


Enhancing Data Collection to Improve Health Care Access and Quality for All

Introduction

In 2010, New Hampshire Health Care Facility Discharge Data Submission rules changed (NH Administrative Rule He-C 1500) requiring NH hospitals to collect and report patient race and ethnicity fields in a new format and for the first time required the collection of patient language data. As 2010 discharge data¹ is newly available, we are able to look at the quality of patient race, ethnicity and language (REaL) data fields for the first time to establish benchmarks and identify areas of necessary improvement for the inpatient setting. While it is likely that the quality of this data has already been improved since the initial year of the rule change, acknowledging best practices can still serve to bolster the quality of data and lead to improvements in the care New Hampshire hospitals are able to provide.

The Federal Health IT Strategic Plan 2015-2020 recognizes the importance of high-quality data collection in supporting the delivery of high-quality health care. These data collection criteria are necessary for meeting CMS Stage 1 and Stage 2 Meaningful Use Core Measures (Figure 1), a component of eligibility for the Medicare and Medicaid Electronic Health Records Incentive Programs. In addition, DNV GL, the Joint Commission and the CMS all require collection of these data for their accreditation and certification processes. The Strategic Plan believes health care value, quality, access, equity, and population health can be improved through the collection of this data.⁵ With high-quality data on hand, we can begin the process of addressing weaknesses in these areas and improve health care for all.

Figure 1. Relevant Meaningful Use core measure definitions necessary for EHR Incentive Programs

Stage 1 (Measure 7 of 13) ²	
Objective	Record the following demographics: <ul style="list-style-type: none"> • Preferred Language • Gender • Race • Ethnicity • Date of Birth
Measure	Greater than 50 percent of unique patients have demographics recorded as structure data.
	
Stage 2 (Measure 2 of 16) ³	
Objective	Record the following demographics: <ul style="list-style-type: none"> • Preferred Language • Sex • Race • Ethnicity • Date of Birth • Date • Preliminary cause of death in event of mortality
Measure	Greater than 80 percent of unique patients have demographics recorded as structure data.
Criteria used in Meaningful Use certification ⁴	
Race and Ethnicity	1997 OMB Standards described in § 170.207(f)
Preferred Language	ISO 639-2 alpha-3 codes described in § 170.207(g)

Data and Discussion

In review of the data, Race had the highest reporting rate of the REaL demographic variables. Table 1 reports the quality of race data collected by hospitals across the state. There is data associated with

Table 1. Reported race by data quality category.

Reported Race	No.	(%)
Reported, known	82,794	(68.8)
Reported "Unknown" or "Other Race"	37,594	(31.2)
Not Reported	5	(0.00)
TOTAL	120,393	(100.0)

Table 2. Reported ethnicity by data quality category.

Reported Ethnicity	No.	(%)
Reported, known	74,667	(62.0)
Reported, unknown	36,393	(30.2)
Not Reported	9,333	(7.75)
TOTAL	120,393	(100.0)

essentially every patient discharge as there are almost no blank fields. However, the completeness of its data does not guarantee meaningfulness as 31.2% of discharges were coded "Unknown" or "Other" providing no useful information. This compromises the accuracy of the race variable as a whole. Furthermore only one race code was associated with each discharge. This suggests that patients may not have been encouraged to self-identify using as many categories as they felt best described themselves, a best practice in collection of this data.

It is useful to note a code of "Refused/declined to provide" is considered "Reported, known" for the purposes of this report. Also a blank response is considered "Not Reported."

As noted in Table 2, ethnicity had the lowest rate of reporting at 62.0% of all discharges. Ethnicity data has a greater proportion of blank responses than reported Race, accounting for close to 8% of the data. Additionally the proportion of "Reported, unknown" responses is about the same as for Race, resulting in fewer meaningful pieces of data. It is apparent that a greater emphasis should be placed on accurate recording of Race and Ethnicity in order to push reporting away from "Unknown, Other" and "blank" statuses toward meaningful demographic data.

