

# NH PIM Report – July 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 April 2007. Approximately 34% of residents were receiving at least one PIM in their regularly scheduled medications. This indicates a large improvement since the previous report, in which 38% 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 May 2007. Of 403 medication records collected, 389 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 34% of the 389 residents were receiving at least one PIM in their regularly scheduled medications, and 44% of the 389 residents had a PIM available for use PRN. Ipratropium is still the most frequently appearing regularly scheduled PIM. Iron at large daily doses (greater than 325 mg/day) is the second most frequent PIMs for regularly scheduled medications. Bisacodyl is much improved and is the third most frequent PIM 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 PIMs in the three prior data collection periods (July/August 2006, October 2006, and January 2007).

Individual facilities varied in their rate of regularly scheduled PIMs from approximately 21% to 45%. PRN PIM rates ranged from 38% to 54%. 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

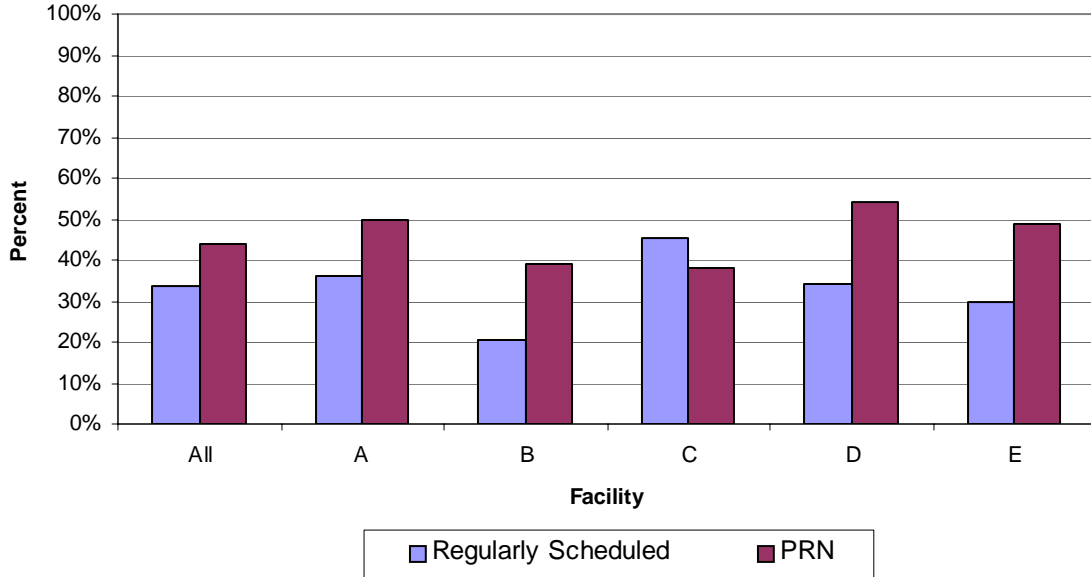
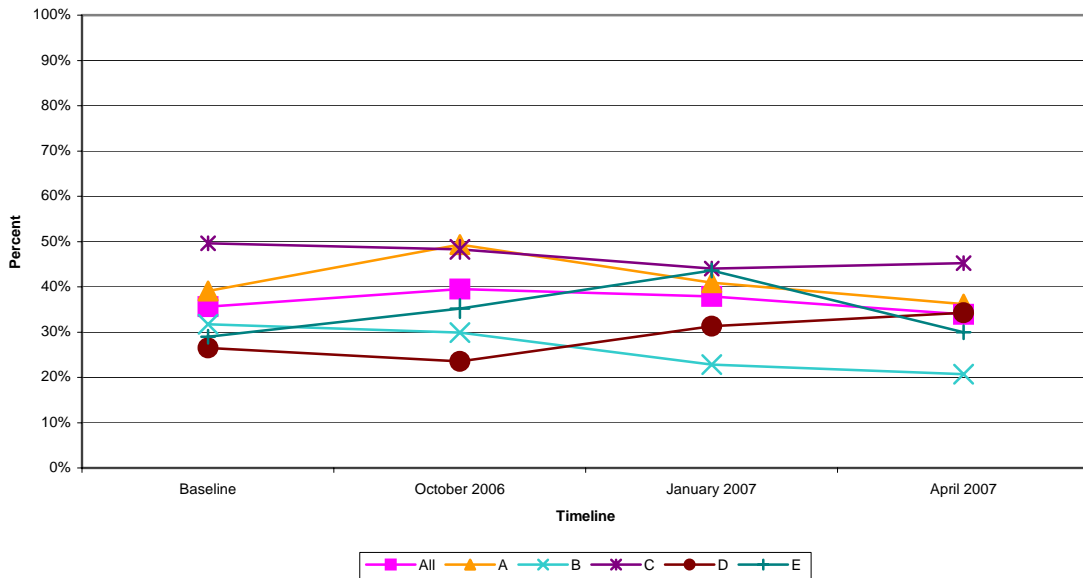


