



# Hennepin Health

## 2015- 2016 Focus Study:

### Pain Management and Pain Medication Prescribing and Treatment

#### ***Description***

The goal of this focus study is to determine whether providers are engaging in tapering practices with pain medications and to determine what lessons can be learned and whether interventions are needed.

According to Centers for Disease Control and Prevention report titled “CDC Guideline for Prescribing Opioids for Chronic Pain – United States, 2016”<sup>1</sup>:

- 20% of patients presenting to physician offices with non-cancer pain symptoms or pain-related diagnoses (including acute and chronic pain) receive an opioid prescription.
- In 2012, health care providers wrote 259 million prescriptions for opioid pain medication.
- Opioid prescriptions per capita increased 7.3% from 2007 to 2012, with opioid prescribing rates increasing more for family practice, general practice and internal medicine compared with other specialties.
- Evidence supports short-term efficacy of opioids for reducing pain and improving function in non-cancer nociceptive and neuropathic pain in randomized clinical trials but few studies have been done to assess the long-term benefits of opioids for chronic pain.
- From 1999 to 2014, more than 165,000 persons died from overdose related to opioid pain medication in the United States.
- Prescriptions by primary care clinicians account for nearly half of all dispensed opioid prescriptions, and the growth in prescribing rates among these clinicians has been above average.

According to an article published in Minnpost (5/6/15), the Minnesota Department of Human Services Commissioner reported the following<sup>2</sup>:

- Approximately 3,000 Minnesota Health Care Plan (MHCP) enrollees become chronic opioid users annually.
- Of the new chronic users, over 80% have a recent diagnosis of mental illness, substance abuse disorder, or both mental illness and substance abuse disorder, each of which increases the likelihood that a person will become dependent.

- More than half of pregnant Minnesota women who are known to be opioid dependent are still prescribed opioids for pain during pregnancy.

The article further indicated that the state is working with the Minnesota Medical Association to develop tighter prescription standards for opioid-based pain medication.

Chronic pain can contribute to a decreased quality of life. Opioids are intended to improve the quality of life for those affected by chronic pain. However, long-term opioid therapy has been associated with an increased risk of abuse or overdose, with several studies showing a dose-dependent association.

This focus study was selected based on a high percentage of Hennepin Health enrollees with a chronic pain diagnosis and the potential of being prescribed opioids creating a high risk for those enrollees to develop a substance use disorder.

### ***Process and Documentation***

This focus study began using Hennepin Health-PMAP (PMAP) enrollees as a study population and expanded to include enrollees in the Hennepin Health-SNBC (SNBC) population. The study was a chart audit review. An audit protocol was developed and training provided to staff conducting the audit.

Of approximately 300 PMAP enrollees and 374 SNBC enrollees, a random sample of 50 enrollees from each program was pulled according to the following criteria:

- Enrollees had to have continuous Hennepin Health enrollment (or no more than a 30 day gap of coverage) in 2014 for PMAP or continuous enrollment in 2015 for SNBC enrollees
- Enrollees had a primary or secondary diagnosis of either chronic pain due to trauma, other chronic pain, chronic pain syndrome, or chronic postoperative pain and who had prescription refills.
- The following groups were excluded:
  - Enrollees with a cancer diagnosis
  - MSHO, MSC+ and dual SNBC enrollees

Claims were analyzed from January, 2014 through December, 2014 for PMAP and January, 2015 through December, 2015 for SNBC to see whether practitioners tapered enrollees off narcotics. Charts were reviewed to determine whether there was evidence of tapering pain medications, if alternative pain management strategies were recommended and whether enrollees complied with the treatment recommendations.

### **Definitions**

The Minnesota Department of Human Services (DHS) has been working on multiple fronts to reduce inappropriate opioid analgesic utilization and has been examining access barriers to other pain treatments that have better risk/benefit profiles than opioids. The State Opioid Oversight Project (SOOP) is a coordinated effort of state government addressing

seven strategies: primary prevention, opioid prescribing, neonatal abstinence syndrome, medication-assisted recovery, prescription monitoring program, access to naloxone, and prescription take back opportunities. According to Dr. Jeff Schiff, Medical Director for Minnesota Health Care Programs with DHS, there are three specific prescribing intervals: **Acute:** after an event (e.g. surgery or injury) for 4-7 days; **Post-acute:** prescribing at 4-45 days and **Chronic:** prescribing over 45 days. (Sources: DHS HSAC 10/9/14 meeting minutes; Dr. Jeff Schiff's presentation "State Efforts to Impact Opioid Prescribing" which was presented at the 8/25/15 Pain, Pill, Problem conference.)

To be consistent with the state prescribing efforts, for purposes of this focus study, chronic pain was reflected by prescribing over 45 days for the chronic pain diagnoses listed in the report parameters.

Chart reviews examined whether:

- The MN Prescription Monitoring Program was contacted prior to prescribing medications,
- Drug screens were completed,
- Pain assessments occurred,
- A pain contract or pain plan was created,
- Enrollees followed through with provider treatment recommendations.

Evidence of tapering medications occurred if there was a dose/frequency change or a quantity change of the pain medication. Alternative treatment options included acupuncture, chiropractic visits, occupational therapy, physical therapy, pool therapy, psychotherapy, steroid injections, tens unit, exercise, referrals to chemical dependency services, neurology, orthopedics, pain clinics, rehabilitation and sports medicine.

