DIRECTORATE FOR EMPLOYMENT, LABOUR AND SOCIAL AFFAIRS
HEALTH COMMITTEE

Cancels & replaces the same document of 10 July 2024

Health Working Papers

OECD Health Working Paper No. 168

Comparative assessment of patient safety culture performance in OECD countries

Findings based on the Hospital Survey on Patient Safety Culture versions 1 and 2

Katherine de Bienassis* and Niek Klazinga*

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JT03547402

Acknowledgements

Abstract and Key Points

Safety is a core dimension of health care quality, and measurement of patient safety culture in OECD countries is increasingly conducted as part of efforts to monitor patient safety and to contribute to health system performance assessment. A positive patient safety culture is associated with several benefits, including better health outcomes and patient experiences, as well as improved organisational productivity and staff satisfaction and retention.

In recent years, there has been a proliferation of measurement of patient safety culture using staff surveys, with most countries using at least one tool broadly within their health system. Building on four years of work, a second OECD data collection on Patient Safety Culture occurred in 2022-2023 with the support of the members of OECD Expert Group on Patient Safety Culture. In total, data from almost 650,000 (648,262) health care workers, from 3,387 different sites/hospitals, across 14 countries was added in the 2022-2023 round of data collection. Despite many commonalities between countries in the implementation of PSC measurements, there remains differences in the scope of implementation and rates of survey response.

Since the first OECD pilot on patient safety culture, a substantial number of countries have transitioned to using second version of the Hospital Survey on Patient Safety Culture (HSPSC v2), which was released by the US Agency for Healthcare Research and Quality (AHRQ) in 2019. Findings from the disaggregated analysis show the that nursing staff were the most likely respondents of the survey—with an average of 45% of respondents being nurses across countries. On average across participating countries, physicians consisted of 14% of responses and hospital management consisted of 9% of respondents. Data is available for by staff type for all HSPSC v2 domains.

The domain of *staffing and work pace* (that there are enough staff to handle the workload, staff work appropriate hours and do not feel rushed, and there is appropriate reliance on temporary or float staff) remains the lowest scoring domain on average for countries. **Less than half of respondents felt that there were safe staffing and work pace levels in their work environment** (48% and 37% average positive response for countries using HSPSC v2 and v1 respectively). From HSPSC v2 data, managers were found to have the highest perceptions of safe staffing and work-pace (54%), with lower levels of positive perceptions among, doctors (45%), nurses (45%), and other clinical staff (48%).

Likewise, there remains **high levels of perceived punitive response to error in hospital work environments**. The domain of *response to error* (that staff are treated fairly when they make mistakes and there is a focus on learning from mistakes and supporting staff involved in error) demonstrated generally low performance, with an average positive response rate of 54% for countries using HSPSC v2 and 47% HSPSC v1. Using data from HSPSC v2, on average 68% of managers had a positive response on this item, compared to only 53% of physicians and 52% of nurses.

The highest scoring domains related to interpersonal relationships in the workplace. These were teamwork and supervisor, manager, or clinical leader support for patient safety. For countries using HSPSC v2, the positive response rate for teamwork was 76% and for Supervisor, Manager, or Clinical

Leader Support for Patient Safety it was 73%. For countries using HSPSC v1, these rates were 69 and 63% respectively.

There remains significant international variation in the performance across countries. Several domains—including, response to error, handoffs and information exchange, and organizational learning—continuous improvement—had an over 20 percentage point difference between the best and worst performing countries using HSPSC v2.

Patient safety culture appears to be reaching a tipping point, with potential to be used as an indicator for international benchmarking, with numerous large-scale, national assessments using a harmonized tool. The results of national-level assessments show that there is ample room for improving safety culture in OECD countries, and that the need to assess patient safety culture through sustained and ongoing survey monitoring continues.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

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Acronyms

AHRQ	US Agency for Healthcare Research and Quality
HAS	Haute Autorité de santé (France)
HCQO	(Working Party on) Health Care Quality and Outcomes
HSPA	Health Systems Performance Assessment
HSPSC	Hospital Survey on Patient Safety Culture (also referred to as HSOPS, HSPOSC, SOPS, and Survey on Patient Safety Culture)
PSC	Patient Safety Culture
PSI	Patient Safety Indicator
SAQ	Safety Attitudes Questionnaire
WHO	World Health Organization
WP	Working Party (OECD)

1. The growing momentum for measuring patient safety culture

1.1. Strong safety cultures are important for ensuring safe health care delivery

1.   The main goal of health care is to improve patient's health and well-being. All too often, however, patients are exposed to harm and patient safety events over the course of their care. The cost of care related patient harm in hospitals is considerable, with 15% of hospital activity and expenditure estimated to be directly attributed to patient harm (Slawomirski, Auraaen and Klazinga, 2017[1]).

2.   Health care is a high-risk endeavour. However, many safety failures can be prevented through a better safety culture to create an environment capable and motivated for improvement. A strong focus on patient safety helps ensure an environment where patients can receive the care they need, while minimizing the likelihood they will be harmed in the process. Health care facilities with strong patient safety cultures put an increased emphasis on maintaining a safe environment for patients. Beyond this, organizations with strong safety culture focus on the reporting of, and learning from, the harms that do happen (de Bienassis et al., 2020[2]).

3.   Measures of patient safety culture (PSC) from the perspective of health workers can be used – along with patient-reported experiences of safety, traditional patient safety and health outcome indicators– to give a holistic perspective of the state of safety in health systems. A positive patient safety culture for health workers results in shared perceptions of the importance of safety, increased transparency and trust, and higher levels of shared responsibility, along with improved confidence in organisational and national safety initiatives. A growing body of research has found that positive patient safety culture is associated with several benefits, including better health outcomes and patient experiences, as well as improved organisational productivity and staff satisfaction, safety, and retention (Lee et al., 2019[3]; Dicuccio, 2015[4]; Olsen et al., 2024[5]).

1.2. Previous OECD efforts to quantify patient safety culture across countries

4.   Safety is a core dimension of health care quality as part of the OECD's renewed Health System Performance Assessment Framework (OECD, 2024[6]). Measurement of patient safety culture is increasingly conducted as part of efforts to monitor patient safety, and contribute to systems for ongoing health system performance monitoring.

5.   In recent years, there has been a proliferation of measurement of patient safety culture using staff surveys. A 2020 analysis from the OECD examined the scope of patient safety culture measurement in OECD countries, finding that 20 of 24 surveyed countries use at least one tool broadly within their health system. Most assessments of patient safety culture (PSC) occur in the hospital setting, surveying hospital staff on an ad-hoc basis. PSC measures are primarily used to inform internal learning and improvement, and are not commonly used for accountability purposes, though some countries serve as exceptions. In

addition to existing efforts at this time, over 75% of surveyed countries (18 of 23) indicated that there were plans in their country to initiate or expand existing work on PSC (de Bienassis et al., 2020[2]).

6.	This landscape assessment work was followed by a first pilot data collection on patient safety culture in 2020-2021, which involved collecting and analysing data on PSC surveys, including meta-data related to the survey context within countries. Findings from this effort are reported in the OECD publication *Developing international benchmarks of patient safety culture in hospital care: Findings of the OECD patient safety culture pilot data collection and considerations for future work*. During this data collection effort, the OECD gathered 42 submissions from 16 countries. In total, the first data collection covered survey responses from almost 2,150,000 health workers across all country data submissions. For the 15 countries that assessed PSC using the Hospital Survey on Patient Safety Culture (HSPSC) (or a national tool that was then mapped onto HSPSC domains), the OECD data collection team was able to conduct preliminary benchmarking across the 12 domains of the HSPSC. Results of this data collection were published also in the OECD flagship publication, Health at Glance 2021. Despite relatively high performance in many areas, the data indicated opportunities for improvement. The domains of poorest performance included staffing (40% average positive response for OECD countries), Nonpunitive Response to Errors (41%), Teamwork Across Units (46%), and Handoffs & Transitions (47%).

7.	Despite many commonalities between countries in the implementation of PSC measurements, the expert group identified several improvements that could be made to enhance international comparability and to understand structural and survey related factors that may influence PSC survey results. Following the experience of the first data collection, the OECD ad hoc Expert Group on Patient Safety Culture proposed additional analysis in terms of structures and organizational factors of hospitals and survey implementation—such as additional information related to sources and methods, including hospital size, hospital type, and number of respondents per staffing category. This information is now incorporated in the analyses in the subsequent section.

2. Findings from the second OECD pilot on patient safety culture

2.1. Characteristics of survey data received during the 2022-2023 OECD Patient Safety Culture Pilot Data Collection

8. The second OECD data collection on Patient Safety Culture occurred in 2022-2023 and was facilitated by the members of OECD Expert Group on Patient Safety Culture (see 2.6.1.Annex B). **In total, data from almost 650,000** (648,209) **health care providers from 14 countries was added in the 2022-2023 round of data collection (see** Figure 2.1**)**. Data covering less than 5,000 health workers was included from Portugal, the Netherlands, Israel, and Colombia. Four countries—Türkiye, Mexico, Saudi Arabia, and the United States—submitted data covering the survey responses of over 100,000 health care workers. Saudi Arabia and the United States collect data via voluntary submissions from hospitals, where as the survey is mandatory as part of national programs in Mexico and Türkiye.

