On the Journey Toward Health Equity: Data, Culture Change, and the First Step

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The stark manifestations of racism and health inequity in 2020 have prompted leaders at Intermountain Healthcare to commit to a journey that addresses conditions coursing through the greater society, as well as within their own organization. They acknowledge a need to focus on areas beyond the traditional health system operation playbook. As they work to develop a new organizational culture, they are applying their experience in data collection and analysis to quickly identify instances of inequity, develop targeted solutions, track the data to assess the response, and change the culture. Early efforts using dashboards and run charts show promise, but the authors recognize that these are first steps — and there will be missteps — along this journey.

In the spring of 2020, when Covid-19 emerged in Utah, we did not need detailed benchmarked data to notice the disproportionate burden of disease. As we took care of patients with Covid-19 in the Respiratory ICU at Intermountain Medical Center, we, like every other health care worker across the country, noticed that nearly half of the patients were Hispanic, Spanish-speaking, and/or not white. As physicians, we were upset about the inequity. What was not clear was what we could actually do to address it. In May 2020, the murder of George Floyd horrified and shocked us and increased the urgency of our need to act. We started talking about what our roles are — as individuals and as an organization — to address racism.

Starting on the Journey Toward Equity

By September 2020, we at Intermountain Healthcare had adopted equity as both one of our fundamentals of extraordinary care and explicitly as one of the named values in our mission, vision, and values. We are building the organizational structure that will undergird this work,
including hiring an advocate for equity and inclusion as well as initiating a national search for a Chief Equity Officer and both a Senior Medical Director of Equity and Inclusion and a Senior Nursing Director of Equity and Inclusion.\textsuperscript{1} Health care leaders in Utah joined hospital systems across the United States to declare systemic racism a public health emergency.\textsuperscript{2} We aim to achieve transformational change; however, not everyone was ready for this change.

“I don’t see why Intermountain is wasting money on a chief equity officer when we don’t have a problem with racism,” said one physician. Even some who were supportive of the equity commitment were hesitant: “We should wait for the chief equity officer to set the system strategy, so we have an organized response,” others asserted, as we started the initial efforts into looking at our data.

It was clear that different people had different perspectives on whether, or to what extent, inequity exists, broadly or within their own workplace environment. But if we agree that equity is important, and if we agree that objective data can help us discover the presence of inequity and create opportunities for analysis to determine how and why that inequity is occurring, then we have made a solid start in creating a structure that will enable us to meet our overarching mission of helping people live the healthiest lives possible.

Meanwhile, we were learning from other organizations further along in this journey who already had chief equity officers in place: They were not reporting this single intervention to be a panacea for addressing health inequity and structural racism. In fact, questions about reporting structure and how to empower a chief equity officer became more urgent as Diversity, Equity, and Inclusion leaders at other organizations were encountering barriers.\textsuperscript{3–7} Clearly, a Chief Equity Officer was necessary to advance equity, but simply hiring one was far from sufficient.

\textbf{Dashboards in Equity Through Quality, Safety, and Experience Data}

At Intermountain, we, like many other organizations, are learning how to understand, find, and reduce health inequities. We have a rich history and experience in understanding, tracking, and improving health care quality and delivery. We are modeling our approach to equity on our health care improvement work.

First, we needed to define what success looked like. What specific and measurable goals would we set? And how could we engage everyone in the work?

\begin{quote}
\textit{Given our demographics, it was important to use an integrated race and ethnicity variable to increase our ability to detect disparities on the basis of race and ethnicity.}
\end{quote}

Our first system goals around equity set out to examine our existing key performance indicators through disaggregated race, ethnicity, sex, language, and other equity data. These goals cascade
through service lines and subservice lines, facilities, hospital units, clinics, and all areas of our organization. Every leader could look at their area and their important outcomes (or key performance indicators) and not only assess how they were performing on those indicators, but also, by using race, ethnicity, sex, or other equity disaggregated data, look for disparities in their outcomes.