Data collection of patient preferred language presented a greater challenge for hospitals as no criteria were provided in the rules to standardize the field. The requirement in the rule specified that facilities submit information in an open field the way the health care facility coded it. As a result of the open-field response for language, the reporting status "Reported, known" for Preferred Language

Table 3. Reported "preferred language" by data quality category.

Reporting Status	No.	(%)
Reported, known	89,498	(74.3)
Reported, unknown*	7,779	(6.46)
Not Reported	23,116	(19.2)
TOTAL	120,393	(100.0)

*Data in this grouping was reported as "unknown," "other," or was undecipherable

required a looser definition. It accounts for any response that was not blank or coded “Unknown” and was a full or condensed (reasonably resembling a name) form of a language name. Close to three quarters of individuals were coded with an interpretable language code, while about 20% of the data was left blank.

As the NHHA recommended to hospitals in 2010 the use of the ISO 639-2 alpha-3 coding to standardize the patient language field, compliance with the ISO standard was also reviewed. The 9.6% compliant codes represent 26 of the 115 unique codes reported. However, only one hospital reported the majority of language data compliant with the ISO standard (8,186 of the 11,578 total “Reported, compliant” individuals).

Table 4. Reported “preferred language” in accordance with Meaningful Use criteria.

Reporting Status	No.	(%)
Reported, compliant*	11,578	(9.62)
Reported, not compliant	85,699	(71.2)
Not Reported	23,116	(19.2)
TOTAL	120,393	(100.0)

*meets Meaningful Use Stage 1 Core Objective (6) as defined by §170.207(g)

Clearly Patient Preferred Language has the greatest room for improvement. While this demographic has the highest reporting rate at 74% of all discharges, the data completely lacks uniformity. For instance, the 73% of “Reported, known” patients whose preferred language is English were reported by 12 unique codes including E, E

N, ENG, ENGLISH and unfortunately eight others “ENGLSIH,” “ENGLISH,” “ENDGLISH18” etc. This trend of unclear codes carries further with other undecipherable codes such as “J,” “1241650” and “B1R9E2.” From a usability standpoint, the current state of the Language data is in need of improvement. Anyone wanting to use the data to improve quality of care will likely have great difficulty doing so given its current state. This is an unfortunate disservice to those who could benefit.

The reported language field will only become a valid source of demographic information once a common coding system is applied throughout the state.

Appendix Table A1 presents a blinded review of the quality of the race, ethnicity, and language data collected by each hospital.

Moving Forward

Increasingly, health care regulatory bodies and payment methodologies are requiring healthcare organizations to provide evidence that every patient served received appropriate patient- and family-centered quality care. Most relevant, the Medicare and Medicaid EHR Incentive Programs not only encourage a standardized format for NH hospitals to report REaL data, but also provide financial incentives to do so. This provides the opportunity to identify vulnerable patients enabling organizations to improve care. Catholic Medical Center is an example of one organization that has taken a step forward, demonstrating the possibility of using this data to improve outcomes. (Figure 2)

Figure 2. Putting Language Data to Use: Catholic Medical Center's Story

Catholic Medical Center put their patient language data to good use while participating in the Centers for Medicare & Medicaid Services Innovation Center Partnership for Patients Initiative. Goals for the Initiative were to reduce preventable harm by 40% and reduce preventable readmissions within 30 days of discharge by 20% in a three year period. In the course of reviewing readmissions to meet this goal, Catholic Medical Center noticed that patients with a preferred language other than English had higher readmission rates. As a result of this finding, Catholic Medical Center set a goal to use an on-site interpreter during discharge education for all patients indicating a preferred language other than English. For their quality metric, they documented this use in the patient record, noting the percentage of patients whose record indicated a need for an interpreter who received one during discharge. This, combined with other strategies, resulted in a successful reduction in readmission rates. According to Georgelyn Wizner, Director of Social Services, "Holding ourselves accountable not only enabled us to improve systems and reach a desirable quality improvement and cost reduction benchmark, it increased confidence among our staff that we were addressing all the needs of our patients."

