Buprenorphine utilization and member characteristics — an integrated pharmacy and medical claims analysis

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Background

- The U.S. annual estimated cost of substance abuse is more than $600 billion and behavioral health disorders are expected to become a leading cause of disability by 2020.[1]
- In October 2000, treatment of opioid dependence was transformed, by Congressional approval of the Drug Addiction Treatment Act (DATA 2000), to allow qualified physicians to prescribe and/or dispense approved Schedule III-V medications for the treatment of opioid dependence. Previously, this type of treatment was available only in federally approved Opioid Treatment Programs (methadone clinics).
- Buprenorphine/naloxone (Suboxone) and buprenorphine (Subutex) were the first narcotic drugs available under DATA 2000 for treatment of opiate dependence that can be prescribed in a doctor's office.
- During 2012 and 2013 within one Southern Blue Cross and Blue Shield Plan's commercially insured members, buprenorphine alone and buprenorphine/naloxone combination products accounted for 74,882 claims, $25,073,417 in total paid of which $21,760,469 (87%) was plan paid.[2]
- Buprenorphine programs aimed at stopping concomitant opioid use have been implemented and measured in one pharmacy benefit manager (Aetna). The program outcomes demonstrated a 35.5 percent decrease in inpatient admissions and a 40.5 percent decrease in medical costs ($18,050 compared to $13,033 per member, p=0.003). Furthermore, opioid abstinence increased from 49 percent in June 2010 (program inception) to 85.7 percent in July 2013.[3]
- Although, research has shown that opioid dependence medication assisted treatment with products like buprenorphine in combination with behavioral health are effective, understanding buprenorphine utilization patterns can assist plans in identifying areas for clinical program development.

Objective

Among commercial buprenorphine users, evaluate utilization patterns and duration, medical diagnoses and concomitant opioid use to help guide clinical program development.

Methods

- We queried administrative pharmacy claims data for a commercial Blue Cross and Blue Shield Plan in the South to find members utilizing a buprenorphine containing product at any time during 2012 through 2013.
- The term "buprenorphine" is used to describe both buprenorphine alone and buprenorphine/naloxone combination products.
- Buprenorphine products were limited to those used for treatment of opioid dependence. Therefore, claims for the following products were excluded from this analysis:
  - Buprenorphine injection product (Buprenex) representing <0.01 percent of all buprenorphine claims from 2012 to 2013.
  - Buprenorphine transdermal (Butrans) which represented <10 percent of buprenorphine claims.
  - Buprenorphine/naloxone sublingual tablet (Zubsolv) was also not included in the analysis because it represented only nine claims in 4Q2013 and $3,792 total paid.
- Members were not required to be continuously enrolled; however we assessed number of eligible months for each member.
- An index buprenorphine date was identified for each member and defined as their first claim at any time from Jan. 1, 2012 through Dec. 31, 2013.
- We did not query the data for buprenorphine claims prior to Jan. 1, 2012; therefore members identified early in the analysis period (i.e., Jan. 1, 2012 to March 31, 2012), may or may not have been new to buprenorphine therapy.
- For all identified members we queried pharmacy claims for the following variables:
  1. Duration of buprenorphine therapy (defined as number of days between index date and end date [last claim + days supply prior to a 120-consecutive day gap or censor at Dec. 31, 2013])
  2. Count of all buprenorphine claims within their therapy window
  3. Count of unique prescribers and pharmacies for buprenorphine claims
  4. Buprenorphine total paid, member paid and plan paid
  5. Presence of an opioid claim found within 180 days prior to index buprenorphine claim
  6. Presence of an opioid supply on the buprenorphine index date, or within the buprenorphine treatment window (index date through end date),
  7. Date of the first opioid claim
  8. Average days supply and quantity dispensed for opioids
  9. Number of opioid claims found within the buprenorphine treatment window (index date through end date)
  10. Opioid expenditures (total, member and plan paid)
- We queried medical claims from 2012 through 2013 and describe the distribution of members with presence of one or more of the following diagnoses in any field: cancer, low back pain, joint pain, abdominal pain, neck pain, headache, arthritis, anxiety disorders, depression, fibromyalgia, opioid dependence or abuse, non-opioid dependence or abuse, bipolar disorder, hepatitis C, schizophrenia, alcohol related psychiatric disorder, or neurologic related pain.
- We also queried medical claims for a procedure code for Vivitrol (naltrexone) J2315; there were two members of the 5,564 with a claim for Vivitrol in two years.
- Separate analyses focused on all buprenorphine prescribers among analyzable members with an index buprenorphine claim during 2012 through 2013. We describe the prescribers' specialty along with the number of unique buprenorphine members and total paid for their buprenorphine claims. Possible outlier buprenorphine prescribers are identified.

