

Proposed Changes to Existing Measures for HEDIS^{®1} MY 2022: Introduction of Race and Ethnicity Stratification Into Select HEDIS Measures

NCQA seeks comments on the proposed addition of race and ethnicity stratifications to select HEDIS measures beginning in measurement year (MY) 2022. NCQA's goal is to advance health equity by leveraging HEDIS to hold health plans accountable for disparities in care among their patient populations. This includes bringing transparency to where gaps exist (or do not exist) and highlighting plans that successfully invest in strategies to reduce disparities in care and outcomes.

Based on feedback from expert panels, the NCQA team developed a 3-year phased approach for implementing the stratifications, with a stated goal of requiring all plans to report measure performance by race and ethnicity using directly collected² member data by MY 2024. In MY 2022 and MY 2023, plans that meet a direct data completeness threshold of 80% for race and 80% for ethnicity will be allowed to report the stratification using their own directly collected member data for race and ethnicity. Direct data is the gold standard.

Note: *NCQA's proposal is to implement indirect data for population level analysis; we recognize that indirect data is likely to be inappropriate for patient-level intervention. It is our opinion that indirect data provides a path toward transparency on disparities in quality of care in the near term.*

Plans that do not meet the data completeness threshold will be required to report the stratification using an approved method of indirect race and ethnicity assignment. NCQA is currently evaluating two potential approaches to specifying this stratification (Attachment). The approaches are consistent in the approved methods of direct and indirect data collection, but differ in the level at which the direct data completeness threshold must be met:

- **Option 1:** *Require data completeness at the measure level.* In this approach, plans must meet the data completeness threshold for the eligible population of each measure to which this stratification applies in order to report using direct data for each measure.
- **Option 2:** *Require data completeness at the plan level.* In this approach, plans must meet the data completeness threshold across their enrollment in order to report using direct data for all measures to which this stratification applies.

NCQA proposes that race and ethnicity stratifications are reported separately. NCQA also proposes to define race and ethnicity categories according to existing HEDIS descriptive measure *Race/Ethnicity Diversity of Membership (RDM)*, which aligns with Office of Management and Budget categories (Attachment).

NCQA seeks general feedback on the proposal above and on the following:

1. *Measures listed as candidates for stratification in MY 2022 (Attachment).* In selecting these measures, NCQA evaluated them on a set of criteria, including the extent of known disparities by race and ethnicity in a particular health issue, areas that have been prioritized in state equity efforts, and whether a measure could be expected to yield small denominators if stratified. NCQA also sought to cover a wide range of health topics and include measures reported by all product lines (Medicare, Medicaid, commercial).

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² In developing our recommended approach, NCQA considered multiple options for implementing this stratification in HEDIS, taking into account the importance of moving toward direct data, as well as limitations of the current data environment and feasibility for implementation. In alignment with the current RDM measure, NCQA defines direct data collection as data collected directly from members (e.g., surveys, health risk assessments, disease management registries, CMS/state databases) or from enrollment information furnished by state Medicaid agencies. Indirect methods involve imputing race/ethnicity through methods such as surname analysis and geo-coding.

2. *The timeline for introducing the race and ethnicity stratification to measures.* A target of 5 measures will be stratified in MY 2022, with a minimum of 15 measures stratified by MY 2024. NCQA will convene a Health Equity Expert Work Group throughout 2021 to gather ongoing feedback as we review public comment responses and finalize the stratification specification.
3. *Thoughts on additional measures* that should be prioritized for future stratification.
4. *Concerns regarding feasibility for direct/indirect methods.* NCQA welcomes feedback on the details and implications of these methods.

Supporting documents include the draft stratification options, the list of candidate measures and evidence workup.

NCQA acknowledges the contributions of the Health Equity Expert Work Group and the internal Measures Policy team for their input and work on these proposed race/ethnicity stratifications.

Race/Ethnicity Stratification Options for MY 2022		
Description	Option 1: Data Completeness at Measure-Level	Option 2: Data Completeness at Plan-Level
Number of measures	5	5
Direct Data Completeness Threshold	Race: 80% Ethnicity: 80%	Race: 80% Ethnicity: 80%
Level of Data Completeness Required	<p><i>Measure level:</i></p> <ul style="list-style-type: none"> In order to report stratification for any measure using its own direct data, the plan must meet the data completeness threshold for the denominator population of the measure. Using an approved indirect method, the plan must report any of the 5 measures for which it did not directly collect race and ethnicity data for 80% of members in the denominator. 	<p><i>Plan level:</i></p> <ul style="list-style-type: none"> In order to report stratification for all 5 measures using its own direct data, the plan must meet the data completeness threshold for the plan's entire membership. If the plan did not directly collect race and ethnicity for 80% of its enrollment, it must report stratification for all 5 measures using an approved indirect method.
Approved Reporting Methods	<p><i>Direct:</i></p> <ul style="list-style-type: none"> Data collected directly from members (e.g., surveys, health risk assessments, disease management registries, CMS/state databases) or from enrollment information furnished by state Medicaid or federal agencies. <p><i>Indirect:</i></p> <ul style="list-style-type: none"> Bayesian Indirect Surname and Geocoding (BISG) Method^{1,2} Geographic Assignment at Census Tract Unit: <p>The following approach should be used to assign indirect race and ethnicity values using geographic data. The source for geographic data is the American Community Survey—5 Year Estimate—Public Use Microdata Sample from the most recent year available as of January 1 of the measurement year. The geographic unit for assignment of race and ethnicity is the <u>census tract</u>.</p> <ol style="list-style-type: none"> Assign member to census tract based on address of primary residence. If the member resided in more than one census tract during the measurement year, assign to census tract in which they most frequently lived. If no one census tract has a plurality, assign to the census tract in which the member resided at end of the measurement year. Assign the member to the race and ethnicity categories that hold the plurality (most frequent category) at the census tract geographic unit. <ol style="list-style-type: none"> Race should be assigned according to the variable "Recoded detailed race code." Ethnicity should be assigned according to the variable "Detailed Hispanic origin allocation flag." 	