### ***Analysis***

The numerator included enrollees with a primary or secondary diagnosis of either chronic pain due to trauma, other chronic pain, chronic pain syndrome or chronic postoperative pain and who had continuous Hennepin Health enrollment in 2014 (PMAP) or 2015 (SNBC) with no more than a thirty (30) day gap in enrollment. Exclusions included MHSO, MSC+ and dual SNBC enrollees and enrollees with a cancer diagnosis.

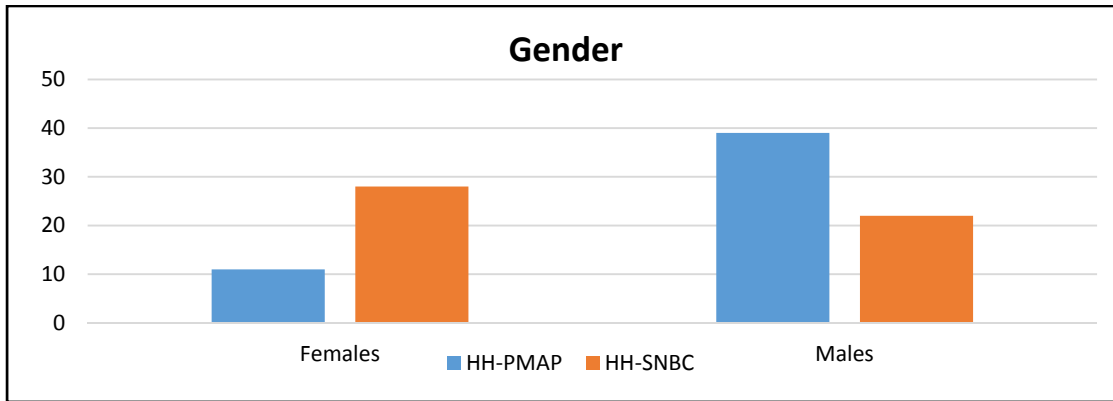
The denominator was adults aged 18 to 64 years calculated as of December 31<sup>st</sup> of the measurement year (January, 2014 through December, 2014 for PMAP and January, 2015 through December, 2015 for SNBC) that were enrolled in Hennepin Health with no more than a thirty (30) day gap in enrollment and enrolled as of December 31<sup>st</sup> (anchor date of measurement year).

Figures 1 and 2 summarize basic information on the enrollees. Figure 1 depicts the enrollee's gender showing thirty-nine (39) males (78%) and eleven (11) females (22%) for PMAP and twenty-two (22) males (44%) and twenty-eight (28) females (56%) for SNBC. Figure 2 summarizes the race/ethnicity of the enrollees showing that African or African

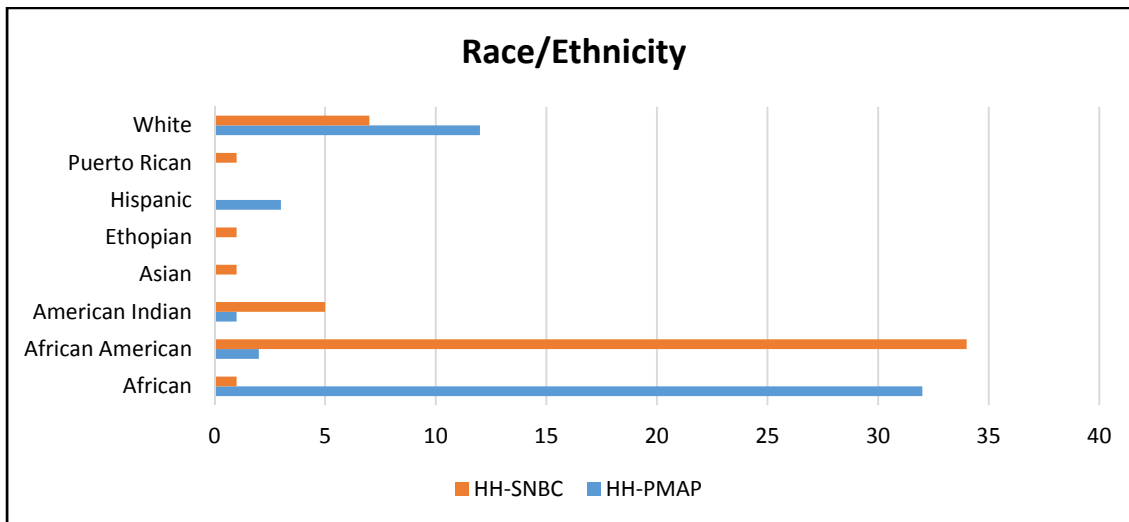
American comprised the largest ethnic group within the sample selection, followed by White and American Indian ethnic groups.

Only one (1) PMAP enrollee was in the Restricted Recipient program and six (6) enrollees for SNBC. For PMAP, 86% of enrollees were enrolled for at least eleven or twelve months and for SNBC, 100% of enrollees were enrolled for twelve months.

**Figure 1: Gender**



**Figure 2: Race/Ethnicity**



Figures 3 - 8 show the number of enrollees and the number of months where an activity was implemented and completed for the following provider-initiated activities: ordering a drug screen, contacting the MN Prescription Monitoring Program (PMP), completing a pain assessment, pain contract or a pain plan.

Figure 3 shows that twenty-four (24) PMAP enrollees (48%) and twenty-two (22) SNBC enrollees (44%) did not have a drug screen ordered while twelve (12) PMAP (24%) and eleven (11) SNBC (22%) enrollees had a drug screen ordered one month only. The remaining enrollees had drug screens completed ranging from two (2) to five (5) months.

