**Supplement**

Table 1. Changes in outcomes across facilities before and after OSI implementation.a

|  |  |  |
| --- | --- | --- |
|  | Facilities with reductions  N, % | Facilities with increases  N, % |
| **Total number of patients on high-dosage opioids or concurrent benzodiazepines** |  |  |
| Number of patients receiving daily dosages > 100 MEQ | 122, 87% | 19, 13% |
| Number of patients receiving daily dosages > 200 MEQ | 126, 90% | 14, 10% |
| Number of patients receiving benzodiazepines with opioids | 135, 96% | 6, 4% |
| **Ratio of patients on high-dosage opioids or concurrent benzodiazepines/Total number receiving opioids** |  |  |
| % of patients > 100 MEQ | 95, 68% | 45, 32% |
| % of patients > 200 MEQ | 105, 75% | 35, 25% |
| % of patients on concurrent benzodiazepines | 125, 89% | 16, 11% |

a Increases or reductions are based on change in a facility (average during post-OSI months – average during pre-OSI months) of high-dosage opioid or concurrent benzodiazepine prescribing across 141 VHA facilities.

**Table 2.** Segmented regression results of sensitivity analyses with estimated changes in patients receiving high dosage opioids and concurrent benzodiazepines from October 2012 to September 2014 (except otherwise indicated)

|  |  |  |  |
| --- | --- | --- | --- |
|  | Pre-OSIa  (95% CI) | Immediate intervention effectb  (95% CI) | Post-OSIc  (95% CI) |
| **Excluding phase-in period Oct through Dec 2013** |  |  |  |
| Number of patients > 100 MEQ | -174 | 260 | -276 |
|  | (-202, -146) | (-140, 660) | (-327, -225) |
| Number of patients >200 MEQ | -102 | 156 | -131 |
|  | (-117, -87) | (-59, 371) | (-158, -104) |
| Number of patients on concurrent benzodiazepines | -574 | -876 | -718 |
|  | (-692, -456) | (-2590, 838) | (-935, -501) |
| **Excluding 4 VISNs (previously piloted OSI)** |  |  |  |
| Number of patients > 100 MEQ | -174 | 218 | -272 |
|  | (-201, -147) | (-43, 479) | (-310, -234) |
| Number of patients >200 MEQ | -102 | 149 | -131 |
|  | (-116, -88) | (9, 289) | (-151, -111) |
| Number of patients on concurrent benzodiazepines | -460 | 184 | -703 |
|  | (-583, -337) | (-1019, 1387) | (-876, -530) |
| **Pre-OSI segment starting October 2011d** |  |  |  |
| Number of patients > 100 MEQ | -144 | 419 | -469 |
|  | (-217, -71) | (-440, 1278) | (-657, -281) |
| Number of patients >200 MEQ | -91 | 384 | -239 |
|  | (-130, -52) | (32, 736) | (-334, -144) |
| Number of patients on concurrent benzodiazepines | -384 | -46 | -1220 |
|  | (-473, -295) | (-1991, 1899) | (-1538, -902) |
| **Subset of patients receiving chronic opioidse** |  |  |  |
| Number of patients > 100 MEQ | 89  (-40, 218) | -1090  (-2352, 172) | -364  (-546, -182) |
| Number of patients > 200 MEQ | -21  (-62, 20) | -154  (-552, 244) | -168  (-225, -111) |
| Number of patients on concurrent benzodiazepines | 5  (-167, 177) | -1245  (-2933, 443) | -838  (-1081, -595) |
| **Subset of patients receiving opioids non-chronicallyf** |  |  |  |
| Number of patients > 100 MEQ | -307  (-426, -188) | 1202  (32, 2372) | 33  (-136, 202) |
| Number of patients > 200 MEQ | -110  (-148, -72) | 376  (1, 751) | 4  (-50, 58) |
| Number of patients on concurrent benzodiazepines | -579  (-749, -409) | 888  (-780, 2556) | 57  (-183, 297) |

a Slope (change in number of patients over time) in the pre-OSI segment

(October 2012 to September 2013)

b Immediate change in number of patients during the month of OSI implementation (October 2013)

c Additional change in slope (compared to the pre-OSI segment) after OSI implementation (October 2013 to September 2014)

d Examines prescribing from October 2011 to September 2014 with OSI implementation in October 2013.

e Chronic opioids were defined as receiving opioids for at least 70 out of the past 90 days.

f Patient receiving opioids for less than 70 out of the past 90 days.