¹ Elliott, M., A. Fremont, P. Morrison, P. Pantoja, & N. Lurie. 2008. "A New Method for Estimating Race/Ethnicity and Associated Disparities Where Administrative Records Lack Self-Reported Race/Ethnicity." *Health Services Research* 43, 1722–36. <https://doi.org/10.1111/j.1475-6773.2008.00854.x>

² Haas, A., M.N. Elliott, J.W. Dembosky, J.L. Adams, S.M. Wilson-Frederick, J.S. Mallett, S. Gaillot, S.C. Haffer, & A.M. Haviland. 2019. "Imputation of Race/Ethnicity to Enable Measurement of HEDIS Performance by Race/Ethnicity." *Health Services Research* 54(1), 13–23. <https://doi.org/10.1111/1475-6773.13099>

Race/Ethnicity Stratification Options for MY 2022			
Race & Ethnicity Categories	HEDIS/OMB Race	HEDIS/OMB Ethnicity	CMS Category
	White	Unknown	White
	Black	Unknown	Black
	American Indian/Alaska Native	Unknown	American Indian/Alaska Native
	Asian	Unknown	Asian/Pacific Islander
	Unknown	Hispanic/Latino	Hispanic
	Some Other Race	Unknown	Other
	Unknown	Unknown	Unknown
	Native Hawaiian and Other Pacific Islander	Unknown	(No equivalent category)
	Two or more races	Unknown	(No equivalent category)

Taken from Table RDM-A-1: CMS Categories Crosswalked to HEDIS/OMB Race and Ethnicity.

A list of potential measures for initial stratification in MY 2022 are below. Measures were identified by evaluating current HEDIS measures on a defined set of exclusion and prioritization criteria. They were excluded from consideration for MY 2022 if they were ECDS or digital, risk-adjusted, in first-year status or slated for retirement. Measures were prioritized for inclusion if they represented a high-priority population for disparities, represented multiple HEDIS domains and/or represented multiple product lines.

List of Candidate Measures for Race/Ethnicity Stratification in MY 2022		
Domain	Measure	Product Lines
Effectiveness of Care	Controlling High Blood Pressure (CBP)	Commercial, Medicaid, Medicare
	Comprehensive Diabetes Care (CDC)* • HbA1c Control <8%	Commercial, Medicaid, Medicare
	Comprehensive Diabetes Care (CDC)* • Eye Exam	Commercial, Medicaid, Medicare
	Antidepressant Medication Management (AMM)	Commercial, Medicaid, Medicare
	Follow-Up After Emergency Department Visit for People With Multiple High-Risk Chronic Conditions (FMC)	Medicare
Access and Availability of Care	Adults' Access to Preventive/Ambulatory Health Services (AAP)	Commercial, Medicaid, Medicare
	Prenatal and Postpartum Care (PPC)	Commercial, Medicaid
Utilization	Well-Child Visits in the First 30 Months of Life (W30)	Commercial, Medicaid
	Child and Adolescent Well-Care Visits (WCV)	Commercial, Medicaid
	Mental Health Utilization (MPT)	Commercial, Medicaid, Medicare

*Separate measures if approved for MY 2022.

Health Equity and Social Determinants of Health (SDOH) in HEDIS®¹ **Workup**

Topic Overview

NCQA seeks to address inequities in health care and promote health equity through performance measurement, and strives to shed light on health care disparities, to advance health equity and to ensure that factors beyond clinical determinants are considered in the Healthcare Effectiveness Data and Information Set (HEDIS). As a part of this effort, NCQA is exploring several approaches, including stratification of HEDIS measures by race, ethnicity and socioeconomic status, in order to highlight disparities in care and hold plans accountable for implementing interventions to reduce them. NCQA is also considering potential new measure development efforts aimed at explicitly addressing social determinants of health (SDOH), such as assessing social risk or needs.

Measuring Race and Ethnicity in HEDIS

Although HEDIS does not require reporting by race/ethnicity, two measures assess diversity of health plan membership. Their intent is to assess the level of completeness of language, race and ethnicity data among health plans.

- *Language Diversity of Membership (LDM)* assesses the count and percentage of members enrolled at any time during the measurement year, by spoken language preferred for health care and preferred language for written materials.
- *Race/Ethnicity Diversity of Membership (RDM)* assesses the count and percentage of members enrolled any time during the measurement year, by race and ethnicity. The measure categorizes members using designations provided by the Office of Management and Budget: White, Black or African American, American Indian and Alaska Native, Native Hawaiian and Other Pacific Islander, Some Other Race, Two or More Races, Unknown and Declined. The measure also allows ethnicity reporting by the Hispanic or Latino category.

Both LDM and RDM are specified for the commercial, Medicaid and Medicare product lines and were introduced into HEDIS in 2010. Reporting on these measures is required for health plans or other entities seeking NCQA's Distinction in Multicultural Health Care (NCQA, 2020).

In recent years, the RDM measure has revealed a lack of completeness of race and ethnicity data. In Measurement Year 2019, commercial plans reflected the lowest ability to gather complete data when compared to Medicare and Medicaid. Approximately 76% of racial data and 94% of ethnicity data was incomplete for the commercial product line. For Medicaid plans, 50% of racial data was incomplete and 70% of ethnicity data was incomplete. Medicare plans demonstrated the greatest ability to collect complete data: only 26% of racial data and 60% of ethnicity data was incomplete. For HEDIS data collection, NCQA considers data to be "complete" when >95% of data is known and "incomplete" data refers to instances where <50% of data is known, or data is missing.

