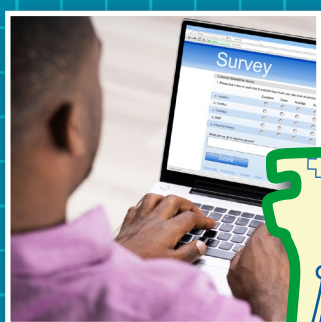


Learning from AHRQs' Diagnostic Safety Culture Survey at a Tertiary Care Health System in Brazil: A Case Study



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Issue Brief 20

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Introduction

Diagnostic error was found to be one of the most prominent patient safety risks at the Sociedade Beneficente Israelita Brasileira Albert Einstein (SBIBAE), a tertiary care health system in São Paulo, Brazil. This health system consists of five high-complexity hospitals, two private (with 746 beds) and three public (with 889 beds) and provides both inpatient and outpatient care. The health system uses an anonymous incident reporting system, enabling employees to report potential adverse events, near-misses, or areas of risk across the entire health system.

Over the past 8 years, a specialized team made up of nurses, doctors, and medical specialists has analyzed these adverse events using the Root Cause Analysis and Action (RCA2) methodology.¹ An analysis of 276 severe and catastrophic adverse events from 2016 to 2022 found that diagnostic errors contributed to 23 percent of all events.

The analysis led health system leaders to identify the diagnostic process as a critical issue that needs to be addressed to improve patient safety. To ensure the implementation of actions and interventions to reduce diagnostic safety events, we created a new Diagnostic Excellence Program with the endorsement of the institution's leadership. This program aimed to integrate and prioritize several fragmented initiatives across the institution and provide them with support.

To inform the development of the Diagnostic Excellence Program, we first conducted a survey-based assessment of physician perspectives on the culture of diagnostic safety at our institution. This case study describes how we used our survey to create an initial approach to developing and implementing a program to recognize and address diagnostic errors. The survey was adapted from AHRQ's Medical Office Surveys on Patient Safety Culture® (SOPS®) Diagnostic Safety Supplemental Item Set.²

Initial Approach

We started our diagnostic safety initiative by convening a multidisciplinary team of representatives from diverse specialties and different practice areas encompassing both public and private care. To help prioritize the diagnostic safety-related actions to undertake first, the team conducted a survey-based initial needs assessment. We wanted to understand physician perceptions regarding safety culture related to the diagnostic process within the institution. The objective was to establish a baseline, define targeted actions, and identify key improvement opportunities based on survey responses.

The needs assessment included a modified survey adapted from the SOPS Medical Office Survey Diagnostic Safety Supplemental Item Set.² The questions were translated to Portuguese and adapted minimally so they could be answered by physicians working in any setting (inpatient or outpatient). For instance, phrases such as “in this office/appointments” were modified to “in this service.” We also included a final free-text question about what could be done to improve the institution's diagnostic process.

The original survey was developed for outpatient settings and for all clinic staff. However, we focused the survey on obtaining physician perspectives regardless of the care setting. The survey assessed the extent to which the organizational culture supports the diagnostic process, accurate diagnoses, and communication surrounding diagnoses. The survey included 12 questions (Table 1) that cover the following composite measure domains: Time Availability (3 items), Testing and Referrals (4 items), and Provider and Staff Communication Around Diagnosis (5 items).

Each item was rated using a 5-point Likert scale: strongly disagree (1), disagree (2), neither agree nor disagree (3), agree (4), and strongly agree (5), in addition to the option “not applicable/do not know.”