**Figure 3: Drug Screens Completed**

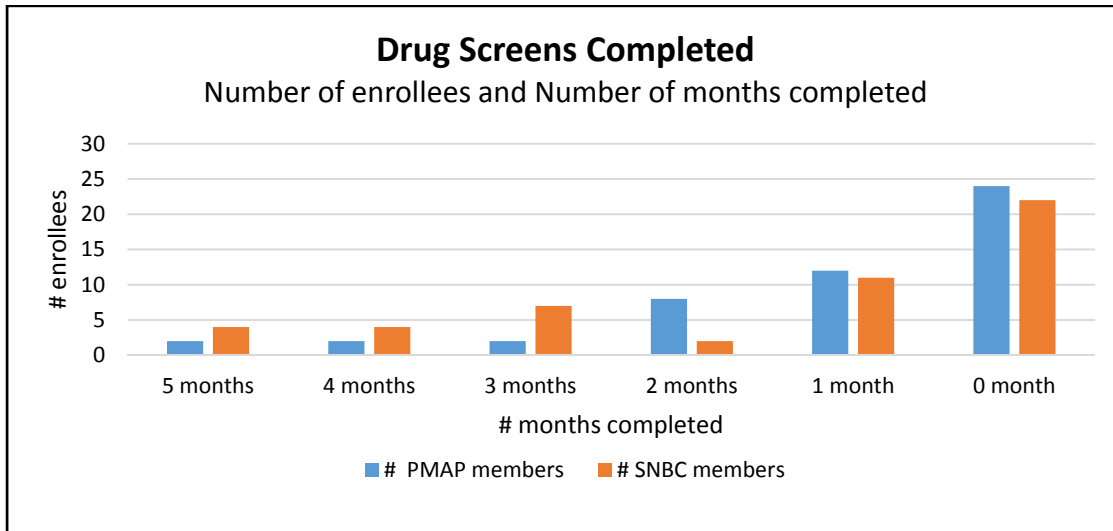


Figure 4 indicates whether providers contacted the MN Prescription Monitoring Program (PMP) when reviewing and/or ordering medications. There was no documentation that the PMP had been contacted for forty-five (45) PMAP enrollees (90%) and forty-four (44) SNBC enrollees (88%). For the rest of the enrollees, the PMP was contacted from one to three months.

**Figure 4: MN Prescription Monitoring Program**

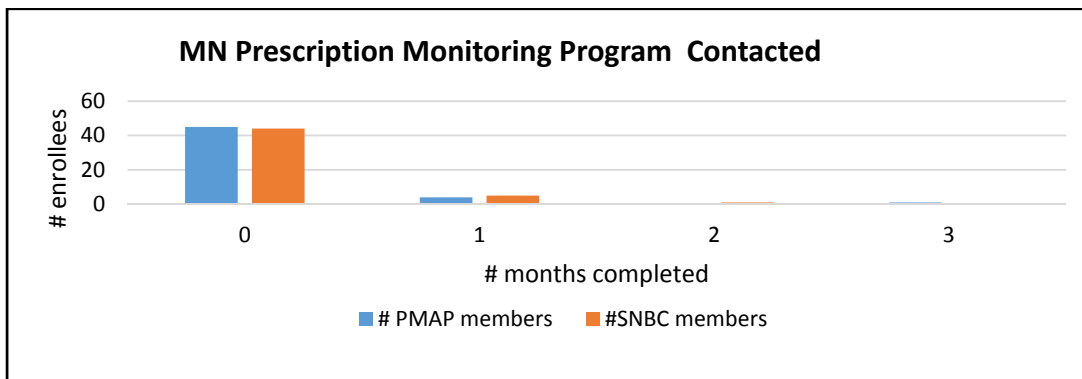
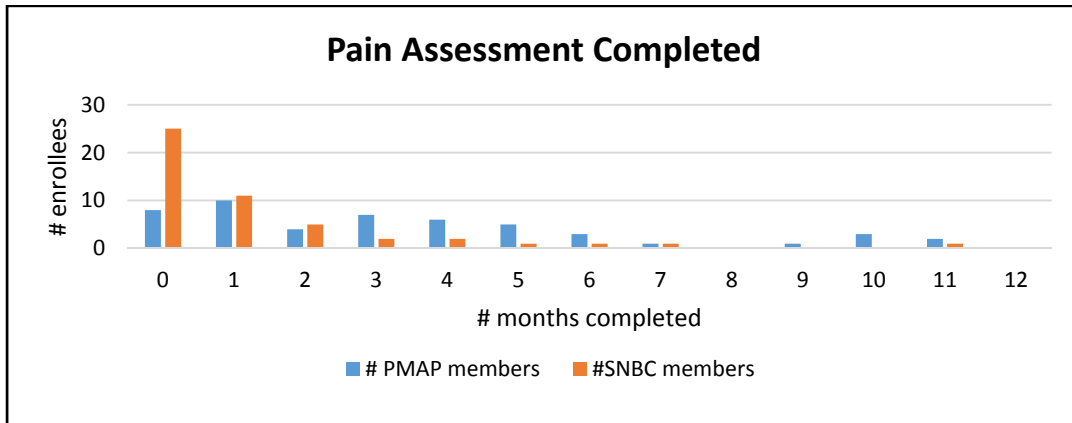


