

NH PIM Report – October 2007

This report highlights potentially inappropriate medications (PIMs), as defined in the Beers Criteria, CFMC identified from the collection of medication administration records (MARs) from July 2007. Approximately 32% of residents were receiving at least one PIM in their regularly scheduled medications. This indicates a large improvement since the beginning of the project (July 2006), in which 36% of residents were receiving at least one PIM in their regularly scheduled medications.

Also incorporated into this report is information from monthly pharmacist reports and physician feedback related to PIMs. Pharmacist reports are incorporated as available. Individual facilities have been de-identified.

Methods

CFMC examined the medication records of nursing home residents in five facilities in August 2007. Of 380 medication records collected, 364 were usable for analysis (residents 65 years of age or older). Medications were separated by regularly scheduled and PRN, and PIMs were identified.

Results

Overall, approximately 32% of the 364 residents were receiving at least one PIM in their regularly scheduled medications, and 40% of the 364 residents had a PIM available for use PRN. Ipratropium is still the most frequently appearing regularly scheduled PIM. Bisacodyl is the second most frequent PIM for regularly scheduled medications. Amlodipine, iron at large daily doses, and clonidine are the remaining top 5 PIMs for regularly scheduled medications. The PRN PIM rates are largely due to the use or allowed use of bisacodyl and ipratropium. Bisacodyl and ipratropium have been the most frequent PRN PIMs in all four prior data collection periods (July/August 2006, October 2006, January 2007, and April 2007).

Individual facilities varied in their rate of regularly scheduled PIMs from approximately 17% to 39%. PRN PIM rates ranged from 33% to 49%. Figure 1 shows the rate of residents receiving at least one PIM, either as a regularly scheduled medication or available for use PRN.

Figure 1. Percent of Residents With a PIM

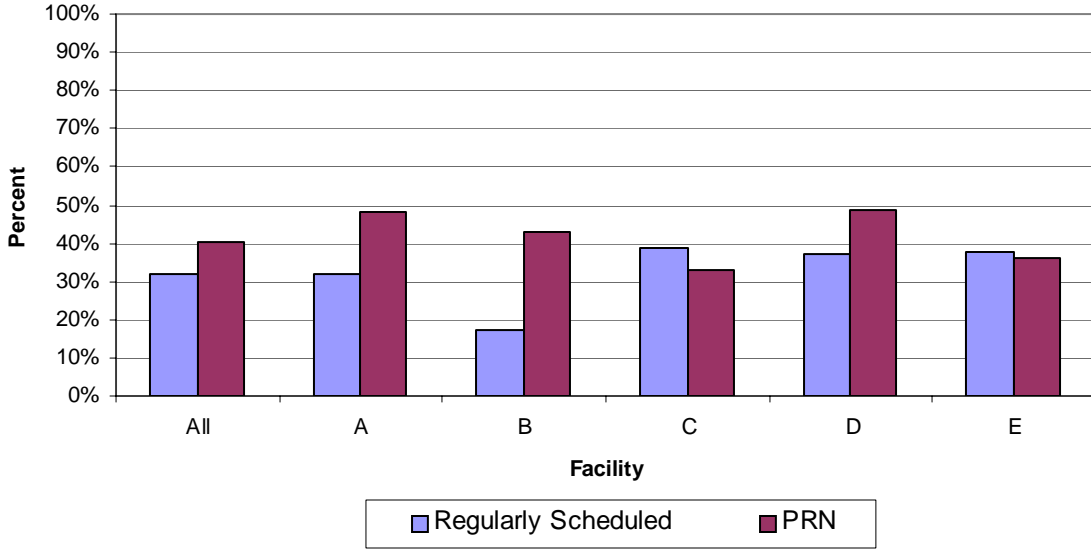


Figure 2 displays the percent of residents with at least one PIM in their regularly scheduled medications over all five data collection periods. Figure 3 displays the same information for PRN medications. Many participants are experiencing measurable improvement (a lower percentage).

