

# NH PIM Report – April 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 January 2007. Approximately 38% of residents were receiving at least one PIM in their regularly scheduled medications. This indicates a small improvement since the previous report, in which 39% 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. Chart review was done in February 2007 to acquire historical pharmacist and physician communications, as available in active charts. 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 February 2007. Of 439 medication records collected, 425 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 38% of the 425 residents were receiving at least one PIM in their regularly scheduled medications, and 56% of the 425 residents had a PIM available for use PRN. These 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 two prior data collection periods, July/August 2006 and October 2006.

Individual facilities varied in their rate of regularly scheduled PIMs from approximately 23% to 44%. PRN PIM rates ranged from 35% to 94%. 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**

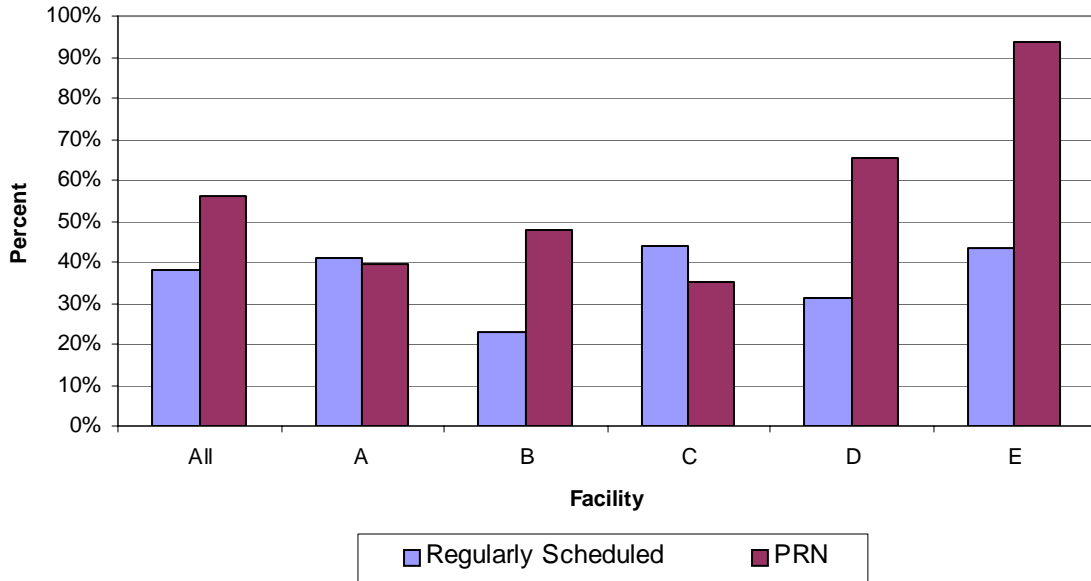
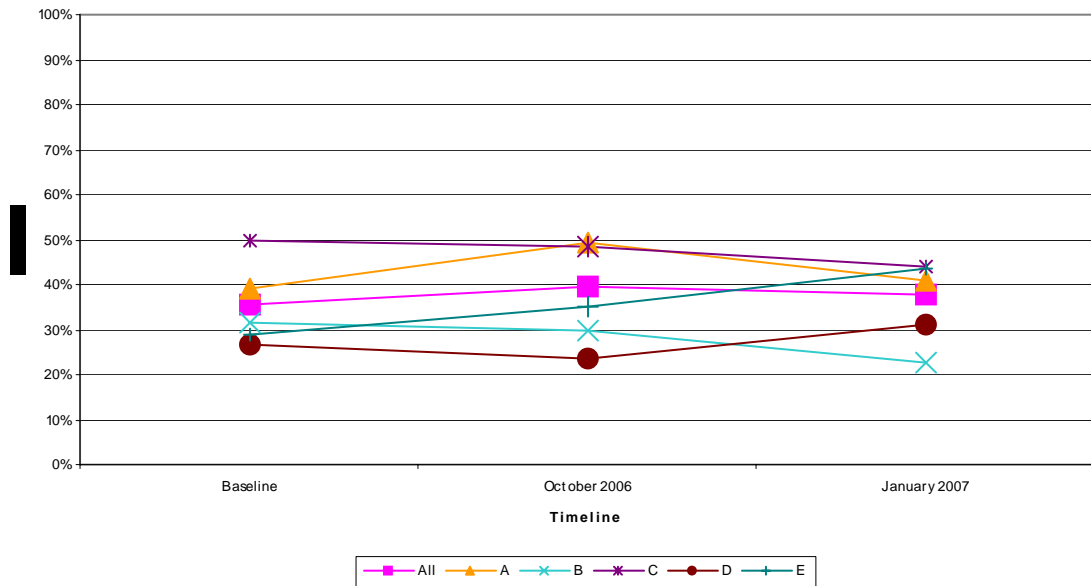


