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Signature Leadership Series

A Framework for Stratifying Race, Ethnicity and Language Data

October 2014

Equity of Care

Suggested Citation: Health Research & Educational Trust. (2014, October). *A framework for stratifying race, ethnicity and language data*. Chicago, IL: Health Research & Educational Trust. Accessed at www.hpoe.org

Accessible at: www.hpoe.org/stratifyingdata

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Acknowledgments

The Health Research & Educational Trust, along with the Hospitals in Pursuit of Excellence team, would like to acknowledge the following individuals for their invaluable assistance and contributions to producing this guide.

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Table of Contents

Executive Summary....4

Introduction....5

Stratification Framework....6

Step 1: Assemble a working group that is focused on health care disparities data....6

Step 2: Validate the REAL data....7

Step 3: Identify the highest priority metrics for stratification....7

Step 4: Determine if stratification is possible on the selected metrics....8

Step 5: Stratify the data....8

Conclusion....12

Endnotes....13

Additional Resources....14

Executive Summary

Eliminating health care disparities is essential to improve quality of care for all patients. Hospitals and care systems are working to ensure every patient receives high-quality care. In addition, value-based purchasing and pay-for-quality programs necessitate that hospitals and care systems improve patient outcomes. One step in addressing health care disparities and improving patient outcomes is stratifying patient data by race, ethnicity and language data.

By collecting and stratifying patient race, ethnicity and language (REAL) data, hospitals and care systems can identify which, if any, health care disparities exist—and then target interventions to address the disparities. Hospitals and care systems that understand their patient populations and work to make quality improvements across individual patient groups will improve their overall performance.

This guide provides a framework that allows hospitals and care systems to stratify patient data for the purpose of identifying health care disparities. This framework includes five steps.

Five-step Framework for Stratifying REAL Data

1. Assemble a working group that is focused on health care disparities data
2. Validate the REAL data
3. Identify the highest priority metrics for stratification
4. Determine if stratification is possible on the selected metrics
5. Stratify the data

Source: American Hospital Association, 2014.

Each hospital or care system can approach stratifying data differently; however, the general framework for the stratification effort is similar.

Hospitals and care systems can develop dashboards to report stratified REAL data by readmissions, patient satisfaction and hospital core measures. Discussing these dashboards in regularly scheduled quality meetings allows leadership to continuously address gaps in care and work to eliminate disparities. Eliminating health care disparities will improve scores for all patient groups and, in turn, improve overall hospital performance.

Introduction

The purpose of this guide is to provide a framework that allows hospitals and care systems to stratify patient data for the use of identifying health care disparities. Each hospital or care system can approach stratifying data differently; however, the general framework in approaching the stratification effort is similar. Successful stratification involves an organized approach that uses validated data in a collaborative manner.

Racial and ethnic minorities are projected to account for a majority of the U.S. population by 2043, and the future market for health care services inevitably will reflect this change.[1] In addition, the next generation of health care consumers will be increasingly empowered to differentiate providers based on publicly available quality and satisfaction measures. Hospitals and care systems that can accommodate the unique needs of diverse populations will be well positioned for future success. One way to achieve this goal is to collect and use race, ethnicity and language (REAL) data in a meaningful way to understand and address health care disparities among various racial and ethnic groups.

The collection and use of REAL data is part of a larger effort surrounding the use of health care disparities information. The Health Research & Educational Trust and the Institute for Diversity in Health Management found that 95 percent of hospitals collect REAL data; however, only 22 percent use the data in their hospital's decision making.[2] As hospitals strive for continuous quality improvement, the use of REAL data can help hospitals identify where their quality efforts are effective and where opportunities for improvement remain. Use of this existing data can help hospitals to ensure that the care they provide is tailored to the individual needs of their patients.

The use of REAL data involves the practice of stratification. Data stratification is the process of analyzing available data to identify quantitative trends, results and areas in need of quality improvement. To perform stratification, a hospital computes separate performance scores on quality, access or other metrics of interest by the race, ethnicity and language of its patients. For example, a hospital could calculate readmission scores for its English and non-English speaking patients.

By stratifying REAL data, hospitals and care systems can identify which, if any, health care disparities exist. A hospital or care system then can target interventions to those populations with lower quality metrics in order to improve overall quality outcomes and reduce care disparities. Without data stratification, these disparities cannot be properly targeted and addressed. As hospitals seek to understand the needs of the communities they serve, this use of REAL data will provide a more comprehensive look.