Figure 2. Trended Percent of Residents With Regularly Scheduled PIMs

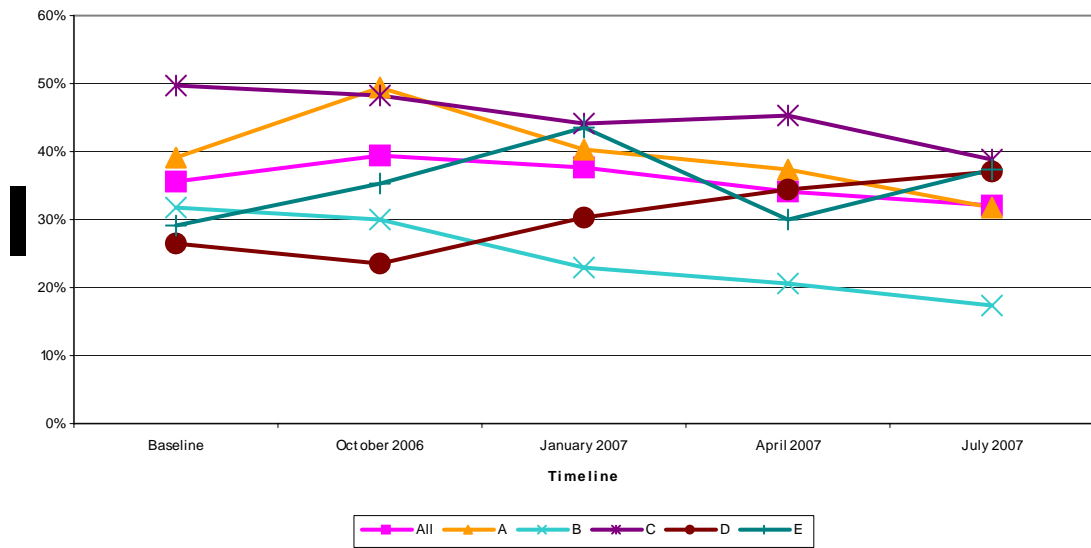


Figure 3. Trended Percent of Residents With PRN PIMs

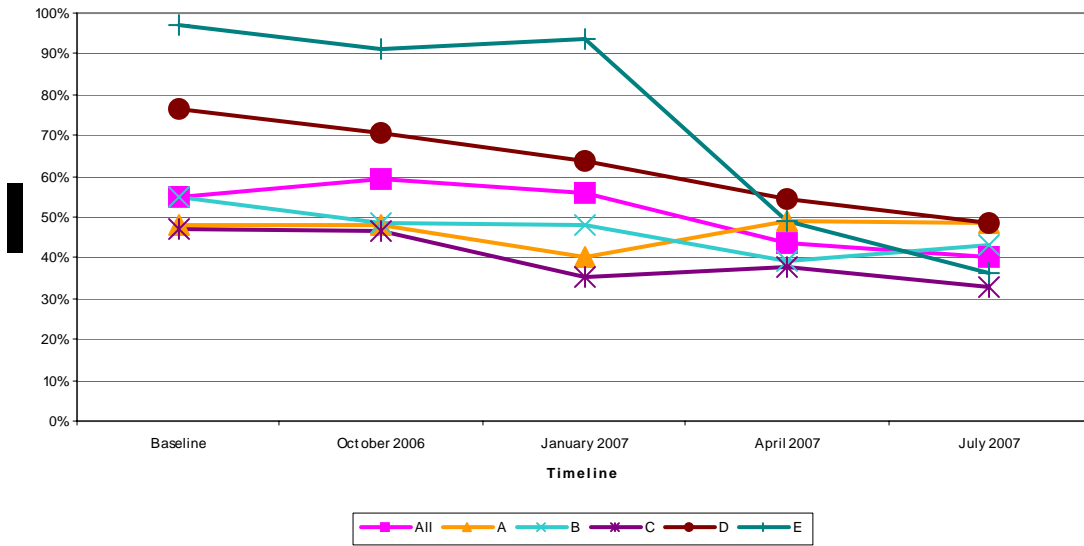


Figure 4 addresses how many PIMs each resident with at least one PIM was receiving. The majority of residents with at least one PIM were receiving only one PIM (69% in regularly scheduled medications, 81% in PRN medications). Some residents were receiving 2 PIMs (25% in regularly-scheduled medications, 15% in PRN medications). Few residents were receiving 3 or more PIMs (6% in regularly-scheduled medications, 4% in PRN medications). These proportions are similar relative to previous reporting periods.