Results

- There were 5,564 members identified with one or more buprenorphine claim between Jan. 1, 2012 and Dec. 31, 2013.
- Approximately 158 members or 11 per 100,000, initiated buprenorphine on a monthly basis from February 2012 through December 2013.
- Total paid per member, per month (PMPM) for buprenorphine products increased almost 30 percent from 1Q2012 to 4Q2013, $0.63 in 1Q2012 to $0.82 in 4Q2013.
- Suboxone 8-2mg film comprised 78.4 percent of the total paid for all buprenorphine products in 2012 through 2013.
- Average length of buprenorphine therapy was approximately nine months based on the median number of claims of nine and average duration of therapy of 295 days (9.8 months).
- Buprenorphine only (Subutex) utilization
  - Buprenorphine only represented 2,388 (3.2%) of the 74,882 claims and $430,376 (1.7%) of total paid from 2012 to 2013.
  - There were 136 (2.4%) members whose only claims found were for the buprenorphine only tablet (no naloxone). Of these, 67 (49.3%) also had a diagnosis of opioid abuse in their medical claims history.
  - These members may be using buprenorphine for pain because of their opioid abuse history; however 41 of the 136 members also had concomitant opioid therapy during their buprenorphine treatment.
- Slightly more than one in four members (1,570 [28.2%]) had an opioid claim during their buprenorphine treatment window.
  - 724 (13.0%) members had two or more opioid claims during their buprenorphine treatment.
  - 257 (4.6%) had more than 60 days of opioid supply during their buprenorphine treatment.
- There were 2,312 (41.6%) buprenorphine utilizing members from 2012 to 2013 who did not have an International Classification of Diseases (ICD9) code for opioid dependence in their medical claims during the two year time period.
- 825 (14.8%) of members used three or more different prescribers to obtain their buprenorphine, however we are unable to discern whether or not additional prescribers are a part of the same practice.
- Ten unique prescribers accounted for 30 percent of the buprenorphine total paid amount.

Limitations

- Administrative medical and pharmacy claims have the potential for miscoding and include assumptions of members' actual medication use and diagnoses; therefore the data may represent information that is false-positive or false-negative.
- These results are limited to one commercial plan in the South and may not be generalizable to other regions or health care plans.
- Members may have paid cash for other opioid claims; therefore our counts of opioid claims among buprenorphine utilizers could be underestimating actual use.

Conclusions

- Successful opioid dependence treatment is important for insurers. Understanding buprenorphine utilization patterns can assists plans in identifying areas for clinical program development.
- It is important to understand that any program aimed at ensuring appropriate opioid abuse treatment would require dedicated personnel and additional financial resources.
- In this plan, focus will be aimed at limiting concomitant opioid use to only appropriate situations and increasing consistency of treatment through a limited prescriber network.
- Consideration will be made to providing more intense care management throughout buprenorphine therapy to help ensure treatment success.