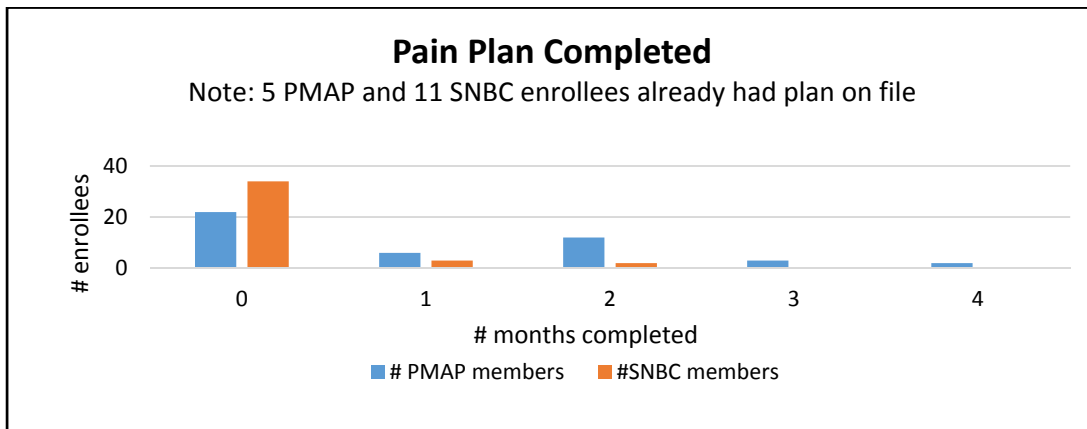
Figure 5 depicts the number of enrollees who had a pain assessment completed and the number of months a pain assessment occurred. Eight (8) PMAP enrollees or 16% and twenty-five (25) SNBC enrollees or 50% never had a pain assessment completed. The next highest percentage of pain assessments completed occurred for one month with the rest ranging from two to eleven months.

**Figure 5: Pain Assessment Completed**



Figures 6 and 7 show the number of enrollees who had a pain plan or a pain contract completed and the number of months a pain plan or contract was reviewed or completed. Figure 6 depicts the number of pain plans completed. For PMAP, twenty-two (22) or 44% and thirty-four (34) SNBC (68%) enrollees did not have a pain plan completed. For the remainder of the enrollees, a plan was either completed or reviewed ranging over a time period of one (1) to four (4) months. Figure 7 indicates the number of enrollees with a completed pain contract. Thirty-five (35) or 70% PMAP and thirty-six (35) or 72% SNBC enrollees did not having a pain contract. For the remaining enrollees, pain contracts were reviewed or completed ranging from one (1) to three (3) months.

**Figure 6: Pain Plan Completed**



**Figure 7: Pain Contract Completed**

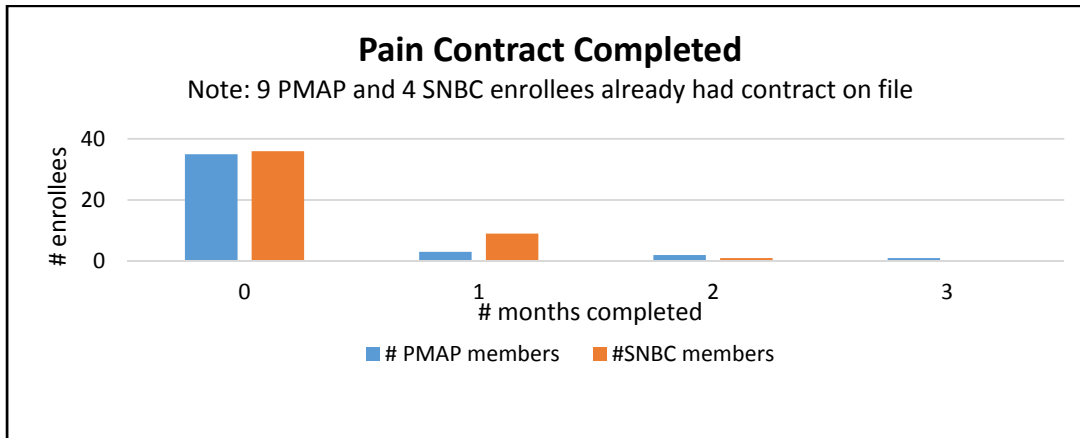


Table 1 summarizes the number of enrollees with alternative treatments recommended and enrollee compliance or non-compliance. For the vast majority of enrollees in both programs, alternative treatments were not recommended. For PMAP enrollees, the most common alternative treatments ordered included physical therapy, referral to a pain clinic, chiropractic services, steroid injection and acupuncture. For SNBC enrollees, the alternative treatments most commonly recommended were physical therapy, steroids, chiropractic services, psychotherapy, surgery, and referrals to mental health, chemical dependency, orthopedic or neurology services. Full compliance with alternative treatment recommended varied from 2% to 54% with the exception of enrollees getting x-rays where there was up to 82% compliance.

Table 1: Alternative Treatments and Enrollee Compliance								
Type	# Enrollees; treatment not recommended		# Enrollees; treatment recommended and enrollee did not comply		# Enrollees; treatment recommended and enrollee always complied		# Enrollees; treatment recommended and enrollee complied 1+ months but less than all months	
	PMAP	SNBC	PMAP	SNBC	PMAP	SNBC	PMAP	SNBC
Acupuncture	35 (70%)	40 (80%)	4 (8%)	2 (4%)	9 (18%)	8 (16%)	2 (4%)	0 (0%)
Chiropractor	34 (68%)	34 (68%)	4 (8%)	1 (2%)	10 (20%)	13 (26%)	2 (4%)	2 (4%)
OT	47 (94%)	45 (90%)	0 (0%)	0 (0%)	3 (6%)	4 (8%)	0 (0%)	1 (2%)
Pool Therapy	41 (82%)	45 (90%)	1 (2%)	2 (4%)	8 (16%)	2 (4%)	0 (0%)	0 (0%)
PT	19 (38%)	21 (42%)	10 (20%)	7 (14%)	19 (38%)	13 (26%)	2 (4%)	7 (14%)
Psychotherapy	44 (88%)	29 (58%)	1 (2%)	1 (2%)	5 (10%)	18 (36%)	0 (0%)	2 (4%)
Steroid	34 (68%)	25 (50%)	2 (4%)	1 (2%)	14 (28%)	23 (46%)	0 (0%)	1 (2%)
Tens Unit	42 (84%)	48 (96%)	0 (0%)	0 (0%)	8 (16%)	2 (4%)	0 (0%)	0 (0%)

