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High Dose Opioid Drug Use Evaluation

Background

Concerns over misuse and abused of opioid analgesics have garnered national and regional attention. In 2011 the Executive Office of the President stated: "Prescription drug misuse and abuse is a major public health and public safety crisis."[1] The Director of the Center for Disease Control (CDC) described misuse and abuse of prescriptions as an "epidemic."[2] The Centers for Medicare and Medicaid Services (CMS) in 2011 indicated that Prior Authorizations are a part of a "robust state controlled prescription drug program." Washington State enacted House Bill 2876 mandating pain specialist consultations for patients exceeding 120 morphine equivalents daily (MED).[3]

The use of long-acting opioids (LAO) has been steadily increasing despite concerns over efficacy and safety. Medicaid prescriptions for opioids doubled between 1998 and 2003, accounting for approximately 4% of all Medicaid prescriptions by 2003.[4] With increasing use of LAO there has been a corresponding increase in morbidity, as illustrated by an increasing number of emergency department (ED) visits. The Drug Abuse Warning Network (DAWN) studied ED visits from 2004-2008 and saw a 111% increase in visits related to nonmedical use of opioid analgesics. Methadone, oxycodone and hydrocodone use were associated with the highest number of visits. The non-medical use of benzodiazepines accounted for an 89% increase in ED visits for the same study period. [5] A Substance Abuse and Mental Health Services Administration (SAMHSA) report in 2013 indicated Oregon had the highest rate of the non-medical use of prescription opioid analgesics for 2010-2011.[6]

The consequences of escalating opioid use in Oregon were reflected in a report from the 2010 Oregon Prescription Opioid Poisoning Workgroup. In 2007 opioid related poisonings accounted for 22.3% of all medication and drug-related hospitalizations in Oregon. Deaths due to prescription opioids in 2008 represented 53% of all deaths due to poisonings by medications and drugs. Methadone poisonings increased 70-fold since 1997 and deaths due to methadone accounted for 33% of the deaths due to poisonings in Oregon in 2008. In 75% of the deaths due to methadone, patients had a history of substance abuse listed in their charts.[7] Other studies have demonstrated that 18-41% of patients using opioids for chronic pain, showed drug abuse behavior.[8]

Policy Summary

In the spring of 2012 the Oregon Department of Medical Assistance Programs (DMAP) implemented a prior authorization (PA) program for all long and short acting opioids analgesics with a total dose exceeding the equivalent of 120mg of morphine sulfate daily(MED).[9–12] Long acting opioid analgesic (LAO) restrictions were implemented April 9, 2012. Short acting opioid analgesics (SAO) restrictions were implemented June 21, 2012. Prior to these changes a PA was required only for non-preferred long acting opioids. The new criteria were approved by the Oregon Medicaid Fee-For-Service (FFS) Pharmacy and Therapeutics Committee and all requests were evaluated in accordance with applicable Oregon Administrative Rules (OAR).[13] Patients treated for cancer-related pain were exempt from the policy (Table A5). Excluded opioid drug products included buprenorphine/naltrexone for substance abuse and combination opioid and acetaminophen products. Key evaluation criteria were: treatment of an Oregon Health Plan (OHP) funded condition, documentation of improvements in both pain control and functional status, a recent (within 90 days of request) urine drug screen (UDS), and the use of a single pharmacy and prescriber for high dose opioids. Temporary authorizations

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were granted for up to 90 days when requested for the purposes of tapering the opioid dose below 120MED, ordering a UDS, or submitting documentation of improvements in pain and functional status.[12,14]

Drug Use Evaluation Goals

- Determine if the policy changed the number of patients receiving high dose opioids
- Determine if prior authorizations were requested, and if so, if they were approved
- Determine if prior authorization requirement caused unintended harms, as identified by changes in health care service utilization

Methods

This retrospective pre/post cohort study evaluated claims from April 9, 2011 until August 9, 2013. Study inclusion and exclusion criteria are summarized in Figure 1. The study included patients with a paid (FFS) pharmacy claim for a qualifying high dose opioid analgesic between January 1, 2012 and April 8,2012 and a denied high dose opioid claim after the policy went into effect (defined as the Index Event). High dose (HD) opioids claims were defined as the total dose exceeding 120mg morphine equivalents daily (MED), as calculated by the strength, quantity and days supply on the paid claim. For short acting opioids, a minimum day supply of 14 days was also required for inclusion. A complete list of qualifying opioid analgesics and morphine equivalents appears in Table A1 of Appendix A. An Index Event (IE) was defined as a FFS claim rejection for a qualifying opioid analgesic with an Explanation of Benefits (EOB) code of either "1056-Prior Authorization Required" or "0030-Drug Quantity Per Day Limit" and without a concurrent EOB of "2017 – Bill Managed Care".

Patients with dual Medicare and Medicaid coverage were excluded, as were all patients with third party insurance (TPL) from one year before until one year after the IE. Patients with more than a 45 day gap in eligibility from one year before until one year after the IE were excluded, except when the loss of eligibility was due to death. The high dose opioid policy did not apply to the treatment of malignant pain, therefore patients with a medical claim indicating a cancer diagnosis (Table A2) with a date of service within 1 year prior to the IE were not subject to the policy and were therefore excluded from the study. Patients with an approved PA for a non preferred opioid analgesic effective on 4/9/2012 were excluded.

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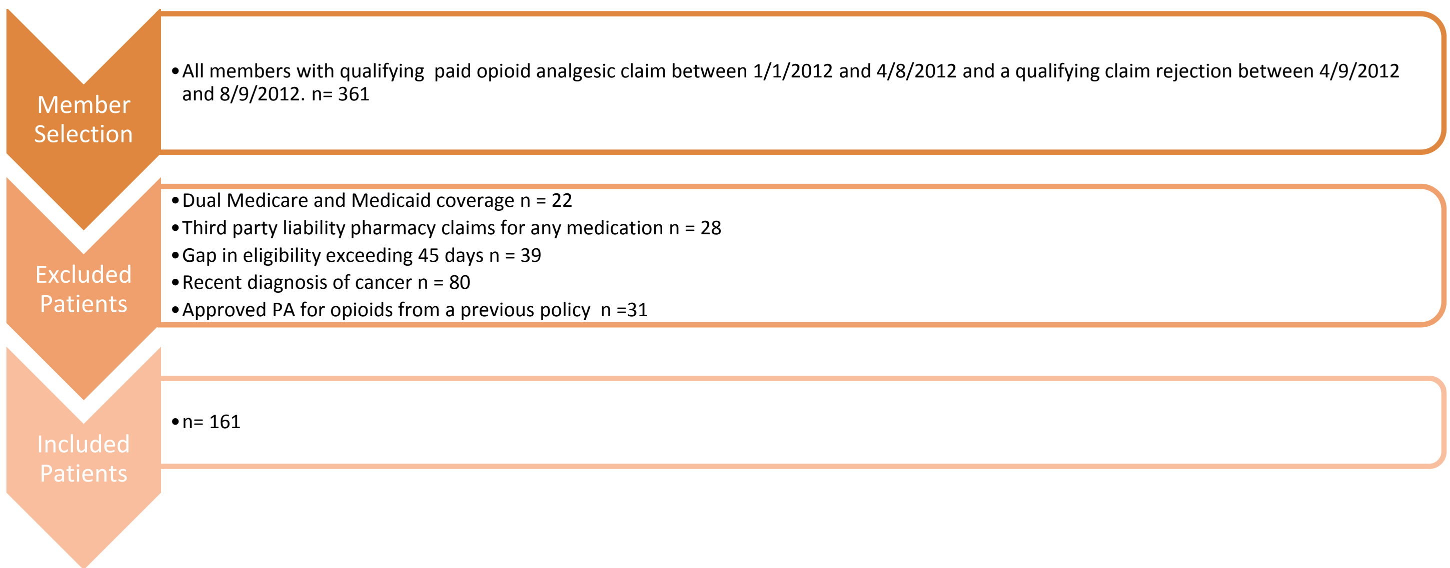

Figure 1 Patient Inclusion Criteria

Baseline Characteristics

Baseline characteristics were collected as potential factors impacting the approval of prior authorizations and health care service utilization (Tables 1-4). Pre-existing pain-related co-morbidities were determined by medical claims within 1 year prior to the IE. International Classification of Diseases, 9th Revision, Clinical Modification (ICD9) codes for each diagnosis group are listed in Table A2. Analgesic therapy, both opioid and non-opioid, were also assessed at baseline. The total opioid dose was calculated as the average MED across all paid opioid claims over the 100 days prior to the IE. Concurrent use of high dose opioids was defined as at least 30 days during which both a long acting and short acting HD opioid were prescribed during the 100 days prior to the IE. Duration of HD therapy was determined looking back at all FFS pharmacy claims for qualifying HD opioid prescriptions. The initiation of HD therapy was defined as the first qualifying HD opioid prescription without a qualifying HD opioid prescription in the preceeeding 45 days. Other analgesics are listed in Table A3 of Appendix A.