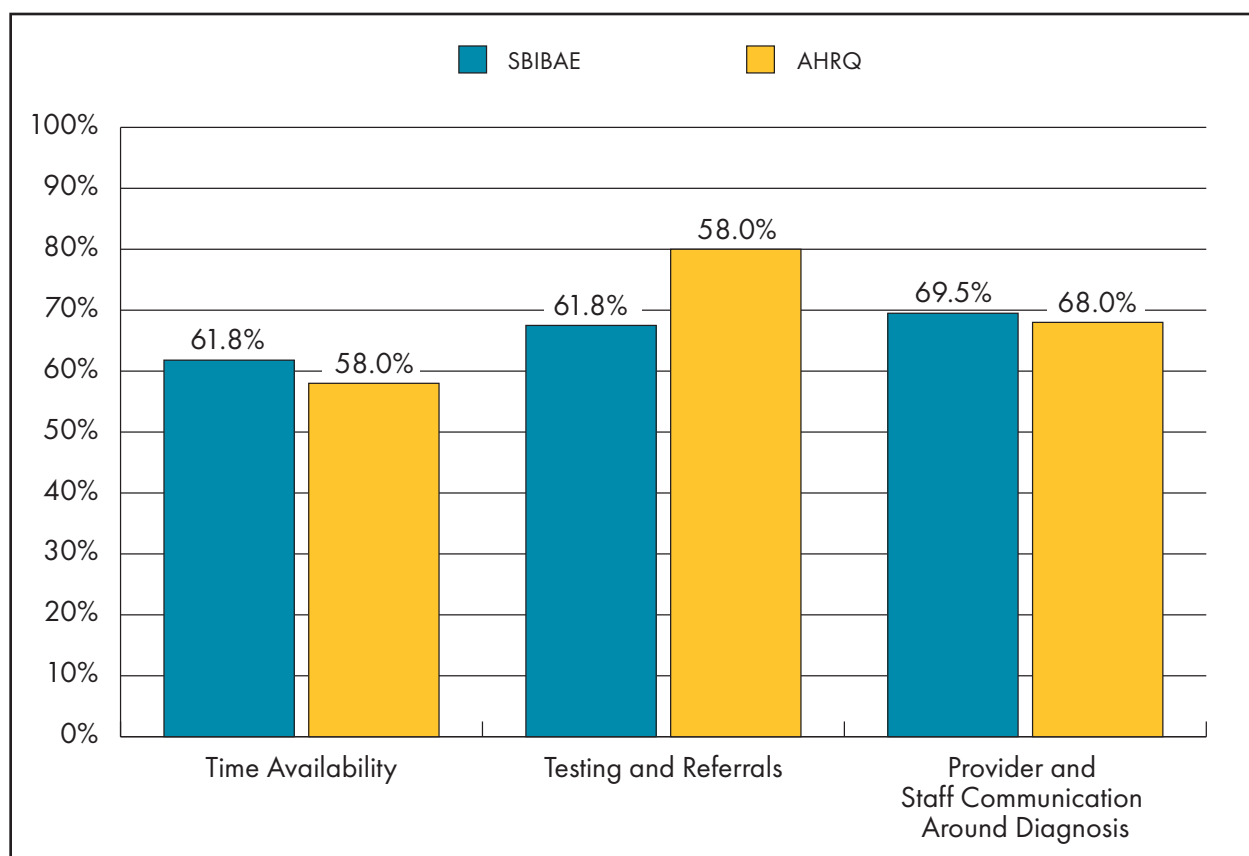
These questions were made available through the REDCap platform. The survey was administered to all physicians affiliated with SBIBAE through institutional communication systems, including email and WhatsApp. We ensured physicians’ anonymous participation.

For each item, we calculated the percentage of positive responses by summing up the “strongly agree” and “agree” responses and dividing by the total number of responses, excluding missing responses and not applicable/do not know responses. We excluded “I don’t know” and “not applicable” responses from this total. While the comparison is not direct, we show the data from an AHRQ report on the results obtained from 110 medical offices in the United States with 1,126 respondents.³

Summary of Survey Findings

From February to March 2023, 1,113 physicians (76% private sector and 24% public sector) working in inpatient and outpatient settings participated in the survey. The survey’s average percent positive score across the three domains was 67.5 percent (the AHRQ score was 69%). Figure 1 shows the percent positive responses for each composite measure domain.

Figure 1. Percentage of positive responses from SBIBAE and AHRQ data from Survey on Patient Safety Culture Diagnostic Safety Supplemental Item Set for selected domains



Key: SBIBAE = Sociedade Beneficente Israelita Brasileira Albert Einstein, São Paulo, Brazil).

Most physician respondents thought they had sufficient time to evaluate the patient during the consultation. But they thought other professionals, such as other members of a multidisciplinary care team (e.g., nurses, physiotherapists, nutritionists, pharmacists) did not have enough time to review the information relevant to the diagnosis (Table 1, items 1 and 2).

Survey findings revealed an excellent relationship with specialties that provided diagnostic support; more than 90 percent of physicians responded that they directly communicated with other specialists, radiologists, and pathologists when they needed clarification (Table 1, item 12). However, in the free-text comments on how to improve the diagnostic process, some comments reflected a large communication gap between the frontline physicians in the emergency department, intensive care unit professionals, and public sector radiologists.

Responses to the two feedback questions on failures in the diagnostic process suggested a gap in open communication regarding diagnostic errors. The first question related to whether a provider informs another provider in the office/system when they think that provider may have missed a diagnosis, and the second related to whether the office was informed when a missed, wrong, or delayed diagnosis happened in that office. These results were below the AHRQ average (Table 1, items 10 and 11) and revealed a significant gap within the institution in routinely providing specific feedback when a diagnosis is missed or incorrect, limiting learning opportunities for all care teams.