<b>Table 1: Alternative Treatments and Enrollee Compliance</b>								
<b>Type</b>	<b># Enrollees; treatment not recommended</b>		<b># Enrollees; treatment recommended and enrollee did not comply</b>		<b># Enrollees; treatment recommended and enrollee always complied</b>		<b># Enrollees; treatment recommended and enrollee complied 1+ months but less than all months</b>	
	<b>PMAP</b>	<b>SNBC</b>	<b>PMAP</b>	<b>SNBC</b>	<b>PMAP</b>	<b>SNBC</b>	<b>PMAP</b>	<b>SNBC</b>
Surgery	48 (96%)	37 (74%)	0 (0%)	0 (0%)	2 (4%)	12 (24%)	0 (0%)	0 (0%)
Exercise	41 (82%)	34 (68%)	1 (2%)	2 (4%)	8 (16%)	8 (16%)	0 (0%)	6 (12%)
Rest	49 (98%)	49 (98%)	0 (0%)	0 (0%)	1 (2%)	1 (2%)	0 (0%)	0 (0%)
X-Ray	36 (72%)	9 (18%)	0 (0%)	0 (0%)	14 (28%)	41 (82%)	0 (0%)	0 (0%)
Refer to CD	49 (98%)	32 (64%)	1 (2%)	1 (2%)	0 (0%)	14 (28%)	0 (0%)	3 (6%)
Refer to MH	43 (86%)	20 (40%)	0 (0%)	0 (0%)	7 (14%)	27 (54%)	0 (0%)	2 (4%)
Refer to Neuro	45 (90%)	37 (74%)	0 (0%)	1 (2%)	5 (10%)	11 (22%)	0 (0%)	0 (0%)
Refer to Ortho	43 (86%)	31 (62%)	1 (2%)	1 (2%)	6 (12%)	13 (26%)	0 (0%)	2 (4%)
Refer to Pain Clinic	27 (54%)	43 (86%)	9 (18%)	2 (4%)	12 (24%)	3 (6%)	2 (4%)	1 (2%)
Sports Medicine	49 (98%)	49 (98%)	0 (0%)	0 (0%)	1 (2%)	1 (2%)	0 (0%)	0 (0%)
Relaxation	50 (100%)	50 (100%)	0 (0%)	0 (0%)	0 (0%)	0(0%)	0 (0%)	0 (0%)
Use of heat/cold/massage	39 (78%)	38 (76%)	0 (0%)	1 (2%)	11 (22%)	10 (20%)	0 (0%)	1 (2%)
Other	37 (74%)	21 (42%)	10 (20%)	2 (4%)	3 (6%)	17 (34%)	0 (0%)	0 (0%)
Other Alternatives/Referrals:	<b>PMAP:</b> Brace, Cardiology, Dermatology, Pharm D/ Pharmacy, Rheumatology, Spine Clinic, Harrington Rods, Sr. Kenny, weight loss, knee sleeve <b>SNBC:</b> Endocrinology, DME (brace/splint/orthotics), Pharmacy, Rheumatology, sleep center, Sr. Kenny, MTM services, bariatrics, home health, podiatry, cancer clinic							

Table 2 outlines evidence of whether medication tapering occurred. It shows the number of enrollees on a specific medication, whether it was a new prescription without refills, and for enrollees with refills, whether there was tapering up or down of the medication. Tapering up or down includes a change in dosage and/or a change in quantity prescribed. On average, most PMAP enrollees were on three different medications with a range from 1-8 medications per enrollee. For SNBC, the average number of medications was four with a range from 1-9 per enrollee. Overall, for both programs, there was a higher percentage of no tapering medications compared to tapering medications. Figures 8-12 summarize the total number of enrollees for the most common medication prescribed, whether it was a new prescription only, whether tapering occurred or did not occur. The most frequent



medications prescribed for comparison were Gabapentin, Hydroc/APAP, Oxycod/APAP, Oxycodone Tab, and Tramadol HCL Tab.

For Gabapentin, there was an equal division of enrollees with a new prescription only, those who tapered up and those who tapered down at 16% each, with 66% not being tapered off the medication. For Hydroc/APAP, 43% accounted for a new prescription only, with 21% either tapering up or down on the medication, and 25% had no evidence of tapering. For Oxycod/APAP, 17% accounted for a new prescription only, 38% had no tapering, 36% tapered up, and 33% tapered down. For Oxycodone Tab, 55% was a new prescription only, with 15% not tapering and 25% tapering up or down. For Tramadol HCL Tab, 36% was for a new prescription only, with 52% not tapering, and 12% tapering up and 9% tapering down.