Figure 2 displays the percent of residents with at least one PIM in their regularly scheduled medications over all four data collection periods. Figure 3 displays the same information for PRN medications. Many participants are experiencing measurable improvement (a lower percentage). Facility E has experienced large improvement since the previous reporting period.

Figure 2. Trended Percent of Residents With Regularly Scheduled PIMs



**Figure 3. Trended Percent of Residents With PRN PIMs**

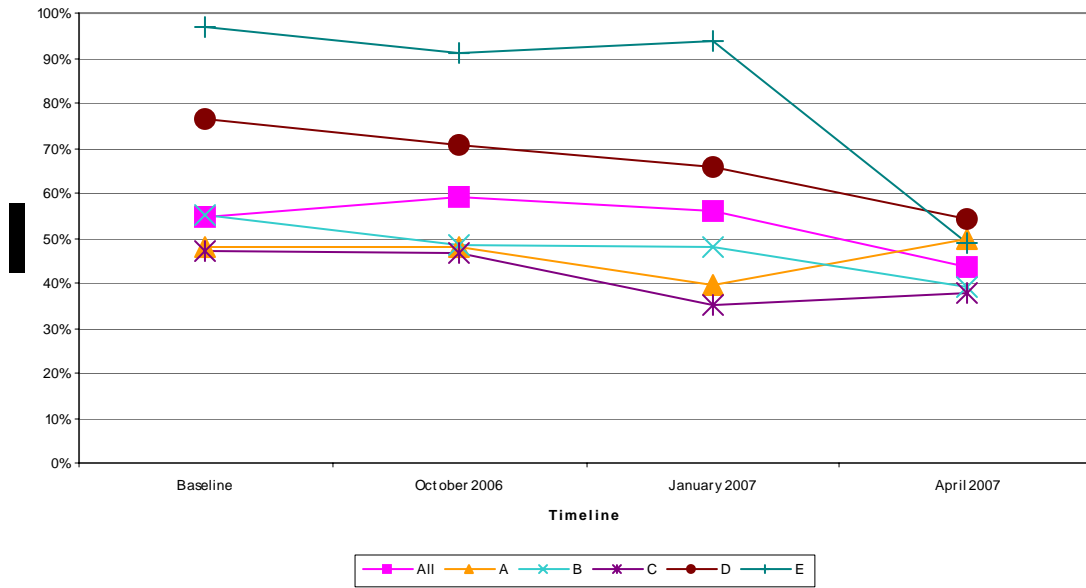


Figure 4 addresses how many PIMs each resident with at least one PIM was receiving. The majority of residents with at least one PIM were receiving only one PIM (70% in regularly scheduled medications, 79% in PRN medications). Some residents were receiving 2 PIMs (23% in regularly-scheduled medications, 18% in PRN medications). Few residents were receiving 3 or more PIMs (7% in regularly-scheduled medications, 4% in PRN medications). These proportions are improved relative to previous reporting periods (larger percentage with fewer PIMs).

