December 22, 2015

TO: National Quality Forum

FROM: RAND Health

SUBJECT: Request for Ad Hoc Review of NQF 0004 (Initiation and Engagement of Alcohol and Other Drug Dependence Treatment) **Part 2 of 2**

Overview

This memo requests an ad hoc review of NQF 0004 (Initiation and Engagement of Alcohol and Other Drug Dependence Treatment). NQF 0004 is a two-part measure that consists of the proportion of patients with an initial diagnosis of alcohol or other drug dependence that receive (1) treatment within 14 days of the initial diagnosis, and (2) follow-up treatment within 30 days thereafter. In this memo, we present evidence that the current definition of "treatment" is incomplete, as it only includes psychosocial interventions, but not medication-assisted treatment (MAT). In other words, patients who receive MAT only, and health plans that provide coverage for them, would be meaningfully misclassified based on the current definition.

We propose that the measure definition for NQF 0004 be changed so receiving psychosocial treatment only, MAT only, or both psychosocial treatment and MAT would meet the numerator criteria. Based on recent conversations with NQF staff, we understand that there is no plan for a systematic re-evaluation of NQF 0004 in the near future. Therefore, this memo is a request for an ad hoc review of NQF 0004 in order to align the measure definition with current evidence. In a previous memo sent to NQF on December 1, 2015, we presented guideline recommendations that support the use of MAT for treatment of alcohol or opioid dependence, as well as evidence from a targeted literature search on the proportion of psychosocial care being provided outside of the formal healthcare system.

The current memo (Part 2 of 2) presents an analysis of commercial claims data of the effect of changing the measure definitions. In this memo, we define two versions of the measure: the original version and the revised version. We describe how we estimated the differences between the two versions, including the data source, the methods used to identify the index episode, and the qualifying events that define the numerators and denominators of the measure. We present a comparison of the original version of the measure and our proposed revision, and the estimated misclassification based on current specifications.

Data Source

Data for the analysis were derived from the MarketScan® Commercial Database (including data from Standard Quarterly Updates) for calendar years 2013 and 2014. These databases contain fully adjudicated, patient-level claims and include files on enrollment (summary and detail), drug claims, facility headers, inpatient admissions, outpatient claims, population counts, and inpatient services. All records in these files were used as input to identify individuals that met the measure's eligibility criteria.

Methods Used To Calculate Measure Rates

We followed the technical specifications in the NQF submission form for NQF 0004 (Initiation and Engagement of Alcohol and Other Drug Dependence Treatment) to calculate the original measure rates. These specifications for the measure include for each of the two rates (Initiation and Engagement): definitions of and time periods for the numerator and denominator (first column of Table 1), detailed instructions for creating the numerator and denominator, and numerator and denominator exclusions. We calculated a "Revised Version" that counted MAT as treatment in the definition of initiation and engagement (specifications in second column of Table 1). The following list highlights key aspects of the methods used for the two versions of the measure:

- We used HCPCS codes, CPT codes, UBREV codes, and ICD-9-CM diagnosis and procedure codes obtained from NQF.
- We used National Drug Codes (NDCs) identified by RAND for FDA-approved medications for medication-assisted treatment for alcohol and opioid dependence, as well as J codes for injectable drugs.
- Rates were calculated for index episodes occurring between January 1, 2014, and November 15, 2014, inclusive.
- For patients with more than one AOD episode, the first index episode in the time period was included; subsequent episodes were excluded.
- For index episodes that are inpatient admissions, the admit date was used to scan for a prior clean period but the discharge date was used as the date of the event.
- Patient must have been continuously enrolled from 60 days before the index episode through 44 days after.
- We excluded index episodes that were missing any enrollment records for the member, with enrollment records indicating the individual was not a member at the time of the event, or with enrollment records indicating the member was less than 13 years of age or 65 years of age or over at the time of the event.
- Episodes with detoxification codes were counted in the denominator, but were not counted in the numerator of the initiation or engagement rates.
- All inpatient admissions were counted as self-initiating except those with a detoxification code present.
- An index episode based on an emergency department visit resulting in inpatient admission was treated as an inpatient admission.
- Multiple events on the same day were counted as separate if they were from distinct provider IDs, or the provider ID was missing and the events were from separate claims files.

- A 60-day clean period was required for the episode to be counted in the denominator. For the calculation including filled prescriptions for MAT, the clean period excluded those with a filled prescription for MAT in the prior 60 days.
- A single filled prescription for MAT after initiation was sufficient for the case to be counted as engaged.

In addition, we compared the original and revised rates for initiation and engagement based on index episodes for alcohol dependence only, opioid dependence only, and both alcohol and opioid dependence at the population level.