These goals were specific, yet flexible, and facilitated participation at all levels within the organization. Individual clinics already working on access could now begin to examine how access looked for patients of different races or ethnicities. Our hospital-based teams could look at whether health outcomes we already benchmark (Vizient Clinical Data Base/Resource Manager), such as heart failure readmissions, sepsis mortality, or postsurgical complications, differed on the basis of patient race, ethnicity, or other available equity variables. Teams began to examine their ongoing initiatives and interventions with an eye to assessing whether these interventions were widening or narrowing discrepancies in health outcomes.

Thus, we began developing equity dashboards and adding demographic slicers to existing clinical dashboards. The most obvious place to start was to build a dashboard that looked at existing metrics by the equity variables we had: namely sex, race, and ethnicity. We built dashboards that could look at these equity variables in the important outcomes that we used to assess our performance. We added options to be able to select patients on the basis of service lines or subservice lines and location to help facilitate understanding of which teams within our matrixed organization are accountable for the care and clinical outcomes and thus, would be best suited to bring forth insights from the data.

Figure 1 is an example of the Vizient Outcomes dashboard that shows health outcomes (observed mortality, risk adjusted mortality index, and length of stay, for example) that we can assess by diagnosis codes (Medicare Severity Diagnosis Related Group); clinical service lines; facilities; and operating lanes, such as ED, Critical Care, and Medical-Surgical (Hospitalist).

Similar dashboards were developed in other areas, looking at telehealth access, obstetric outcomes, and pediatric outcomes. These dashboards were our first systematic examinations for disparity. We could see the relative proportion of patients we were serving on the basis of sex, race, and ethnicity. We could see the proportion of patients for whom, although the race data were technically complete in our health record, the category recorded was unavailable. Although the vast majority of our patients were white or non-Hispanic, we knew from United States Census reports that while 90.6% of the population is designated as white, 77.8% of the population is designated as white alone and non-Hispanic or Latino. Given our demographics, it was important to use an integrated race and ethnicity variable to increase our ability to detect disparities on the basis of race and ethnicity.

Different groups built dashboards that looked slightly different but were valuable in their assessments of important clinical outcomes. Race, ethnicity, and language were added to the critical care dashboard that tracked our Covid-19 outcomes (Figure 2).

The types of dashboards seen in Figure 1 remain useful in allowing the flexibility to dig in and ask questions. However, they also are a bit overwhelming. There are so many differences based
on care considerations and so many different ways to look at and present data. Where should we start? What differences are significant, and what is just noise? Disparities were noted in all directions; sometimes white patients had better outcomes, sometimes worse. What does that mean? Each observation led to more questions and more possibilities and more spiraling research projects to ponder. Clearly, we needed to have dashboards for granular data, but we also needed to make improvements to better bridge the chasm between data and actionable insights. We determined that effective displays and analyses of our equity-focused data collection and analysis efforts must facilitate:

### Example of a Clinical Dashboard of Sex, Race, and Ethnicity Disaggregated Data with Clinical Outcomes

This figure is an example of a dashboard of clinical outcomes, such as risk-adjusted mortality and length of stay (LOS), that can present those outcomes disaggregated by sex, race, and ethnicity. By drilling down on the basis of diagnosis, service line, or facility, teams and leaders are able to examine the outcomes most relevant to their areas. Mortality index is risk-adjusted mortality based on diagnosis. Avg = average, MSDRG = Medicare Severity Diagnosis Related Group, Obs = observed.