9. The 2022-2023 data collection complements a previous OECD pilot data collection on patient safety culture, which captured information on 2,148,956 health care workers across participating countries published in the previous report (encompassing 2011-2022) (de Bienassis and Klazinga, 2022[7]).

Figure 2.1. Number of health worker survey respondents by country
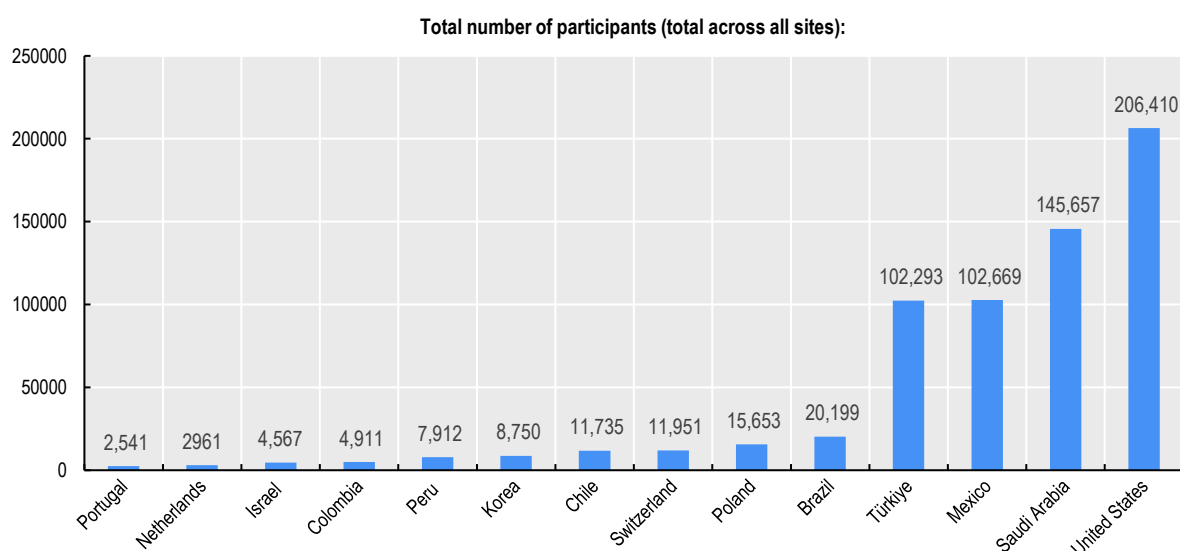
Source: OECD Pilot Data Collections on Patient Safety Culture, 2022-2023

10.   **Data from the 2022-2023 collection period included information from 3,387 different sites/hospitals** (see Figure 2.2). The number of sites covered in the data collection ranged from under 10 in Switzerland, the Netherlands, and Portugal, to over 1,000 in Mexico and Türkiye.

Figure 2.2. Number of sites included in PSC data by country
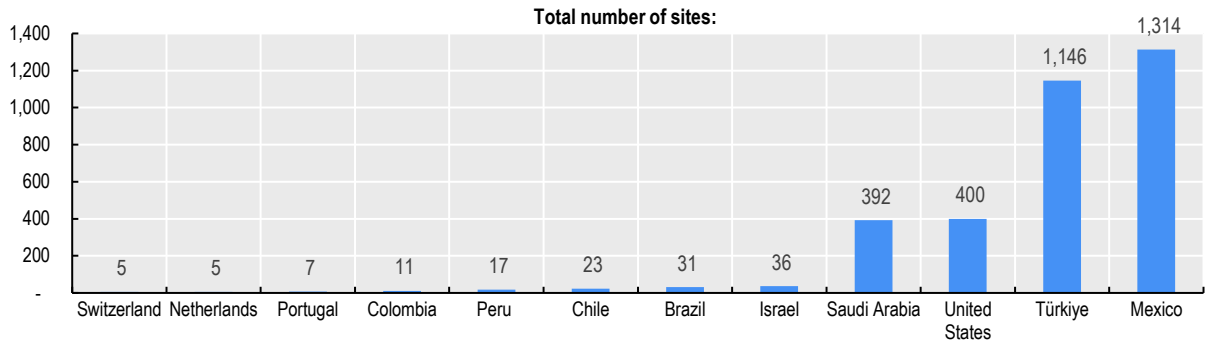
Note: the number of sites was not submitted by Poland, Korea and United States
Source: OECD Pilot Data Collections on Patient Safety Culture, 2022-2023

11.   Nursing staff were the most likely respondents of the survey—with an average of 45% of respondents being nurses across countries. The percentage of nurses responding varied from 34% in the United States to 59% in Korea (see Figure 2.3). On average across participating countries, physicians consisted of 14% of responses and management consisted of 9% of respondents. Other clinical staff and support staff consisted of 16% and 15% of the samples on average across countries.

Figure 2.3. Distribution of staff types among survey respondents
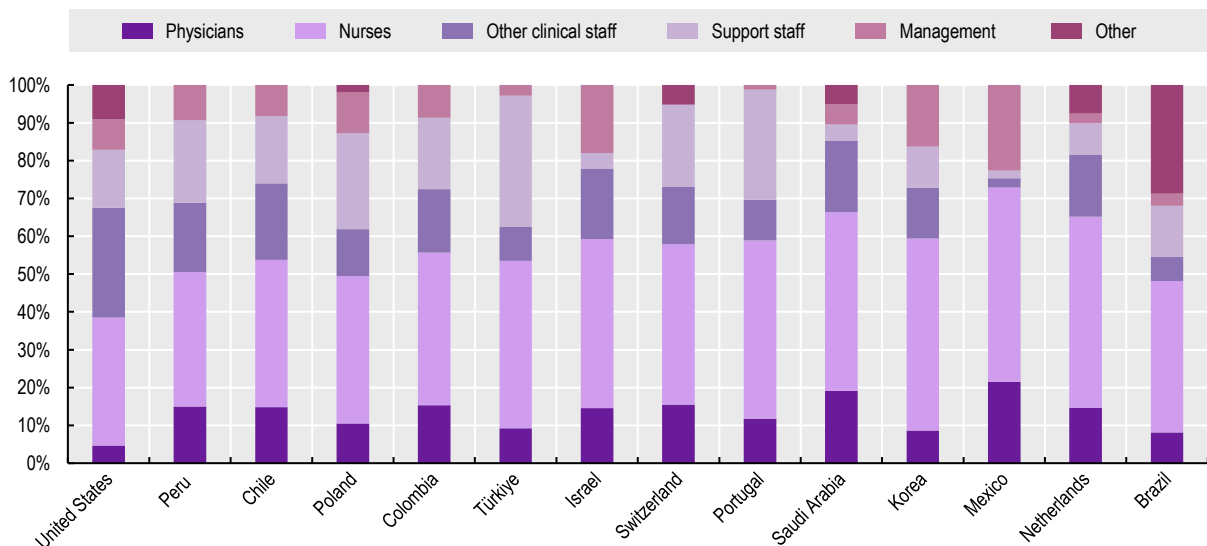
Source: OECD Pilot Data Collections on Patient Safety Culture, 2022-2023

12.   The average national response rates (pooled across all sites) ranged from under 25% in Switzerland and Poland to 74% in Türkiye and 67% in Brazil (see Figure 2.4). Variation in response rate should be considered with the interpretation of results. The average number of respondents varied as well,

from 78 per site in Mexico to over 2,000 in Switzerland—reflecting the fact that the Mexico survey was composed of 99% hospitals with 500 beds or less, while all of the hospitals surveyed in Switzerland had more than 500 beds. Additional information on the characteristics of the submitted data can be found in 2.6.1.Annex A.