Figure 2 displays the percent of residents with at least one PIM in their regularly scheduled medications over all three data collection periods. Figure 3 displays the same information for PRN medications. Many participants are experiencing measurable improvement (a lower percentage).

**Figure 2. Trended Percent of Residents With Regularly Scheduled PIMs**



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

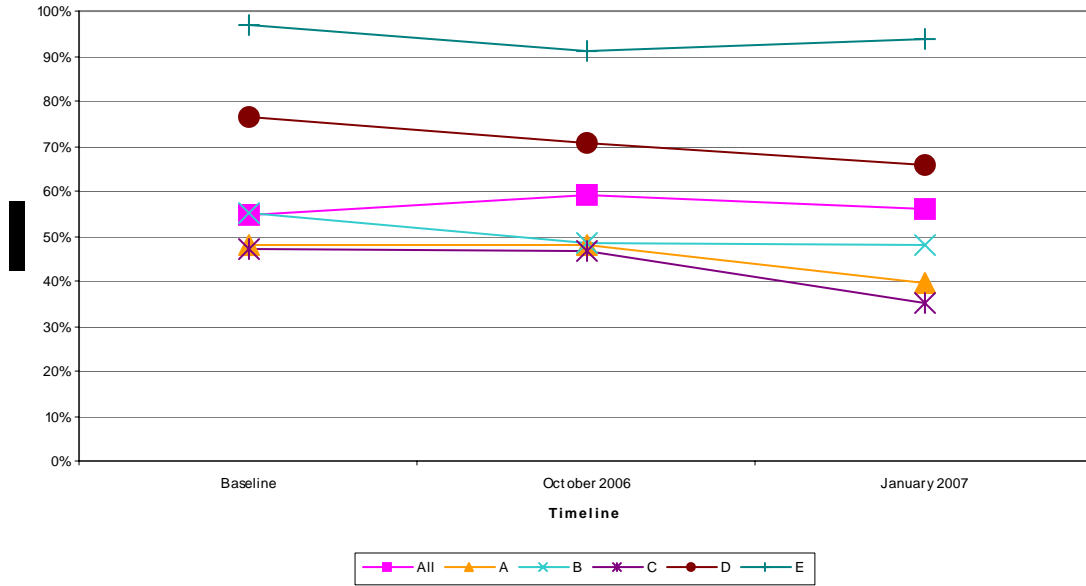


Figure 4 addresses how many PIMs each resident with at least one PIM was receiving. The majority of residents with at least one PIM were receiving only one PIM (63% in regularly scheduled medications, 74% in PRN medications). Some residents were receiving 2 PIMs (30% in regularly-scheduled medications, 18% in PRN medications). Few residents were receiving 3 or more PIMs (7% in regularly-scheduled medications, 8% in PRN medications). These proportions have not varied measurably in the three reporting periods