#### FIGURE 1

**Example of a Clinical Dashboard of Sex, Race, and Ethnicity Disaggregated Data with Clinical Outcomes**

<table>
<thead>
<tr>
<th>Sex</th>
<th>Case Count</th>
<th>Obs Death Rate</th>
<th>Mortality Index</th>
<th>Obs Avg LOS</th>
<th>LOS Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>96,525</td>
<td>1.08%</td>
<td>0.74</td>
<td>3.28</td>
<td>0.75</td>
</tr>
<tr>
<td>Male</td>
<td>70,420</td>
<td>2.13%</td>
<td>0.81</td>
<td>4.21</td>
<td>0.76</td>
</tr>
<tr>
<td>Unknown</td>
<td>31</td>
<td>9.68%</td>
<td>3.30</td>
<td>3.90</td>
<td>0.77</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race</th>
<th>Case Count</th>
<th>Obs Death Rate</th>
<th>Mortality Index</th>
<th>Obs Avg LOS</th>
<th>LOS Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>136,635</td>
<td>1.51%</td>
<td>0.74</td>
<td>3.65</td>
<td>0.75</td>
</tr>
<tr>
<td>Unavailable</td>
<td>11,363</td>
<td>1.28%</td>
<td>1.26</td>
<td>3.01</td>
<td>0.81</td>
</tr>
<tr>
<td>Other</td>
<td>12,277</td>
<td>2.07%</td>
<td>0.91</td>
<td>4.42</td>
<td>0.79</td>
</tr>
<tr>
<td>Declined</td>
<td>2,467</td>
<td>1.26%</td>
<td>0.76</td>
<td>3.63</td>
<td>0.79</td>
</tr>
<tr>
<td>Black</td>
<td>2,056</td>
<td>1.12%</td>
<td>0.90</td>
<td>4.23</td>
<td>0.78</td>
</tr>
<tr>
<td>Asian</td>
<td>2,188</td>
<td>1.65%</td>
<td>0.81</td>
<td>3.74</td>
<td>0.72</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Case Count</th>
<th>Obs Death Rate</th>
<th>Mortality Index</th>
<th>Obs Avg LOS</th>
<th>LOS Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Declined</td>
<td>1,784</td>
<td>1.23%</td>
<td>0.71</td>
<td>3.70</td>
<td>0.79</td>
</tr>
<tr>
<td>Hispanic Origin</td>
<td>19,754</td>
<td>1.26%</td>
<td>0.68</td>
<td>3.89</td>
<td>0.78</td>
</tr>
<tr>
<td>Hispanic Origin Unknown</td>
<td>8,001</td>
<td>0.96%</td>
<td>1.93</td>
<td>2.36</td>
<td>0.80</td>
</tr>
<tr>
<td>Non Hispanic Origin</td>
<td>128,737</td>
<td>1.59%</td>
<td>0.76</td>
<td>3.67</td>
<td>0.74</td>
</tr>
<tr>
<td>Unavailable</td>
<td>8,700</td>
<td>1.89%</td>
<td>1.05</td>
<td>4.44</td>
<td>0.84</td>
</tr>
</tbody>
</table>


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Using race and ethnicity as an integrated variable. Our health record keeps race and ethnicity as separate variables (as required for our government reporting), but such a presentation of the data makes it more difficult to assess for disparities.

Assessing outcomes over time. Leaders and clinicians are accustomed to examining outcomes over time (Figure 2), but a single-time-point snapshot, like our Vizient Outcomes Report (Figure 1), does not allow us to assess for disparities that may increase or decrease over time (whether because of secular trends, our interventions, or other causes). We must be able to assess disparities in health outcomes in the same way we are familiar in assessing all outcomes: in a run chart over time.

Identifying the comparison group. We need a simple assessment of whether a finding is noise or signal when faced with large amounts of data. A run chart more easily helps explain outliers or trends over time, but we also need to visualize the outcome for two groups together (e.g., white, non-Hispanic patients vs. any nonwhite or Hispanic patients or other groups) to more easily assess which of the myriad observations are worth more follow-up.