No matter the current quality of the data, there will always be room for improvement. The NH Health & Equity Partnership understands the challenges in collecting accurate data and is able to support organizations in this endeavor to improve the overall health and wellness of all who live in our State. Best practices and staff training tools in race, ethnicity, and language data collection have been identified by organization like the Health Research Education Trust. (www.hretdisparities.org) The following highlights several best practices:

- Organizations should identify defined processes outlining how to collect quality REaL data including who it is collected from, when, where, and how the data is collected as well as appropriate staff training.
- Organizations should provide standardized scripts to effectively collect the data and if needed, explain why the data is collected in the event of an objection.
- To reduce staff and patient confusion of ethnicity and race categories, staff should request ethnicity first, then race. Patients should understand that there is no 'right' answer, and they should be allowed to self-identify as more than one race.

Quick Script Sample: "We want to make sure that all our patients get the best care possible. We would like you to tell us your ethnic and racial background so that we can assure that all patients receive the highest quality of care. The more we know about our patients, the better we can serve our community."

Clarifying Script Sample: "People have a personal opinion about their identity. We respect this and ask you to select as many or as few of the options as you wish. We ask this question because national data indicates that avoidable health differences exist between different population groups. We collect this information to learn more about these issues, and make sure that our hospital does not discriminate."

Health inequities can be better managed with accurate data to identify issues of concern and measure the quality of interventions.

References

¹ New Hampshire Department of Health and Human Services. (2013). *2010 New Hampshire Uniform Healthcare Facility Discharge Data Set* [Public Use Dataset]. Available from <http://www.dhhs.nh.gov/dphs/hsdm/hospital/publications.htm>

² EHR Incentive Program. (2014). *Eligible Professional Meaningful Use Core Measures Measure 7 of 13* [PDF file]. Retrieved from https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/downloads/7_Record_Demographics.pdf

³ EHR Incentive Program. (2014). *Eligible Hospital and Critical Access Hospital Meaningful Use Core Measures Measure 2 of 16* [PDF file]. Retrieved from https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/downloads/Stage2_HospitalCore_2_RecordDemographics.

⁴ Healthit.gov. Standards Hub [web page]. Retrieved from <http://www.healthit.gov/policy-researchers-implementers/meaningful-use-stage-2-0/standards-hub>

⁵ The Office of the National Coordinator for Health Information Technology. (2014). *Federal Health IT Strategic Plan 2015 – 2020* [PDF file]. Retrieved from <http://www.healthit.gov/sites/default/files/federal-healthIT-strategic-plan-2014.pdf>



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New Hampshire
Health & Equity Partnership

The New Hampshire Health & Equity Partnership is a public-private coalition of individuals and organizations whose vision is for everyone in New Hampshire to have a fair opportunity to live a long, healthy life.

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TABLE A1. Summary table of all data collected by Race, Ethnicity and Language. Percentages are tabulated across rows within each patient demographic variable. Facilities were blinded by random assignment of an arbitrary one letter code that was alphabized in this table. For hospitals wishing to request their facility code, please contact Gwen Duperron at GDuperron@nhha.org.