Figure 2.4. Average pooled and hospital level response rates

Average pooled and hospital average response rates
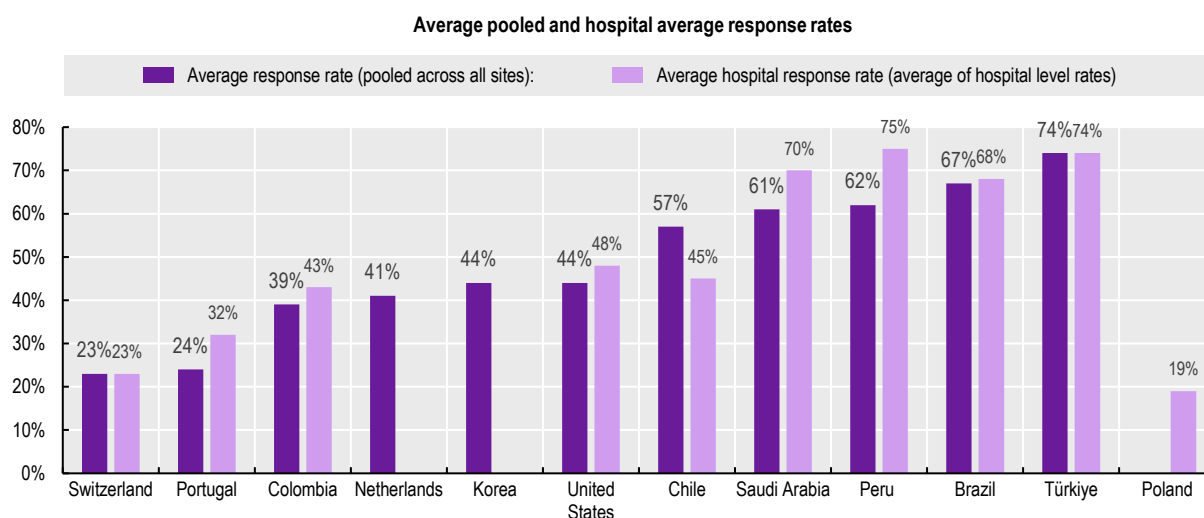
Source: OECD Pilot Data Collections on Patient Safety Culture, 2022-2023

2.2. Versions of survey tools used, and countries included in analysis

2.2.1. Hospital Survey on Patient Safety Culture version 2

13.   One of the most significant methodological changes from the previous OECD pilot data collection on patient safety culture involved the collection the Hospital Survey on Patient Safety Culture (HSPSC) version 2, in addition to the previously collected version 1. In 2019, AHRQ released a new version of the HSPSC, HSPSC v2. The original version of the survey remains available; however, AHRQ now encourages the use of HSPSC v2. HSPSC v2 has fewer items than HSPSC v1, and the domain names have been updated to reflect the content of included items. Five HSPSC v1 survey items were kept in HSPSC v2 unchanged, but changes were made to wording of the remaining items (Westat et al., 2019[8]).

14.   Based on pilot testing, AHRQ reports that scores on HSPSC v2 composite measures and survey items can be expected to be higher than comparable scores on HSPSC v1 due to changes in the survey, though the scope of differences varies depending on the domain and item (Westat et al., 2019[8]). For the continuation of this work, submissions using different versions of the HSPSC may present potential barriers in cohesively summarizing the state of PSC internationally. Methods for benchmarking using different versions of the tool will need to be further explored in the case of future data collections.

15.   For the analysis included in the report, data collected via the 2022-2023 data collection is combined with data from select countries from the previous pilot (the 2020-2021 data collection). Data has been included from the previous data collection if 1) there was not a more recent data submission from that country and 2) if the data was from 2019 or later. As a result, data from Belgium, Japan, France, Spain, and Canada has been included in the analysis that was not submitted in this data collection. More details on these included surveys can be found in the report, *Developing international benchmarks of patient*

safety culture in hospital care: Findings of the OECD patient safety culture pilot data collection and considerations for future work. Information on the tools used by each of the countries in the included analysis can be found in Figure 2.5.

Figure 2.5. Tools used by countries included in the analysis

HSPSC.v1	HSPSC.v2
• Brazil (Accession)	• Chile
• Netherlands	• Colombia
• Mexico	• Israel
• Switzerland	• Korea
Data included from 2020-2021 PSC pilot data collection	• Peru (Accession)
• Belgium	• Poland
• France	• Portugal
• Spain	• Saudi Arabia (non-OECD member)
• Japan	• Türkiye
	• United States

Source: OECD Pilot Data Collections on Patient Safety Culture, 2022-2023
Note: Data from Canada also is represented for some domains using the Canadian Patient Safety Culture Survey Tool (Can-PSCS).

2.3. Key findings for benchmarking on patient safety culture performance

16.   Table 2.1 shows the high-level findings of the benchmarking exercise. This table shows the OECD averages for each version of the HSPSC tool separately. Data from non-member and accession countries is not included in this table, but are included in the averages of the domain specific tables. As expected, performance rates are generally higher for domains when assessed by v2 of the tool, as compared to v1.

17.   Benchmarking results show average low performance on some common domains. The domain of staffing and work pace (that there are enough staff to handle the workload, staff work appropriate hours and do not feel rushed, and there is appropriate reliance on temporary, float, or on call staff) remains the lowest scoring domain on average for countries using both HSPSC v2 and v1 (only 48% and 37% average positive response respectively. Response to error (that staff are treated fairly when they make mistakes and there is a focus on learning from mistakes and supporting staff involved in error) also demonstrated generally low performance, with an average positive response rate of 54% for countries using HSPSC v2 and 47% HSPSC v1. These results are similar to those from the OECD's 2022 report, where staffing and work-pace and response to errors remained the domains with the lowest average performance across countries.

18.   The highest scoring domains related to interpersonal relationships in the workplace. These were teamwork and supervisor, manager, or clinical leader support for patient safety. For countries using HSPSC v2, the positive response rate for teamwork was 76% and for Supervisor, Manager, or Clinical Leader Support for Patient Safety it was 73%. For countries using HSPSC v1, these rates were 69 and 63% respectively.

Table 2.1. Average Performance on HSPSC Domains across OECD Countries, using most recent year available, 2020-2023.

HSPSC v2 Domain (v1 Domain)	Description	HSPSC v2	HSPSC v1
Teamwork (v1 *Teamwork Within Units*)	Staff work together as an effective team, help each other during busy times, and are respectful.	76% (8 OECD countries)	69% (6 OECD countries)
Staffing and Work Pace (v1 *Staffing*)	There are enough staff to handle the workload, staff work appropriate hours and do not feel rushed, and there is appropriate reliance on temporary, float, or on call staff	48% (8 OECD countries)	37% (7 OECD countries)
Organizational Learning—Continuous Improvement	Work processes are regularly reviewed, changes are made to keep mistakes from happening again, and changes are evaluated.	64% (8 OECD countries)	60% (6 OECD countries)
Response to Error (v1 *Nonpunitive Response to Errors*)	Staff are treated fairly when they make mistakes and there is a focus on learning from mistakes and supporting staff involved in errors.	54% (8 OECD countries)	47% (7 OECD countries)
Supervisor, Manager, or Clinical Leader Support for Patient Safety (v1 *Supervisor/Manager Expectations & Actions Promoting Patient Safety*)	Supervisors, managers, or clinical leaders consider staff suggestions for improving patient safety, do not encourage taking shortcuts, and take action to address patient safety concerns	73% (8 OECD countries)	63% (6 OECD countries)
Communication About Error (v1 *Feedback & Communication About Error*)	Staff are informed when errors occur, discuss ways to prevent errors, and are informed when changes are made.	65% (8 OECD countries)	54% (6 OECD countries)
Communication Openness	Staff speak up if they see something unsafe and feel comfortable asking questions.	67% (8 OECD countries)	54% (7 OECD countries)
Reporting Patient Safety Events (v1 *Frequency of Events Reported*)	Mistakes of the following types are reported: (1) mistakes caught and corrected before reaching the patient and (2) mistakes that could have harmed the patient but did not.	60% (8 OECD countries)	51% (6 OECD countries)
Hospital Management Support for Patient Safety (v1 *Management Support for Patient Safety*)	Hospital management shows that patient safety is a top priority and provides adequate resources for patient safety.	59% (8 OECD countries)	48% (6 OECD countries)
Handoffs and Information Exchange (v1 *Handoffs & Transitions*)	Important patient care information is transferred across hospital units and during shift changes.	64% (8 OECD countries)	44% (6 OECD countries)

Note: OECD average is composed of the most recent year's data from participating OECD countries (Brazil, Peru, and Saudi Arabia not included). Domains are written in alignment with HSPSC v2, HSPSC v1 domains (if titled differently) are written in parentheses.
Source: OECD Patient Safety Culture Pilot Data Collections (2023 and 2020-21)

19.   Examples of the analysis on the domains response to error, staffing and work pace, and handoffs and transitions are represented in the tables below. The remaining tables of additional domains (Teamwork, Organizational Learning—Continuous Improvement, Supervisor, Manager, or Clinical Leader Support for Patient Safety, Communication About Error, Communication Openness, Reporting Patient Safety Events, and Hospital Management Support for Patient Safety) can be found in 2.6.1.Annex C.

20.   Figure 2.6 which displays findings on the domain of **response to error**, meaning that staff are treated fairly when they make mistakes and there is a focus on learning from mistakes and supporting staff involved in errors. On average, only 52% of respondents had a positive response in this domain using HSPSC v2 and 42% using HSPSC v1. As a result of the most recent data collection, information on the performance on PSC is now also available for staff type. Figure 2.7 shows differences by staff category. Using data from HSPSC v2, on average 68% of managers had a positive response on this item, compared to only 53% of physicians and 52% of nurses.

