DEVELOPING ALGORITHMS FOR IDENTIFYING BENEFICIARIES WITH HIGHER THAN EXPECTED UTILIZATION OF OPIOIDS ANALGESICS

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BACKGROUND

- Opioids are those medications which act as pain relievers and include: hydrocodones, oxycodones, morphines, codeines, and related drugs.
- Currently, more than 3% of adults are using long-term opioid therapy for chronic non-cancerous pain.
- During the years 1999-2007, almost 124% increase in unintentional overdose deaths in United States was observed due to the increase in the prescription opioid overdoses.
- Drug related adverse events have also been found to be higher in people consuming opioids at doses equal to 50 mg/d or more morphine.
- Study result also suggest that patients consuming 100 mg/d or more opioids dose have 8.9 times more overdose risk than those consuming just 1-20 mg/d of opioids.

OBJECTIVES

Considerable attention is given to managing opioid use in order to avoid addiction and possible diversion problems. A Pharmacy Quality Alliance (PQA) workgroup has been working on a pharmacy quality measure where morphine equivalent dosing would be used to identify potential problem cases. The objective of this study was to evaluate the PQA criteria for this potential measure in the Mississippi Medicaid population.

METHODS

- A retrospective study was done using Mississippi Medicaid claims data for 2013
- Beneficiaries were included if enrolled the entire year, had 1+ prescription for an opioid in the Center for Disease Control Morphine Milligram Equivalent Table, were age 19+, they did not have any claims with diagnoses of sickle cell anaemia or cancer, and were not dual eligible or in long term care
- Morphine Equivalent Dose (MED) values were calculated for all prescriptions. MED values were calculated using the following formula: (Submitted Quantity * Strength * MME Conversion Factor)/ Days Supply
- Cut-off values of 120mg and 100mg MED were examined with sensitivity analysis for number of days at or above the cut-off
- Distinct providers and pharmacies were identified using their national provider identifier numbers

PQA MEASURES

- Measure 1 (Opioid High Dosage): The percentage of individuals without cancer receiving a daily dosage of opioids greater than 120mg morphine equivalent dose (MED) for 90 days or longer
- Measure 2 (Multiple Prescribers and Multiple Pharmacies): The percentage of individuals without cancer receiving prescriptions for opioids from four (4) or more prescribers AND four (4) or more pharmacies
- Measure 3 (Multi-Provider, High Dosage): The percentage of individuals without cancer receiving prescriptions for opioids greater than 120mg morphine equivalent dose (MED) for 90 days or longer, who received opioid prescriptions from four (4) or more prescribers AND four (4) or more pharmacies

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TABLE 1. Frequency of beneficiaries with opioid dose overutilization

	60 Consecutive Days	30 Consecutive Days
MED>120	760 (1.37%)	1242 (2.24%)
MED>100	957 (1.72%)	1503 (2.70%)

TABLE 2. Frequency of beneficiaries having MED greater than 120/100 for the following number of days

	0 Days	1-10 Days	11-20 Days	21-30 Days	31+ Days
MED>120	53087 (95.7%)	890 (1.6%)	157 (0.28)	348 (0.62%)	987 (1.77%)
MED>100	52027 (93.87)	1656 (2.98%)	157 (0.28%)	390 (0.70%)	1194 (2.15)

TABLE 3. Frequency of beneficiaries having MED greater than 100 for 30 consecutive days using the following number of pharmacies and prescribers

	Number of Pharmacies						
Number of Prescribers	**4**	**5**	**6**	**7**	**8**	**9**	**10**
4	17 (12.50)	11 (8.09)	8 (5.88)	2 (1.47)	0	0	0
5	17 (12.50)	9 (6.62)	3 (2.21)	2 (1.47)	2 (1.47)	0	0
6	12 (8.82)	6 (4.41)	5 (3.68)	2 (1.47)	1 (.74)	0	1 (.74)
7	4 (2.94)	5 (3.68)	4 (2.94)	1 (.74)	0	0	0
8	0	3 (2.21)	4 (2.94)	2 (1.47)	0	0	0
9	4 (2.94)	0	0	1 (.74)	0	0	0
10	0	0	2 (1.47)	0	1 (.74)	1 (.74)	0
11	1 (.74)	1 (.74)	1 (.74)	0	1 (.74)	0	0
12	0	0	1 (.74)	0	0	0	0
13	0	0	1 (.74)	0	0	0	0

TABLE 4. Frequency of beneficiaries having MED greater than 100 for 60 consecutive days using the following number of prescribers and pharmacies

	Number of Pharmacies					
Number of Prescribers	**4**	**5**	**6**	**7**	**8**	**10**
4	12 (919.5)	8 (12.70)	3 (4.76)	0	0	0
5	5 (7.94)	5 (7.94)	0	1 (1.59)	2 (3.17)	0
6	4 (6.35)	2 (3.17)	2 (3.17)	0	0	1 (.59)
7	3 (4.76)	3 (4.76)	3 (4.76)	0	0	0
8	0	1 (1.59)	3 (4.76)	1 (1.59)	0	0
10	0	0	2 (3.17)	0	0	0
11	1 (1.59)	0	0	0	0	0
12	0	0	1 (1.59)	0	0	0

TABLE 5. Frequency of beneficiaries having MED greater than 120 for 30 consecutive days using the following number of prescribers and pharmacies

	Number of Pharmacies					
Number of Prescribers	4	5	6	7	8	10
4	14 (12.50)	8 (7.14)	6 (5.36)	2 (1.79)	0	0
5	14 (12.50)	8 (7.14)	3 (2.68)	2 (1.79)	2 (1.79)	0
6	8 (7.14)	5 (4.46)	5 (4.46)	0	1 (0.89)	1 (0.89)
7	4 (3.57)	5 (4.46)	3 (2.68)	1 (0.89)	0	0
8	0	3 (2.68)	4 (3.57)	2 (1.79)	0	0
9	4 (3.57)	0	0	1 (0.89)	0	0
10	0	0	2 (1.79)	0	0	0
11	1 (0.89)	1 (0.89)	0	0	1 (0.89)	0

TABLE 6. Frequency of beneficiaries having MED greater than 120 for 60 consecutive days using the following number of prescribers and pharmacies

	Number of Pharmacies		
Number of Prescribers	**4**	**5**	**6**
4	8 (1.05)	3 (0.39)	1 (0.13)
5	2 (.26)	1 (0.13)	0
7	3 (0.39)	3 (0.39)	0
9	1 (0.13)	0	0

RESULTS

- 1.37% and 2.24% of the beneficiaries received prescriptions for opioids >120mg MED for ≥60 and 30+ consecutive days.
- 1.72% and 2.70% of the beneficiaries were found to receive prescriptions of opioids >100mg MED for 60+ and 30+ consecutive days.
- Approximately, 1.77% of beneficiaries having an opioid prescription claim are consuming an MED greater than 120mg for more than 31 days indicating issues with their opioid consumption pattern.
- 12.5% of beneficiaries having >100mg MED for 30+ consecutive days were doctor shopping (using 4+ pharmacies and 4+ prescribers)

CONCLUSION / RECOMMENDATIONS

- Combining doctor shopping with high MED can be used to identify potential abusers for intervention.
- A list of these opioid over utilizers was submitted to the Medicaid Program Integrity Bureau for evaluation for the lock-in program.
- A provider education program was initiated where prescribers are notified of patients with high MED use and doctor/pharmacy shopping.

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