Figure 4. Distribution of PIMs per Resident

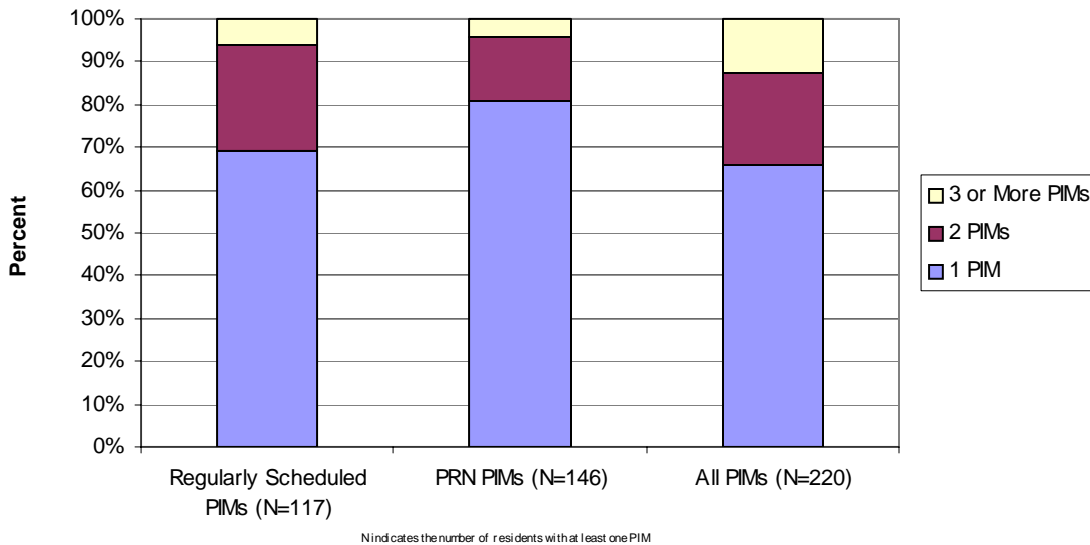


Figure 5 identifies the actual regularly scheduled medications identified as PIMs and the proportion of residents receiving each. For example, of the 117 residents receiving at least one PIM in their regularly scheduled medications, approximately 19% were