Outcomes

Drug therapy disposition (e.g. continued, discontined, etc.) was assessed between the IE plus 100 day to the IE plus 200 days. Patients with at least one qualifying HD opioid analgesic prescription were classified as “High dose opioids continued.” Patients receiving at least one study eligible opioid analgesic (Table A1) not meeting the criteria for high dose or a non-study opioid analgesic (Table A4) were classified as “Continued with any opioid.” Patients with any paid claims for non-opioid analgesics (Table A3) were included in the “Non-opioid analgesic therapy” group. Paid and unpaid claims for any opioid analgesic (Table A1 or A3) were evaluated to identify patients with 3 or more prescribers of opioid analgesics.

Patients potentially paying cash for unapproved high dose opioid prescriptions were identified using a proxy based on denied claims. The proxy was defind as the presence of at least two rejected study eligible opioid analgesic claims between the IE+100 days and the IE+200 days with error codes of either “1056-Prior Authorization Required” or “0030-Drug Quantity Per Day Limit”. Duplicate claims were excluded if a high dose prescription was paid within 4 days for the

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same active agent, the same strength, the same release formulation (immediate or extended). Members with claims meeting these criteria were classified as "Mulitple Unapproved High Dose Opioid Prescriptions."

The final PA disposition was determined at 100 days after the IE. This allowed for temporary authorizations of high dose opioids to occur which allowed patients to safely taper the total daily dose to less than 120 MED or to allow providers to satisfy other PA criteria (e.g. obtain a urine drug screen). These temporary authorizations were provided only upon request by the provider and were typically for no more than 90 days. Patients with PAs submitted for qualifying opioid analgesics after the IE and with approval end days beyond the IE plus 100 days were considered "Approved." Patients with PAs submitted for qualifying opioid analgesics after the IE, but none approved beyond the IE plus 100 days were classified as "Not Approved." All other patients were classified as "Not Requested."

Healthcare service utilization for 1 year prior to the IE and one year after the IE were used to assess potential harms associated with the PA policy. A primary outcome was the composite of all cause hospitalizations, pain related hospitalizations, all cause emergency department (ED) visits, and pain-related ED visits. Hospitalizations and ED encounters were classified as pain related if the primary diagnosis of the encounter was included in table A2.

A secondary composite outcome of substance misuse was identified by outpatient methadone administration, buprenorphine opioid dependence therapy, and opioid overdose. Outpatient methadone administration was identified by medical claims with the procedure code H0020. Outpatient pharmacy claims for methadone were not considered methadone administration for opioid dependence.

Results

Table 1 – Baseline Demographics

Demographics	Members n=161	
	#	%
Age		
0-17	1	1%
25-34	12	7%
35-44	28	17%
45-54	58	36%
55-64	60	37%
65 and Older	2	1%
Gender		
Female	99	61%
Male	62	39%
Race		
Non-White	22	14%
White	139	86%

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Table 2 - Baseline Co-Morbidities

Pain-Related Diagnoses	Members n=161	
	#	%
Pain Conditions		
Bone Disorders	4	2%
Gastrointestinal, hepatic, renal, gynecologic and urologic disorders	53	33%
Gout	4	2%
Headache	37	23%
Multiple Sclerosis	2	1%
Musculoskeletal Disorders	104	65%
Neuropathic Pain Disorders	40	25%
Other Pain Syndromes	78	48%
Rheumatoid Arthritis & Ankylosing spondylitis	10	6%
Soft Tissue Disorders	102	63%
Somatic Pain Disorders	2	1%
Spinal Disorders	121	75%
Substance Abuse / Misuse / Dependence	44	27%
Mental Health Disorders	79	49%

*Individual members may appear in more than one category

Table 3 – Analgesic Drug Therapy – 100 Days Prior to Index Event

Opioid and Related Drug Therapy	Members n=161	
	#	%
Presence of Opioids*		
Fentanyl	21	13%
Hydrocodone/acetaminophen	31	19%
Hydromorphone	11	7%
Methadone	59	37%
Morphine sulfate	57	35%
Oxycodone	63	39%
Oxycodone/acetaminophen	24	15%
Concurrent High Dose LAO and SAO	17	11%
Other Analgesic Therapy		
Antiepileptics	36	22%
NSAIDs	34	21%
Other	35	22%

*Opioids listed in Tables A1 and A4 not appearing in Table 3 had no patients with claims during the 100 days prior to the index event

Table 4 – Dose and Duration of High Dose Opioid Therapy at Baseline

	Mean	Maximum	Minimum
Average Duration of High Dose Opioid of Therapy (Days)	1,077	4,144	13
Average Mg of Morphine Equivalents Daily (MED) for all concurrent opioids	313	1,606	83

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Table 5 - Drug Therapy Disposition by Final Authorization Disposition

	Overall		Final Authorization Disposition					
			Approved		Not Approved		Not Requested	
	#	%	#	%	#	%	#	%
Total	161	100%	59	37%	38	24%	64	40%
Opioid Analgesic Therapy								
High Dose Opioids Continued	43	27%	40	68%	3	8%	0	0%
Continued with low dose opioid	89	55%	15	25%	25	66%	49	77%
No Opioid Therapy	29	18%	4	7%	10	26%	15	23%
Non-Opioid Analgesic Therapy	81	50%	30	51%	18	47%	33	52%
Mulitple Unapproved High Dose Opioid Prescriptions	46	29%	7	12%	11	29%	28	44%

*Drug therapy disposition and prior authorization disposition both assessed at 100 days after the index event

Figure 2 - Unique Members with Paid Claims for High Dose Opioids by Month Relative to the Index Event