<b>Table 2: Evidence of Medication Tapering</b>										
<b>Medication</b>	<b>Total # enrollees on med</b>		<b># enrollees with new Rx only</b>		<b># enrollees no taper</b>		<b># enrollees taper up</b>		<b># enrollees taper down</b>	
	<b>PMAP</b>	<b>SNBC</b>	<b>PMAP</b>	<b>SNBC</b>	<b>PMAP</b>	<b>SNBC</b>	<b>PMAP</b>	<b>SNBC</b>	<b>PMAP</b>	<b>SNBC</b>
APAP/Codeine	2	5	1	1	1	4	0	0	0	0
Aspirin	2	3	0	2	2	1	0	0	0	0
Baclofen	3	1	1	0	2	1	0	0	0	0
Caspasin Cream	1	0	0	0	1	0	0	0	0	0
Cyclobenzapar	2	15	0	2	2	14	0	0	0	1
Cymbalta	2	2	2	1	0	0	0	1	0	0
Endocet Tab	1	1	1	0	0	1	0	0	0	0
Flexeril	9	4	6	2	1	2	0	0	1	0
Gabapentin	5	27	1	4	4	17	1	4	1	4
Hydroc/APAP	14	14	5	7	1	6	6	0	5	1
Ibuprofen	9	17	3	5	4	11	1	1	0	1
Lidocaine Cream	1	13	0	7	0	6	0	0	1	0
Lidocaine Patch	2	1	0	0	2	1	0	0	0	0
Lyrica	2	4	1	0	0	4	1	0	1	0
Melaxican	1	0	1	0	0	0	0	0	0	0
Methocarbam	3	2	2	0	0	2	1	0	0	0
Mobic	1	3	0	1	1	2	0	0	0	0
Morphine ER Tab	2	3	2	1	0	1	0	1	0	0
Morphine Sul Tab	2	1	1	0	1	1	0	0	0	0
Motrin	6	3	3	1	3	1	0	1	1	0
Naprosyn	4	0	2	0	1	0	1	0	0	0
Naproxen	4	9	3	2	2	4	0	3	0	1
Neurontin	1	0	0	0	0	0	1	0	0	0
Oxycodone Cap	2	2	2	1	0	0	0	1	0	1
Orphanadrine Tab	1	0	1	0	0	0	0	0	0	0
Oxycod/APAP	17	25	3	4	8	8	5	10	6	8
Oxycodone Sol	1	1	1	1	0	0	0	0	0	0
Oxycodone Tab	11	9	6	5	2	1	4	1	3	2

Table 2: Evidence of Medication Tapering										
Medication	Total # enrollees on med		# enrollees with new Rx only		# enrollees no taper		# enrollees taper up		# enrollees taper down	
	PMAP	SNBC	PMAP	SNBC	PMAP	SNBC	PMAP	SNBC	PMAP	SNBC
Oxycontin Tab	2	0	0	0	1	0	1	0	0	0
Prednisone	1	13	0	6	1	5	0	2	0	2
Robaxin	2	1	1	1	0	0	1	0	0	0
Sulindac	1	0	1	0	0	0	0	0	0	0
Tizanidine	4	3	1	0	2	3	0	0	0	0
Tramadol HCL Tab	14	19	3	9	9	8	2	2	2	1
Tramadol/APAP	2	0	2	0	0	0	0	0	1	0
Tylenol	6	10	3	3	2	6	2	1	0	0
Tylenol Arthritis	2	0	0	0	2	0	0	0	0	0
Voltarin Gel	3	0	1	0	2	0	0	0	0	0