Figure 2.6. Response to Error (v1 Nonpunitive Response to Errors)

Average % Positive Response

Country	Value
Israel	68
United States	63
Portugal	56
Saudi Arabia	56
Colombia	55
Türkiye	55
HSPSC v2 Average	52
Chile	45
Korea	45
Poland	45
Peru	44
Switzerland[1]	55
Spain[1,2]	53
Netherlands[1]	49
Japan[1,2]	46
HSPSC v1 Average	42
Belgium[1]	41
France[1,2]	36
México[1]	31
Brazil[1]	28
Canada[2,3]	35
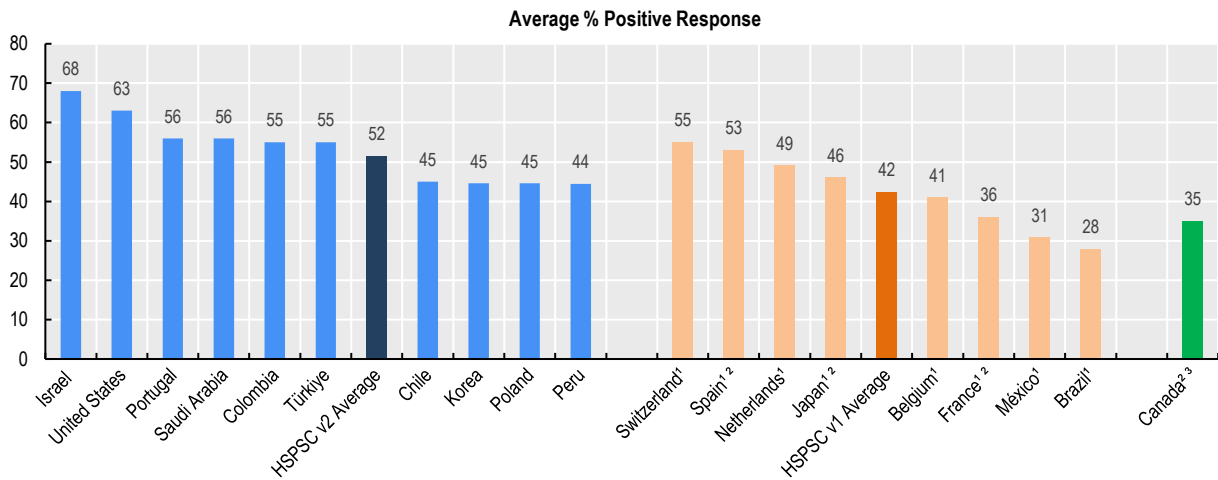
Note: 1. HSPSC v1 (in Orange) 2. Data from previous PSC pilot data collection. All data from 2019-2023 3. The Canadian Patient Safety Culture Survey Tool (Can-PSCS), 2018 (in Green).
Source: OECD Pilot Data Collections on Patient Safety Culture

Figure 2.7. Response to Error (v1 Nonpunitive Response to Errors), by key job categories
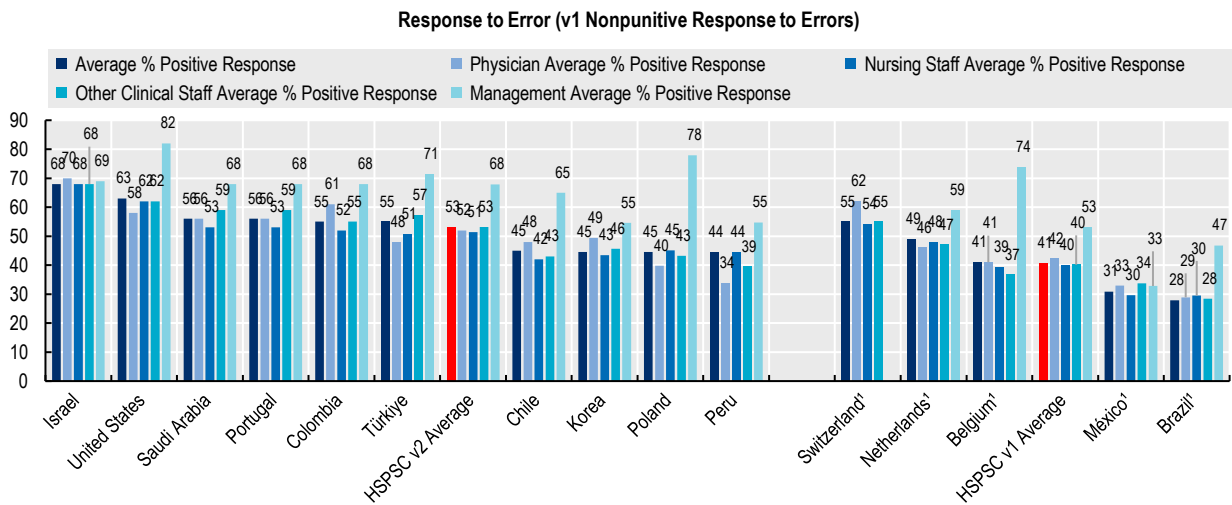
Response to Error (v1 Nonpunitive Response to Errors)

■ Average % Positive Response   ■ Physician Average % Positive Response   ■ Nursing Staff Average % Positive Response
■ Other Clinical Staff Average % Positive Response   ■ Management Average % Positive Response

Note: Data from 2019-2023 1. HSPSC v1
Source: OECD Pilot Data Collections on Patient Safety Culture

21.   The PSC domain of **staffing and work pace** relates to if there are enough staff to handle the workload, staff work appropriate hours and do not feel rushed, and there is appropriate reliance on temporary, float, or short-term staff. On average,47% of respondents in countries using the HSPSC v2 tool felt that staffing conditions were conducive to proving safe care, compared with 37% of staff using HSPSC v1 (see Figure 2.8). Using HSPSC v2 data, managers were found to have the highest perceptions of safe staffing and work-pace (54%), with lower levels of positive perceptions among doctors (45%), nurses (45%), and other clinical staff (48%). Rates are lower among staff groups using HSPSC v1, with all staffing categories reporting positive response rates below 41% (see Figure 2.9).

Figure 2.8. Staffing and work pace

Staffing and Workpace

% Positive Response

Note: Data from 2019-2023. 1. HSPSC v1 (Orange) 2. Data from previous PSC pilot data collection.
Source: OECD Pilot Data Collections on Patient Safety Culture

Figure 2.9. Staffing and work pace, by key job categories
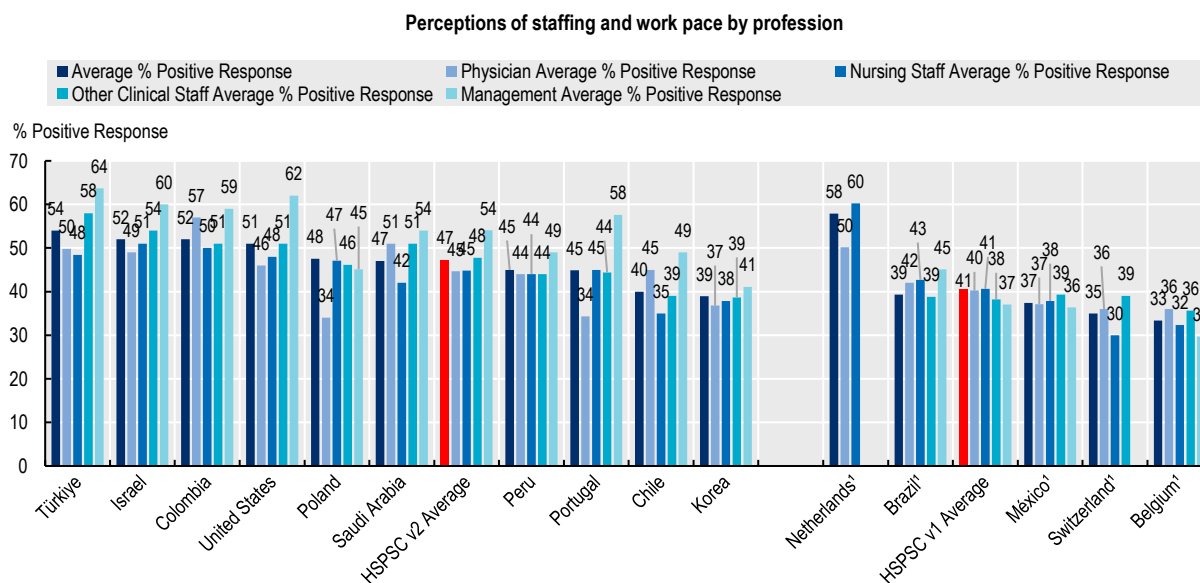
Perceptions of staffing and work pace by profession

- ■ Average % Positive Response
- ■ Physician Average % Positive Response
- ■ Nursing Staff Average % Positive Response
- ■ Other Clinical Staff Average % Positive Response
- ■ Management Average % Positive Response

% Positive Response

Note: Data from 2019-2024. 1. HSPSC v1 2. Data from previous PSC pilot data collection.
Source: OECD Pilot Data Collections on Patient Safety Culture

22.   The domain of **handoffs and information exchange** refers to work environments where important patient care information is transferred across hospital units and during shift changes. Across all countries, the average positive response was 65% for countries using HSPSC v2 and 44% of countries using HSPSC v1 (see Figure 2.10). Notable differences in perceptions by job type were found in Türkiye and Portugal.