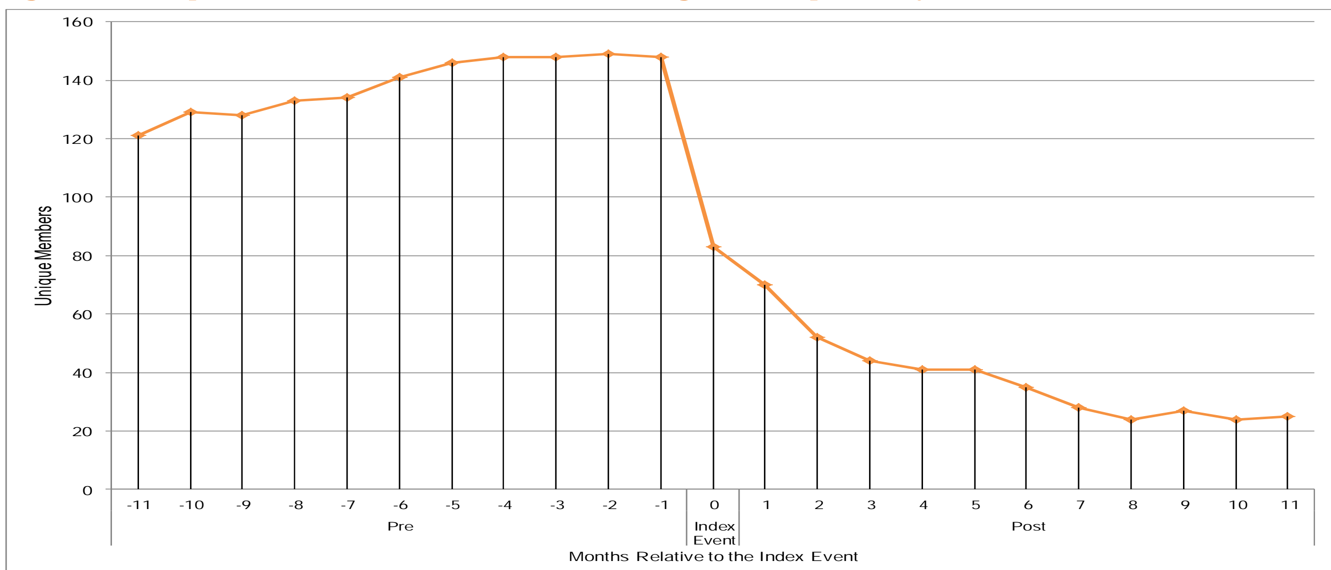

Table 6– Hospital Services

	Overall				Final Authorization Disposition																			
					Approved				Not Approved				Not Requested			
	n=161				n=59				n=38				n=64			
	Pre		Post		Pre		Post		Pre		Post		Pre		Post	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Composite Outcome – All cause hospitalizations and ED visits	70	43%	84	52%	21	36%	23	39%	16	42%	21	55%	33	52%	40	63%
All Cause Hospitalizations	25	16%	30	19%	8	14%	8	14%	6	16%	6	16%	11	17%	16	25%
Pain Related Hospitalizations	4	2%	7	4%	2	3%	1	2%	0	0%	1	3%	2	3%	5	8%
All Cause ED Visits	68	42%	84	52%	20	34%	23	39%	16	42%	21	55%	32	50%	40	63%
Pain Related ED Visits	44	27%	46	29%	13	22%	9	15%	11	29%	14	37%	20	31%	23	36%

The McNemar test found a non-significant (p=0.0769, OR 1.700, CI 0.951 to 3.117) change in all cause hospitalizations. A post hoc analysis found a statistically significant increase in all case ED visits was observed (p=0.045, OR 1.800, CI 1.014 to 3.282). No statistically significant association was found for any of the three prior authorization disposition sub groups for either the composite outcome or all cause ED visits. Outpatient visits per member changed very little (mean 12.31 visits per year before intervention to 12.68 after intervention, median 10.00 both pre and post intervention).

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Post hoc review revealed 41% of members who had a post intervention ED visit also met the proxy measure for paying cash for high dose opioids. This was an increase from 25% in members with pre intervention ED visits. Likewise, 35% members with a post intervention ED visit had a baseline history of substance abuse / misuse /dependence compared to the rates in members with pre-intervention ED visit (18%).

Table 7 Substance Misuse and Dependence

	Overall				Final Authorization Disposition											
					Approved				Not Approved				Not Requested			
	n=161				n=59				n=38				n=64			
	Pre		Post		Pre		Post		Pre		Post		Pre		Post	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Composite Secondary Outcome Substance Misuse and Dependence – Methadone treatment, buprenorphine opioid dependence therapy, and opioid overdose	2	1.2%	5	3.1%	0	0.0%	2	3.4%	0	0.0%	1	2.6%	2	3.1%	2	3.1%
Outpatient Methadone Administration	1	0.6%	2	1.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	1.6%	2	3.1%
Buprenorphine opioid dependence therapy	0	0.0%	1	0.6%	0	0.0%	1	1.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Opioid Overdose	1	0.6%	2	1.2%	0	0.0%	1	1.7%	0	0.0%	1	2.6%	1	1.6%	0	0.0%

All 5 members meeting the substance misuse and dependence composite outcome after the IE continued on low dose opioid therapy.

There were 4 deaths within one year of the IE. One member was not approved for opioid therapy and the date of death (DOD) was 93 days after the IE. There were no hospital claims on or around the DOD. One day prior to death there was a paid claim for alprazolam 0.25mg tablets quantity dispensed 120 and a denied claim for oxycodone IR 30mg quantity dispensed 120. Of the 3 members with approved therapy, one was in a long term care facility (DOD 97 days after IE), one appears to have died in the hospital possibly due to complications of liver disease (DOD 126 days after IE), and the last had no paid or denied opioid claims within 6 months of the DOD (314 days after IE). The last claim for this final member was from the local fire department, but there are no subsequent hospital claims.

Discussion

There was a clear reduction in the number of members receiving high dose opioids (p = XXXXX). Table 5 shows that only 27% of members continued to have paid pharmacy claims for high dose opioids 100 days after the index event. This 73% reduction in members with paid claims may not reflect actual high dose opioid use. There were 55 members (33%) with multiple denied claims for high dose opioids after 100 days, which was our proxy for continuing therapy by paying cash for prescriptions. This suggests that the actual reduction in patient prescribed high dose opioids may be closer to 40%. It is noteworthy that of the four members who died during the study period, the one with an opioid claim one day prior to death was denied, suggesting therapy had continued despite the PA policy.

A surprising 39% of members did not have PAs requested for their high dose opioid therapy. Of the 97 patients with a PA request, 62% were approved. Of the 64 members without a PA request, 44% had multiple denied claims for high dose opioids after 100 days. This suggests that for some patients and providers, therapy continued despite the policy.

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A non-significant (p=0.0769) increase in the composite outcome for hospital service utilization suggests the policy did not cause harms as measured by the composite outcome, but a ED visits appear to have increased after the policy (p=0.045, OR 1.800, CI 1.014 to 3.282). Interestingly, this increase in ED visits was largely due to non-pain related encounters. These results suggest factors other than painful conditions may be associated with the increase in ED visits due to the policy. The composite outcome for substance misuse and dependence was met by 5 members (3%). Three of these members used either buprenorphine products for opioid dependence or received treatment at a methadone clinic. Currently, there are no policies restricting the use of opioid analgesics in the presence of methadone treatment. Legal restrictions prevent the disclosure of methadone treatment without written consent of the patient. Buprenorphine products used to treat opioid dependence are only approved when no long acting opioids are prescribed, creating a selection bias for no patients receiving buprenorphine therapy at baseline. The clinical and statistical significance of this composite outcome is unclear.

Limitations

The absence of data describing actual prescriptions filled is a major limitation to determining the number of members continuing to receive high dose opioids. Our data clearly shows a reduction in the number of claims paid, while the number of patients with denied high dose opioid claims (33%) suggests that prescribing practices may not have changed. The FFS program does not have access to the Prescription Drug Monitoring Program (PDMP) data. Without access to the PDMP data, it is difficult to determine if the policy changed prescribing practices or simply reduced the number of claims paid for by the program. Although the PMDP cannot disclose patient-level data, they can provide aggregated data matched to a list of patients. A study could be conducted to evaluate high dose opioid therapy in patients who did not have a PA approved using the PDMP data. Such collaboration would provide important public health and policy insights.

The lack of a more robust statistical analysis of the cause of the increase in ED visits represents a signficant limitation of this policy evaluation. A more robust statistical analysis could clarify the factors causing an increase in non-pain related ED visits.

This policy evaluation is subject to the limitations of all claims based retrospective analyses. Claims data is an incomplete and sometimes inaccurate portrait of the true clinical picture.

Recommendations

- Maintain high dose opioid PA policy.
- Collaborate with the Prescription Drug Monitoring Program to determine if high dose opioid therapy was continued in patients who did not have a Prior Authorization approved.
- Perform a Provider analysis to look at location, specialty, or identify other distinguishing characteristics.