Table 1. Member characteristics for buprenorphine utilizers

Description	Members n = 5,564
Median months with Blue Plan insurance	21
Male	68.7%
Average age	35
Median buprenorphine containing product claims per member	9
Median days of buprenorphine therapy	211

Table 2. Opioid utilization found during buprenorphine treatment window

Description	Members n = 5,564
Members with opioid claim on index or during buprenorphine therapy	1,570
Percent with opioid claim on index or during buprenorphine therapy	28.2%
Median quantity	36
Median days supply	8
Members with 60-day cumulative supply or more of opioid	257
Percent of Members with 60-day cumulative supply or more of opioid	4.6%

Table 3. Medical diagnoses (ICD9 Codes) found any time during 2012 through 2013 among buprenorphine utilizers

Diagnosis*	Members with ICD9 Code n = 5,564
Opioid dependence or abuse	3,252 (58.4%)
Low back pain	2,230 (40.1%)
Non-opioid dependence or abuse	2,136 (38.4%)
Joint pain	1,543 (27.7%)
Anxiety disorders	1,499 (26.9%)
Depression	1,106 (19.9%)
Abdominal pain	1,087 (19.5%)
Headache	1,035 (18.6%)
Neck pain	792 (14.2%)
Arthritis	699 (12.6%)
Fibromyalgia	615 (11.1%)
Neurologic related pain	392 (7.0%)
Alcohol related psychiatric disorder	238 (4.3%)
Bipolar disorder	186 (3.3%)
Hepatitis C	143 (2.6%)
Cancer	49 (0.9%)
Schizophrenia	11 (0.2%)

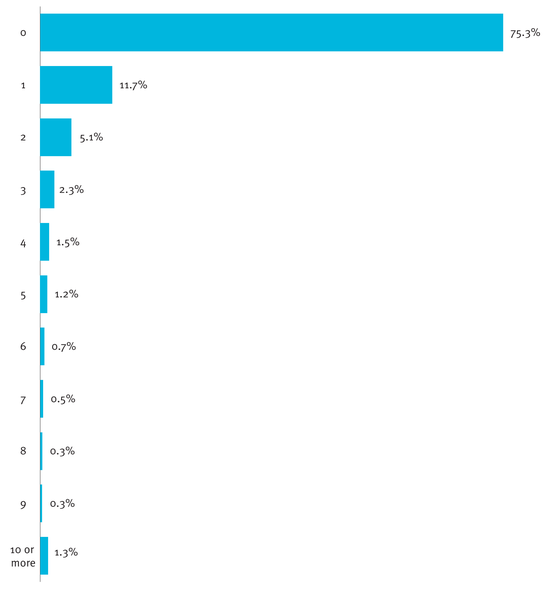
ICD9 = International classification of diseases — ninth revision
*Not mutually exclusive. Members may be in more than one category.

Table 4. Top ten buprenorphine prescribers by total paid amount

Provider discipline description	Members	Weighted claims	Claims per members	Buprenorphine total paid	Percent of total paid	Cumulative percent total paid
Prescriber 1 – Family medicine, addiction medicine	331	2,581	7.8	$1,047,779	4.2%	4.2%
Prescriber 2 – Family medicine	360	2,285	6.3	$960,698	3.8%	8.0%
Prescriber 3 – Psychiatry and neurology	222	2,945	13.3	$956,847	3.8%	11.9%
Prescriber 4 – General practice	150	1,909	12.7	$759,838	3.0%	14.9%
Prescriber 5 – Family medicine, addiction medicine	284	3,542	12.5	$730,623	2.9%	17.8%
Prescriber 6 – Internal medicine	104	1,235	11.9	$707,426	2.8%	20.7%
Prescriber 7 – General practice, addiction medicine	117	2,046	17.5	$627,519	2.5%	23.2%
Prescriber 8 – Internal medicine	143	1,655	11.6	$600,885	2.4%	25.6%
Prescriber 9 – Family medicine	193	1,602	8.3	$492,690	2.0%	27.6%
Prescriber 10 – Neuromusculoskeletal medicine	111	1,155	10.4	$464,716	1.9%	29.4%

*All providers listed above found as registered on either buprenorphine.com or http://buprenorphine.samhsa.gov/bwns_locator/
Weighted claims = claim count normalized to 30-day supply, e.g. a 90-day supply claim would count as three claims.

Figure 1. Count of opioid claims found during buprenorphine treatment window



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