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

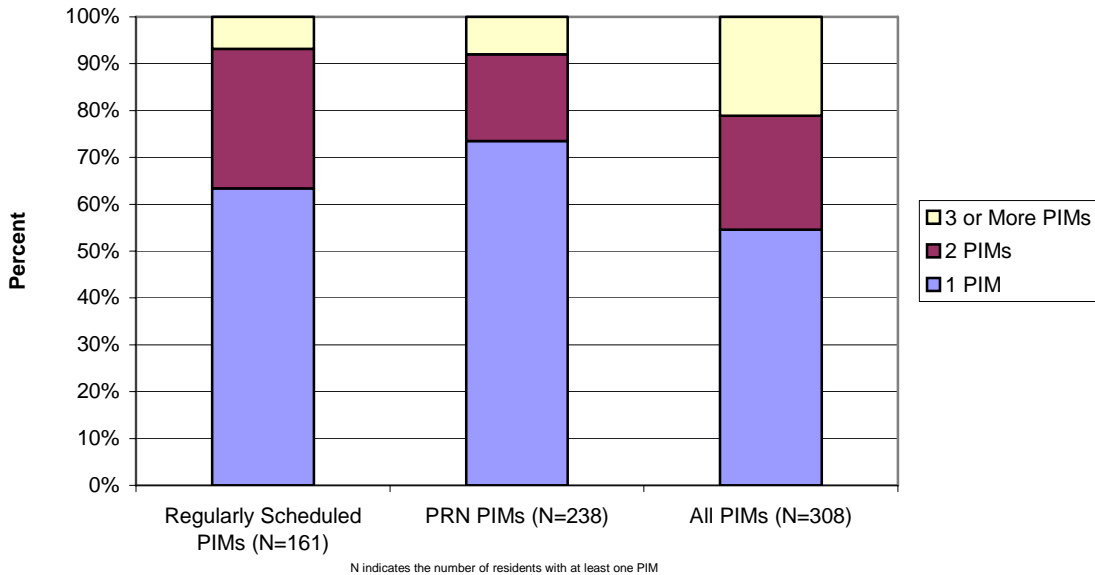


Figure 5 identifies the actual regularly scheduled medications identified as PIMs and the proportion of residents receiving each. For example, of the 161 residents receiving at least one PIM in their regularly scheduled medications, approximately 18% were receiving ipratropium and 15% were receiving bisacodyl. This is improvement over the previous reporting period. Figure 6 reflects the proportion of PIMs discontinued and/or addressed by the pharmacist or physician as potentially inappropriate. For example, 38% of the residents identified with ipratropium as a PIM have either had this medication discontinued or the pharmacist and physician have communicated about this PIM.