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Oregon Health Authority

Appendix A

Table A1 – Study Eligible Opioid Analgesics

Generic Drug Name	Formulation	Morphine Equivalents
CODEINE PHOSPHATE	SOLUTION 15 mg/5 mL	0.45 Per ml
CODEINE SULFATE	SOLUTION 30 mg/5 mL	0.90 Per ml
CODEINE SULFATE	TABLET 15 mg	2.25 Per Unit
CODEINE SULFATE	TABLET 30 mg	4.50 Per Unit
CODEINE SULFATE	TABLET 60 mg	9 Per Unit
FENTANYL	PATCH TD72 100 mcg/hour	360 Per Day
FENTANYL	PATCH TD72 12 mcg/hour	43.20 Per Day
FENTANYL	PATCH TD72 25 mcg/hour	90 Per Day
FENTANYL	PATCH TD72 50 mcg/hour	180 Per Day
FENTANYL	PATCH TD72 75 mcg/hour	270 Per Day
HYDROMORPHONE HCL	CAP24H PEL 12 mg	48 Per Unit
HYDROMORPHONE HCL	CAP24H PEL 16 mg	64 Per Unit
HYDROMORPHONE HCL	CAP24H PEL 24 mg	96 Per Unit
HYDROMORPHONE HCL	CAP24H PEL 32 mg	128 Per Unit
HYDROMORPHONE HCL	LIQUID 1 mg/mL	4 Per ml
HYDROMORPHONE HCL	SUPP.RECT 3 mg	12 Per Unit
HYDROMORPHONE HCL	TAB ER 24H 12 mg	48 Per Unit
HYDROMORPHONE HCL	TAB ER 24H 16 mg	64 Per Unit
HYDROMORPHONE HCL	TAB ER 24H 32 mg	128 Per Unit
HYDROMORPHONE HCL	TAB ER 24H 8 mg	32 Per Unit
HYDROMORPHONE HCL	TABLET 2 mg	8 Per Unit
HYDROMORPHONE HCL	TABLET 3 mg	12 Per Unit
HYDROMORPHONE HCL	TABLET 4 mg	16 Per Unit
HYDROMORPHONE HCL	TABLET 8 mg	32 Per Unit
LEVORPHANOL TARTRATE	TABLET 2 mg	60 Per Unit
MEPERIDINE HCL	SOLUTION 50 mg/5 mL	1 Per ml
MEPERIDINE HCL	TABLET 100 mg	10 Per Unit
MEPERIDINE HCL	TABLET 50 mg	5 Per Unit
METHADONE HCL	ORAL CONC 10 mg/mL	30 Per ml
METHADONE HCL	SOLUTION 10 mg/5 mL	6 Per ml
METHADONE HCL	SOLUTION 5 mg/5 mL	3 Per ml
METHADONE HCL	SYRINGE 10 mg/mL	30 Per ml
METHADONE HCL	SYRINGE 5 mg/5 mL	3 Per ml
METHADONE HCL	TABLET 10 mg	30 Per Unit
METHADONE HCL	TABLET 5 mg	15 Per Unit
METHADONE HCL	TABLET SOL 40 mg	120 Per Unit
MORPHINE SULFATE	CAP ER PEL 10 mg	10 Per Unit
MORPHINE SULFATE	CAP ER PEL 100 mg	100 Per Unit
MORPHINE SULFATE	CAP ER PEL 130 mg	130 Per Unit
MORPHINE SULFATE	CAP ER PEL 150 mg	150 Per Unit
MORPHINE SULFATE	CAP ER PEL 20 mg	20 Per Unit
MORPHINE SULFATE	CAP ER PEL 200 mg	200 Per Unit
MORPHINE SULFATE	CAP ER PEL 30 mg	30 Per Unit
MORPHINE SULFATE	CAP ER PEL 40 mg	40 Per Unit
MORPHINE SULFATE	CAP ER PEL 50 mg	50 Per Unit
MORPHINE SULFATE	CAP ER PEL 60 mg	60 Per Unit
MORPHINE SULFATE	CAP ER PEL 70 mg	70 Per Unit
MORPHINE SULFATE	CAP ER PEL 80 mg	80 Per Unit
MORPHINE SULFATE	CAP24H PEL 100 mg	100 Per Unit
MORPHINE SULFATE	CAP24H PEL 20 mg	20 Per Unit
MORPHINE SULFATE	CAP24H PEL 50 mg	50 Per Unit
MORPHINE SULFATE	CAPSULE 15 mg	15 Per Unit
MORPHINE SULFATE	CAPSULE 30 mg	30 Per Unit
MORPHINE SULFATE	CPMP 24HR 120 mg	120 Per Unit
MORPHINE SULFATE	CPMP 24HR 30 mg	30 Per Unit
MORPHINE SULFATE	CPMP 24HR 45 mg	45 Per Unit
MORPHINE SULFATE	CPMP 24HR 60 mg	60 Per Unit
MORPHINE SULFATE	CPMP 24HR 75 mg	75 Per Unit
MORPHINE SULFATE	CPMP 24HR 90 mg	90 Per Unit
MORPHINE SULFATE	SOLUTION 10 mg/0.5 mL	20 Per ml
MORPHINE SULFATE	SOLUTION 10 mg/5 mL	2 Per ml
MORPHINE SULFATE	SOLUTION 100 mg/5 mL (20 mg/mL)	20 Per ml
MORPHINE SULFATE	SOLUTION 20 mg/5 mL	4 Per ml
MORPHINE SULFATE	SOLUTION 5 mg/0.25 mL	20 Per ml
MORPHINE SULFATE	SUPP.RECT 10 mg	10 Per Unit
MORPHINE SULFATE	SUPP.RECT 20 mg	20 Per Unit
MORPHINE SULFATE	SUPP.RECT 30 mg	30 Per Unit
MORPHINE SULFATE	SUPP.RECT 5 mg	5 Per Unit
MORPHINE SULFATE	SYRINGE 20 mg/mL	20 Per ml
MORPHINE SULFATE	TABLET 15 mg	15 Per Unit
MORPHINE SULFATE	TABLET 30 mg	30 Per Unit
MORPHINE SULFATE	TABLET ER 100 mg	100 Per Unit
MORPHINE SULFATE	TABLET ER 15 mg	15 Per Unit
MORPHINE SULFATE	TABLET ER 200 mg	200 Per Unit
MORPHINE SULFATE	TABLET ER 30 mg	30 Per Unit
MORPHINE SULFATE	TABLET ER 60 mg	60 Per Unit
MORPHINE SULFATE	TABLET SOL 10 mg	10 Per Unit
MORPHINE SULFATE	TABLET SOL 15 mg	15 Per Unit
MORPHINE SULFATE	TABLET SOL 30 mg	30 Per Unit
OXYCODONE HCL	CAPSULE 5 mg	7.50 Per Unit
OXYCODONE HCL	ORAL CONC 20 mg/mL	30 Per ml
OXYCODONE HCL	ORAL CONC 20 mg/mL	30 Per ml
OXYCODONE HCL	SOLUTION 5 mg/5 mL	1.50 Per ml
OXYCODONE HCL	TAB ER 12H 10 mg	15 Per Unit
OXYCODONE HCL	TAB ER 12H 15 mg	22.50 Per Unit
OXYCODONE HCL	TAB ER 12H 160 mg	240 Per Unit
OXYCODONE HCL	TAB ER 12H 20 mg	30 Per Unit
OXYCODONE HCL	TAB ER 12H 30 mg	45 Per Unit
OXYCODONE HCL	TAB ER 12H 40 mg	60 Per Unit
OXYCODONE HCL	TAB ER 12H 60 mg	90 Per Unit
OXYCODONE HCL	TAB ER 12H 80 mg	120 Per Unit
OXYCODONE HCL	TABLET 10 mg	15 Per Unit
OXYCODONE HCL	TABLET 15 mg	22.50 Per Unit
OXYCODONE HCL	TABLET 20 mg	30 Per Unit
OXYCODONE HCL	TABLET 30 mg	45 Per Unit
OXYCODONE HCL	TABLET 5 mg	7.50 Per Unit
OXYCODONE HCL	TABLET ORL 5 mg	7.50 Per Unit
OXYCODONE HCL	TABLET ORL 7.5 mg	11.25 Per Unit
OXYMORPHONE HCL	SUPP.RECT 5 mg	15 Per Unit
OXYMORPHONE HCL	TAB ER 12H 10 mg	30 Per Unit
OXYMORPHONE HCL	TAB ER 12H 15 mg	45 Per Unit
OXYMORPHONE HCL	TAB ER 12H 20 mg	60 Per Unit
OXYMORPHONE HCL	TAB ER 12H 30 mg	90 Per Unit
OXYMORPHONE HCL	TAB ER 12H 40 mg	120 Per Unit
OXYMORPHONE HCL	TAB ER 12H 5 mg	15 Per Unit
OXYMORPHONE HCL	TAB ER 12H 7.5 mg	22.5 Per Unit
OXYMORPHONE HCL	TABLET 10 mg	30 Per Unit
OXYMORPHONE HCL	TABLET 5 mg	15 Per Unit