To further efforts to address racial and ethnic disparities in care, NCQA seeks to implement a required stratification by race/ethnicity to select additional HEDIS measures in order to encourage health plans to integrate equity into quality measurement efforts. This approach will help identify plans that are successful in eliminating disparities in performance.

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Measuring Socioeconomic Status and Disability

Currently, HEDIS requires a socioeconomic status (SES) and disability stratification for four measures: *Breast Cancer Screening*, *Colorectal Cancer Screening*, *Comprehensive Diabetes Care—Eye Exam* and *Plan All-Cause Readmission*. NCQA chose to apply stratification to these measures based on consultation with an expert panel and analysis of health plan performance on select HEDIS measures when adjusting for disparity in performance between low- and high-SES populations (NCQA, n.d.).

Stratification applies to the Medicare product line only, as it leverages Medicare-specific eligibility criteria. Performance is stratified into one of six categories capturing: Low-income status (LIS)/Dual Medicaid and Medicare eligibility (DE) only, Disability status only, LIS/DE and Disability, Neither LIS/DE *nor* Disability, Other or Unknown. “Other” represents members who have end-stage renal disease or who fall into no alternative categories. Dual enrollment status remains one of the strongest predictors of outcome, even after accounting for other social and functional risks. The intent of the SES and disability stratification is to shed light on disparities in care by SES. NCQA is interested in potentially expanding the SES stratification to additional HEDIS measures.

SDOH in HEDIS

There is broad acknowledgment that social factors such as access to food, employment status and physical environment contribute significantly to health outcomes. HEDIS does not currently require stratifications by SDOH other than SES and does not include SDOH-specific measures. NCQA sees this gap as an opportunity to expand the scope of HEDIS quality measurement and encourage health plan accountability for acknowledging members’ social needs and clinical needs.

Background, Prevalence and Importance

Background

The WHO defines social determinants of health, or SDOH, as “the conditions in which people are born, grow, work, live and age, and the wider set of forces and systems shaping the conditions of daily life,” including economic policies and systems, development agendas, social norms and political systems (WHO 2020). Several other leading health organizations have developed similar definitions from which to operate when working to achieve health equity (CDC, 2020; Healthy People 2030, 2020). Equally important terms often referred to in the health equity domain include “social risk factors,” “social needs,” “behavioral risk factors” and “disparities.” Such language is often employed to highlight the influence of various factors on health care access as well as outcomes (Alderwick, 2019). Factors cited as considerably impacting health inequity include access to nutritious food, neighborhood safety, distance to public transportation and adequate housing (AMA, 2019; AAFP, 2019).

Disparities in morbidity and mortality across multiple factors have been well documented over the last few decades as leading health organizations increasingly elevate health equity as a priority (Baciu, 2017; Penman-Aguilar, 2016). Organizations such as the Centers for Disease Control and Prevention (CDC) and the WHO, and policy initiatives like Healthy People 2030, have indicated the need to pursue health equity in the face of widening disparities between various subgroups in the United States (CDC, 2020; CSDH 2008; Pendo, 2020). Health care disparities occur across many dimensions, including race and ethnicity, gender, sexual orientation, socioeconomic status, disability status and geographic location (KFF 2020).

Disparities

Racial, ethnic and socioeconomic disparities call attention to a striking need for targeted interventions to improve health outcomes. Although socially constructed categories of race and ethnicity do not cause health disparities, they often link directly to other dimensions that impact health, including, but not limited to, geographic location, socioeconomic status, access to health care

insurance and systemic racism (CDC, 2020; Cogburn, 2019). When compared with White Americans, for instance, racial and ethnic minorities often fare significantly worse in terms of health outcomes.

A review of health status across racial groups in 2019 found that while policy and program efforts such as the Affordable Care Act have begun to narrow disparities, notable differences in health outcomes persist. For example, Blacks and Native Americans experienced infant mortality rates approximately two times higher than that of Whites (Artiga, 2019). The Office of Minority Health found that Hispanics are 60% more likely to die from viral hepatitis than Whites, despite having lower rates of hepatitis C (OMH, 2020). In 2014, the CDC reported that about 18.0% of Black adults and 16.8% of Hispanic adults had a diabetes diagnosis, while the prevalence in White adults was 9.6%. Each statistic is striking, given that in 2014, all racial and ethnic minority groups combined made up 37.9% of the United States population (over 120,000,000 people) (Baciu, 2017; NCHS, 2016).

Access to care and environmental factors

In addition to disparities in health outcomes across populations, literature indicates that disparities exist on different axes such as environmental and social exposures, access to health care and health services, completion of treatment and quality of care. From 2000–2017, approximately one third of performance measures assessing individuals' access to health care services did not show improvement; about 40% of these access measures revealed that Blacks, Native Americans and Native Hawaiians received worse care than Whites (AHRQ, 2019).

Recent studies have found that individuals with lower economic and educational status are less likely to begin and/or complete engagement with various health care services. A Minneapolis-based study indicated that while 69% of White patients who qualified for colorectal cancer screening completed screens, just 43% of all patients of color completed them (Kottke, 2014; Hostetter, 2018). Of note, Latinos are less likely than the majority of the population to seek and receive various health care services due to discrimination, lower insurance rates (76% compared to 91% nationwide) and, in some cases, the lack of Spanish translation services in the health care setting (Vega, 2009; Steinberg, 2016).

Additionally, studies show that environment also plays an important role in health disparities. Due to racist segregation practices, disadvantaged populations such as ethnic minorities (particularly Blacks and Native Americans), immigrants, people with lower incomes and beneficiaries with Medicaid insurance are more likely to live and work in areas with greater exposure to toxic environments (Gee, 2004; Institute of Medicine, 2003; Lewis, 2017). Chemical waste plants and other high-pollutant sources make certain groups more vulnerable to conditions such as asthma, cancer and chemical poisoning. The American Lung Association finds that the burden of air pollution is unevenly shared and may deeply affect populations with greater exposure to stress and discrimination (ALA, 2020). Studies underscore strong associations between constant exposure to air pollution and increased asthma diagnoses in children from economically deprived areas.