Figure 5. Regularly Scheduled PIMs

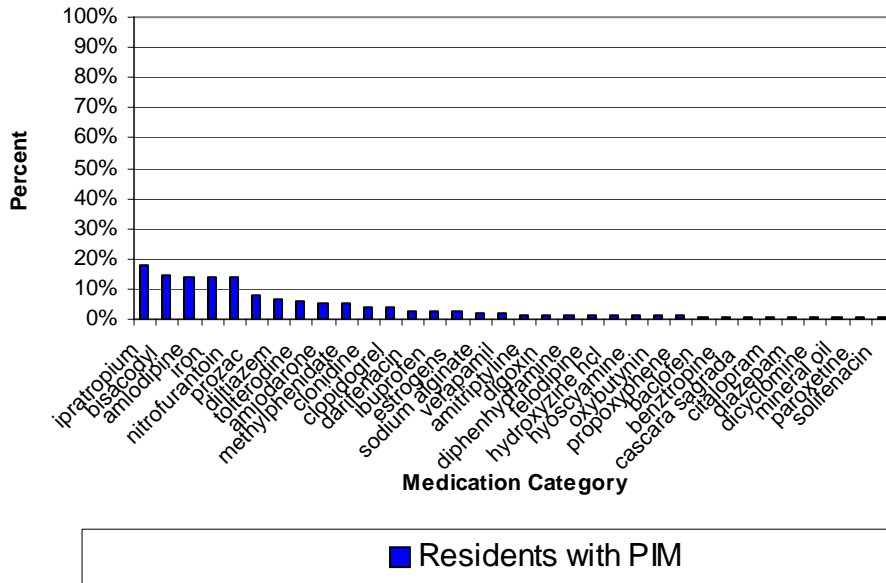


Figure 6. Regularly Scheduled PIMs Addressed

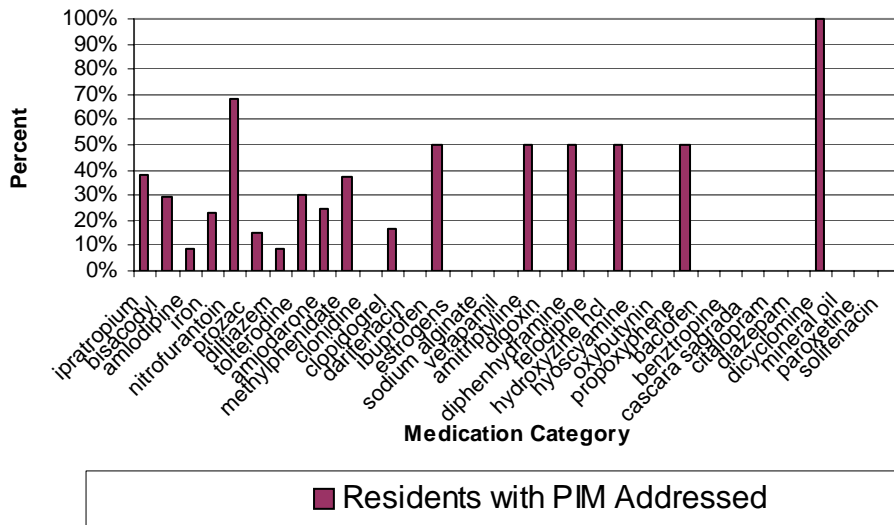


Figure 7 is similar to Figure 5 and Figure 8 is similar to Figure 6, but for PRN medications. Bisacodyl may or may not be inappropriate for PRN use, but it is still reflected in this table. Approximately 79% of the 238 residents receiving at least one PIM in their PRN medications were receiving bisacodyl and 19% were receiving ipratropium. Diphenhydramine improved from approximately 8% in the previous reporting period to approximately 5% in the current reporting period.

Figure 7. PRN PIMs

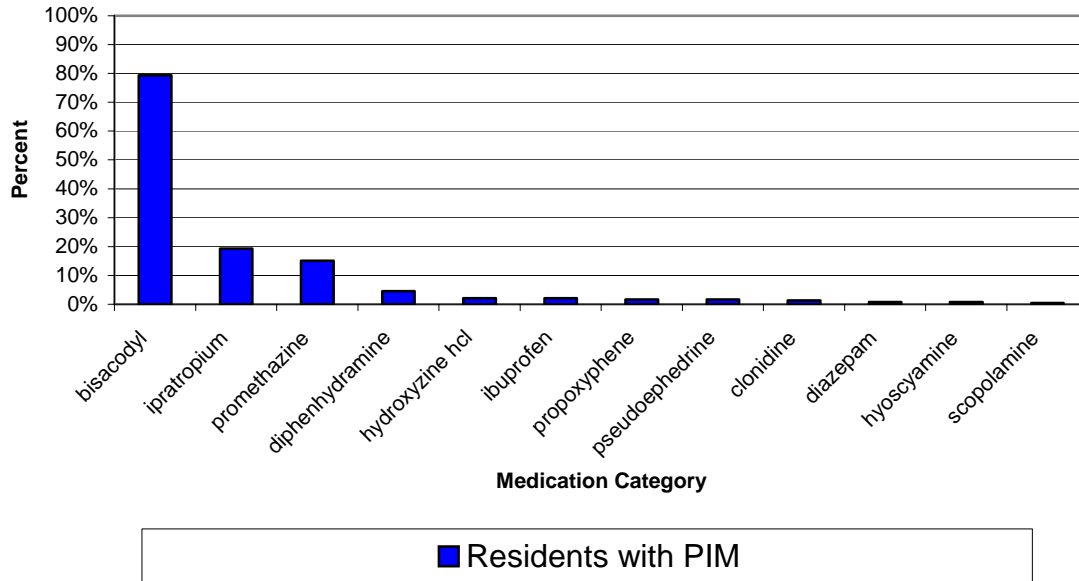
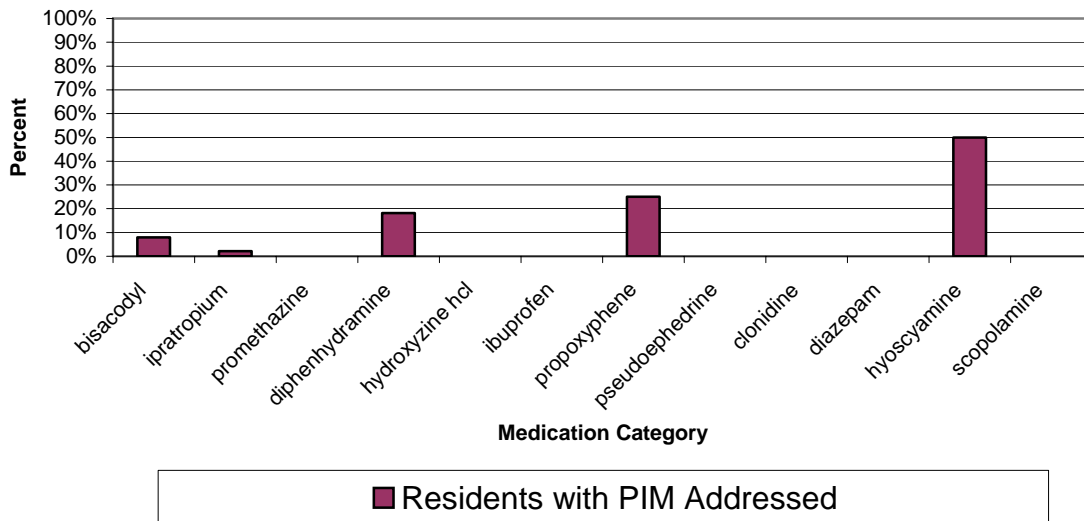