Figure 7. PRN PIMs

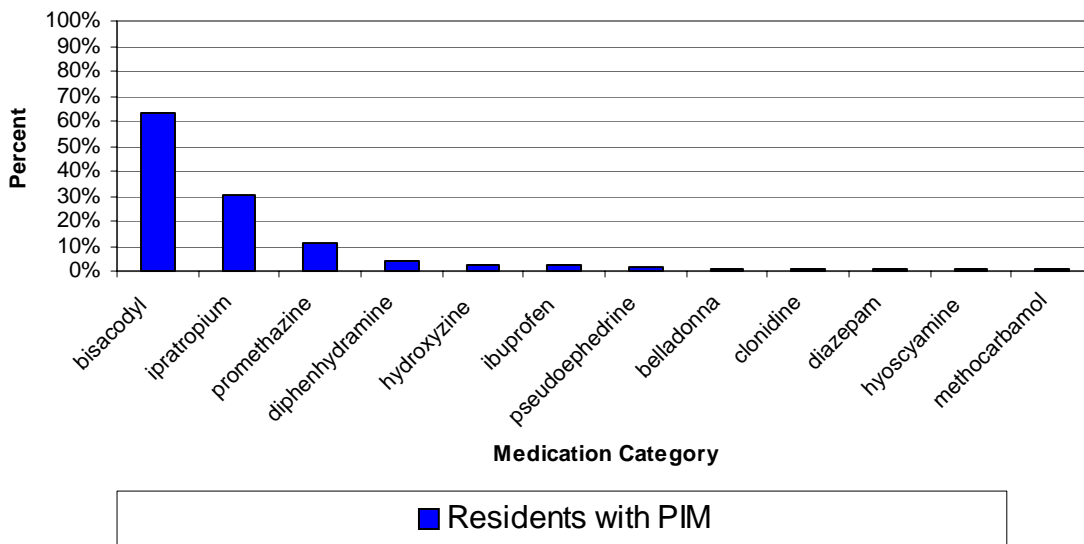
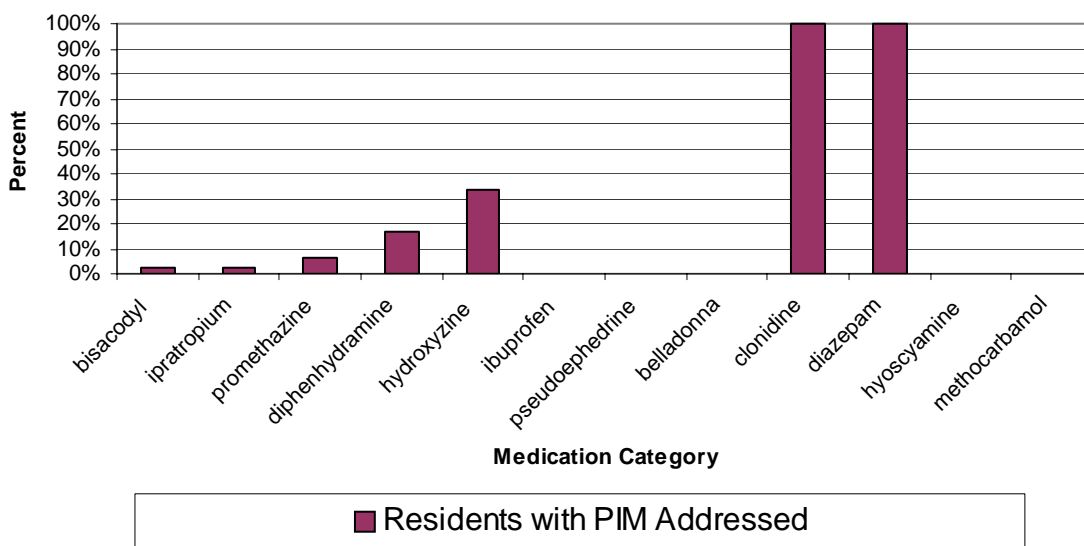


Figure 8. PRN PIMs Addressed



While it is important to have PRN medications, it is also interesting to note that most PRN PIMs were not administered at all or rarely administered. This is reflected in Figure 9. Bisacodyl, ipratropium, promethazine, diphenhydramine, and hyoscyamine are the only PRN PIMs that were actually administered one or more days in July 2007. Hyoscyamine was administered to only one resident 11 or more days in July 2007.