Importance

Public health leaders have increasingly called for collaborative, coordinated approaches across different disciplines to close the gaps in health disparities. It is estimated that between 45% and 57% of SDOH stem from outside the health care system and 80% of influences on health comes from outside physician

visits; calls for response to health disparities have echoed a need to implement interdisciplinary approaches (APHA, 2019; Daniel, 2018; AMA 2019). Some SDOH that stem from within the health care system are health literacy and sociobehavioral SDOH screening, as well as treatment from interdisciplinary clinical teams (Mogford, 2011; Daniel, 2018; NAS, 2019).

The American College of Physicians published a set of policy recommendations on SDOH, expressing support for cross-agency collaboration to maximize the impact of changes in policy.

The American Public Health Association (APHA) similarly indicated that cross-cutting interventions must be employed by organizations in different fields at the national, local and individual levels in addition to work implemented through nongovernmental organizations (Chisolm, 2019). The need for the implementation and maintenance of measurable objectives when assessing disparities and health equity-driven goals is another topic that many leading health care organizations are invested in.

Healthy People 2030 has expressed interest in strengthening the link between performance measurement and addressing social risks (APHA, 2019). The APHA also highlights the importance of measurement-oriented initiatives in decreasing health disparities. Researchers find that creating approaches with operational objectives can help health care organizations clearly assess whether they are on track to meet health equity goals at various levels (individual, community, state, national).

In 2017, the Health and Public Policy Committee at the American College of Physicians recommended that health care organizations adjust performance measures to reflect risks in caring for disadvantaged populations (Daniel, 2018).

COVID-19

The COVID-19 pandemic accentuates the need to address health disparities and underscores that living in an underserved environment and facing social adversity correlates directly to biased rates of infection and poor health outcomes (Holuka, 2020). Early studies show that several groups are at increased risk of contracting COVID-19 and dying from the coronavirus, including individuals aged 65 and older, racial and ethnic minorities and groups from economically depressed communities (Hatcher, 2020; Kim, 2020).

The pandemic has also shed light on disparities in emergency department (ED) utilization. In a study of individuals who tested positive for COVID-19 in the ED, 65.3% of Black patients tested positive and 38.0% of White patients tested positive (Price-Haywood, 2020). Data gathered from the California Department of Public Health reveals that racial and ethnic minorities are disproportionately diagnosed with COVID: Latinos make up 39% of California's population but account for 61% of the state's COVID-19 cases, while Whites make up 38% of the state's population and account for only 18% of cases (CDPH, 2020).

Financial impact

Health disparities place a considerable economic burden on society. Total overall costs of health inequities and premature deaths between 2003 and 2006 amounted to \$1.24 trillion (AHPA, 2019). Experts estimate that eliminating health disparities during this time frame would have reduced this cost by \$229.4 billion (LaVeist, 2009).

State and local-level analyses similarly reveal the potential economic impact of eliminating disparities; researchers found that of the \$525 million North

Carolina’s state Medicaid program spent for diabetes-related services in 2008, it could have saved approximately \$225 million in costs linked to diabetes services if racial and economic disparities were eliminated (Buescher, 2010).

Health disparities also have a direct impact on the economy due to the disruption to daily lives, loss in labor productivity and premature death (Thornton, 2016). The Government Accountability Office found that an increased prevalence of chronic conditions such as heart disease and cancer among Blacks and Hispanics has led to notable decreases in average household earnings, in addition to a weakened ability to afford health care (Suthers, 2008).

Impact on the individual

Constant interaction with adverse social risk factors can take a considerable toll on well-being. A national geographic analysis of life expectancy by ZIP code found that in the city of Chicago, life expectancy differed by as much as 30 years, depending on the neighborhoods reviewed (Gourevitch, 2018; Healthy Chicago 2.0, 2020; Cohen, 2016). Similar life expectancy differences were found in cities across the United States: Residents living mere miles apart were found to have vastly different socioeconomic experiences, which mapped onto health disparities and life expectancy trends. Individuals living in neighborhoods with higher life expectancies were more likely to have higher average incomes, access to transportation, successful schools, high-quality medical facilities, access to nutritious food and clean water sources, and to live in communities that invested in social services (Chetty, 2016; Hacke, 2017; Gourevitch, 2018). Several studies have noted that areas with a deep investment in these services tend to coincide with better access to health care services and better individual and public health outcomes (Dwyer-Lindgren, 2017).

Data Availability and Use (Race, Ethnicity and Social Needs)

Although the importance of addressing health disparities is apparent, challenges remain, including how to accurately and feasibly identify race, ethnicity and social needs for the purposes of equitable quality measurement. Some data elements may be more readily available than others, some data sources may demonstrate greater accuracy than others. Below is an analysis of the availability of race, ethnicity and social needs data in administrative claims and electronic health records (EHR) and via community-level proxies.

Administrative Data

Race and ethnicity

There are a number of challenges associated with collecting complete and accurate race and ethnicity data.

Lack of standardized race and ethnicity categories has been identified as a key barrier to widespread collection and utilization of this data, as noted in the Institute of Medicine’s landmark report, *Race, Ethnicity, and Language Data Standardization for Health Care Quality Improvement*.

Additional barriers identified included technical challenges such as space on collection forms and accessibility of fields in electronic systems to collect such information, discomfort with asking or responding to questions of race and ethnicity and a lack of sufficiently descriptive categories for patient self-identification (Institute of Medicine, 2009).

Analysis of RDM measure data from 2012–2015 found that data was most complete for Medicare plans and was least complete for commercial plans. Roughly 40% of Medicare plans reported complete race data% compared to less than 20% for Medicaid and commercial plans.