**Figure 4. Distribution of PIMs per Resident**

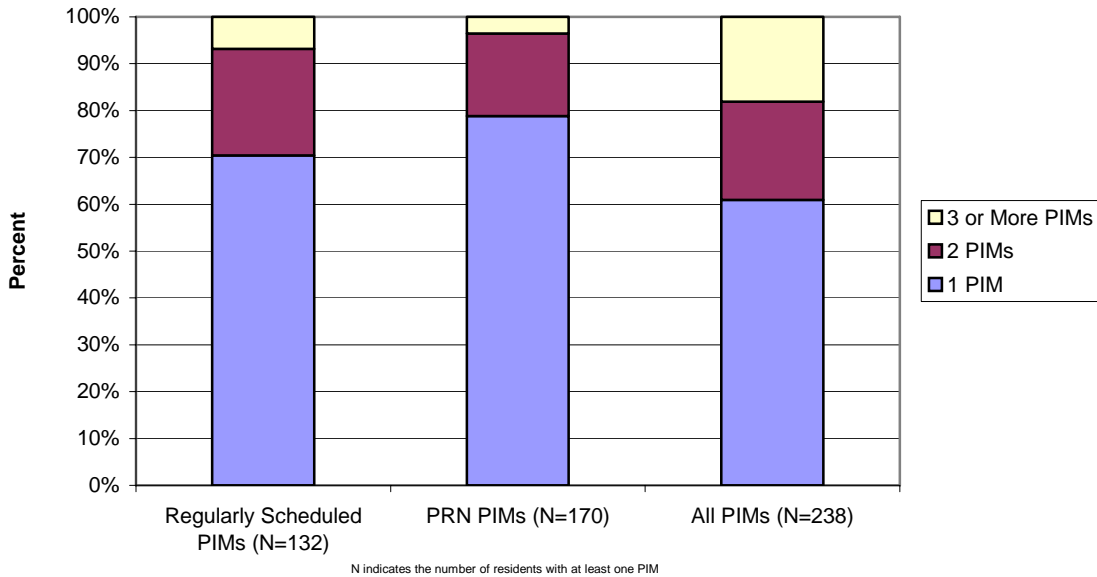
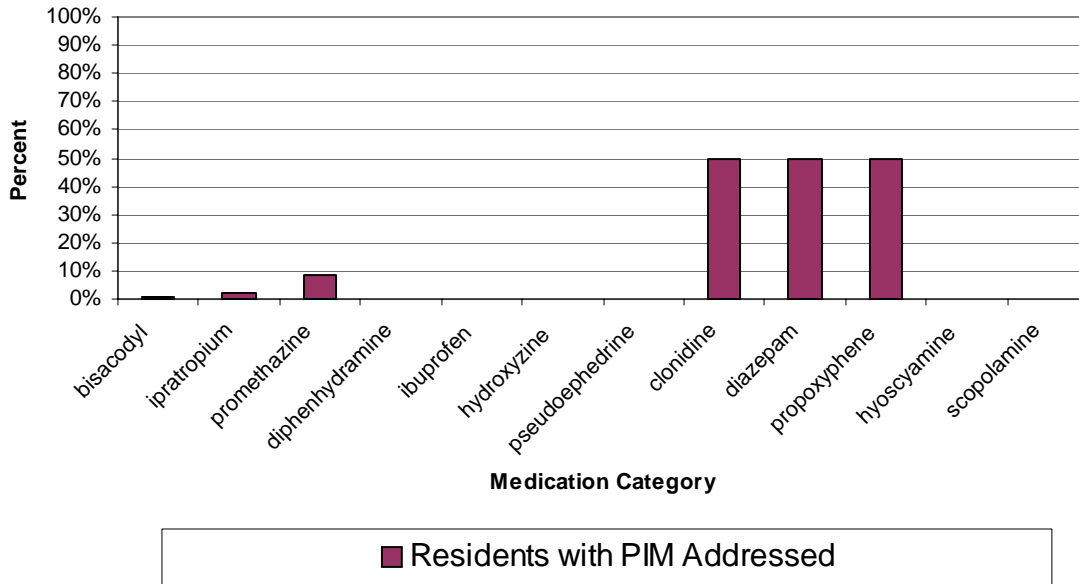