Lastly, we attempted to estimate the effect of the changes in definitions in relative rankings of health plans. Estimation was necessary because the data do not contain a health plan identifier. We formed pairs of U.S. Census codes for industry and Metropolitan Statistical Areas (MSA) under the assumption that benefits will be similar for the same industry in a given market. We then drew one random sample of 50 and of 100 eligible patients from each of those pairs to represent a hypothetical health plan operating in this market. We calculated the average absolute difference, relative percentage difference, difference in rank, for the initiation and engagement rates separately.

Table 1. Definitions of Original and Revised Versions of NQF 0004 (Initiation and Engagement of Alcohol and Other Drug Dependence Treatment)

Component	Original Version	Revised Version
Measure statement (Measure 1-Initiation)	The percentage of adolescent and adult patients with a new episode of alcohol or other drug (AOD) dependence who received the following. - Initiation of AOD Treatment. The percentage of patients who initiate treatment through an inpatient AOD admission, outpatient visit, intensive outpatient encounter or partial hospitalization within 14 days of the diagnosis.	The percentage of adolescent and adult patients with a new episode of alcohol or other drug (AOD) dependence who received the following. - Initiation of AOD Treatment. The percentage of patients who initiate treatment through an inpatient AOD admission, outpatient visit, intensive outpatient encounter, partial hospitalization, or ***a filled prescription or injection for medication-assisted treatment*** within 14 days of the diagnosis.
Measure statement (Measure 2-Engagement)	The percentage of adolescent and adult patients with a new episode of alcohol or other drug (AOD) dependence who received the following. - Engagement of AOD Treatment. The percentage of patients who initiated treatment and who had two or more additional services with a diagnosis of AOD within 30 days of the initiation visit.	The percentage of adolescent and adult patients with a new episode of alcohol or other drug (AOD) dependence who received the following. - Engagement of AOD Treatment. The percentage of patients who initiated treatment and who had two or more additional services with a diagnosis of AOD, ***or at least one additional filled prescription for medication-assisted treatment or injection*** within 30 days of the initiation visit.
Numerator of Measure 1: Initiation of AOD Dependence Treatment	Initiation of AOD treatment through an inpatient admission, outpatient visit, intensive outpatient encounter or partial hospitalization within 14 days of diagnosis.	Initiation of AOD treatment through an inpatient admission, outpatient visit, intensive outpatient encounter or partial hospitalization, ***or filled prescription or injection for medication-assisted treatment*** within 14 days of diagnosis.

Component	Original Version	Revised Version
Numerator of Measure 2: Engagement of AOD Treatment	Initiation of AOD treatment and two or more inpatient admissions, outpatient visits, intensive outpatient encounters or partial hospitalizations with any AOD diagnosis within 30 days after the date of the Initiation encounter (inclusive).	Initiation of AOD treatment and two or more inpatient admissions, outpatient visits, intensive outpatient encounters or partial hospitalizations with any AOD diagnosis ***or filled prescription for medication-assisted treatment or injection*** within 30 days after the date of the Initiation encounter (inclusive).
Denominator of Measures 1 and 2	Patients 13-64 years of age who were diagnosed with a new episode of alcohol or other drug dependency (AOD) during the first 10 and ½ months of the measurement year (e.g., January 1-November 15).	
Time Period for Initiation Numerator	14 days after diagnosis	
Time Period for Engagement Numerator	30 days after the date of initiation encounter	
Time Period for Denominator	The first 10 and ½ months of the measurement year (e.g., January 1 to November 15)	

Results

Population Level

Table 2 displays the initiation and engagement rates for the original and revised versions of the measure at the population level. The results for the original version of NQF 0004 indicate that 38.9% of eligible patients had an inpatient or outpatient visit within 14 days of the index episode (i.e., met the initiation criterion), and 12.9% had two or more inpatient or outpatient visits within 30 days of the initiation visit (i.e., met the engagement criterion).

Including MAT in the numerator increases both the initiation and engagement rates. The initiation rate increased from 38.9% to 40.1%, representing a 3.1% relative increase. The engagement rate increased from 12.9% to 14.5%, representing a 12.2% relative increase.

Importantly, changing the definition meant that fewer index episodes were eligible for the denominator, because patients with ongoing MAT in the 60 days preceding the index episode were excluded. The number of eligible episodes in the denominator decreased from 296,750 in the original version to 281,672 in the revised version of the measure. In other words, about 15,000 episodes (or about 5% of the episodes) in patients under ongoing treatment were incorrectly included in the measure.

