IMPLEMENTING AND INTERPRETING A PROPOSED NEW MEASURE FOR HEDIS® 2020: PHARMACOTHERAPY FOR OPIOID USE DISORDER

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Background

- Opioid use disorder (OUD) is a serious and growing epidemic in the United States, associated with a range of mental and general comorbid disorders and increased mortality[1,2]
- First-line treatment for patients with OUD is medication-assisted treatment (MAT), consisting of behavioral therapy and one of three pharmacotherapy options: methadone, naltrexone or buprenorphine[3]
  - Pharmacotherapy improves outcomes and prevents relapse and overdose, yet is underutilized in OUD treatment[4]
- To address the gap in pharmacotherapy care, the National Committee for Quality Assurance proposed a measure for the Healthcare Effectiveness Data and Information Set (HEDIS®) to assess treatment adherence: by identifying patients with new episodes of OUD pharmacotherapy episodes that resulted in 180 or more covered treatment days[5]

Objective

- To implement and interpret the HEDIS 2020 "Pharmacotherapy for Opioid Use Disorder" measure using real-world observational claims data in order to assess new OUD pharmacotherapy episodes and treatment adherence

Methods

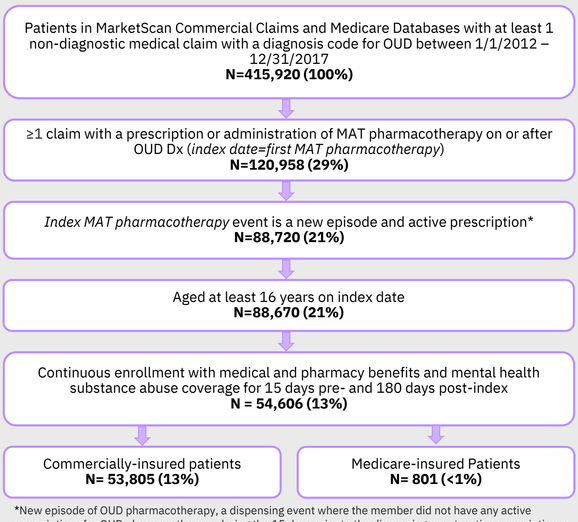
Study Design and Data Source

- This study employed an observational cohort design within the IBM® MarketScan® Commercial Claims and Encounters and Medicare Supplemental Databases
- The MarketScan® data was accessed using Treatment Pathways 4.0, an online analytic platform, to identify patients with OUD who newly initiated on pharmacotherapy, with no evidence of pharmacotherapy during the 15 days prior to the first MAT prescription, with an allowable treatment gap of up to 7 days

Outcomes

- Primary outcomes were the proportion of patients with a minimum of 180 days of continuous treatment (with an allowable gap of up to 7 days) during a 365-day period, the number of days of exposure in new pharmacotherapy treatment episodes, and medication possession ratio (MPR) for new treatment episodes, separately for commercially-insured and Medicare-insured patients

Figure 1. Patient Selection



*New episode of OUD pharmacotherapy, a dispensing event where the member did not have any active prescriptions for OUD pharmacotherapy during the 15 days prior to the dispensing event; active prescription, a prescription is considered active if the days' supply indicated on the date when the member filled the prescription is the number of days or more between that date and the relevant service date

Results

- Among the 54,606 patients with OUD who initiated MAT pharmacotherapy and met all study criteria, 53,805 (98.5%) were commercially-insured and 801 (1.5%) insured by Medicare (*Figure 1*)
- Patients' mean age was 33 years [SD=12] and 66 years [7] among Commercial and Medicare patients, respectively, and a majority in both groups were male (*Table 1*)
- Among commercially-insured patients, most patients (40%) resided in the South, whereas most Medicare-insured patients (43%) resided in the North Central region (*Table 1*)
- Among all patients who met the study criteria, the mean duration of the index treatment episode was 140 days [SD=223] for Commercial enrollees and 122 days [199] for Medicare enrollees, with a median of 53 days and 37 days, respectively (*Table 2*)

Table 1. Demographic Characteristics[1]

	Commercial N=53,805	Medicare N=801
Age, years (Mean, SD)	33 (12)	66 (7)
Median	30	66
Minimum	16	22
Maximum	64	92
Sex, N (%)		
Male	34,161 (63%)	475 (59%)
Female	19,644 (37%)	326 (41%)
Heath plan type, N (%)		
Comprehensive	1,986 (4%)	433 (54%)
EPO/PPO	33,380 (62%)	267 (33%)
HMO	5,355 (10%)	59 (7%)
POS/POS with capitation	4,282 (8%)	35 (4%)
CDHP/HDHP	6,859 (13%)	6 (1%)
Unknown	1,943 (3%)	1 (<1%)
Geographic region, N (%)		
Northeast	13,686 (25%)	171 (21%)
North Central	10,919 (20%)	345 (43%)
South	21,327 (40%)	190 (24%)
West	7,682 (14%)	94 (12%)
Unknown	191 (<1%)	1 (<1%)