For countries using HSPSC v2, 61% of doctors, 67% of nurses, 58% of other clinical staff, and 66% of management had a positive response (see Figure 2.11). Data from Türkiye shows a 18-percentage point difference in positive perceptions between management and physicians, and data from Portugal shows a 24-percentage point difference between these two groups.

Figure 2.10. Handoffs and Information Exchange
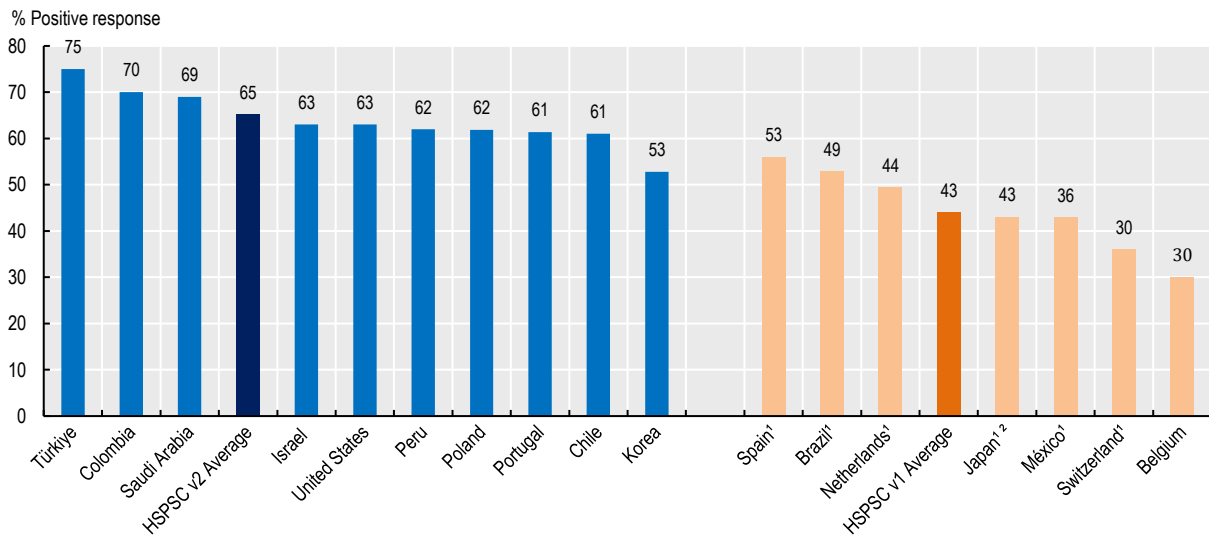
Note: Data from 2019-2024. 1. HSPSC v1 2. Data from previous PSC pilot data collection.
Source: OECD Pilot Data Collections on Patient Safety Culture

Figure 2.11. Handoffs and information exchange, by job category
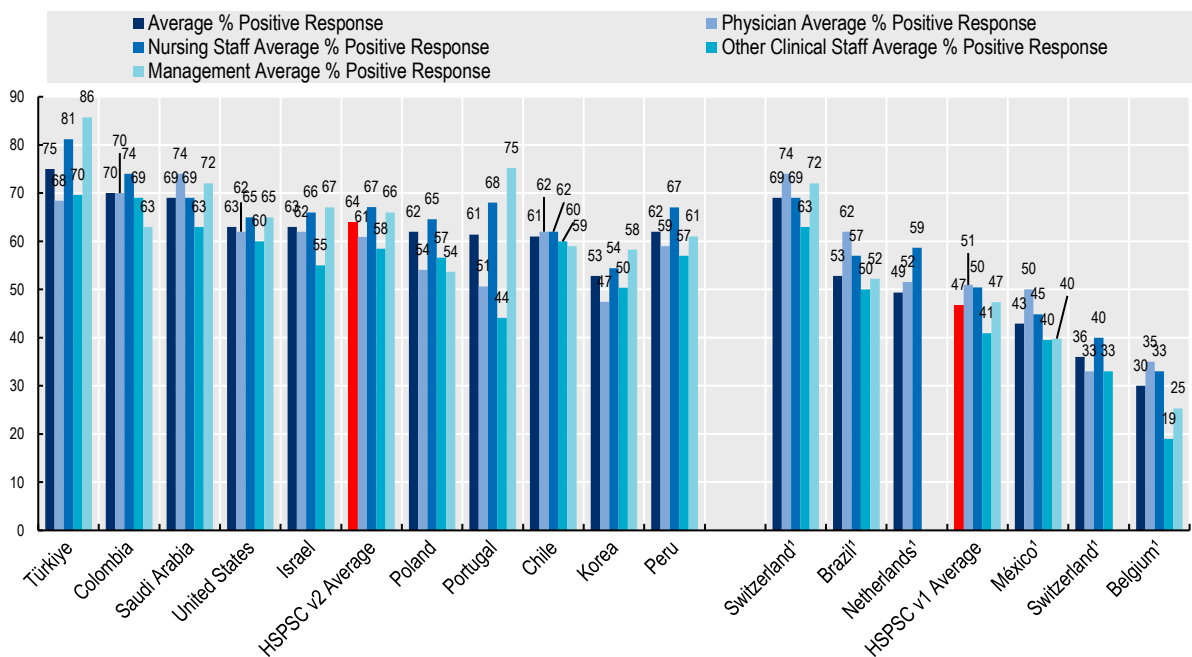
Note: Data from 2019-2024. 1. HSPSC v1 2. Data from previous PSC pilot data collection.

Source: OECD Pilot Data Collections on Patient Safety Culture

2.4. Exploratory international analysis of patient safety culture using the "threshold" method.

23.   Experiences from the first round of international benchmarking on PSC proposed increasing the assessment to account for suggested more analysis assessing the differences in average response rates across hospitals and the scope of variation at the hospital/unit level (e.g. % of hospitals/units that have high levels of positive responses). Countries, including Belgium and Norway, have explored mechanisms for reporting PSC findings in this manner (de Bienassis and Klazinga, 2022[7]).

24.   As a result, reporting on hospital or unit variation was explored during this data collection to assess the feasibility for countries in reporting further disaggregated data. The data collection asked countries to report the % of hospitals performing over a certain threshold for each domain. Countries with a limited number of reporting sites were excluded, so as a result only countries with more than 15 sites per country were included in the analysis. Figure 2.12 shows the percentage of hospitals with an over 60% average positive response rate by domain. All five countries included in this analysis showed high hospital level performance on the teamwork domain, and low performance in the staffing and work pace domain—with no hospitals reaching the 60% threshold in some countries. Figure 2.13 shows the percentage of hospitals with an over 75% average positive response rate by domain. Due to the higher threshold there is increased variation on performance across countries, leading to difficulties in interpretation. Due to variation in performance across domains, a different threshold—based on median performance, for example—could be explored in the future analyses.

Figure 2.12. Percentage of hospitals with an over 60% average positive response rate by domain
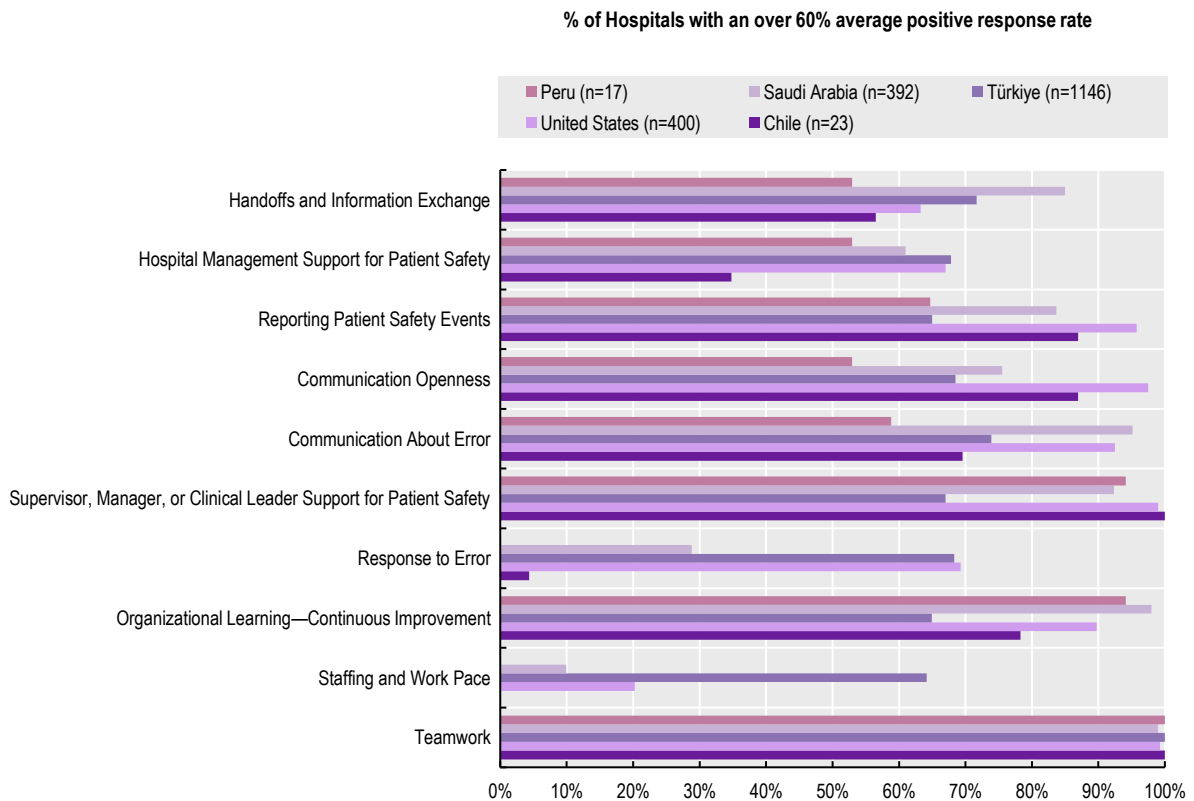
% of Hospitals with an over 60% average positive response rate