Understanding the underlying risk factors. We need a clear way of assessing for disparities in comorbidities or other risk factors that could be playing a role in the health outcomes of interest. For example, disparities due to structural racism are well described in the different prevalence and severity of common conditions, such as hypertension, diabetes, and tobacco use, among others. These factors are likely contributors to differing mortality
rates. We need to better understand whether the driver of an outcome such as mortality is a result of factors present on admission, factors present because of the care within the hospital walls, or a combination, and in what proportion. How much of our effort should be aimed at addressing social determinants of health and how much in evaluating factors within clinics and hospitals, and for which specific health outcomes?

Those who dove into the work and discovered disparities were now faced with thinking about ways of addressing them, when often the disparities seemed to be upstream from the inpatient encounter. For hospital-based medicine, how much of an observed disparity is within our control as we treat that patient? Would that be different for a primary care physician with a small practice? How do we get data that help us set priorities for highest efficiency? Where is the highest yield for effort spent?

Each observation led to more questions and more possibilities and more spiraling research projects to ponder. Clearly, we needed to have dashboards for granular data, but we also needed to make improvements to better bridge the chasm between data and actionable insights.

Our next dashboard allowed for side-by-side comparison of an outcome with race and ethnicity. This dashboard also preselected a standard look of white, non-Hispanic versus Hispanic patient outcomes and mortality index in a run chart (Figure 3). Once again, we could look at outcomes and patient groups on the basis of clinical service lines and location to better narrow the scope of the outcomes and patient disparities for which we were looking.

Once we could look at a difference in outcomes, the first question we asked was whether comorbidities or differences in the prevalence of other conditions were the major drivers of the disparity in the observed outcome. In order to assess that more broadly, we created a heat map to evaluate the prevalence of comorbidities for common diagnoses (Figure 4).

We discovered that Hispanic patients hospitalized with Covid-19 in the ICU were more likely than their white, non-Hispanic counterparts to have type 2 diabetes (53% vs. 36%, respectively). In contrast, Hispanic patients were less likely to have renal failure (15% vs. 31%) or to use tobacco (21% vs. 24%).

We were trying to “look at everything through an equity lens,” as the mantra went, but we were quickly overwhelmed. Our next step forward was to use machine-learning algorithms to sort through the vast number of comparisons and to yield some limited number of actionable insights that would allow us to focus our interventions system work.

And we still had questions. “We really need to look at the quality of our data first,” a physician leader asserted with respect to equity-related data. “Other institutions have shown that the data
Comparing Race and Ethnicity Data for Mortality Index in Inpatient Mortality: Working Toward a Combined Race and Ethnicity Variable

This figure shows a dashboard comparing race and ethnicity variables together with clinical outcomes of interest. Working toward a combined race and ethnicity variable, we selected a first default for the dashboard of white, non-Hispanic patients versus Hispanic patients of any race. This example shows the mortality index (risk-adjusted mortality) for all patients. The drill-down options based on service lines (Clinical Owner, Vizient [Viz] Service Line, or Vizient Sub Service Line), location (ICU days), source of admission (ED), and age (Pediatric Age) allow teams and leaders to examine the outcomes most relevant to their areas. Mortality index is the risk-adjusted mortality based on diagnosis. Med/Surg = medical/surgical.

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are often incomplete or inaccurate. It does not make sense to look at outcomes until we know how good our data are.”

Data Quality

What is the accuracy of and how complete are our equity data? The completion rate for demographic information varies considerably; for example, we have a response rate of less than 3% for sexual orientation and gender identity data. Race data are completed in the medical record for more than 97% of patients, but, as many others have reported, these data are often inaccurate. Data quality can be easily overlooked, and it can be hard to get people interested. It is a bit like remodeling a kitchen
and then finding out you needed to fix the plumbing or electrical. Nobody sees these hidden systems, yet they are critical to the proper function of the kitchen. Clearly, we could not stop all equity efforts and wait for the findings of a multiyear data project. But at the same time, we needed to promptly assess the quality of the data that were driving our work.