Facility Code	RACE						ETHNICITY						LANGUAGE					
	Reported, known*		Reported, unknown†		Not Reported		Reported, known*		Reported "Unknown"		"Blank"		Reported, known*		Reported, unknown‡		Not Reported	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
A	4398	(95.0)	232	(5.0)	0	(0.0)	1051	(22.7)	3579	(77.3)	0	(0.0)	3460	(74.7)	100	(2.2)	1070	(23.1)
B	7413	(98.9)	84	(1.1)	0	(0.0)	32	(0.4)	7465	(99.6)	0	(0.0)	3024	(40.3)	4473	(59.7)	0	(0.0)
C	0	(0.0)	14392	(100.0)	0	(0.0)	0	(0.0)	14392	(100.0)	0	(0.0)	13844	(96.2)	547	(3.8)	1	(0.0)
D	304	(97.7)	7	(2.3)	0	(0.0)	147	(47.3)	47	(15.1)	117	(37.6)	309	(99.4)	2	(0.6)	0	(0.0)
E	1196	(99.7)	3	(0.3)	0	(0.0)	363	(30.3)	27	(2.3)	809	(67.5)	1071	(89.3)	1	(0.1)	127	(10.6)
F	6519	(98.6)	93	(1.4)	0	(0.0)	6559	(99.2)	53	(0.8)	0	(0.0)	6606	(99.9)	6	(0.1)	0	(0.0)
G	365	(2.4)	15105	(97.6)	0	(0.0)	15470	(100.0)	0	(0.0)	0	(0.0)	15382	(99.4)	0	(0.0)	88	(0.6)
H	3172	(96.6)	110	(3.4)	0	(0.0)	3282	(100.0)	0	(0.0)	0	(0.0)	1	(0.0)	0	(0.0)	3281	(100.0)
I	3	(0.3)	1137	(99.7)	0	(0.0)	11	(1.0)	1129	(99.0)	0	(0.0)	0	(0.0)	2	(0.2)	1138	(99.8)
J	13627	(98.5)	208	(1.5)	0	(0.0)	12073	(87.3)	1762	(12.7)	0	(0.0)	13679	(98.9)	0	(0.0)	156	(1.1)
K	7403	(88.3)	978	(11.7)	0	(0.0)	4486	(53.5)	441	(5.3)	3454	(41.2)	8186	(97.7)	195	(2.3)	0	(0.0)
L	4443	(90.7)	457	(9.3)	0	(0.0)	4900	(100.0)	0	(0.0)	0	(0.0)	4254	(86.8)	0	(0.0)	646	(13.2)
M	0	(0.0)	1206	(100.0)	0	(0.0)	1206	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1206	(100.0)
N	898	(92.2)	76	(7.8)	0	(0.0)	974	(100.0)	0	(0.0)	0	(0.0)	866	(88.9)	0	(0.0)	108	(11.1)
O	5917	(97.2)	170	(2.8)	0	(0.0)	3748	(61.6)	2339	(38.4)	0	(0.0)	5987	(98.4)	99	(1.6)	1	(0.0)
P	875	(100.0)	0	(0.0)	0	(0.0)	875	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	875	(100.0)
Q	1190	(99.1)	11	(0.9)	0	(0.0)	869	(72.4)	326	(27.1)	6	(0.5)	923	(76.9)	278	(23.1)	0	(0.0)
R	3840	(97.7)	84	(2.1)	5	(0.1)	4	(0.1)	0	(0.0)	3925	(99.9)	0	(0.0)	0	(0.0)	3929	(100.0)
S	0	(0.0)	971	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	971	(100.0)	788	(81.2)	183	(18.8)	0	(0.0)
T	6692	(96.6)	237	(3.4)	0	(0.0)	6929	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	6929	(100.0)
U	9206	(94.7)	517	(5.3)	0	(0.0)	9157	(94.2)	566	(5.8)	0	(0.0)	9643	(99.2)	80	(0.8)	0	(0.0)
V	725	(83.1)	147	(16.9)	0	(0.0)	739	(84.7)	133	(15.3)	0	(0.0)	0	(0.0)	0	(0.0)	872	(100.0)
W	1605	(99.0)	17	(1.0)	0	(0.0)	1233	(76.0)	339	(20.9)	50	(3.1)	1475	(90.9)	147	(9.1)	0	(0.0)
X	928	(58.6)	655	(41.4)	0	(0.0)	559	(35.3)	1024	(64.7)	0	(0.0)	0	(0.0)	0	(0.0)	1583	(100.0)
Y	1085	(98.1)	21	(1.9)	0	(0.0)	0	(0.0)	1106	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	1106	(100.0)
Z	990	(59.4)	676	(40.6)	0	(0.0)	0	(0.0)	1665	(99.9)	1	(0.1)	0	(0.0)	1666	(100.0)	0	(0.0)

* Known category contains "Refused/declined to provide"
†Unknown category is comprised of "Unknown" and "Other Race" responses
‡Represents "Unknown," "Other" or undecipherable responses