All product lines reported less than 20% complete ethnicity data. The majority of Medicaid and Medicare plans reported using direct methods of collecting race and ethnicity data; commercial plans used indirect methods (Ng et al., 2017).

In 2020, a CMS analysis of Medicaid and CHIP beneficiary enrollment data from 2016 found that the majority of states had incomplete race and ethnicity data. Despite regulations requiring states to report race and ethnicity data on all (or almost all) beneficiaries, the analysis found that only 21 states reported having race and ethnicity data for greater than 90% of beneficiaries (State Health Access Data Assistance Center, 2020).

Beyond the issue of completeness, there is evidence to suggest variable accuracy of race and ethnicity in administrative data. Discrepancy in accuracy of data between racial and ethnic groups may limit the ability to accurately measure disparities in care. Analysis of race/ethnicity in Medicare administrative data, compared to self-reported race/ethnicity in the home health Outcome and Assessment Information Set (OASIS), found that data was considerably more accurate for White and Black beneficiaries than for Hispanic, non-Hispanic Asian, Hawaiian Native, other Pacific Islander, American Indian or Alaskan Native.

The sensitivity of administrative data to accurately identify race and ethnicity among White and Black beneficiaries was between 96% and 98%. Among people who self-identified as Hispanic, the data had a sensitivity of just 36.2%; it was 62.6% for those identifying as non-Hispanic Asian, Hawaiian Native or other Pacific Islander and approximately 43% for those identifying as non-Hispanic American Indian or Alaskan Native (Jarrín et al., 2020). Multiple studies have observed a similar pattern of under-identification or misclassification of smaller racial and ethnic groups in Medicare administrative data (Filice & Joynt, 2017; Smith et al., 2010; Zaslavsky et al., 2012).

Social needs

Documentation of social needs in administrative claims is increasing but remains uncommon.

In 2016, Medicare introduced “z-codes,” a set of ICD-10 diagnosis codes related to SDOH. Z-codes are designed to capture social factors that influence a patient’s health status, including, but not limited to, socioeconomic and psychosocial circumstances (CMS, 2020).

Analysis of z-code utilization among Medicare fee-for-service (FFS) beneficiaries found that among 33.7 million total beneficiaries in 2017, approximately 1.4%% had claims with documented z-codes. The most commonly used z-codes were for homelessness, problems related to living alone, disappearance or death of a family member, problems related to psychosocial circumstances and problems in relationships with a spouse or partner.

The analysis concluded that the data likely underestimates patient social needs among Medicare FFS beneficiaries and that although SDOH screening may

occur, the extent to which patient social needs are being documented in claims is unclear (CMS, 2020).

Another study examining z-code utilization from 2016–2017 using the National Inpatient Sample, a publicly available, all-payer, inpatient care database, resulted in similar findings. Of over 14 million hospitalizations, just 1.9% included a z-code. The study concluded that z-codes are not an accurate representation of the true burden of social needs among hospitalized patients (Truong et al., 2020).

There are some important considerations in evaluating the appropriateness of relying on claims to identify, prioritize and address social needs across a population. The effort of Gottlieb and colleagues to map social screening tools to existing z-codes revealed challenges: There may not be a social code that appropriately matches to an identified need; multiple social codes may apply; meaning may be lost in selecting a particular social code (Gottlieb et al., 2017). For example, because “lack of adequate food or safe drinking water” collapses several distinct social needs, meaning may be lost when attempting to understand and address population-level needs.

Despite the low utilization and limitations of ICD-10 social codes, efforts are underway to increase utilization and usefulness of SDOH documentation in claims.

- In 2019, the American Hospital Association released *ICD-10-CM Coding for Social Determinants of Health* in an effort to increase utilization of z-codes (American Hospital Association, 2019).
- The American Medical Association, in partnership with UnitedHealthcare, announced the desire to expand the existing set of z-codes to increase specificity and allow more accurate documentation of patient social needs (American Medical Association, 2019).

Indirect (proxy) data

Due to the limited availability of both race/ethnicity and social needs data in administrative claims, a common alternative approach is to identify demographic information and social needs using a community proxy, such as aggregated geographic-level data from national surveys or data sources like the U.S. Census Bureau. In this approach, community-level data (e.g., census block, ZIP code) may be used to attribute a characteristic to a patient who resides in that location. For example, each year, CMS releases a report of racial and ethnic health disparities in Medicare Advantage, using HEDIS and Consumer Assessment of Healthcare Providers and Systems (CAHPS^{®2}) data. Because HEDIS data is not currently available by race/ethnicity, CMS combines residential location and surname to indirectly estimate race and ethnicity (CMS, 2020; Elliott, 2008). The method has shown 93% concordance for White and Black beneficiaries, 94% for Asian/Pacific Islander and 95% for Hispanic beneficiaries (Martino et al., 2013).

In 2009, the Institute of Medicine recommended that in cases where race and ethnicity data is unavailable, organizations should use indirect estimation to support analyses of race and ethnic disparities (IOM, 2009).

The National Quality Forum (NQF) recommends that organizations use proxy data from geocoding, surname analysis and Bayesian estimation when

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conducting community-level interventions, but notes that such data is limited when conducting individual-level interventions (NQF, 2008).

Analysis of studies combining clinical and nonclinical determinants of health (e.g., SES, built environment, social circumstances) found a four-fold increase in the number of articles in this space between 2010 and 2018. Among studies included in the review, 50% measured nonclinical determinants at the aggregate (i.e., geographic) level. Analysis found that geographic areas smaller than a ZIP code were commonly used and the majority of studies (81.7%) relied on U.S. Census Bureau data (Golembiewski, 2019).

Researchers have cited risks associated with relying on community-level data to impute an individual attribute; for example, community-level data is subject to ecological fallacy—an individual in a particular neighborhood may not match the overall attributes of that neighborhood (Gottlieb, 2018). Further, there may be concerns with the timeliness of national data sources (Cantor et al., 2018; Boudreaux, 2015). Examples of studies illustrating the advantages and disadvantages of relying on community-level proxies to impute social needs are provided below.