[1]As of index date; CDHP/HDHP, consumer-directed health plan/high-deductible health plan; EPO/PPO, exclusive/preferred provider organizations; HMO, health maintenance organization; POS, point of service; SD, standard deviation

Table 2. Duration of Treatment Exposure among All Patients*

	Commercial N=53,805	Medicare N=801
Treatment Exposure Length, Days (Mean, SD)	140 (223)	122 (199)
Median	53	37
Minimum	1	1
Maximum	2,402	1,703

*Among all study patients with a minimum index treatment length of 1 day

Table 3. Medication Possession Ratio among All Patients*

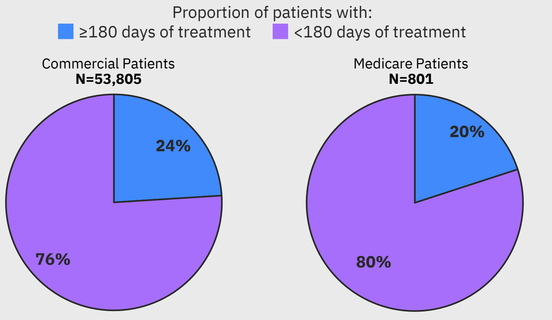
	Commercial N=53,805	Medicare N=801
Medication Possession Ratio (MPR) (Mean, SD)	0.45 (0.38)	0.41 (0.37)
Median	0.31	0.21
Minimum	0.00	0.00
Maximum	1.00	1.00

*Among all study patients with a minimum index treatment length of 1 day; MPR is defined as sum of all days' supply and duration of clinical benefit for MAT pharmacotherapy, divided by 180 days of possible treatment

Results, Cont.

- According to the HEDIS definition, the proportion of patients with an index treatment-adherent episode during the 365 days post-index was 24% (N=12,768) for commercially-insured patients and 20% (N=164) for Medicare-insured patients (*Figure 2*)
- Among index treatment-adherent episodes that satisfied the HEDIS® definition, the mean length of the episodes was approximately 420 days and median approximately 320 days, with a mean MPR of 0.98 [SD=0.09], for both commercially- and Medicare-insured patients (*Table 4*)

Figure 2. Treatment Adherence by HEDIS Definition*



*Defined by having continuous pharmacotherapy treatment beginning on index pharmacotherapy date through 179 days after index date, allowing for a maximum gap in medication treatment of 7 days

Table 4. Duration of Treatment Exposure among Treatment-Adherent Patients*

	Commercial N=12,768	Medicare N=164
Treatment Exposure Length, Days (Mean, SD)	429 (298)	417 (271)
Median	330	317
Minimum	180	182
Maximum	2,382	1,693

*Among treatment-adherent patients with a minimum index treatment length of 180 day; variable length follow-up ending at earliest of end of index treatment episode, continuous enrollment, or available data (07/31/2018)

Table 5. Medication Possession Ratio (MPR) among Treatment-Adherent Patients*

	Commercial N=12,768	Medicare N=164
MPR (Mean, SD)	0.98 (0.09)	0.98 (0.09)
Median	1.00	1.00
Minimum	0.14	0.15
Maximum	1.00	1.00

*Among treatment-adherent patients with a minimum index treatment length of 180 day; MPR is defined as sum of all days' supply and duration of clinical benefit for MAT pharmacotherapy, divided by elapsed days in variable length follow-up ending at earliest of end of index treatment episode, continuous enrollment, or available data (07/31/2018)

Limitations

This analysis has conventional limitations of claims-based analyses:

- This study was based on OUD patients with commercial or Medicare health coverage, and results may not be generalizable to OUD patients with other types of insurance or without health insurance coverage
- MAT use based on pharmacy claims indicated that a drug was filled but does not confirm that patients took the medication as directed
- Diagnoses on claims may be mis-coded, thereby potentially underestimating the size of the patient population

Conclusions

- This study's estimated proportions of patients who met the HEDIS® criteria for pharmacotherapy treatment adherence of 24% for commercially-insured patients and 20% for Medicare-insured patients are in line with the HEDIS® field-testing estimates of 23% and 25% for commercial and Medicare enrollees, respectively[5]
- This study confirms the feasibility of implementing the HEDIS® measure using real-world data and illustrates major gaps in the OUD treatment continuum, as demonstrated by the low proportions of patients who are treatment-adherent, as well as the low MPRs among OUD patients initiating MAT pharmacotherapy

References

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Disclosure

Allison Perry, Vicki Wing, and Janna Manjelievskaia are employees of IBM Watson Health. This study was funded by IBM Watson Health.