Note: Data presented on countries using HSPSC v2 with more than 15 observations (sites/hospitals)
Source: OECD Pilot Data Collections on Patient Safety Culture

Figure 2.13. Percentage of hospitals with an over 75% average positive response rate by domain
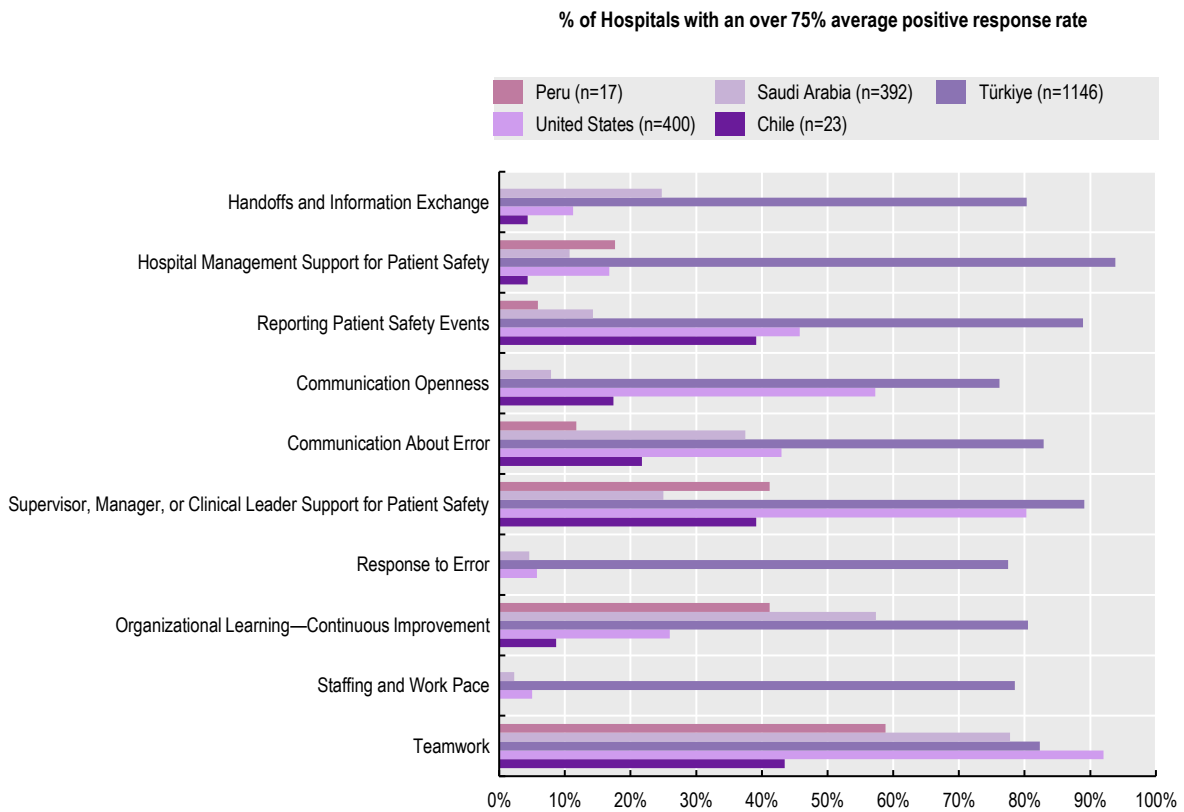
% of Hospitals with an over 75% average positive response rate

Note: Data presented on countries using HSPSC v2 with more than 15 observations (sites/hospitals)
Source: OECD Pilot Data Collections on Patient Safety Culture

2.5. State-of-the-art for country activities for measuring and improving patient safety culture

25.   Since the publication of the previous benchmarking report on patient safety culture in 2022, there have been significant advancements in uptake measurement activities for patient safety culture (de Bienassis and Klazinga, 2022[7]). The following section describes the latest in national level assessments measure and improve patient safety culture, including from some countries (Australia, Italy) whose data is not represented in the previous sections. Descriptions have been provide by country representatives.

2.5.1. Australia

26.   The Australian Commission on Safety and Quality in Health Care (ACSQHC) has released a toolkit which provides advice on measurement approaches and includes an Australian modification of the Hospital Survey on Patient Safety Culture. The Australian modification of this survey was validated and tested in public and private Australian hospitals. An expert advisory group supported the ACSQHC to modify the HSPSC v2 to ensure that the language used in the survey was appropriate for an Australian setting.

Cognitive testing was undertaken with 20 hospital staff to understand how the questions were understood by a range of hospital staff and to identify additional changes to improve understanding.

27. Pilot testing was undertaken to validate the survey in an Australian hospital setting and identify if the survey could be shortened. Nine public and private hospitals participated in the pilot. Information from the pilot and advice from the advisory group was used to test the survey and identify items that could be removed. The results of the analysis using a 26-item model yielded an adequate to good fit for the confirmatory factor analysis indices (Tucker Lewis Index = 0.938, Comparative Fit Index = 0.950, Root Mean Square Error of Approximation = 0.050).

28. In conjunction with the development of Australian modification of the survey, the ACSQHC developed the Patient Safety Culture Measurement Toolkit[1]. The toolkit enables the routine and systematic collection of data about staff experiences of safety culture for health services and provides implementation advice along with tools and templates. The toolkit and survey were released in late 2021.

29. Use of the survey is voluntary in Australia. States and territories along with private hospitals use a range of methods to understand and improve on patient safety culture. Interest in systematic measurement of patient safety culture is growing with several states and territories piloting use of the survey or providing technical support to implement the survey. Since the soft release, 430 users have downloaded the survey. To promote and further support national uptake of the toolkit, the ACSQHC is developing additional promotional and implementation resources to demonstrate the utility, benefits and quality improvements from systematic, integrated measurement of patient safety culture.

2.5.2. Chile

30. Among the objectives proposed for health system priorities in Chile for the year 2024 is to work on strengthening the safety culture in health facilities, including the countries 198 public hospitals. The Ministry of Health has been working in a planning which advance and strengthen actions related to the safety of health care. The result of this work is the National Safety Plan, which will promote training, updating, and preparation of technical standards, ultimately strengthening the safety culture though measurement and implementation of improvement strategies. An agreement has been signed with Florida International University (FIU) to apply the HMA safety culture survey to 62 public hospitals in Chile. The survey will be coordinated by hospitals internal patient safety teams, with the support of government authorities, subnational agencies, and public hospital directors.

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[1] https://www.safetyandquality.gov.au/our-work/indicators-measurement-and-reporting/patient-safety-culture

Box 2.1. Healthcare Management Americas Patient Safety Culture Data Collection

Healthcare Management Americas (hma.fiu.edu) at Florida International University, has supported the implementation of HMA Patient Safety Culture (PSC) survey in Peru, Colombia, Chile and Brazil. The HMA survey collects data using the second version of the AHRQ survey translated to Spanish and Portuguese and culturally adapted to Latin American countries. From 2022 HMA has collected data from 56 hospitals from Peru, 33 from Colombia, 16 from Chile, and 8 from Brazil. Through collaborations with private and public organizations, HMA has provided—free of charge—hospital reports to improve PSC, as well as training to all staff.