Figure 8: Most Common Medication Prescribed

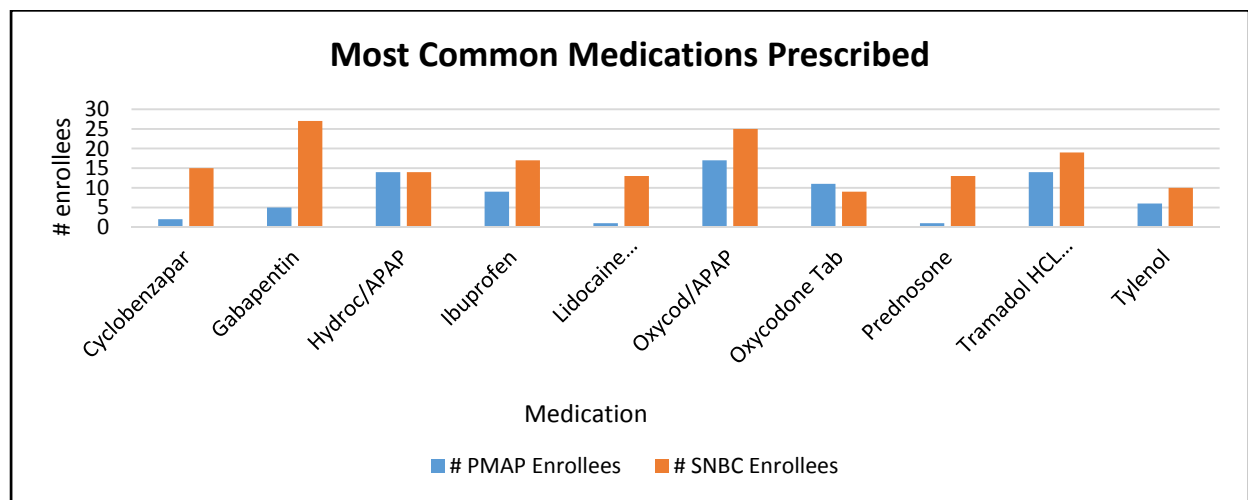
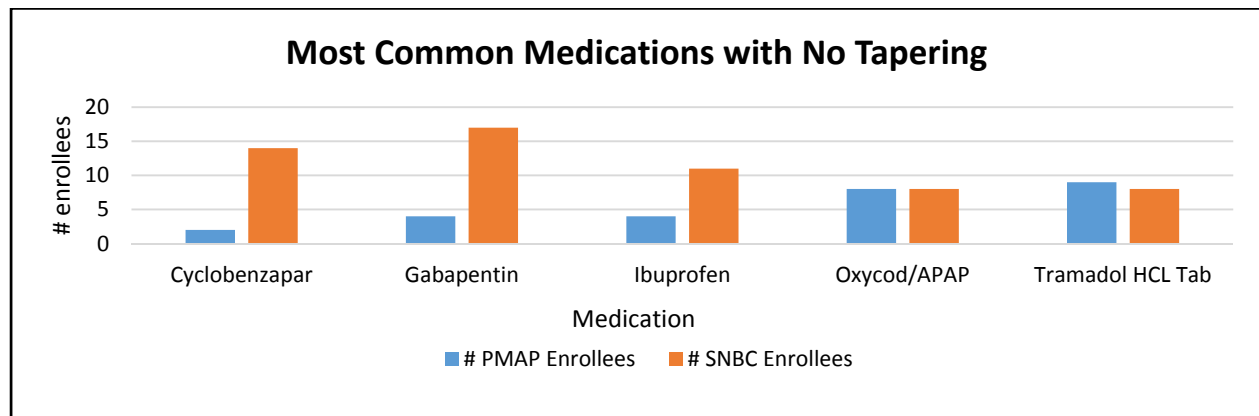
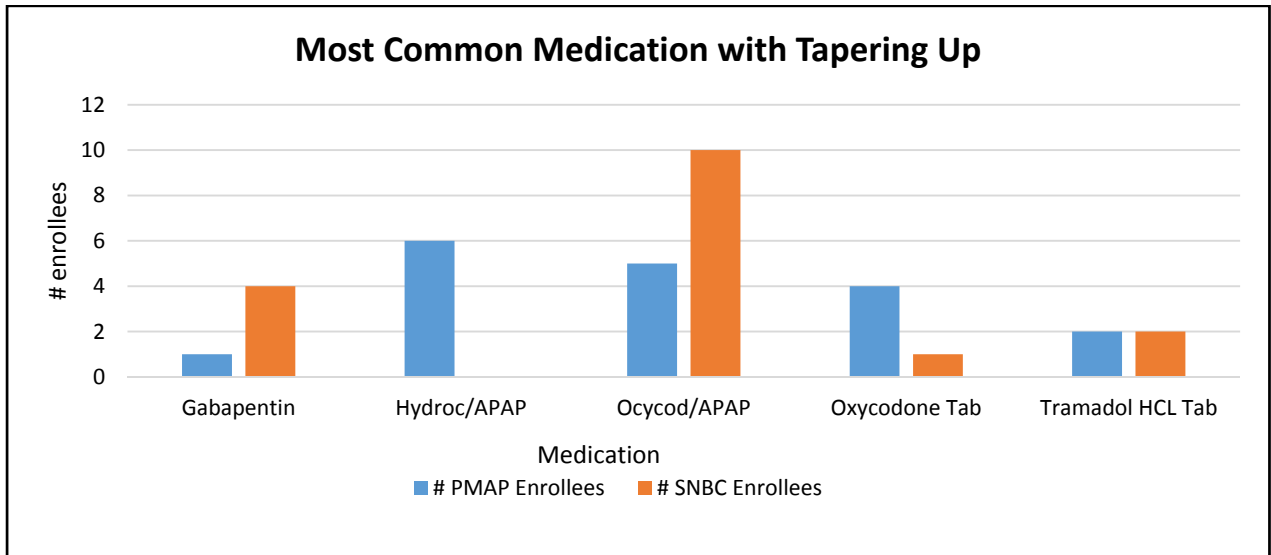


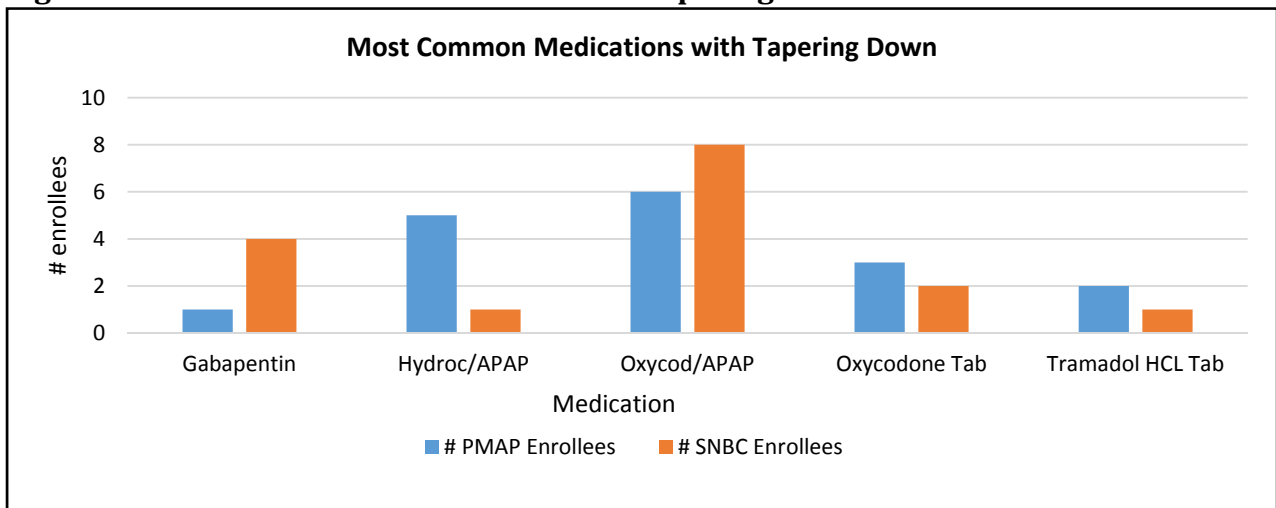
Figure 9: Most Common Medications with No Tapering