Stratification Framework

Stratifying patient data requires an organized, comprehensive planning framework that promotes collaboration across several hospital departments. Before implementing a framework, it is essential to have senior leadership buy-in. With this support, the organization can make changes that address identified health care disparities. Moreover, the trend data resulting from stratification will inform hospital strategic planning and resource allocation. Therefore, an organized framework is necessary to ensure stratification efforts result in reliable and valid conclusions about disparities in a hospital's care.

Stratified data are essential to identifying health care disparities, and these data must be presented in a format that allows hospital leadership to quickly identify and understand gaps in care. For example, many hospitals and care systems develop dashboards that stratify REAL data by clinical and operational metrics. It should be noted that when working with special patient populations, such as pediatric patients and lesbian, gay, bisexual and transgender (LGBT) patients, data collection and analysis are more complex.

Hospital leadership can follow a five-step framework to help facilitate a stratification effort, with several actions needing completion before advancing to the next step.

Five-step Framework for Stratifying REAL Data

1. Assemble a working group that is focused on health care disparities data
2. Validate the REAL data
3. Identify the highest priority metrics for stratification
4. Determine if stratification is possible on the selected metrics
5. Stratify the data

Source: American Hospital Association, 2014.

Step 1: Assemble a working group that is focused on health care disparities data

A health care disparity working group would be charged with assessing the organization's REAL data quality; developing and implementing policies related to registration, data collection and clinical care; and enhancing the collection of REAL data through education and training.

This working group should include leaders from hospital departments that collect REAL data, produce analytics, perform quality improvement and are engaged in community outreach efforts. Involving staff from departments related to diversity, data, analytics, patient safety, information technology, quality/performance improvement, patient experience, corporate auditing and finance in discussions will create a more comprehensive plan.

Here is a sample of key areas from which individuals can be assembled for an effective working group.

- Diversity and inclusion
- Quality and safety
- Information and technology
- Data analytics
- Language services
- Admitting and registration
- Compliance
- Community outreach

Step 2: Validate the REAL data

Stratification based on reliable and valid data can lead to the discovery of trend data and health care disparities. The first task of the working group is to conduct a thorough assessment of the quality of the existing patient data as it relates to race, ethnicity and language metrics. The working group should examine the following:

1. Accuracy – Are the data self-identified and correctly recorded? Data can be self-identified by the patient or by the registration staff. Are there differences in categorization among data sources? Addressing these questions will help ensure that the data are accurate, which is critical as the working group begins to think through use and stratification of these data.
2. Completeness – Are race, ethnicity and language data captured across all service areas? What is the percentage of unknown, other or declined data? A robust data set will present opportunities to do more with the data as the hospital begins to stratify. It also will help address care disparities across the organization as a whole.
3. Uniqueness – Are individual patients represented only once? Are there multiple points where the data might be collected or recorded? How are the data consolidated? Making sure that a complete and thorough process is in place will prevent duplication of collected data or inefficiencies in the collection, which is important for the current and the ongoing processes.
4. Timeliness – Are the data kept up to date? How often are the data updated? Sustainability of this information will best ensure this is not a one-time effort but something that will continually benefit the organization and quality improvement efforts.
5. Consistency – Are the data internally consistent, and do the data reflect the patient population served? A final or continual check of data will further refine and improve any system in place for this work.

The working group should explore the quality of the REAL data, how the data are housed and how the hospital or care system staff is collecting the data. By answering the above questions, gaps in the data collection and consolidation process may be identified and then addressed.

Validating the REAL data is an essential step in ensuring the stratification is accurate. Once the data are validated, the next step is to connect the REAL data to outcomes such as patient satisfaction, patient experience, clinical care processes, hospital core measures and readmissions. This can provide insight into a variety of health care disparities that might have gone unnoticed.

Step 3: Identify the highest priority metrics for stratification

It is important for hospitals and care systems to strike a balance between inpatient and outpatient metrics as well as balance among the services offered by the hospital. A balance will provide a more complete picture of the possible health care disparities in the organization. In the beginning, the stratification effort should address certain basic clinical and patient satisfaction data. For example, when considering patient satisfaction, one might start by analyzing HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems) scores by ethnicity.

The hospital or care system may already have certain priority areas where improvement efforts are underway. But has the organization assessed whether there are disparities existing in these areas based on REAL data? If not, then perhaps these disparities are contributing to the low quality scores. The goal of Steps 2 and 3 is to complete an exhaustive assessment of all available data points and identifying quality metrics. Starting in certain areas will help the organization understand how to stratify the data and ensure the data set is good. From there, the organization can build into other areas.

Table 1 provides examples of metrics that can be considered when identifying specific data elements.