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Table A2 – Diagnosis Codes

Disorder Category	ICD-9 Code*	ICD-9 Description
Bone Disorders	730	OSTEOMYELITIS PERIOSTITIS&OTH INFS INVLV BONE
Bone Disorders	732	OSTEOCHONDROPATHIES
Bone Disorders	809	ILL-DEFINED FRACTURES OF BONES OF TRUNK
Bone Disorders	810	FRACTURE OF CLAVICLE
Bone Disorders	811	FRACTURE OF SCAPULA
Bone Disorders	812	FRACTURE OF HUMERUS
Bone Disorders	813	FRACTURE OF RADIUS AND ULNA
Bone Disorders	814	FRACTURE OF CARPAL BONE
Bone Disorders	815	FRACTURE OF METACARPAL BONE
Bone Disorders	816	FRACTURE ONE OR MORE PHALANGES OF HAND
Bone Disorders	817	MULTIPLE FRACTURES OF HAND BONES
Bone Disorders	818	ILL-DEFINED FRACTURES OF UPPER LIMB
Bone Disorders	819	MX FX INVOLV BOTH UP LIMBS&UP LIMB W/RIB&STERNUM
Bone Disorders	820	FRACTURE OF NECK OF FEMUR
Bone Disorders	821	FRACTURE OF OTHER AND UNSPECIFIED PARTS OF FEMUR
Bone Disorders	822	FRACTURE OF PATELLA
Bone Disorders	823	FRACTURE OF TIBIA AND FIBULA
Bone Disorders	824	FRACTURE OF ANKLE
Bone Disorders	825	FRACTURE OF ONE OR MORE TARSAL&METATARSAL BONES
Bone Disorders	826	FRACTURE OF ONE OR MORE PHALANGES OF FOOT
Bone Disorders	827	OTHER MULTIPLE&ILL-DEFINED FRACTURES LOWER LIMB
Bone Disorders	828	MULT FX OF LEGS-LEGS W/ARM-LEGS W/RIBS&STERNUM
Bone Disorders	905	LATE EFF MUSCULOSKEL&CONNECTIVE TISSUE INJURIES
Gastrointestinal, hepatic, renal, gynecologic and urologic disorders	250	DIABETES MELLITUS
Gastrointestinal, hepatic, renal, gynecologic and urologic disorders	277	OTHER AND UNSPECIFIED DISORDERS OF METABOLISM
Gastrointestinal, hepatic, renal, gynecologic and urologic disorders	300	ANXIETY DISSOCIATIVE AND SOMATOFORM DISORDERS
Gastrointestinal, hepatic, renal, gynecologic and urologic disorders	453	OTHER VENOUS EMBOLISM AND THROMBOSIS
Gastrointestinal, hepatic, renal, gynecologic and urologic disorders	558	OTHER NONINFECTIOUS GASTROENTERITIS AND COLITIS
Gastrointestinal, hepatic, renal, gynecologic and urologic disorders	571	CHRONIC LIVER DISEASE AND CIRRHOSIS
Gastrointestinal, hepatic, renal, gynecologic and urologic disorders	573	OTHER DISORDERS OF LIVER
Gastrointestinal, hepatic, renal, gynecologic and urologic disorders	574	CHOLELITHIASIS
Gastrointestinal, hepatic, renal, gynecologic and urologic disorders	575	OTHER DISORDERS OF GALLBLADDER
Gastrointestinal, hepatic, renal, gynecologic and urologic disorders	576	OTHER DISORDERS OF BILIARY TRACT
Gastrointestinal, hepatic, renal, gynecologic and urologic disorders	583	NEPHRITIS&NEPHROPATHY NOT SPEC AS ACUTE/CHRONIC
Gastrointestinal, hepatic, renal, gynecologic and urologic disorders	585	CHRONIC KIDNEY DISEASE
Gastrointestinal, hepatic, renal, gynecologic and urologic disorders	614	INFLAM DZ OF OVARY-TUBE-PELVIC TISSUE-PERITONEUM
Gastrointestinal, hepatic, renal, gynecologic and urologic disorders	620	NONINFLAM D/O OVARY FALLOP TUBE&BROAD LIGAMENT
Gastrointestinal, hepatic, renal, gynecologic and urologic disorders	625	PAIN&OTH SYMPTOMS ASSOC W/FEMALE GENITAL ORGANS
Gastrointestinal, hepatic, renal, gynecologic and urologic disorders	751	OTHER CONGENITAL ANOMALIES OF DIGESTIVE SYSTEM
Gastrointestinal, hepatic, renal, gynecologic and urologic disorders	774	OTHER PERINATAL JAUNDICE
Gastrointestinal, hepatic, renal, gynecologic and urologic disorders	777	PERINATAL DISORDERS OF DIGESTIVE SYSTEM
Gastrointestinal, hepatic, renal, gynecologic and urologic disorders	7890	ABDOMINAL PAIN
Gastrointestinal, hepatic, renal, gynecologic and urologic disorders	996	COMPLICATIONS PECULIAR CERTAIN SPECIFIED PROC
Gout	274	GOUT
Gout	712	CRYSTAL ARTHROPATHIES
Headache	30781	TENSION HEADACHE
Headache	339	OTHER HEADACHE SYNDROMES
Headache	346	MIGRAINE
Headache	7840	HEADACHE
Multiple Sclerosis	334	SPINOCEREBELLAR DISEASE
Multiple Sclerosis	340	MULTIPLE SCLEROSIS
Musculoskeletal Disorders	272	DISORDERS OF LIPOID METABOLISM
Musculoskeletal Disorders	355	MONONEURITIS OF LOWER LIMB AND UNSPECIFIED SITE
Musculoskeletal Disorders	524	DENTOFACIAL ANOMALIES INCLUDING MALOCCLUSION
Musculoskeletal Disorders	713	ARTHRPATH W/OTH DISORDERS CLASSIFIED ELSEWHERE