"We recognized that we had work to do in improving the quality of our race and ethnicity data, but we also knew that we could begin to look at disparities with the data we currently had. If we did find a health disparity, it was likely to be real. If we did not find a disparity, we would have to acknowledge that a disparity may be hidden by the bias of our race and ethnicity data collection."
After discussions with colleagues (including personal communication with Tom Sequist and Christian Dankers at Mass General Brigham), we decided to analyze the self-reported race data (obtained via the Hospital Consumer Assessment of Healthcare Providers and Systems [HCAHPS] surveys) and our partnership with Press Ganey with the race data we captured through our usual registration processes.

We found that we had disparities in the data accuracy on the basis of race, summarized in Table 1. The gold standard for comparison was self-reported race obtained via the electronic Press Ganey surveys. The comparator was the race we had recorded in our electronic health record (EHR) via the usual registration processes. We found that our sensitivity (or true positive rate) was greater than 99% for our white patients. Our sensitivity for other races was much lower, ranging from 2% (for multiracial) to 86% for Black. Thus, we had a disparity in the accuracy with which we were identifying patients — white patients were more likely to be called the correct race in our records, whereas patients of other races were less likely to have the correct race identified in their health record.

Table 1 shows the sensitivity and specificity for race using self-reported race via the Press Ganey HCAHPS surveys as the gold standard compared with the race for each patient available in the EHR. The sensitivity (or true positive rate) for identifying a given race ranges from 2.84% for the multiple category to 99.33% for the white category, meaning patients who self-identify as white are correctly identified in the EHR as white more than 99% of the time. Meanwhile, patients who self-identify as multiracial are correctly identified as multiracial in the EHR less than 3% of the time.

The specificity (or true-negative rate) of identifying a given race ranges from 60.18% for the white category to 99.94% for the multiple category. Patients who do not identify as white are correctly not identified as white in the health record only 60.18% of the time. Meanwhile,
patients who do not identify as multiracial are correctly not identified as multiracial more than 99% of the time.

When we categorized someone as a race other than Black, their self-reported race was not Black more than 99% of the time (high specificity). And, when we categorized someone as white, their self-reported race was white more than 99% (high sensitivity). But when we categorized someone as something other than white, their self-reported race was not white only 60% of the time (low specificity). The designation of white race was sensitive, but not specific. In total, these results indicated that we were often calling nonwhite patients white, thus obscuring our ability to detect disparities in our health outcomes data. We recognized that we had work to do in improving the quality of our race and ethnicity data, but we also knew that we could begin to look at disparities with the data we currently had. If we did find a health disparity, it was likely to be real. If we did not find a disparity, we would have to acknowledge that a disparity may be hidden by the bias of our race and ethnicity data collection.

We set up a data quality team to work on setting a strategy for improving the data collection. Barriers to obtaining race, ethnicity, sexual orientation, gender identity, and disability data include the discomfort many of us feel in asking and answering these questions. Indeed, it was only in 2015 that employment and housing discrimination on the basis of sexual orientation and gender identity became illegal in the United States. Experience from others indicated that we could do harm asking questions that patients may find uncomfortable. Systemwide training would be needed to ensure that the professionals registering patients were sharing the reason for asking these sensitive questions. And yet another approach would be to place greater reliance on self-reported information. Consider, for example, that with improving communication networks and smartphone adoption rates, we may be poised to rapidly collect self-reported race, ethnicity, and other data through Health Insurance Portability and Accountability Act of 1996–compliant apps, self-registration, and other electronic survey tools. Clearly, we have work to do in framing the questions appropriately, selecting the right places to embed them, and designing processes to reconcile conflicting data, but this is also an opportunity to improve data accuracy and to rely on the gold standard — self-reported data.

**Culture Change**

“We really need to change culture and understanding,” another colleague said. “We need to sit with the discomfort and really dig in.” And there was plenty of discomfort.

