.54, 52.47) | 13.09  (12.36, 13.88) | 48.06  (40.35, 57.37) |
| ***COPD*** | <55 years | 25.49  (19.19, 33.11) | 5.47  (5.07, 5.93) | 25.61  (20.13, 32.06) |
| 55-64 years | 25.80  (22.23, 30.12) | 6.93  (6.52, 7.36) | 33.36  (28.62, 39.33) |
| 65-74 years | 27.04  (24.90, 29.15) | 8.48  (8.13, 8.79) | 35.06  (32.59, 37.53) |
| 75-84 years | 35.79  (33.80, 37.94) | 10.28  (9.98, 10.59) | 41.87  (39.39, 44.24) |
| 85+ years | 45.15  (41.77, 48.64) | 11.97  (11.40, 12.50) | 42.18  (38.12, 46.58) |
| ***Total ED presentations during the period*** | ***Heart failure*** | <55 years | 4.52  (3.74, 5.38) | 1.25  (1.16, 1.35) | 4.85  (3.95, 5.73) |
| 55-64 years | 4.34  (3.56, 5.22) | 1.21  (1.14, 1.29) | 4.27  (3.75, 4.79) |
| 65-74 years | 4.24  (3.83, 4.70) | 1.20  (1.15, 1.26) | 4.50  (3.63, 6.01) |
| 75-84 years | 4.01  (3.78, 4.28) | 1.15  (1.12, 1.18) | 3.56  (3.34, 3.83) |
| 85+ years | 3.89  (3.71, 4.07) | 1.11  (1.08, 1.14) | 2.61  (2.46, 2.76) |
| ***Type2 Diabetes*** | <55 years | 4.32  (3.86, 4.83) | 0.78  (0.72, 0.83) | 4.61  (4.07, 5.23) |
| 55-64 years | 3.54  (3.16, 3.97) | 0.72  (0.68, 0.77) | 3.56  (3.20, 3.96) |
| 65-74 years | 3.59  (3.30, 3.95) | 0.74  (0.70, 0.78) | 3.57  (3.30, 3.88) |
| 75-84 years | 3.58  (3.36, 3.83) | 0.88  (0.84, 0.93) | 3.22  (3.01, 3.44) |
| 85+ years | 3.97  (3.64, 4.32) | 0.92  (0.86, 0.97) | 2.85  (2.54, 3.16) |
| ***COPD*** | <55 years | 6.57  (5.49, 7.90) | 1.31  (1.21, 1.42) | 5.69  (4.88, 6.65) |
| 55-64 years | 5.12  (4.50, 5.83) | 1.19  (1.14, 1.24) | 5.09  (4.48, 5.72) |
| 65-74 years | 4.72  (3.85, 5.95) | 1.19  (1.13, 1.26) | 4.69  (4.21, 5.25) |
| 75-84 years | 3.80  (3.59, 4.02 | 1.13  (1.10, 1.16) | 3.93  (3.71, 4.16) |
| 85+ years | 3.76  (3.51, 4.03) | 1.06  (1.01, 1.10) | 3.15  (2.90, 3.42) |