Figure 8. PRN PIMs Addressed



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. Hydroxyzine hcl and diphenhydramine are the only PRN PIMs for which any residents have taken them six or more days in January 2007.

Figure 9. Number of Days PRN PIM Taken

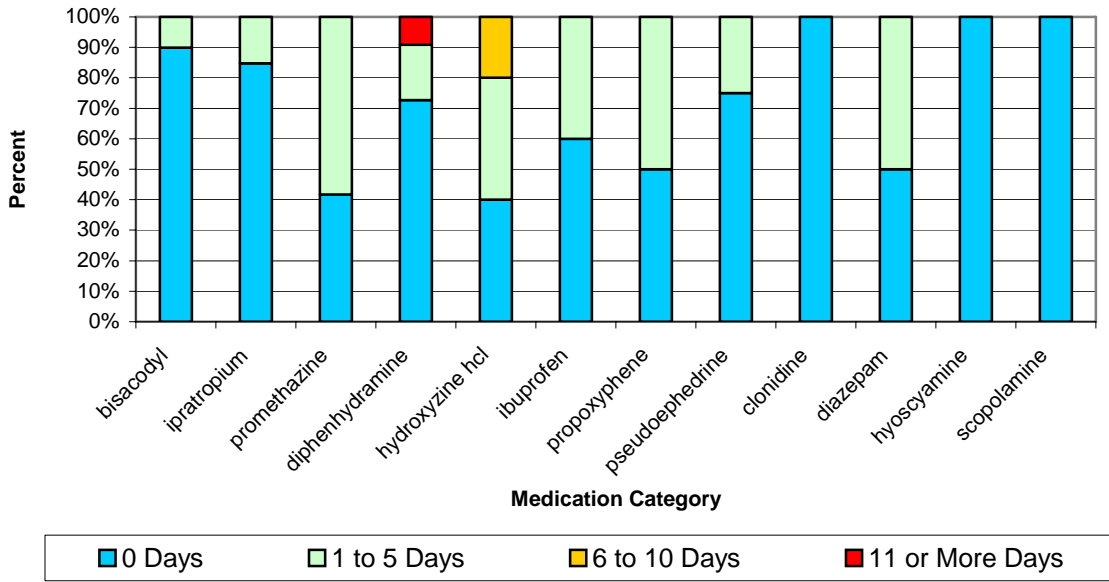


Figure 10 reflects the average number of medications listed on the MAR, while Figure 11 reflects the median number of medications, for all residents (not just those over 65 years of age). These numbers include all items on the MAR: alcoholic beverages, med pass, lotions/creams, vitamins, and drugs. Thus, 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 one resident receiving 35 regularly scheduled medications.