In meeting after meeting on data and equity, people would intentionally use gender as a euphemism for sex, and then soft and gentle education and corrections would follow. Did we know the difference between race and ethnicity? Or what all of the letters in LGBTQIA+ stood for? And did we even understand the difference between equity and equality? Was it not what our community health group was working on?
If each of us had to look at our key performance indicators by race or ethnicity, or another equity variable, then we could begin to see the disparities that were all around us. We would learn about these disparities experientially through our work, in a practical way, and then work together to address them.

“We have to be careful if we look at the data, because we don’t want people to see any discrepancy and get the wrong idea that we are racist,” one analyst said. Another perspective was offered by a colleague at another institution: “We need to get away from thinking about safe spaces, and instead learn to lean into brave spaces.”

The whole field seemed like a land mine that none of us felt qualified to approach. There were so many missteps possible and so many ways in which well-intentioned overtures could result in more harm than doing nothing. It seemed incredibly unlikely that we would navigate this space perfectly without mistakes. And yet, to not even try was not an option. We had to listen and engage. Our multicultural caregiver group provided important feedback. Intermountain Healthcare is home to more than 37,000 caregivers across four states and spans relatively culturally diverse, if not ethnically so, rural and urban areas. Intermountain caregivers are not a monolith of single culture, and we contain the breadth of attitudes toward social mores that are playing out on the national stage. And, despite internal differences on health care equity matters, we share a mission-driven commitment to help people live the healthiest lives possible.

One of our initial approaches to culture change was to build on the culture of quality improvement at Intermountain and decentralize the equity work. If each of us had to look at our key performance indicators by race or ethnicity, or another equity variable, then we could begin to see the disparities that were all around us. We would learn about these disparities experientially through our work, in a practical way, and then work together to address them. If we could begin to address the data gap, then we could begin to address the culture change and inequity.

**Equity in Patient Experience**

We partnered with Press Ganey to address equity in patient experience. We examined our patient experience data disaggregated by race (Figure 5).

We could see how patients of different races and ethnicities compared in their responses. For example, American Indian/Alaska Native patients and Asian patients reported lower patient experience scores compared with patients of other races. We could also examine in what areas we had the most opportunity to improve, as reported by patients of a specific race. For example, Black or African-American patients reported lower patient experience scores in obstetrics compared with other domains, such as medicine or surgery.
Race-Disaggregated Patient Experience Data

This figure shows the race-disaggregated patient experience data. For example, American Indians/Alaskan Natives and Asian patients report lower patient experience scores compared with other races. The positive and negative numbers associated with the bars represent the number of percentage points greater than (positive, green) or less than (negative, red) the overall top box score seen in the All Respondents column. expl = explain, CAHPS = Consumer Assessment of Healthcare Providers and Systems, HCAHPS = Hospital Consumer Assessment of Healthcare Providers and Systems, PG = Press Ganey Inpatient Survey, prob = problem, re = regarding, trtmnt = treatment.

FIGURE 5

Race-Disaggregated Patient Experience Data

This partnership provided us with a framework for understanding the disparity in patient experience as we work to improve the overall patient experience. In obstetric care, for example, we are tracking the observed experience disparity and acting to better understand the root of that disparity. We are adding questions around ethnicity and will work to analyze our data in a combined race and ethnicity variable in the future. We continue to think about how to strike the best balance between disaggregating data to dive into specific communities and ethnicities versus needing enough responses in a category to make the trends and data meaningful.

Publicly Reported Measures of Equity

As we move ahead in this work, we look to partner with national organizations to help set the standards in assessing equity. How do we define success?


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We expect that publicly reported measures with both reputational implications (such as those being developed by U.S. News & World Report, the Lown Institute, Vizient, and the Leapfrog Group, among others) and financial implications (such as the U.S. Centers for Medicare & Medicaid Services metrics tied to incentives) will play an important role in driving outcomes for what success in health equity for health systems looks like.