Table 1. Quality metrics and data elements to consider

Quality Metric	Data element to stratify
Clinical • Hospital inpatient quality reporting (IQR) measures (i.e., "core measures") • 30-day readmissions **Patient Satisfaction** • HCAHPS scores **Cost and Efficiency** • Medicare Spending per Beneficiary	**Demographic** • Age • Gender • Race • Ethnicity • Language preference • Language proficiency

Source: American Hospital Association, 2014.

Step 4: Determine if stratification is possible on the selected metrics

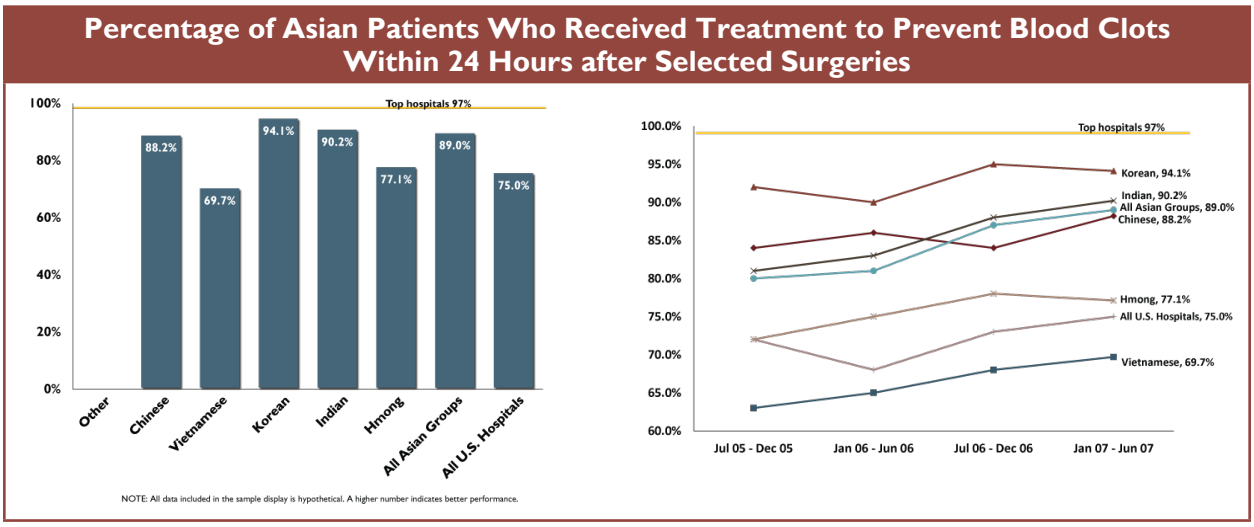
In some cases, it may not be feasible to stratify a metric of interest. For example, the data may be collected in an inconsistent format. If the REAL data quality requires improvement, consider focusing on strategies to collect the data more effectively before stratifying. This can include training front-line staff, conducting quality checks on registration processes, addressing technology barriers and educating patients about why REAL data are collected. If the REAL data quality is good, consider moving forward with stratifying the data.

There also may be instances where there are insufficient data to stratify results on a metric. For example, a hospital attempting to stratify one of its HCAHPS survey questions by the proportion of English, Spanish and Portuguese speakers may find that out of 100 patients, only two are Portuguese speakers. This would likely not provide sufficient data to identify a disparity for Portuguese-speaking patients. The hospital could attempt to overcome this issue by aggregating more data and reanalyzing in the future.

Step 5: Stratify the data

Stratifying valid and reliable data elements allows for the creation of dashboards that display data trends and health care disparities. Incorporating these dashboards into regularly scheduled quality meetings is essential to continually address health care disparities related to REAL data. Figures 1 through 5 display samples of different dashboards that stratify REAL data by readmissions, patient satisfaction and hospital core measures.

Figure 1. Dashboard displaying the association between racial subgroups and post-surgery patient safety measures



Source: Adapted from the Weinick et al., 2008.

Figure 2. Dashboard displaying race and ethnicity associated with 30-day readmissions

30-day Readmissions	White	Hispanic	African-American	American Indian	Asian	Unknown/ Other	Overall
Overall rate	##.#%	##.#%	##.#%	##.#%	##.#%	##.#%	##.#%
Overall volume	#	#	#	#	#	#	#
Heart failure rate	##.#%	##.#%	##.#%	##.#%	##.#%	##.#%	##.#%
Heart failure volume	#	#	#	#	#	#	#
AMI rate	##.#%	##.#%	##.#%	##.#%	##.#%	##.#%	##.#%
AMI volume	#	#	#	#	#	#	#
Pneumonia rate	##.#%	##.#%	##.#%	##.#%	##.#%	##.#%	##.#%
Pneumonia volume	#	#	#	#	#	#	#
COPD rate	##.#%	##.#%	##.#%	##.#%	##.#%	##.#%	##.#%
COPD volume	#	#	#	#	#	#	#

Source: AnMed Health, 2014.