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Disorder Category	ICD-9 Code*	ICD-9 Description
Musculoskeletal Disorders	715	OSTEOARTHROSIS AND ALLIED DISORDERS
Musculoskeletal Disorders	716	OTHER AND UNSPECIFIED ARTHROPATHIES
Musculoskeletal Disorders	717	INTERNAL DERANGEMENT OF KNEE
Musculoskeletal Disorders	718	OTHER DERANGEMENT OF JOINT
Musculoskeletal Disorders	719	OTHER AND UNSPECIFIED DISORDERS OF JOINT
Musculoskeletal Disorders	726	PERIPHERAL ENTHESOPATHIES AND ALLIED SYNDROMES
Musculoskeletal Disorders	727	OTHER DISORDERS OF SYNOVIUM TENDON AND BURSA
Musculoskeletal Disorders	728	DISORDERS OF MUSCLE LIGAMENT AND FASCIA
Musculoskeletal Disorders	731	OSTEITIS DEFORMANS & OSTEOPATHIES W/OTH D/O CE
Musculoskeletal Disorders	733	OTHER DISORDERS OF BONE AND CARTILAGE
Musculoskeletal Disorders	736	OTHER ACQUIRED DEFORMITIES OF LIMBS
Musculoskeletal Disorders	748	CONGENITAL ANOMALIES OF RESPIRATORY SYSTEM
Musculoskeletal Disorders	755	OTHER CONGENITAL ANOMALIES OF LIMBS
Musculoskeletal Disorders	756	OTHER CONGENITAL MUSCULOSKELETAL ANOMALIES
Musculoskeletal Disorders	781	SYMPTOMS INVLV NERVOUS&MUSCULOSKELETAL SYSTEMS
Musculoskeletal Disorders	830	DISLOCATION OF JAW
Musculoskeletal Disorders	831	DISLOCATION OF SHOULDER
Musculoskeletal Disorders	832	DISLOCATION OF ELBOW
Musculoskeletal Disorders	833	DISLOCATION OF WRIST
Musculoskeletal Disorders	834	DISLOCATION OF FINGER
Musculoskeletal Disorders	835	DISLOCATION OF HIP
Musculoskeletal Disorders	836	DISLOCATION OF KNEE
Musculoskeletal Disorders	837	DISLOCATION OF ANKLE
Musculoskeletal Disorders	838	DISLOCATION OF FOOT
Musculoskeletal Disorders	839	OTHER MULTIPLE AND ILL-DEFINED DISLOCATIONS
Musculoskeletal Disorders	840	SPRAINS AND STRAINS OF SHOULDER AND UPPER ARM
Musculoskeletal Disorders	841	SPRAINS AND STRAINS OF ELBOW AND FOREARM
Musculoskeletal Disorders	842	SPRAINS AND STRAINS OF WRIST AND HAND
Musculoskeletal Disorders	843	SPRAINS AND STRAINS OF HIP AND THIGH
Musculoskeletal Disorders	844	SPRAINS AND STRAINS OF KNEE AND LEG
Musculoskeletal Disorders	845	SPRAINS AND STRAINS OF ANKLE AND FOOT
Musculoskeletal Disorders	846	SPRAINS AND STRAINS OF SACROILIAC REGION
Musculoskeletal Disorders	847	SPRAINS&STRAINS OTHER&UNSPECIFIED PARTS BACK
Musculoskeletal Disorders	848	OTHER AND ILL-DEFINED SPRAINS AND STRAINS
Neuropathic Pain Disorders	053	HERPES ZOSTER
Neuropathic Pain Disorders	350	TRIGEMINAL NERVE DISORDERS
Neuropathic Pain Disorders	352	DISORDERS OF OTHER CRANIAL NERVES
Neuropathic Pain Disorders	353	NERVE ROOT AND PLEXUS DISORDERS
Neuropathic Pain Disorders	354	MONONEURITIS UPPER LIMB&MONONEURITIS MULTIPLEX
Neuropathic Pain Disorders	357	INFLAMMATORY AND TOXIC NEUROPATHY
Neuropathic Pain Disorders	443	OTHER PERIPHERAL VASCULAR DISEASE
Neuropathic Pain Disorders	952	SPINAL CORD INJURY W/O EVIDENCE SPINAL BN INJURY
Neuropathic Pain Disorders	953	INJURY TO NERVE ROOTS AND SPINAL PLEXUS
Neuropathic Pain Disorders	954	INJURY OTH NERVE TRUNK EXCLD SHLDR&PELV GIRDLS
Neuropathic Pain Disorders	955	INJURY PERIPH NERVE SHOULDER GIRDL&UPPER LIMB
Neuropathic Pain Disorders	956	INJURY PERIPHERAL NERVE PELVIC GIRDLE&LOWER LIMB
Neuropathic Pain Disorders	957	INJURY TO OTHER AND UNSPECIFIED NERVES
Neuropathic Pain Disorders	958	CERTAIN EARLY COMPLICATIONS OF TRAUMA
Neuropathic Pain Disorders	959	INJURY, OTHER AND UNSPECIFIED
Other Pain Syndromes	338	PAIN NOT ELSEWHERE CLASSIFIED
Rheumatoid Arthritis & Ankylosing spondylitis	714	RA AND OTHER INFLAMMATORY POLYARTHROPATHIES
Rheumatoid Arthritis & Ankylosing spondylitis	720	ANKYLOSING SPONDYLITIS&INFLAM SPONDYLOPATHIES
Soft Tissue Disorders	680	CARBUNCLE AND FURUNCLE
Soft Tissue Disorders	681	CELLULITIS AND ABSCESS OF FINGER AND TOE
Soft Tissue Disorders	682	OTHER CELLULITIS AND ABSCESS
Soft Tissue Disorders	684	IMPETIGO
Soft Tissue Disorders	685	PILONIDAL CYST
Soft Tissue Disorders	686	OTHER LOCAL INFECTION SKIN&SUBCUTANEOUS TISSUE
Soft Tissue Disorders	703	DISEASES OF NAIL

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Disorder Category	ICD-9 Code*	ICD-9 Description
Soft Tissue Disorders	707	CHRONIC ULCER OF SKIN
Soft Tissue Disorders	709	OTHER DISORDERS OF SKIN AND SUBCUTANEOUS TISSUE
Soft Tissue Disorders	710	DIFFUSE DISEASES OF CONNECTIVE TISSUE
Soft Tissue Disorders	725	POLYMYALGIA RHEUMATICA
Soft Tissue Disorders	729	OTHER DISORDERS OF SOFT TISSUES
Soft Tissue Disorders	782	SYMPTOMS INVOLVING SKIN&OTH INTEGUMENTARY TISSUE
Soft Tissue Disorders	870	OPEN WOUND OF OCULAR ADNEXA
Soft Tissue Disorders	872	OPEN WOUND OF EAR
Soft Tissue Disorders	873	OTHER OPEN WOUND OF HEAD
Soft Tissue Disorders	875	OPEN WOUND OF CHEST
Soft Tissue Disorders	876	OPEN WOUND OF BACK
Soft Tissue Disorders	877	OPEN WOUND OF BUTTOCK
Soft Tissue Disorders	878	OPEN WOUND GENITAL ORGANS INCL TRAUMATIC AMP
Soft Tissue Disorders	879	OPEN WOUND OTHER&UNSPECIFIED SITES EXCEPT LIMBS
Soft Tissue Disorders	880	OPEN WOUND OF SHOULDER AND UPPER ARM
Soft Tissue Disorders	881	OPEN WOUND OF ELBOW FOREARM AND WRIST
Soft Tissue Disorders	882	OPEN WOUND OF HAND EXCEPT FINGER ALONE
Soft Tissue Disorders	883	OPEN WOUND OF FINGER
Soft Tissue Disorders	884	MULTIPLE&UNSPECIFIED OPEN WOUND OF UPPER LIMB
Soft Tissue Disorders	890	OPEN WOUND OF HIP AND THIGH
Soft Tissue Disorders	891	OPEN WOUND OF KNEE, LEG , AND ANKLE
Soft Tissue Disorders	892	OPEN WOUND OF FOOT EXCEPT TOE ALONE
Soft Tissue Disorders	893	OPEN WOUND OF TOE
Soft Tissue Disorders	894	MULTIPLE&UNSPECIFIED OPEN WOUND OF LOWER LIMB
Soft Tissue Disorders	895	TRAUMATIC AMPUTATION OF TOE
Soft Tissue Disorders	910	SUPERFICIAL INJURY OF FACE NECK&SCALP EXCEPT EYE
Soft Tissue Disorders	911	SUPERFICIAL INJURY OF TRUNK
Soft Tissue Disorders	912	SUPERFICIAL INJURY OF SHOULDER AND UPPER ARM
Soft Tissue Disorders	913	SUPERFICIAL INJURY OF ELBOW FOREARM AND WRIST
Soft Tissue Disorders	914	SUPERFICIAL INJURY OF HAND EXCEPT FINGER ALONE
Soft Tissue Disorders	915	SUPERFICIAL INJURY OF FINGER
Soft Tissue Disorders	916	SUPERFICIAL INJURY OF HIP THIGH LEG AND ANKLE
Soft Tissue Disorders	917	SUPERFICIAL INJURY OF FOOT AND TOE
Soft Tissue Disorders	919	SUPERFICIAL INJURY OTHER MULTIPLE&UNSPEC SITES
Soft Tissue Disorders	920	CONTUSION OF FACE, SCALP, AND NECK EXCEPT EYE(S)
Soft Tissue Disorders	921	CONTUSION OF EYE AND ADNEXA
Soft Tissue Disorders	922	CONTUSION OF TRUNK
Soft Tissue Disorders	923	CONTUSION OF UPPER LIMB
Soft Tissue Disorders	924	CONTUSION LOWER LIMB&OF OTHER&UNSPECIFIED SITES
Soft Tissue Disorders	940	BURN CONFINED TO EYE AND ADNEXA
Soft Tissue Disorders	941	BURN OF FACE, HEAD, AND NECK
Soft Tissue Disorders	942	BURN OF TRUNK
Soft Tissue Disorders	943	BURN OF UPPER LIMB EXCEPT WRIST AND HAND
Soft Tissue Disorders	944	BURN OF WRIST AND HAND
Soft Tissue Disorders	945	BURN OF LOWER LIMB
Soft Tissue Disorders	946	BURNS OF MULTIPLE SPECIFIED SITES
Soft Tissue Disorders	947	BURN OF INTERNAL ORGANS
Soft Tissue Disorders	949	BURN, UNSPECIFIED SITE
Somatic Pain Disorders	306	PHYSIOLOGICAL MALFUNCTION ARISE FROM MENTAL FCT
Somatic Pain Disorders	307	SPECIAL SYMPTOMS OR SYNDROMES NEC
Spinal Disorders	336	OTHER DISEASES OF SPINAL CORD
Spinal Disorders	344	OTHER PARALYTIC SYNDROMES
Spinal Disorders	349	OTHER&UNSPECIFIED DISORDERS THE NERVOUS SYSTEM
Spinal Disorders	721	SPONDYLOSIS AND ALLIED DISORDERS
Spinal Disorders	722	INTERVERTEBRAL DISC DISORDERS
Spinal Disorders	723	OTHER DISORDERS OF CERVICAL REGION
Spinal Disorders	724	OTHER AND UNSPECIFIED DISORDERS OF BACK
Spinal Disorders	737	CURVATURE OF SPINE
Spinal Disorders	738	OTHER ACQUIRED MUSCULOSKELETAL DEFORMITY