Figure 8. PRN PIMs Addressed



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, diphenhydramine and hydroxyzine hcl are the only PRN PIMs for which any residents have taken them 11 or more days in April 2007. Ipratropium and ibuprofen were taken by some residents six or more days in April 2007.

Figure 9. Number of Days PRN PIM Taken

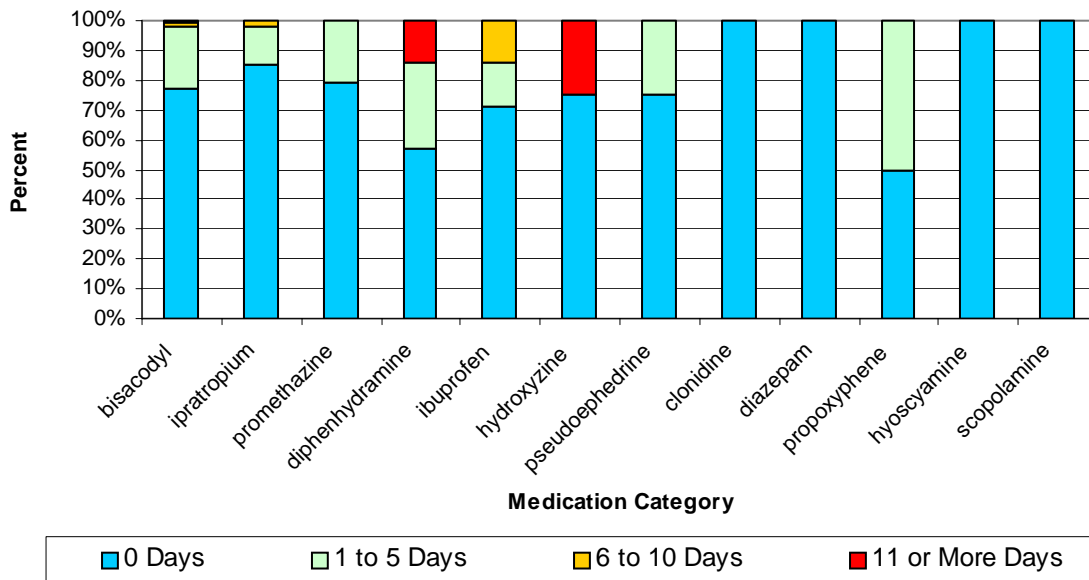


Figure 10 reflects the average number of medications listed on the MAR, while Figure 11 reflects the median number of medications, for all residents (not just those over 65 years of age). These numbers include all items on the MAR: alcoholic beverages, med pass,

lotions/creams, vitamins, and drugs. 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 25 regularly scheduled medications. The extremes have not changed much across reporting periods. Means and medians have decreased slightly, from 9 to 12 medications down to 9 to 11 medications, from prior reporting periods.