Figure 3. Dashboard displaying language services by inpatient and outpatient services

Language Services	Outpatient Services	Inpatient Services	Total
Other	##.#%	##.#%	##.#%
Spanish	##.#%	##.#%	##.#%
Vietnamese	##.#%	##.#%	##.#%
Sign Language	##.#%	##.#%	##.#%
Arabic	##.#%	##.#%	##.#%
Chinese/Mandarin	##.#%	##.#%	##.#%
German	##.#%	##.#%	##.#%
Russian	##.#%	##.#%	##.#%
Farsi (Persian)	##.#%	##.#%	##.#%

Source: AnMed Health, 2014.

Figure 4. Template dashboard displaying race and ethnicity by HCAHPS score

HCAHPS (Inpatient)	Non-Hispanic White N=	Hispanic N=	Black/ African-American N=	Asian N=	American Indian N=	Pacific Islander N=	Multiple Races N=
Overall rating	#	#	#	#	#	#	#
Overall hospital recommendation	#	#	#	#	#	#	#
Nurse communication	#	#	#	#	#	#	#
Doctor communication	#	#	#	#	#	#	#
Quiet at night	#	#	#	#	#	#	#
Room cleanliness	#	#	#	#	#	#	#
Pain control	#	#	#	#	#	#	#
Medication information	#	#	#	#	#	#	#
Discharge information	#	#	#	#	#	#	#
Staff responsiveness	#	#	#	#	#	#	#

Source: Massachusetts General Hospital, 2014.

Figure 5. Template dashboard displaying race/ethnicity by the Healthcare Effectiveness Data and Information Set (HEDIS) Quality Indicators

HEDIS Quality Indicators, 2010–2012

	Race/Ethnicity									
	White		African-American		Hispanic		Asian		Other (excludes unknown)	
	N	%	N	%	N	%	N	%	N	%
Preventive Screening										
Breast cancer screening (women 42–74 years old)										
Physician linked										
Practice linked										
Cervical cancer screening (women 21–64 years old, excluding those with total hysterectomy)										
Physician linked										
Practice linked										
Colorectal cancer screening (individuals 52–75 years old)										
Physician linked										
Practice linked										
Prostate cancer screening (men 52–69 years old)										
Physician linked										
Practice linked										
Diabetes Care										
Any LDL cholesterol test within the last year										
Physician linked										
Practice linked										
Any HbA1c test within the last year										
Physician linked										
Practice linked										
Coronary Artery Disease										
Any LDL cholesterol test within the last year										
Physician linked										
Practice linked										

Source: Massachusetts General Hospital, 2014.

Conclusion

As hospitals and care systems work to improve quality of care and prepare for coming changes in the health care field, the ability to fully understand their patient populations and communities is critical. Collecting and using race, ethnicity and language data will help hospitals and care systems understand their patient populations and address health care disparities. While many hospitals are successfully collecting REAL data, fewer are effectively stratifying the data to shed light on health care disparities.

Stratifying REAL data is part of a larger effort surrounding the use of health care disparities information With these data, hospitals and care systems can effectively target interventions. To use REAL data for stratification on an ongoing basis, it is imperative that the hospital culture emphasize utilizing quantitative data to identify disparities in care and to provide insights on the hospital's performance as it relates to serving its diverse patient population.

Stratification using REAL data requires collaboration across different hospital departments to assess the quality and validity of the data and create a more comprehensive plan. Implementing a structured process to begin using these data for strategy also requires strong support from leadership. The framework provided in this guide is a generalized approach to the stratification of REAL data for hospitals and care systems. Stratifying REAL data is part of a greater process of eliminating health care disparities and, in turn, improving patient outcomes and overall hospital performance.

Endnotes

1. The United States Census Bureau. (December 12, 2012). *U.S. Census Bureau projections show a slower growing, older, more diverse nation a half century from now*. Retrieved from https://www.census.gov/newsroom/releases/archives/population/cb12-243.html

2. Health Research & Educational Trust. (2014, June). *2013 Diversity and disparities survey: A benchmark study of U.S. hospitals*. Chicago, IL: Health Research & Educational Trust. Accessed at http://www.hpoe.org/resources/hpoehretaha-guides/1634

Additional Resources

American Hospital Association and partners. Equity of Care website. www.equityofcare.org.

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