Figure 9. Number of Days PRN PIM Taken

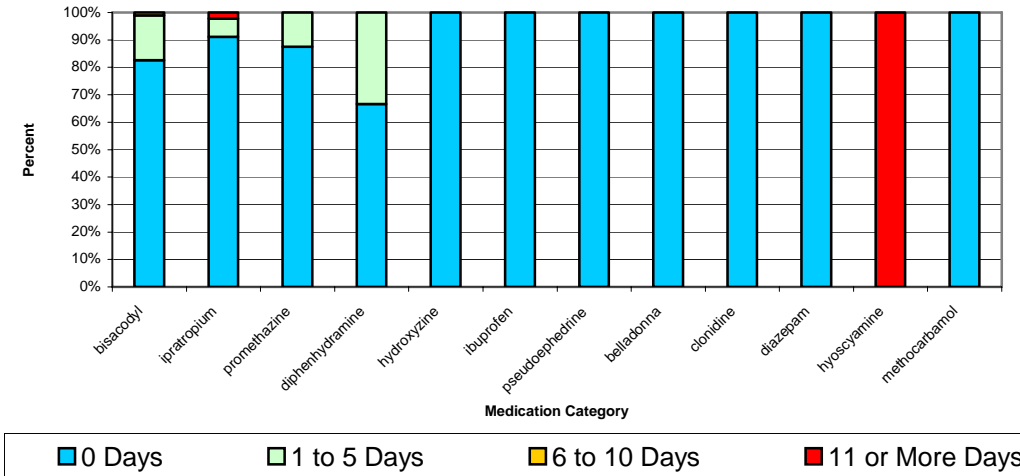


Figure 10 reflects the average number of medications listed on the MAR, while Figure 11 reflects the median number of medications, for all residents (not just those over 65 years of age). These numbers include all items on the MAR: alcoholic beverages, med pass, lotions/creams, vitamins, over-the-counter medications, and prescription medications. Thus, these numbers may be higher than what appears from other sources. For the extremes, there is at least one resident not receiving any medications and at least one resident receiving 28 regularly scheduled medications. The extremes have not changed much across reporting periods. Means and medians, 9 to 11 medications, are similar to the previous reporting period.

Figure 10. Average Number of Medications per Resident

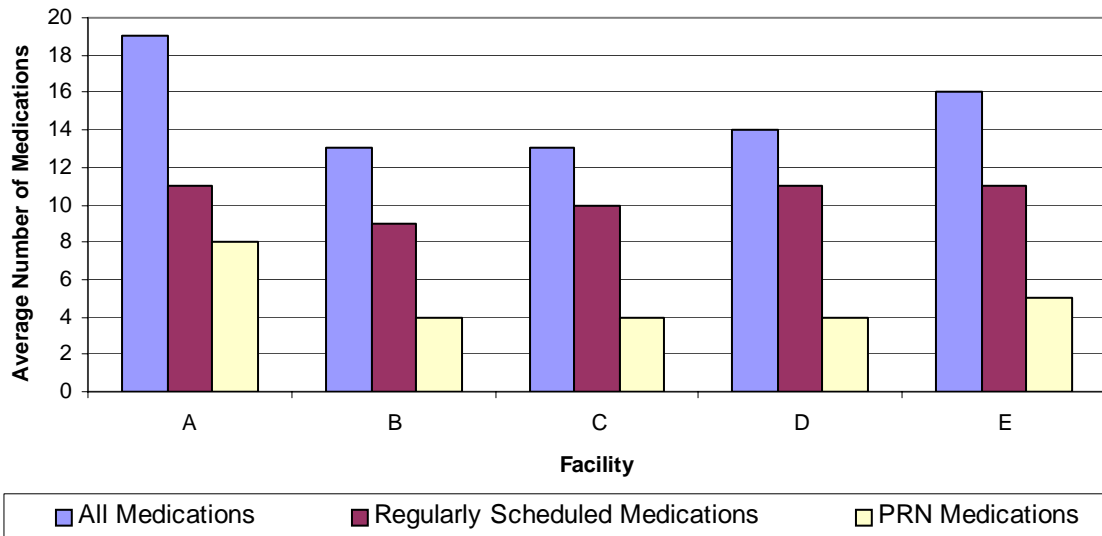
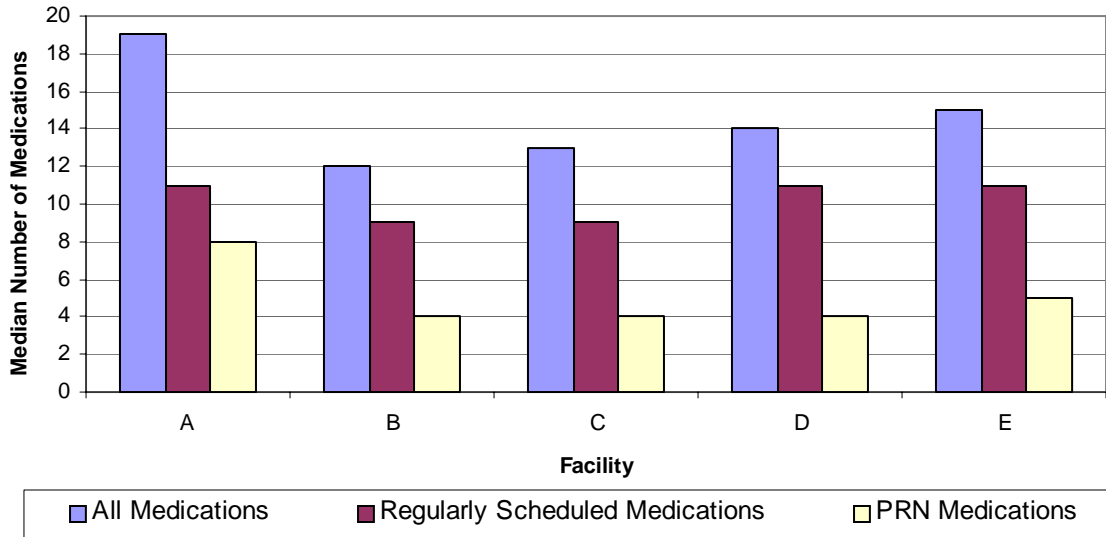
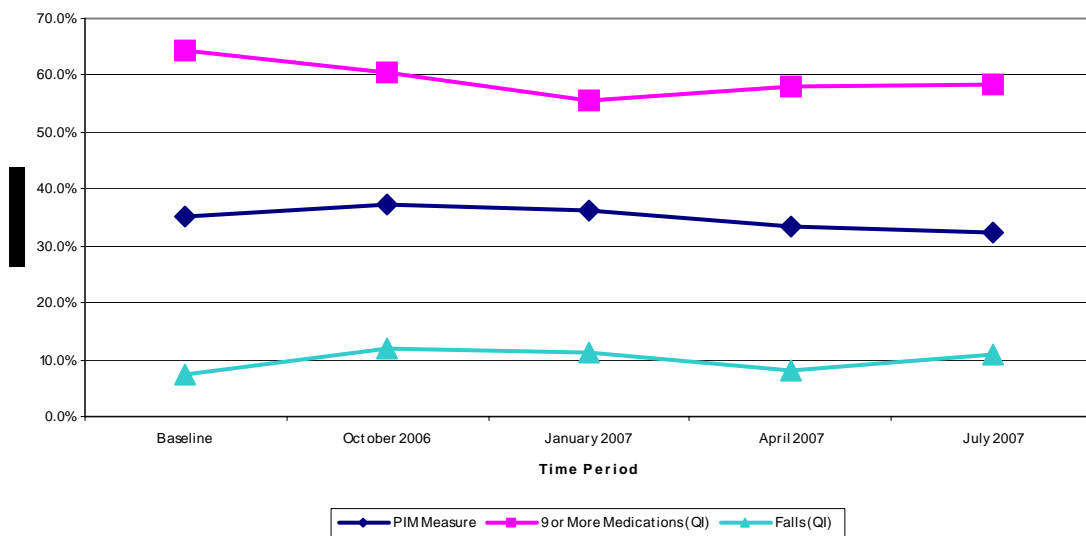