Leveraging national survey data to assign demographic and social characteristics has shown to have high feasibility and utility (Hatef, 2019; ACS, 2018). The American Community Survey (ACS), a national survey of 3.5 million households across the country fielded by the U.S. Census Bureau, is the predominant source. ACS survey results are used to direct over \$675 billion in federal and state funds each year. In one study, data from the ACS, along with data from the National Vital Statistics System and Behavioral Risk Factor Surveillance System, was used to implement the City Health Dashboard. The Dashboard used the census tract area to display 35 measures of health and social factors in order to inform city health equity initiatives. It included stratification of clinical measures (by gender, geography and race/ethnicity) and direct measures of inequity (e.g., measuring racial/ethnic diversity and neighborhood racial/ethnic segregation).

Another study documented creation of an aggregated dataset of community-level SDOH derived from open-source data sets. Called the “Factors Affecting Communities and Enabling Targeted Services (FACETS)” database, the system was designed to map individual addresses to their corresponding census-tract level determinants. The ACS was the primary data source for FACETS. ACS-derived data included racial diversity, ethnic diversity, educational attainment and poverty rate, among other national and state-level data sources (Cantor, 2018).

Researchers have also noted challenges to using national datasets for this purpose:

- Different data sources may link data elements at different geographic levels that may not align with each other or with policy-maker priorities (e.g., countywide metrics are not likely to align with municipal or city boundaries).
- National datasets refresh infrequently; consequently, indicators may lag behind population change.
- Estimates from national sources may lack precision at the community level and might be interpreted as meaningful signals (Gourevitch, 2019).

Researchers also cautioned about challenges mapping between census years, when census tracts may change. They also note that mapping individual street addresses to geographic groupings presents challenges, noting that misspellings, or duplicate street addresses in different areas, can generate error.

SDOH mapping at the community level has limitations, particularly in the context of the National Academy of Medicine and others emphasizing the importance of individual-level SDOH over community-level SDOH, which can have a significant impact on care because they function as the “back end” of the health care system (Cantor, 2018).

EHRs

EHR systems represent an opportunity to capture and utilize rich patient-level demographic and social needs data. The Office of the National Coordinator for Health IT’s most recent certification criteria for Certified Electronic Health Record Systems requires that systems be able to collect structured information related to patient demographics (including race/ ethnicity and preferred language) as well as social, behavioral and psychological data, including, but not limited to, financial resource strain, education and social circumstances (ONC, 2015).

Although evidence indicates that demographic data is routinely documented in EHR systems, there remains considerable variability in how patient social needs are screened for and documented in EHR systems. A study of EHR data for over 5 million patients seen in a multi-level health care system in Maryland found that ZIP code was documented for 95% of patients, race for 90% of patients and ethnicity for 50% of patients. By contrast, less than 1% of patients had data related to a social need documented in structured fields (Hatef et al., 2019).

Barriers to documentation of SDOH in EHR systems include variability in availability of structured screening tools in each system and lack of staff training on screening for and documenting SDOH in the EHR. Variation in availability of structured SDOH fields may be attributed in part to EHR vendor preferences and priorities. A qualitative study of EHR vendor perspectives on and approaches to SDOH data collection in EHRs revealed that EHR vendors are actively investing in SDOH products, but vendors also highlighted that lack of standardization in SDOH screening instruments may lead to variation in how they approach SDOH data collection (Freij et al., 2019).

Further variability is introduced in how—and if—clinicians document social needs, from screening tools to EHR fields. A study analyzing the feasibility of implementing an EHR-based SDOH screening tool found that clinicians may face challenges in screening for and documenting social needs due to a lack of sustainable resources to manage the follow-up workload involved in linking patients with SDOH needs to appropriate resources (Gold et al., 2018).

Current State of SDOH and Equity in Policy and Measurement

National

A number of national programs have made efforts to highlight disparities in care and encourage collection of data to address SDOH. Notably, in August 2020, the CDC released the new set of Healthy People 2030 objectives that includes a set of objectives related to SDOH across five domains: Economic Stability,

Education Access and Quality, Health Care Access and Quality, Neighborhood and Built Environment and Social and Community Context (CDC, 2020).

In 2020, the American Medical Association (AMA) adopted a new policy that seeks to actively dismantle racism in the United States health care system, noting that racism at the interpersonal, cultural and systemic levels have perpetuated health inequities and continue to harm historically marginalized populations. Through this policy, the AMA plans to actively and strategically work with internal and external stakeholders to propel medicine toward anti-racism (AMA, 2020).

Each year, CMS releases its annual Racial, Ethnic, and Gender Disparities in Health Care in Medicare Advantage report, which highlights measures for which performance is worse for Black, Hispanic, American Indian or Alaska Native and Asian or Pacific Islander beneficiaries compared to White beneficiaries (CMS, 2020). CMS also maintains the eCQM measure set, which must be reported with supplemental data including race, ethnicity, payer and sex (Electronic Clinical Quality Improvement Resource Center, 2020).

The Comprehensive Primary Care+ (CPC+) program, a national advanced primary care medical home model with 2,783 practices and 52 payers participating as of 2020, requires practices to “identify patients’ high priority health-related social needs and resources available in your community to meet those needs” (Center for Medicare and Medicaid Innovation, 2018).

State

Most states analyze and publicly report data on health disparities. States deploy varying approaches to measuring health equity, reporting a wide range of health indicators and relying on a multitude of national (e.g., ACS, National Vital Statistics System) and local (e.g., state surveys, local health departments) data sources.