But success in equity broadly looks very much like societal change, currently outside the scope of any individual health system. In her book “Caste: The Origins of Our Discontents,” Isabel Wilkerson demonstrates the societal inequity due to our caste system. We believe that is at the heart of why we have and tolerate the fractured and expensive health system that delivers outcomes inferior to those of other developed countries.

“Success for us would be the liberation phase — the removal of the conditions that perpetuate inequity.”

So, what does success look like? We draw on the analogy exemplified by the 4th Box concept that features a triptych depicting three people of different heights trying to watch a ball game. In the first two panels, a fence is in place, and we can consider how three crates might be positioned and how much that helps each person see over the fence. The three panels are labeled Equality, Equity, and Liberation, the last of which shows that the fence has been removed. A fourth box, labeled Your Idea Here, suggests that the best solution would be to develop a system that would not have created the barrier in the first place. Certainly, that fourth box would be the ultimate goal, but given the current conditions, success for us would be the liberation phase — the removal of the conditions that perpetuate inequity.

We all have to start somewhere, to begin the work at home, within ourselves, within our organizations, and we need to show concrete steps forward. Even if we stumble and sometimes say the wrong thing, we have to be brave enough to take a thoughtful risk, to listen, and still to move forward beyond feeling like it is too big and undefined to yield success. Just doing the work — pinpointing the disparities, learning how to begin to think about and address them, and beginning to understand the underlying reasons for them — will lead to culture change that will create more collective will to change broader systems of oppression. We cannot legislate hearts and minds, but surfacing structural racism and working to address it is not a bad place for health systems to start.

**Simplicity and the First Step**

“A journey of a thousand miles begins with a single step,” the proverb goes. We recognize that as we undertake this journey, we will make missteps, and not every step will be clearly forward. Our data-driven approach may help engage clinicians and operators in the work; we are aware of and will seek to mitigate the paralysis that may befall some as we face the overwhelming number of inequities. But we believe that to start — and to have measurable outcomes and some success we can build on — will be far better than failing to act while waiting for the one perfect thing to do.
As a place to start in examining a key clinical outcome, we decided to assess whether our clinical care was contributing to the inequity we witnessed in our ICUs during the early days of the Covid-19 pandemic. We wanted to create a simple look that would be analogous to our existing dashboards—a run chart to examine the risk-adjusted mortality for patients who are white and non-Hispanic versus patients who are Hispanic and/or nonwhite (Figure 6).

We used the mortality index to determine whether the disparity we were witnessing in our patient population was caused by the demographics of who was exposed to Covid-19 and the disproportionate risk factor prevalence among different groups versus our clinical care. We

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**Risk-Adjusted Mortality Index for Patients with Covid-19 Admitted to the ICU, on the Basis of Combined Race and Ethnicity Variable**

This figure shows the Mortality Index (Vizient risk-adjusted mortality) for patients with Covid-19 admitted to the ICU in 2020 comparing white, non-Hispanic patients with Hispanic and/or any nonwhite patients. An initial disparity is noted, with a higher mortality index for nonwhite and/or Hispanic patients compared with white and non-Hispanic patients in April and May 2020 during the first peak of the pandemic. This disparity seems to subsequently resolve with some variability at various time points.

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found that there had been an initial disparity (whether attributable to chance, the practice of early intubation during the beginning of the pandemic, or another reason altogether), which subsequently closed. Importantly, this run chart now allowed our critical care team to begin to understand the disparities in our ICUs and how to monitor for them. As we introduce interventions to continue to improve our care, we have made it easy to assess whether the intervention increases or decreases the disparity by using the same run chart we use to determine whether an intervention increases or decreases mortality.

We have lowered the barrier to taking the first step, and we will build on that success. We, at Intermountain, are on a journey to improve the equity, safety, quality, experience, access, and affordability of the care we deliver so that we may help people live the healthiest lives possible.

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Disclosures

Denitza P. Blagev, Nathan Barton, Colin K. Grissom, Kathleen E. McKee, and A. Marc Harrison have nothing to disclose.

References