Figure 10. Average Number of Medications per Resident

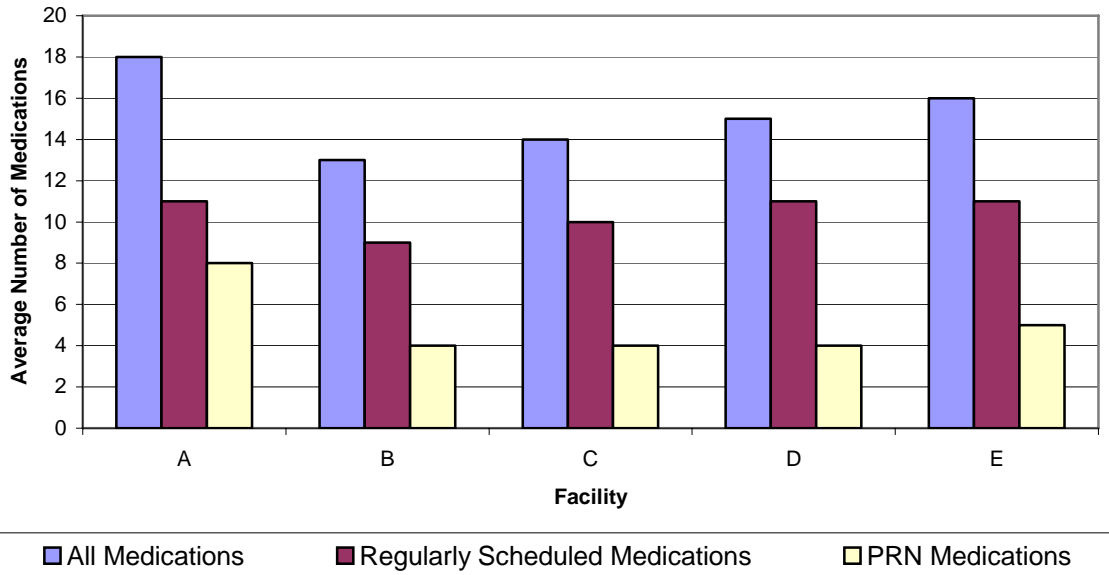
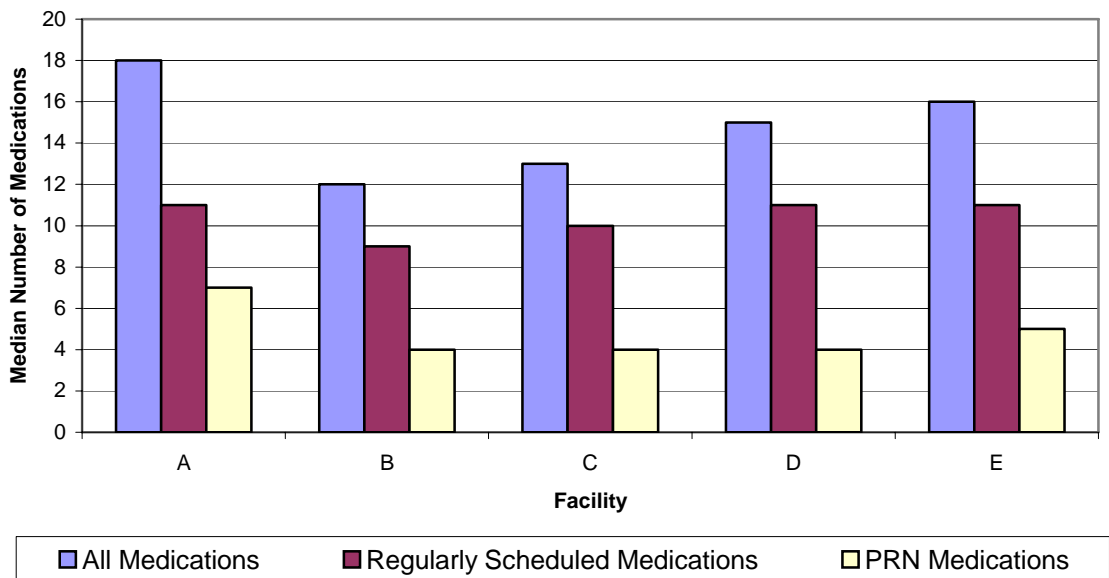


Figure 11. Median Number of Medications per Resident



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 one-third of residents treated by each physician are receiving at least one PIM.