Figure 11. Median Number of Medications per Resident



Changes to medications can affect other measures (qualitative and/or quantitative) upon which facilities base decisions. Some of these may be staff satisfaction, resident satisfaction, frequency of falls, frequency of negative behaviors, etc. The CMS tracks and reports 34 measures in the Facility Quality Measure/Indicator Report that is based on MDS data. One measure, the use of 9 or more different medications, would seem to tie directly to this project. Also, since many of the PIMs have the potential for anticholinergic side effects, the prevalence of falls measure may be related. Figure 12 displays an aggregate of all 5 participating facilities on these two quality measures/indicators as well as our PIM measure. In aggregate, it appears that strong relationships do not exist between PIMs and these two other measures.

Figure 12. QM-QI Results -- All Facilities



Also, in this reporting period, the physician information located on the MARs was analyzed. The five participating facilities work with an average of eight physicians. On average, approximately 25% of residents treated by each physician are receiving at least one PIM. This is a slight improvement over the previous reporting period in which 33% of residents treated by each physician were receiving at least one PIM.

The Prescription Drug Plan (PDP) information was also located and analyzed. The Part D enrollment database provided by the CMS was the data source. The 364 residents in the five participating facilities are enrolled in 6 Medicare Advantage and 11 stand-alone PDP providers; however, 27% of the residents were unable to be matched to a PDP. This confirms the huge diversity in this new Medicare benefit. The most prevalent PDPs are: Evercare, AARP, Kaiser Permanente, and Secure Horizons. These results are similar to the January 2007 report on December 2006 MARs.