In 2023, HMA partnered with the network of social security hospitals from Peru (ESSALUD) to implement the PSC survey in all their 40 facilities with ICUs. The HMA survey included additional questions to identify infection disease risks. The results of the survey have been used to stablish a baseline to evaluate an infection control intervention in ESSALUD's ICUs. In 2022, HMA partnered with the network of 8 Ministry of Health hospitals from East Santiago, in Chile. The survey was implemented in 2023 and served as a pilot to extend the study to all Ministry of Health hospitals in Chile, starting in 2024. The goal is to use the results for a policy recommendation to include PSC surveys in accreditation regulations, first in Chile but later across multiple Latin American countries.

2.5.3. France

31.   In France, patient safety culture assessment is a component of healthcare facility certification. The French National Federation of Regional Quality and Safety Support Organisations (FORAP) and the French National Authority for Health (HAS) have promoted the use of PSC measurement tools since 2010 and conducted the first national survey to measure patient safety culture within healthcare facilities in France in 2023. For this effort, a validated French-language version of HSPSC v1 was used.

32.   The survey was proposed to all French healthcare facilities between 1 May and 30 June 2023, via a dedicated platform (EForap). This platform allows the collection responses to questionnaires, but also to generates an automated results report. There was also an option for healthcare facilities to complete a paper questionnaire. Healthcare facilities could request help from their Regional Quality and Safety Support Organisation (members of FORAP).

33.   A national HAS/FORAP webinar and regional webinars took place in 2023 to encourage healthcare facilities to participate in the survey. The roll-out of the national survey included assistance from each Regional Quality and Safety Support Organisation to provide step-by-step guidance on interpreting, taking ownership of and sharing the results of the patient safety culture assessment. The aim was to define the most appropriate improvement actions. These elements and the first national results were presented during a HAS/FORAP national webinar in November 2023, along with the tools available to improve patient safety culture (safety walkarounds, guide to analysing care-related adverse events, continuous improvement programme for teamwork, accreditation of physicians and medical teams, etc.). A full report on national results will be published in 2024. A new national survey is planned for 2027 as part of a national programme for improving patient safety[2].

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[2] https://www.forap.fr/replay-mesure-culture-de-securite-des-soins-2023-etablissements-de-sante
https://www.forap.fr/campagne-nationale-de-la-culture-de-securite-des-soins-les-premiers-enseignements
https://www.has-sante.fr/jcms/r_1497866/fr/culture-de-securite-des-soins-comprendre-et-mesurer

2.5.4. Italy

34.   In April 2023, a Collaboration Agreement between AGENAS (Italian National Agency for Regional Healthcare Services), University of Genoa and the Local Health Authority of Tuscany Northwest was signed to implement a national system for detecting safety culture in Italian hospitals through validated measures. The study protocol included the adaptation and validation of HSPSC v2 in Italian, in addition to the OECD Patient-reported incident measures (OECD PRIMs). The study protocol is designed to estimate the strength and direction of correlation between staff-reported patient safety culture, patient-reported safety experiences and patient outcomes.

35.   Language and cultural adaptation were carried out between March and April 2023 using the forward-backward translation method to translate the HSPSC v2 from English into Italian. Two different Italian mother-tongue translators with a good knowledge of English were asked to independently translate the questionnaire. The two translations were then synthesized into one final version, that was translated back into English by an English mother-tongue translator with a good knowledge of Italian. The translated questionnaire was submitted to a group of experts to validate its content in April 2023. Experts were asked to rate each item of the questionnaire with a 4 - point Likert scale ranging from not relevant at all to very relevant. The Content Validity Index was calculated for each item (I-CVI) and for the scale (S-CVI). All items achieved an I-CVI superior or equal to 0.78, except for 5 items achieving an I-CVIs equal to 0.70. Since the S-CVI resulted equal to 0.91, every item was maintained in the questionnaire.

36.   The translated version of the questionnaire was submitted to a group of possible participants to assess Face validity. Participants (N=10) were asked to assess whether the items were difficult to understand, confusing, whether they contained difficult words, offensive words, or they needed to be rephrased. In general, none of the questions were considered offensive. Items considered unclear or not legible were modified by adding the definitions of those words difficult to understand for participants.

37.   From May 2023 to November 2023 a pilot survey was conducted in two Italian hospitals (S. Martino Policlinic of Genoa and S. Luca Hospital of Lucca) for the psychometric evaluation and statistical descriptive analysis of the HSPSC v2—Italian version. The two public hospitals were a Teaching Hub Hospital (N=1000 beds; N=5000 hospital personnel) and an Urban Hospital (N=314 beds; N=1500 hospital personnel). All hospital personnel (administrative and healthcare personnel) were invited to participate via email and text messages and informed consent was collected before starting data collection.

38.   Out of the overall 6500 subjects working in the two hospitals a total of n=633 hospital workers participated in the survey (10%). Overall, all the items of the questionnaire were completed by 74.7% of participants (n=473). Most of the participants were nurses (55%), females (75%), with a mean age of 46 years, who have been working for more than 11 years (54%), currently working in clinical inpatient unit (65%), with a direct interaction with patients (89%).

39.   A confirmatory factor analysis CFA based on the construct defined in the original development of the HSOPS 2 (AHRQ, 2022; Sorra et al., 2019) was performed and Cronbach's alpha was calculated for each factor to assess the reliability. The analysis showed an excellent construct fit, with every index taken into consideration obtaining the desirable values. The Cronbach's alpha resulted to be good or acceptable for most factors ($0.7 \leq$ to < 0.89), except for two factors that were at the threshold of acceptability ($0.67 \leq$ to < 0.69). The adapted version of HSOPS 2, can therefore be considered a valid and reliable tool to be used in the Italian context.

40.   The OECD PRIMs patient data collection is ongoing. The first step was forward-backward translated from English into Italian. Then, the content validity in terms of relevance of each item was conducted with an experts panel, the I-CVI and the S-CVI were acceptable with an index ranging from 0.75 to 1 and 0.9, respectively. The final version was assessed for clarity and comprehensibility by the patients' perspective (n=10) and readability for some items were improved.

41.   Feedback on performance could be provided to hospitals and managers that participated in the pilot study and actions to improve patient safety culture and improve results could be planned at local level within the facilities involved. The validated questionnaire will be available for all the Italian hospitals interested in its administration. When the questionnaire application will be spread at the national level, common strategies for feedback to hospitals as well as improvement action could be developed.

2.5.5. Mexico

42.   In Mexico, in 2022, two measurements of the Patient Safety Culture were carried out in outpatient and hospital health care facilities. Data collection occurred between September 17 to November 15, and information was collected from 7,422 out-patient facilities and 74,225 corresponding health professionals and 1,307 hospitals with the participation of 78,917 corresponding health professionals.

43.   In 2023, the number of out-patient facilities covered was 6,111, and with results from 74,217 health professionals. For hospitals, 903 sites were covered with 120,911 participating professonals. In both editions there was representation of the 32 federal entities, as well as the country's Social Security institutions (IMSS, ISSSTE, SEDENA and SEMAR) and institutions without social security (Secretary of Health, State Medical Services, University Hospitals, DIF and Mexican Red Cross) and private hospitals[3]. As part of the work developed from the results obtained, each federal entity carries out a continuous improvement plan based on the areas of opportunity and strengths found in the evaluation.

44.   A new regulation made PSC surveys mandatory for all hospitals in Mexico from 2023. The survey is administered by the MoH annually. This is part of the regulation CSG. 60/06.03.17 (Acciones Esenciales para la Seguridad del Paciente 2017).

2.5.6. Portugal

45.   In Portugal, Patient Safety Culture in hospitals has been assessed since 2014, in even years, and is conducted via a collaboration between Directorate General of Health (DGS), the Portuguese Association for Hospital Development (APDH) and Lisbon School of Health Technology (ESTeSL), with the local implementation of the Quality and Safety Committees (CQS).

46.   In the last trimester of 2022, Portugal began the implementation of a pilot study to validate the Portuguese version of the Hospital Survey on Patient Safety Culture (HSPSC v2). The hospitals were selected to ensure geographical representativeness and included Health Regions of mainland Portugal: North region (East and West); Centre region (East and West); South region (Est and West), however, the selection does not statistically represent the entire country. The data collection was conducted from 19th January to 8th February of 2023

47.   The pilot study took place in 7 public hospitals. The average hospital response rate (average of hospital level rates) was 32%. The domains that had the highest average positive response rate were *Teamwork* and *Supervisor, Manager, or Clinical Leader Support for Patient Safety.* Managers when compared to other professionals, scored highest in all dimensions except *Reporting Patient Safety Events*, in which other support professionals indicated the highest positive response rate. Data collected in the pilot study is informing the definition of the Patient Safety Culture Model—primarily in terms of communication and survey implementation strategies (enrolment and implementation) and information to be included in the units' reports. In 2024, it is expected that HSPSC v2 will be implemented in all Portuguese hospitals.