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Disorder Category	ICD-9 Code*	ICD-9 Description
Spinal Disorders	739	NONALLOPATHIC LESIONS NOT ELSEWHERE CLASSIFIED
Spinal Disorders	742	OTHER CONGENITAL ANOMALIES OF NERVOUS SYSTEM
Spinal Disorders	754	CERTAIN CONGENITAL MUSCULOSKELETAL DEFORMITIES
Spinal Disorders	805	FX VERT COLUMN W/O MENTION SPINAL CORD INJURY
Spinal Disorders	806	FRACTURE VERTEBRAL COLUMN W/SPINAL CORD INJURY

*Includes all child codes

Table A3 – Non-Opioid Analgesics

Generic Drug Name	Type
AMITRIPTYLINE HCL	Other
BROMFENAC SODIUM	NSAID
CELECOXIB	NSAID
DICLOFENAC POTASSIUM	NSAID
DICLOFENAC SODIUM	NSAID
DIFLUNISAL	NSAID
DULOXETINE HCL	Other
ETODOLAC	NSAID
FENOPROFEN CALCIUM	NSAID
FLURBIPROFEN	NSAID
GABAPENTIN	Antiepileptic
IBUPROFEN	NSAID
INDOMETHACIN	NSAID
KETOPROFEN	NSAID
KETOROLAC TROMETHAMINE	NSAID
MECLOFENAMATE SODIUM	NSAID
MEFENAMIC ACID	NSAID
MELOXICAM	NSAID
NABUMETONE	NSAID
NAPROXEN	NSAID
NAPROXEN SODIUM	NSAID
OXAPROZIN	NSAID
PIROXICAM	NSAID
PREGABALIN	Antiepileptic
ROFECOXIB	NSAID
SALSALATE	NSAID
SULINDAC	NSAID
TOLMETIN SODIUM	NSAID
TRAMADOL HCL	Other
TRAMADOL HCL/ACETAMINOPHEN	Other
VALDECOXIB	NSAID

NSAID = Non-Steroidal Anti Inflammatory Drug

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Table A4 –Non-Study Opioid Analgesics

Generic Drug Name
ACETAMINOPHEN WITH CODEINE
ALFENTANIL HCL
ASPIRIN/CODEINE PHOSPHATE
BUPRENORPHINE
BUPRENORPHINE HCL*
BUTALBIT/ACETAMIN/CAFF/CODEINE
BUTORPHANOL TARTRATE
COD/ASA/SALICYLMD/ACETAMIN/CAF
CODEINE/BUTALBITAL/ASA/CAFFEIN
CODEINE/CARISOPRODOL/ASPIRIN
DHCODEINE BT/ACETAMINOPHN/CAFF
DIHYDROCODEINE/ASPIRIN/CAFFEIN
FENTANYL CITRATE
FENTANYL CITRATE-0.9 % NACL/PF
FENTANYL CITRATE/D5W/PF
FENTANYL CITRATE/DROPERIDOL
FENTANYL CITRATE/PF
FENTANYL/BUPIVACAINE/NS/PF
FENTANYL/ROPIVACAINE/NS/PF
HYDROCODONE BITARTRATE/ASPIRIN
HYDROCODONE/ACETAM/DIET.SUP.11
HYDROCODONE/ACETAMINOPHEN
HYDROCODONE/IBUPROFEN
HYDROMORPHONE HCL IN 0.9% NACL

Generic Drug Name
HYDROMORPHONE HCL IN D5W/PF
HYDROMORPHONE HCL/0.9% NACL/PF
HYDROMORPHONE HCL/PF
HYDROMORPHONE/BUPIV/0.9NACL/PF
IBUPROFEN/OXYCODONE HCL
LEVOMETHADYL ACETATE HCL
MEPERIDINE HCL IN 0.9 % NACL
MEPERIDINE HCL/PF
MEPERIDINE HCL/PROMETH HCL
METHADONE HCL IN 0.9 % NACL
MORPHINE IN NACL, ISO-OSM/PF
MORPHINE SULFATE IN 0.9 % NACL
MORPHINE SULFATE LIPOSOMAL/PF
MORPHINE SULFATE/0.9% NACL/PF
MORPHINE SULFATE/D5W
MORPHINE SULFATE/D5W/PF
MORPHINE SULFATE/NALTREXONE
MORPHINE SULFATE/PF
NALBUPHINE HCL
OPIUM/ASPIRIN/CAFFEINE
OPIUM/ASPIRIN/CAFFEINE/CAMPHOR
OPIUM/BELLADONNA ALKALOIDS
OXYCODONE HCL/ACETAMINOPHEN
OXYCODONE HCL/ASPIRIN

Generic Drug Name
OXYCODONE HCL/OXYCODON TER/ASA
OXYCODONE/ASPIRIN
PENTAZOCINE HCL/ACETAMINOPHEN
PENTAZOCINE HCL/ASPIRIN
PENTAZOCINE HCL/NALOXONE HCL
PENTAZOCINE LACTATE
PROPOXYPHENE HCL
PROPOXYPHENE HCL/ACETAMINOPHEN
PROPOXYPHENE NAP/ACETAMINOPHEN
PROPOXYPHENE NAPSYLATE
PROPOXYPHENE/ASPIRIN/CAFFEINE
REMIFENTANIL HCL
REMIFENTANIL IN 0.9 % NACL/PF
SUFENTANIL CITRATE
SUFENTANIL CITRATE/PF
SUFENTANIL/BUPIVACAINE/NS/PF
TAPENTADOL HCL