The Center for Health Care Strategies conducted a qualitative study to understand the extent to which state Medicaid agencies collect SDOH data and how they use the data. Of 8 states interviewed, all collect data on housing and employment and 7 collect data on family and social supports (Center for Health Care Strategies, 2018). Increasingly, states are requiring Medicaid Managed Care Organizations (MCO) to address SDOH in their contracts (Kushner & McConnell, 2019).

Quality Measurement Organizations

Quality Measurement Organizations have recognized the importance of addressing equity through measurement of disparities and SDOH. In 2019, the NQF partnered with Aetna to issue a national call to action to address SDOH and convened a multi-stakeholder summit to develop a set of recommendations related to SDOH. Included was a call to “develop key sets of measures to incorporate and align social determinants of health measurement and activity across the health ecosystem” (National Quality Forum, 2019b). NQF has recently partnered with Humana to develop 3 new electronic quality measures related to food insecurity (National Quality Forum, 2019a).

NCQA also issues Health Plan Accreditation and administers the Patient-Centered Medical Home (PCMH) program. As a part of its Population Health Management (PHM) health plan Accreditation standards, entities must assess the characteristics and needs of their patient populations, including SDOH, and identify and offer community resources to meet those needs. The PCMH model requires practices to demonstrate that they have processes in place to collect data on patient social needs (NCQA, 2020).

Industry

There are multiple examples of innovative industry efforts to measure, report and use data to shine light on health disparities and equip communities with the information they need to address SDOH. Mathematica, Inc. developed the Community Connector tool in 2019, a data visualization tool that describes how a community looks in terms of SDOH across 6 domains.

The Robert Wood Johnson Foundation has also funded a number of innovative initiatives. For example, it has partnered with the University of Wisconsin Population Health Institute to maintain the County Health Rankings and Roadmaps program, an interactive tool that maps a range of clinical and social indicators, such as health behaviors, economic factors and physical environment in almost every county across the 50 states. The tool relies on data from a multitude of national data sets, such as the ACS and BRFSS. Many indicators in the tool are stratified by age, gender, race, education and/or income (Robert Wood Johnson Foundation, n.d.).

In 2018, the Foundation funded initiation of the Gravity Project by SIREN, which aims to standardize coded data elements used to document SDOH in EHRs across four activities (screening, diagnosis, planning, interventions) and three social risk domains: food insecurity, housing instability and quality, transportation access (HL7 International, n.d.).

Screening for SDOH

A growing number of guidelines and clinical practice policies in the U.S. relate to screening for social needs and link to resources. The AMA supports expanding access to SDOH screening tools, urges vendors to adopt SDOH templates and supports payment reform policy proposals that incentivize screening for SDOH and referral to community support systems (American Medical Association, 2019).

The American Academy of Pediatrics recommends screening children for social risk factors during all patient encounters, as well as partnering with community organizations, intervention programs and schools to link patients to needed resources (American Academy of Pediatrics, 2016).

In 2020, the U.S. Preventive Services Task Force released a review of its methods for developing primary care-based recommendations for SDOH. It outlined considerations for new approaches for addressing SDOH in future recommendations and concluded that further research on these proposed methodological changes could position the it to better integrate social risks into future preventive care recommendations (Davidson et al., 2020).

There is growing acknowledgment in the health care community of the need to identify and address social needs and health disparities. In 2017, the American Academy of Family Physician surveyed 5,000 family physicians and found that 83% agreed that family physicians should identify and help address patients' SDOH. 78% agreed they should partner with community organizations to address community health disparities (American Academy of Family Physicians, 2017).

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Appendix A: Guidelines, Position Statements and Recommendations

Clinical and Policy Practice Guidelines: Social Determinants of Health and Health Equity

Organization, Year	Recommendation	Grade
American Academy of Pediatrics, 2016	The AAP recommends surveillance for risk factors related to social determinants of health during all patient encounters. Practices can use a written screener or verbally ask family members questions about basic needs such as food, housing, and heat.	Not graded
American College of Physicians, 2018	<p>Policy Recommendations:</p> <ol style="list-style-type: none"> 1. The American College of Physicians supports increased efforts to evaluate and implement public policy interventions with the goal of reducing socioeconomic inequalities that have a negative impact on health. Supportive public policies that address downstream environmental, geographical, occupation, education, and nutritional social determinants of health should be implemented to reduce health disparities and encourage health equity. 2. The American College of Physicians recommends that social determinants of health and the underlying individual, communities, and systemic issues related to health inequities be integrated into medical education at all levels. Health care professionals should be knowledgeable about screening and identifying social determinants of health and approaches to treating patients whose health is affected by social determinants throughout their training and medical career. 3. The American College of Physicians supports increased interprofessional communication and collaborative models that encourage a team-based approach to treating patients at risk to be negatively affected by social determinants of health. 4. The American College of Physicians supports the adequate and efficient funding of federal, state, tribal, and local agencies in their efforts to address social determinants of health, including investments in programs and social services shown to reduce health disparities of costs to the health care system and agency collaboration to reduce or eliminate redundancies and maximize potential impact. 5. The American College of Physicians supports increase research into the causes, effects, prevention, and dissemination of information about social determinants of health. A research agenda should include short- and long-term analysis of how social determinants affect health outcomes and increased effort to recruit disadvantaged and underserved populations into large-scale research studies and community-based participatory studies. 6. The American College of Physicians recommends policymakers adopt a “health in all policies” approach and supports the integration of health considerations into community planning decisions through the use of health impact assessments. 7. The American College of Physicians recommends development of best practices for utilizing electronic health record (EHR) systems as a tool to improve individual and population health without adding to the administrative burden on physicians. 8. The American College of Physicians recommends adjusting quality payment models and performance measurement assessments to reflect the increased risk associated with caring for disadvantaged patient populations. 9. The American College of Physicians recommends increased screening and collection of social determinants of health data to aid in health impact assessments and support evidence-drive decision making. 	Not graded