Table 2. Measure Rates for Original and Revised Versions of NQF 0004 (Initiation and Engagement of Alcohol and Other Drug Dependence Treatment)

Version	Total Index Episodes	Number Initiated	Initiation Rate	Number Initiated and Engaged	Engagement Rate
Original (MAT Not Included)	296,750	115,347	38.9%	38,289	12.9%
Revised (MAT Included)	281,672	112,900	40.1%	40,787	14.5%

Opioid versus Alcohol Use

We analyzed the effect of adding MAT on the measure rate for diagnosis-specific subgroups related to drug dependence (Table 3). In the alcohol dependence subgroup, the initiation and engagement rates increased from 39.6% to 40.0%, and from 12.1% to 13.0%, respectively, after MAT was included; these represent 1.0% and 7.4% relative increases for the initiation and engagement rates, respectively. The subgroup with opioid dependence exhibited a larger increase in the initiation and engagement rates. When MAT was included in the measure numerator, the initiation rate rose from 36.8% to 41.7% (a 13.3% relative increase) and the engagement rate rose from 16.7% to 22.9% (a 37.1% relative increase).

Table 3. Measure Rates for Original and Revised Versions of NQF 0004 for Alcohol and Opioid Subgroups

Version and Subgroup	Total Index Episodes	Number Initiated	Percent Initiated	Number Initiated and Engaged	Percent Initiated and Engaged
Original Version (MAT Not Included)					
Alcohol Only	156,402	61,935	39.6%	18,925	12.1%
Opioid Only	56,505	20,794	36.8%	9,436	16.7%
Alcohol and Opioid	4,210	2,922	69.4%	1,406	33.4%
Revised Version (MAT Included)					
Alcohol Only	153,888	61,555	40.0%	20,005	13.0%
Opioid Only	46,410	19,353	41.7%	10,628	22.9%
Alcohol and Opioid	3,854	2,748	71.3%	1,438	37.3%

Approximation of Health Plan-Level Results

As described above, we estimated the effect of the change in definitions on the relative ranking of health plans, by drawing a random sample of 50 patients from industry-MSA pairs with 50 or more index episodes (N=566) and of 100 patients from those with 100 or more index episodes (N=328).

For rates based on 50 index episodes, including MAT increased the measure rate by two percentage points on average for both initiation and engagement, with a maximum difference of 14 percentage

points for initiation and 11 for engagement (Table 4). For rates based on 100 index episodes, including MAT increased the measure rate by two percentage points on average for both initiation and engagement as well, with a maximum difference of nine percentage points for both initiation and engagement. These absolute differences represent substantially larger relative increases for engagement (21.2% and 19.1% for 50 and 100 patients, respectively) than initiation (5.2% and 4.4% for 50 and 100 patients, respectively).

The rate differences also influence relative ranking of health plans, with the rank changing by an average of 32 and 51 places for the initiation and engagement rates, respectively, for 50 patient samples, and 17 and 27 places for 100 patient samples. We calculated the proportion of our "health plans" for which the relative rankings changed by at least one quintile when MAT was included in the numerator definition. For the 50 patient samples, about **21% changed by at least one quintile for the initiation and 39% for the engagement measure.** The corresponding rates were **27% and 36%** for the 100 patient samples.

Table 4. Effect of Including Medication-Assisted Treatment in the Definition of Treatment on Initiation and Engagement Rates for Alcohol and Other Drug Dependence on "Health Plan" Performance

	Based on 50 Index Episodes (N=566)				Based on 100 Index Episodes (N=328)			
	Average	Std Dev	Min	Max	Average	Std Dev	Min	Max
Absolute Difference								
Initiation Rate	0.02	0.02	0.00	0.14	0.02	0.01	0.00	0.09
Engagement Rate	0.02	0.02	0.00	0.11	0.02	0.02	0.00	0.09
Relative Difference								
Initiation Rate	5.2%	4.9%	0.0%	36.1%	4.4%	3.7%	0.0%	22.3%
Engagement Rate	21.2%	30.5%	0.0%	334.8%	19.1%	21.8%	0.0%	226.1%
Difference in Rank								
Initiation Rate	32	29	0	168	17	17	0	112
Engagement Rate	51	42	0	209	27	23	0	156

Std Dev=standard deviation, Min=minimum, Max=maximum

Summary and conclusion

Based on our testing of an alternate measure definition using commercial claims data, we conclude that including MAT in the numerator definition of NQF 0004 changes the measure results and health plan rankings based on those results in a meaningful way. Together with the information included in our previous memo that MAT is a guideline-supported treatment option for patients with substance abuse disorders, we would argue that sufficient reason exists to augment the measure definition by including MAT in the numerator.

We acknowledge the limitation that we can only approximate the implications for the relative ranking of health plans, but suggest that the presented evidence is strong enough to justify the proposed minor change to the measure definition on an ad hoc basis, as the current definition may lead to a biased assessment of the performance of health plans.