Table 1. Comparison of SBIBAE survey results and AHRQ SOPS Survey data

Surveys on Patient Safety Culture® (SOPS®) Diagnostic Safety Item – Questions	SBIBAE *	AHRQ **
The amount of time for appointments is long enough to fully evaluate the patient's presenting problem(s).	88.7%	63%
Providers in this office have enough time to review the relevant information related to the patient's presenting problem(s).	40.4%	64%
Providers in this office finish their patient notes by the end of their regular workday.	56.2%	48%
This office is effective at tracking a patient's test results from labs, imaging, and other diagnostic procedures.	88.7%	83%
When this office doesn't receive a patient's test results, staff follow up.	60.4%	82%
All test results are communicated to patients, even if the test results are normal.	59.9%	86%
When this office makes a high priority referral, we try to confirm whether the patient went to the appointment.	61.1%	71%
Providers in this office encourage staff to share their concerns about a patient's health condition.	80.6%	76%
Providers document differential diagnoses when they have not ruled out other diagnoses.	70.1%	60%
When a provider thinks another provider in this office/system may have missed a diagnosis, they inform that provider.	54%	55%
When a missed, wrong, or delayed diagnosis happens in this office, we are informed about it.	52.3%	56%
Providers in this office talk directly with specialists/radiologists/ pathologists when something needs clarification.	90.6%	87%

* Sociedade Beneficente Israelita Brasileira Albert Einstein (SBIBAE).

** Agency for Healthcare and Quality (AHRQ), data from Survey on Patient Safety Culture Diagnostic Safety Supplemental Item Set.

Note: For each item, the percentages of positive responses were calculated by adding the strongly agree and agree responses and dividing by the total number of responses present, ignoring missing responses.

Actions Based on Survey Results

The survey results revealed several opportunities for specific interventions being developed and piloted in different units across the health system. To address survey findings, specifically perceptions that certain team members do not have adequate time, a pilot project “Diagnostic Team” is being implemented in the Transplant Unit to allow better functioning of the medical teams.⁴

The goal is to promote daily structured multidisciplinary rounds, conducted by the nurse leading the case, to address active problems of hospitalized patients. Such rounds include discussions of diagnostic and therapeutic goals, potentially high-stress situations such as clinical deterioration and code activation, and contingency plans and criteria for escalation of care. These rounds are performed on selected at-risk patients, including patients hospitalized for less than 24 hours who had diagnostic uncertainty, patients who were readmitted, and all seriously ill patients.

Improvement actions are being carried out to implement teamwork principles. Initial work was conducted in the Transplant Unit (critical and semi-intensive care) of this hospital using Plan-Do-Study-Act (PDSA) cycles to learn and then disseminate knowledge to other wards in the hospital. To increase awareness of diagnostic safety, TeamSTEPPS® for Diagnosis Improvement⁵ is being used to introduce the concept of a broad multidisciplinary diagnostic team that includes nonclinicians, patients, and their families. An additional goal is assessment and training to support local efforts to reduce diagnostic errors.

To improve communication gaps, we implemented changes in the Radiology Department to optimize interaction between the departments of public care services and radiology. A list of telephone extensions of available radiologists was published and disseminated to improve communication between the care teams of public hospitals and the radiology specialists they refer to. Furthermore, a QR code was created in the report itself to facilitate diagnostic interactions with the Radiology team. When the code is scanned, the team can report queries, make suggestions, and give feedback on the results of the report.

We are also leveraging opportunities to improve feedback related to diagnosis, building on prior work on this topic.⁶⁻⁸ For instance, we are implementing periodic meetings to disseminate lessons learned from diagnostic errors. In addition, we intend to introduce structured feedback methods, such as the ADAPT (Ask-Discuss-Ask-Plan Together) Framework,⁹ to strengthen learning from physicians’ clinical practice.

We are also promoting the adoption of better information management principles and established best practices, such as evaluating differential diagnoses and defining therapeutic goals based on the diagnosis.¹⁰ We plan to build on existing practice management programs at our institution to monitor each professional’s performance in applying these best practices.

Our survey has proven invaluable in identifying areas for optimizing the diagnostic process within our healthcare system. Physician perspectives have highlighted the need for better communication and collaboration within healthcare teams, the importance of feedback in the diagnostic process, and the potential to enhance relationships with other diagnostic specialties, such as radiology. We plan to conduct future surveys to assess the impact of our program. Other healthcare systems can similarly use the diagnostic safety culture survey to better understand and improve their current practices related to the diagnostic process.

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