Organization, Year	Recommendation	Grade
American Medical Association, 2019	<p>Expanding Access to Screening Tools for Social Determinants of Health/Social Determinants of Health in Payment Models H-160.896.</p> <p>Our AMA supports payment reform policy proposals that incentivize screening for social determinants of health and referral to community support systems.</p>	Not graded
American Public Health Association, 2019	<p>The APHA goal is for the United States to become the healthiest nation in a generation by 2030. To accomplish this goal, APHA calls for the conduct of eight science-based key actions:</p> <ul style="list-style-type: none"> • Build safe, healthy communities • Help all young children graduate from high school • Reverse growing income inequalities • Remove barriers to good health for everyone • Provide affordable, nutritious food for everyone • Effectively prepare for and respond to the health impacts of climate change • Provide quality health care to everyone • Strengthen public health infrastructure <p>Furthermore, considerable literature exists denoting additional specific strategies in smaller localities that have led to improvements in health equity through addressing the social determinants of health. These strategies include, but are not limited to, research strategies (such as community-based participatory research), housing program and policy strategies (such as tenant-based rental assistance programs), and educational program and policy strategies (such as center-based early childhood education, full-day kindergarten programs, and high school completion programs).</p>	Not graded
Institute of Medicine, 2009	<p>Recommendation 3-1: An entity collecting data from individuals for purposes related to health and health care should:</p> <ul style="list-style-type: none"> • Collect data on granular ethnicity using categories that are applicable to the populations it serves or studies. Categories should be selected from a national standard list (see Recommendation 6-1a) on the basis of health and health care quality issues, evidence or likelihood of disparities, or size of subgroups within the population. The selection of categories should also be informed by analysis of relevant data (e.g., Census data) on the service or study population. In addition, an open-ended option of “Other, please specify: ” should be provided for persons whose granular ethnicity is not listed as a response option. • Elicit categorical responses consistent with the current OMB standard race and Hispanic ethnicity categories, with the addition of a response option of “Some other race” for persons who do not identify with the OMB race categories. <p>Recommendation 3-2: Any entity collecting data from individuals for purposes related to health and health care should collect granular ethnicity data in addition to data in the OMB race and Hispanic ethnicity categories and should select the granular ethnicity categories to be used from a national standard set. When respondents do not self-identify as one of the OMB race categories or do not respond to the Hispanic ethnicity question, a national scheme should be used to roll up the granular ethnicity categories to the applicable broad OMB race and Hispanic ethnicity categories to the extent feasible.</p>	

Organization, Year	Recommendation	Grade
	<p>Recommendation 5-1: Where directly collected race and ethnicity data are not available, entities should use indirect estimation to aid in the analysis of racial and ethnic disparities and in the development of targeted quality improvement strategies, recognizing the probabilistic and fallible nature of such indirectly estimated identifications. Race and ethnicity identifications based on indirect estimation should be distinguished from self-reports in data systems, and if feasible, should be accompanied by probabilities. Interventions and communications in which race and ethnicity identifications are based on indirect estimation may be better suited to population-level interventions and communications and less well suited to use in individual-level interactions. An indirectly estimated probability of an individual's race and ethnicity should never be placed in a medical record or used in clinical decision making. Analyses using indirectly estimated race and ethnicity should employ statistically valid methods that deal with probabilistic identifications.</p> <p>Recommendation 6-3: Accreditation and standards-setting organizations should incorporate the variables of race, Hispanic ethnicity, granular ethnicity, and language need outlined in this report and associated categories (as updated by HHS) as part of their accreditation standards and performance measure endorsements. The Joint Commission, NCQA, and URAC should ensure collection in individual health records of the variables of race, Hispanic ethnicity, granular ethnicity, and language need as outlined in this report so these data can be used to stratify quality performance metrics, organize quality improvement and disparity reduction initiatives, and report on progress.</p>	Not graded
U.S. Preventive Services Task Force, 2018	The USPSTF recommends that clinicians screen for intimate partner violence (IPV) in women of reproductive age and provide or refer women who screen positive to ongoing support services.	B Recommendation

Grading System Key

U.S. Preventive Services Task Force: What the Grade Means and Suggestions for Practice

Grade	Definition	Suggestion for Practice
A	The USPSTF recommends the service. There is high certainty that the net benefit is substantial.	Offer or provide this service.
B	The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer or provide this service.
C	Clinicians may provide this service to selected patients depending on individual circumstances. However, for most individuals without signs or symptoms there is likely to be only a small benefit from this service	Offer or provide this service only if other considerations support offering or providing the service in an individual patient.
D	The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.	Discourage the use of this service.
I Statement	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.	Read the clinical considerations section of the USPSTF Recommendation Statement. If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.

Appendix B: Environmental Scan Methodology

To gain a broad understanding of efforts underway in the realm of SDOH and health equity, NCQA conducted an environmental scan in fall 2020. The intent was to inform recommendations on how to accurately identify SES, race, ethnicity and SDOH using available data sources.

Literature Review Steps

1. In the initial search and title review, NCQA identified 651 peer-reviewed and 100 gray literature sources. NCQA excluded 458 peer-reviewed and 41 grey literature sources.
2. During the abstract review phase, NCQA analyzed 193 peer-reviewed and 59 gray literature sources. NCQA excluded 151 peer-reviewed and 8 grey literature sources.
3. In the final found of review, NCQA analyzed 42 peer-reviewed and 33 gray literature sources in full. These sources constitute the reference points for our research questions.

Our key research questions were as follows:

1. What race, ethnicity and SDOH data is available via administrative claims, community-level proxies and EHR? What is the feasibility, validity and reliability of that data?
2. What health outcomes show the greatest disparities by socioeconomic status? What health disparities are the highest policy priorities?
3. What is the current state of race, ethnicity and SDOH in quality measurement?
4. What are potential unintended consequences of measuring or reporting disparities in quality of care?