*Buprenorphine HCL sublingual tablets are excluded

Table A5 – Other Diagnosis Codes

Disorder Category	ICD-9 Code*	ICD-9 Description
Cancer	140	MALIGNANT NEOPLASM OF LIP
Cancer	141	MALIGNANT NEOPLASM OF TONGUE
Cancer	142	MALIGNANT NEOPLASM OF MAJOR SALIVARY GLANDS
Cancer	143	MALIGNANT NEOPLASM OF GUM
Cancer	144	MALIGNANT NEOPLASM OF FLOOR OF MOUTH
Cancer	145	MALIGNANT NEOPLASM OTHER&UNSPECIFIED PARTS MOUTH
Cancer	146	MALIGNANT NEOPLASM OF OROPHARYNX
Cancer	147	MALIGNANT NEOPLASM OF NASOPHARYNX
Cancer	148	MALIGNANT NEOPLASM OF HYPOPHARYNX
Cancer	149	MAL NEOPLASM-OTH SITES-LIP-ORAL CAVITY-PHARYNX
Cancer	150	MALIGNANT NEOPLASM OF ESOPHAGUS
Cancer	151	MALIGNANT NEOPLASM OF STOMACH
Cancer	152	MALIG NEOPLASM SMALL INTESTINE INCL DUODENUM
Cancer	153	MALIGNANT NEOPLASM OF COLON
Cancer	154	MALIG NEOPLASM RECTUM RECTOSIGMOID JUNCTION&ANUS
Cancer	155	MALIGNANT NEOPLASM OF LIVER AND INTRAHEPATIC BDS
Cancer	156	MALIGNANT NEOPLASM GALLBLADDER&EXTRAHEPATIC BDS
Cancer	157	MALIGNANT NEOPLASM OF PANCREAS
Cancer	158	MALIGNANT NEOPLASM OF RETROPERITONEUM&PERITONEUM
Cancer	159	MALIG NEO DIGES ORGANS&PANCREAS-OTH SITES
Cancer	160	MALIG NEOPLSM NASL CAVITIES MID EAR&ACSS SINUSES
Cancer	161	MALIGNANT NEOPLASM OF LARYNX
Cancer	162	MALIGNANT NEOPLASM OF TRACHEA BRONCHUS AND LUNG
Cancer	163	MALIGNANT NEOPLASM OF PLEURA
Cancer	164	MALIGNANT NEOPLASM OF THYMUS HEART&MEDIASTINUM
Cancer	165	MAL NEO-OTH ILL-DEF RESP SYS-INTRATHORACIC
Cancer	170	MALIGNANT NEOPLASM OF BONE&ARTICULAR CARTILAGE

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Disorder Category	ICD-9 Code*	ICD-9 Description
Cancer	171	MALIGNANT NEOPLASM CONNECTIVE&OTHER SOFT TISSUE
Cancer	172	MALIGNANT MELANOMA OF SKIN
Cancer	173	OTHER MALIGNANT NEOPLASM OF SKIN
Cancer	174	MALIGNANT NEOPLASM OF FEMALE BREAST
Cancer	175	MALIGNANT NEOPLASM OF MALE BREAST
Cancer	176	KAPOSIS SARCOMA
Cancer	179	MALIGNANT NEOPLASM OF UTERUS, PART UNSPECIFIED
Cancer	180	MALIGNANT NEOPLASM OF CERVIX UTERI
Cancer	181	MALIGNANT NEOPLASM OF PLACENTA
Cancer	182	MALIGNANT NEOPLASM OF BODY OF UTERUS
Cancer	183	MALIGNANT NEOPLASM OF OVARY&OTHER UTERINE ADNEXA
Cancer	184	MALIG NEOPLASM OTH&UNSPEC FEMALE GENITAL ORGANS
Cancer	185	MALIGNANT NEOPLASM OF PROSTATE
Cancer	186	MALIGNANT NEOPLASM OF TESTIS
Cancer	187	MALIG NEOPLASM PENIS&OTHER MALE GENITAL ORGANS
Cancer	188	MALIGNANT NEOPLASM OF BLADDER
Cancer	189	MALIG NEOPLASM KIDNEY&OTH&UNSPEC URINARY ORGANS
Cancer	190	MALIGNANT NEOPLASM OF EYE
Cancer	191	MALIGNANT NEOPLASM OF BRAIN
Cancer	192	MALIG NEOPLASM OTHER&UNSPEC PARTS NERVOUS SYSTEM
Cancer	193	MALIGNANT NEOPLASM OF THYROID GLAND
Cancer	194	MALIG NEOPLASM OTH ENDOCRN GLANDS&RELATED STRCT
Cancer	195	MALIGNANT NEOPLASM OF OTHER&ILL-DEFINED SITES
Cancer	196	SEC&UNSPECIFIED MALIGNANT NEOPLASM LYMPH NODES
Cancer	197	SEC MALIG NEOPLASM RESPIRATORY&DIGESTIVE SYSTEMS
Cancer	198	SEC MALIGNANT NEOPLASM OF OTHER SPECIFIED SITES
Cancer	199	MALIGNANT NEOPLASM WITHOUT SPECIFICATION OF SITE
Cancer	200	LYMPH & RETICSRC & OTH SPEC LYMPH MALIG TUMORS
Cancer	201	HODGKINS DISEASE
Cancer	202	OTH MALIG NEOPLASMS LYMPHOID&HISTIOCYTIC TISSUE
Cancer	203	MULTIPLE MYELOMA&IMMUNOPROLIFERATIVE NEOPLASMS
Cancer	204	LYMPHOID LEUKEMIA
Cancer	205	MYELOID LEUKEMIA
Cancer	206	MONOCYTIC LEUKEMIA
Cancer	207	OTHER SPECIFIED LEUKEMIA
Cancer	208	LEUKEMIA OF UNSPECIFIED CELL TYPE
Cancer	209	NEUROENDOCRINE TUMORS
Cancer	2090	MALIGNANT CARCINOID TUMORS OF SMALL INTESTINE
Cancer	2091	MALIG CARCINOID TUMORS APPENDIX LG INTEST RECTUM
Cancer	2092	MALIGNANT CARCINOID TUMORS OF OTHER & UNS SITES
Cancer	2093	MALIG POORLY DIFFERENTIATED NEUROENDOCRIN TUMORS
Cancer	2097	SECONDARY NEUROENDOCRINE TUMORS
Cancer	3383	NEOPLASM RELATED PAIN (ACUTE) (CHRONIC)

*Includes all child codes

Table A6 – Health Outcome Codes

Description	Codes
Hospitalizations	Claim Type = I
ED Visits	Procedure Codes 99281-99285, 99288 OR Revenue Center Codes 0450-0459 or 0981
Outpatient methadone administration	CPT Code H0020
Buprenorphine opioid dependence therapy	BUPRENORPHINE HCL TAB SUBL BUPRENORPHINE HCL/NALOXONE HCL FILM BUPRENORPHINE HCL/NALOXONE HCL TAB SUBL
Opioid Overdose	ICD9 Codes 9650, 96500, 96501, 96502, 96509, E8500, E8501, E8502, E9500
Outpatient Visits	CPT Codes 90000, 90010, 90015, 90017, 90020, 90030, 90040, 90050, 90060, 90070, 90080, 90804, 90805, 90806, 90807, 90808, 90809, 90810, 90812, 90814, 97700, 97701, 99056, 99058, 99060, 99201, 99202, 99203, 99204, 99205, 99211, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245, 99354, 99355, D9430, D9440, FPS18, M0005, M0007, M0008, M0009, Q0044, TAS01, TAS02, TAS03, TAS04