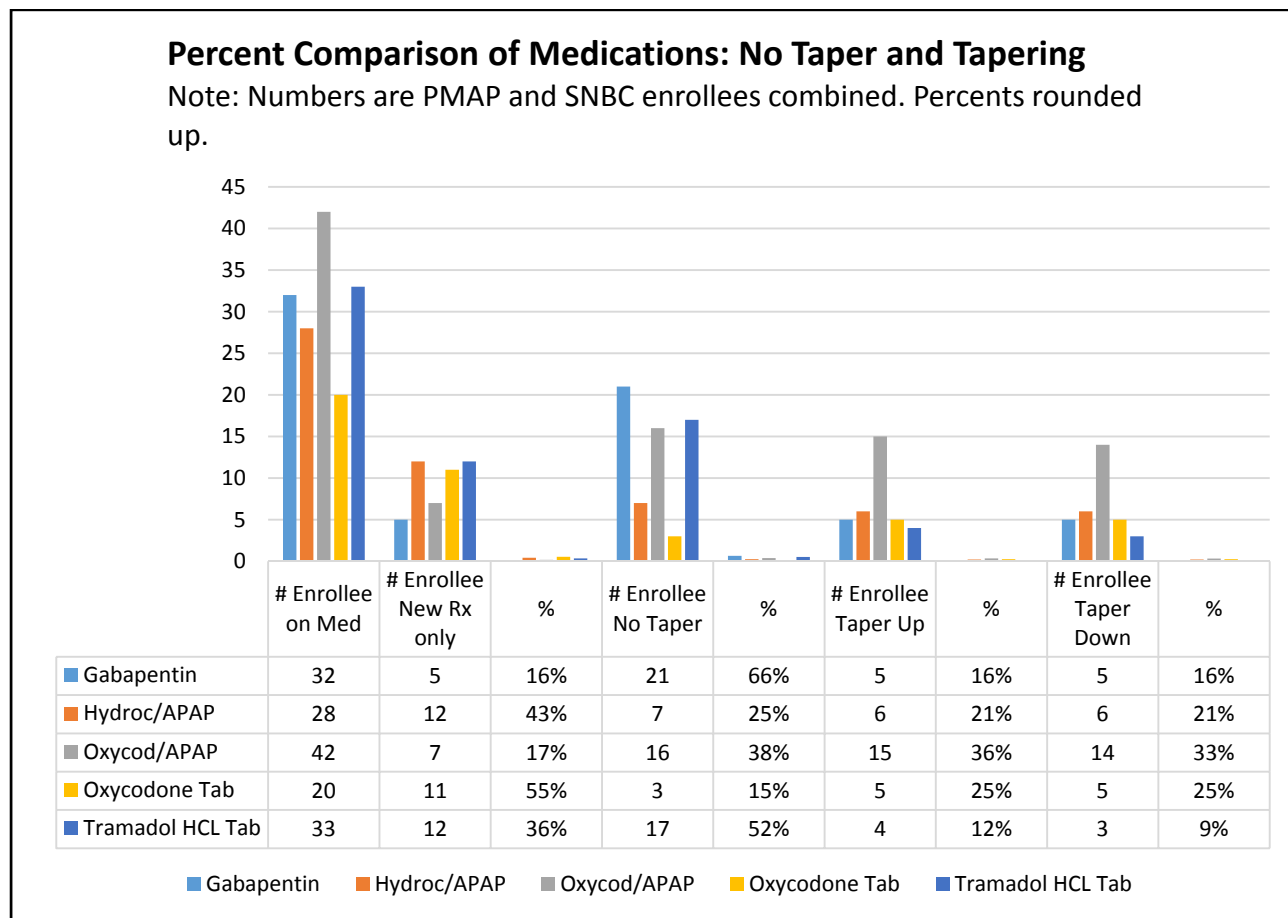
**Figure 10: Most Common Medications with Tapering Up**



**Figure 11: Most Common Medications with Tapering Down**



**Figure 12: Percent comparison of Medications: No Taper and Tapering**



**Recommendations and Next Steps**

There is an opportunity to further educate providers regarding prescribing of narcotics and contacting the MN Prescription Monitoring Program, requesting drug screens, completing pain contracts or plans, and recommending alternative treatments. Hennepin Health receives information from Minnesota Department of Human Services’ Opioid Prescribing Workgroup (OPWG). The OPWG is working on protocols/recommendations for prescribing for acute pain and for post-acute pain. The OPWG is also reviewing the 2016 Institute for Clinical Systems Improvement (ICSI) Pain Health Care Guideline as the basis for chronic pain discussion prior to making OPWG recommendations. Hennepin Health will continue to review and implement recommendations as appropriate.

In addition, the Center for Disease Control and Prevention has issued the [CDC Guideline for Prescribing Opioids for Chronic Pain — United States, 2016 | MMWR](#) that could be shared with providers. The guidelines have recommendations in three areas: determining when to initiate or continue opioids for chronic pain; opioid selection, dosage, duration, follow-up, and discontinuation; and assessing risk and addressing harms of opioid use.

## References

1. Dowell, Deborah, Haegerich, Tamara M, Chou, Roger. CDC Guidelines for Prescribing Opioids for Chronic Pain- United States, 2016. MMWR Recomm Rep 2016;65; 1-49.
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4. Health Services Advisory Council Minutes. Minnesota Department of Human Services. October 9, 2014.