Figure 10. Average Number of Medications per Resident

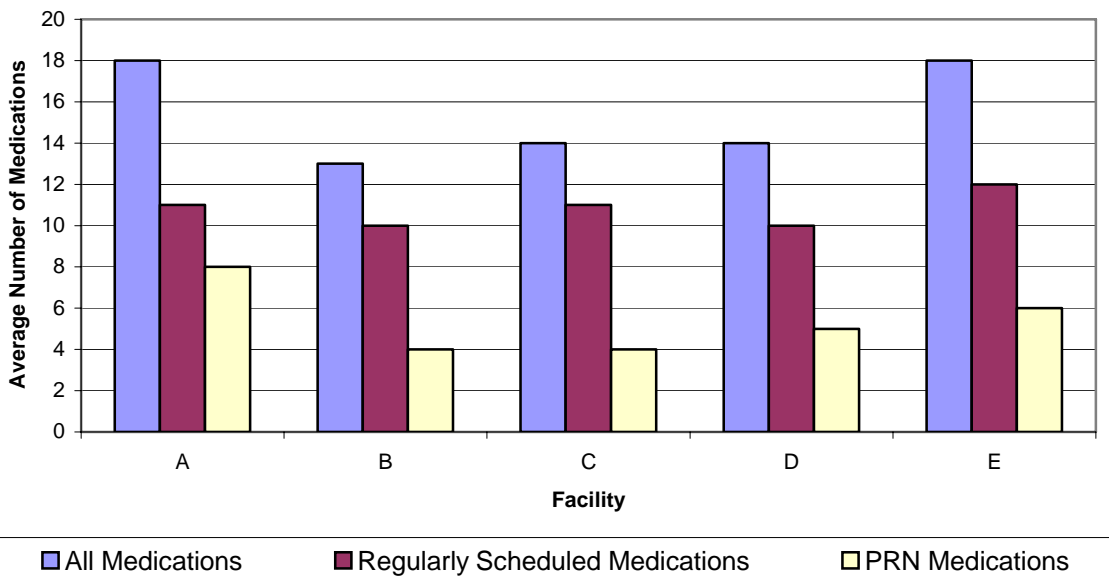
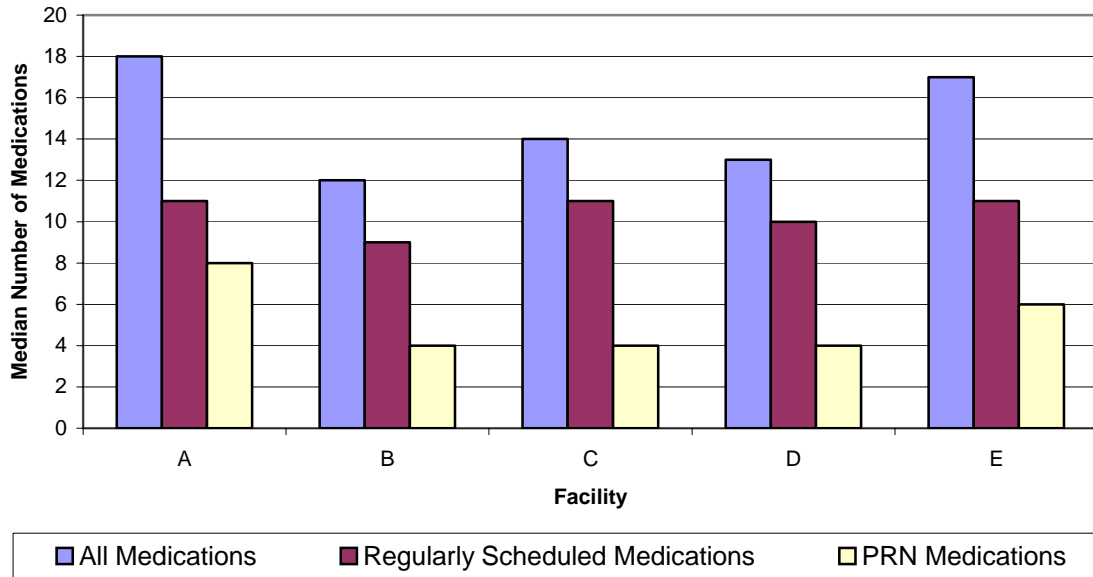


Figure 11. Median Number of Medications per Resident



Also, in this reporting period, the Prescription Drug Plan (PDP) information was located and analyzed. Two data sources were collected: the insurance information from the resident charts or directly provided by the facility and the Part D enrollment database provided by CMS. There were substantial differences between these data sources. According to the CMS database, the 425 residents in the five participating facilities are enrolled in 7 Medicare Advantage and 14 stand-alone PDP providers. This confirms the huge diversity in this new Medicare benefit. The most prevalent PDPs are: Evercare, AARP, Kaiser Permanente, and Secure Horizons.