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3 The results of the survey are available on the DGCES website, https://dgces.salud.gob.mx

2.5.7. Saudi Arabia

48.   The Saudi Patient Safety Center (SPSC) is tasked with the mandate of quantifying patient safety culture in healthcare organizations within Saudi Arabia to improve patient safety. This is accomplished by assessing and measuring healthcare organizations' (hospitals) existing patient safety culture and identifying the priority composites/domains to improve patient safety[4]. Beginning in July 2017 (pilot phase), SPSC launched a national project to measure and enhance patient safety culture in hospitals through an electronically designated platform (developed by SPSC) using the AHRQ Hospital Survey on Patient Safety Culture Survey tool version 1.0. The 2nd cycle launched in April 2019, the 3rd in January 2021, the 4th in January 2022, and the 5th in September 2023 (4th and 5th using V 2.0).

49.   Notably, SPSC's last national measurement cycle was closed in October 2023 with more than 170,000 surveys and 420 engaged hospitals from different healthcare sectors. In addition, SPSC has built hospital survey databases and publishes annual reports using data from hundreds of Saudi Arabian hospitals, who submit data on a voluntarily basis. The databases are used by SPSC, healthcare organizations, health clusters and corporations, health affairs, scholars, survey participants, and other relevant institutions. To streamline the process and reduce expenses, SPSC implemented an electronic system to assist with measuring, monitoring, and administrating safety culture, which is provided to all hospitals at no cost. This platform allows beneficiaries to generate survey links and barcodes to participants, response rate real-time monitoring dashboard, unite level/ staff categories RR dashboard, communication hub, report generation, raw data extraction, comments extraction, groups/ ownership dashboards, among other functionalities.

50.   Following the release of the national database report, SPSC continued its efforts to improve the three lowest scoring domains at the national level and formulating evidence-based recommendations for hospitals to incorporate into their action plans. SPSC initiated a culture improvement initiative by conducting a targeted workshop on data utilization, report analysis, and action plan development. This workshop took place in six regions of the Kingdom over 2022-2023. Furthermore, by collaborating closely with certain designated hospitals, SPSC addresses their specific needs for potential improvement in a particular area. For instance, SPSC facilitates the implementation of Patient Safety Leadership WalkRounds™ intervention upon their request, resulting in a 9% increase in the positive response of the hospital's management support in the 2023 re-assessment phase.

2.5.8. Switzerland

51.   Since 2019, the quality managers of the Swiss university hospitals have collaborated together in a working group. In 2022, the working group Quality launched a pilot project aimed at measuring the patient safety culture in the five university hospitals of Switzerland. This pilot project was coordinated by Swiss University Medicine (Universitäre Medizin Schweiz, Médecine Universitaire Suisse).

52.   All employees of the 5 Swiss university Hospitals were invited to participate:

- University hospital Basel USB
- University Hospital Zurich USZ
- University Hospital Geneva HUG (Hôpitaux universitaires Genève)
- University Hospital BERN (Inselgruppe Bern)
- University Hospital Lausanne CHUV (Centre hospitalier universitaire Vaudois)

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[4] https://www.spsc.gov.sa/English/HSPSC/Pages/default.aspx
https://www.spsc.gov.sa/English/HSPSC/Pages/national-report.aspx
https://www.spsc.gov.sa/English/HSPSC/Pages/HSPSC-references.aspx
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https://x.com/saudipsc/status/1688540493108428800?s=46&t=Mqyrr0QQdk9gbnNm6bQWbA

53.   The Survey was conducted from 15th of February 2023 to the 15th of March 2023 online. The Data were collected on the REDCap server of the university Hospital Geneva. All employees working at the hospital were eligible to participate. Employees without access to computers were excluded. Based on automated email responses, employees who were on holiday, long-term leave, maternity or sabbatical leave were excluded. Employees with an incorrect email address or mailboxes not used anymore were also excluded.

54.   In total, 54,316 employees were invited to participate. After exclusion of ineligible staff (n=1,442), 52,874 staff remained eligible. The patient safety culture questionnaire was the "Hospital Survey on Patient Safety" (HSOPS), version 1, a questionnaire developed in 2004 by the Agency for Healthcare Research and Quality (AHRQ) in the United States (Sorra and Dyer, 2010[9]). This questionnaire has been recommended by the European Society for Quality in Healthcare (Kristensen and Bartels, 2010[10]), and is widely used for the monitoring of patient safety culture, as well as in Switzerland (Kundig et al., 2011[11]; Perneger, Staines and Kundig, 2014[12]; Pfeiffer and Manser, 2010[13]; Cullati et al., 2023[14]). The Organisation for Economic Co-operation and Development (OECD) is recommending the HSOPS for international benchmarks of patient safety culture in hospital settings.

55.   The survey has been assessed in five additional languages to English: German (Pfeiffer and Manser, 2010[13]), French (Occelli et al., 2013[15]), Italian (Bagnasco et al., 2011[16]), Portuguese and Turkish. In addition, we implemented the Spanish version provided by the AHRQ. Translations of the version 1 HSOPS have been scientifically validated.

56.   The aggregated Results were submitted to the OECD in May 2023. In November 2023, the five academic hospitals shared in a workshop involving different stakeholders their understanding of Patient Safety Culture (PSC) and the next steps for a common strategy on improving PSC.

2.5.1. Türkiye

57.   In 2021, the Ministry of Health of the Republic of Türkiye conducted the "Patient Safety Culture Survey" with the aim of assessing the culture of patient safety and increasing awareness nationwide. The survey was conducted from September 25 to November 1, 2021, among healthcare personnel working in all public, private, and university hospitals in Türkiye, achieving a 74% response rate. The results of the "Patient Safety Culture Survey" are included in this report, and there are plans to conduct the survey again in the second term of 2024.

58.   Standards regarding patient safety have been determined within the scope of "Health Quality Standards" (SKS) published by the Ministry of Health within the framework of Türkiye "Health Quality System" since 2005. Thus, the aim is to take precautions and improvement activities to keep all foreseen hazards that may cause harm to all stakeholders at an acceptable risk level. These standards are implemented in all healthcare institutions and organizations and have been evaluated by certified evaluators assigned by our Ministry since 2010. Evaluations continue every year. And thus, the quality scores of health institutions are determined. This score is calculated in accordance with the healthcare quality standards score calculation guide published by the General Directorate of Health Services, and the determined quality score has been used as one of the manager performance indicators since 2011.

59.   The Patient Safety Unit was established in 2022 within the Department of Health Quality, Accreditation and Employee Rights of our Ministry. Existing patient safety goals have been updated, 23 national patient safety goals have been announced in 2022, and the studies and prepared guides regarding patient safety are published on the website of the Department[5]. In 2023, patient safety notifications at the national level were monitored and analysed by the Department of Health Quality, Accreditation and

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5 https://shgmkalitedb.saglik.gov.tr/TR-95192/hasta-guvenligi.html

Employee Rights through the "Türkiye Patient Safety Reporting System". The Ministry of Health has not yet published a quality standard for the systematic measurement of Patient Safety Culture in LTC facilities.

2.5.2. United States

In the United States, the Agency for Healthcare Research and Quality (AHRQ) holds voluntary data submission for the SOPS Hospital Survey 2.0 every 2 years. The latest data submission was in 2022 and the results of which have been included in this report. The next data submission period opens June 2024 for hospitals that has collected data between July 2022 and June 2024, with the results expected in Q3 of 2024. Participation in the SOPS Databases is free and open to users of the surveys to voluntarily submit their data. Since 2022, there have been several data submission for the other SOPS Surveys, including in Nursing Homes/long term care facilities. Information on the tools available and scope of surveys is included below:

- **SOPS Nursing Home Survey**: The 2023 Database included data from 62 U.S. nursing homes and 3,224 nursing home staff respondents[6].
- **SOPS Ambulatory Surgery Center Survey**: The 2023 Database included data from 243 U.S. ambulatory surgery centers and 7,458 respondents[7].
- **SOPS Medical Office Survey**: The 2024 Database included data from 1,164 U.S. medical offices and 15,449 provider and staff respondents[8].
- **SOPS Hospital 2.0 Survey**: The 2022 Database included data from 400 U.S. hospitals and 206,410 respondents (as noted above, the results from this database have already been provided to OECD)[9].

In 2020 the state of Florida made the PSC measurement mandatory for all hospitals operating in the state (HB#763)[10]. Hospitals will use the AHRQ HSPSC v2 instrument, and will report a summary to the Florida regulator every 2 years beginning in 2025.

2.6. Future considerations and next steps

2.6.1. Further development and integration of PSC data collections

60.   Following two successful pilot data collection efforts to assess the feasibility of collecting and reporting data on patient safety culture, the OECD will begin collecting PSC indicators as part of its core data collection to provide insights on the state of patient safety among OECD countries. The data collection is proposed to align with HSPSC v2, with mapping of HSPSC v1 to the included domains, with the version of the tool will be indicated in the data set. Additional OECD countries will be welcomed and encouraged to submit data though this method for future data collections moving forward. Information on sources and methods, similar to the meta-data included in this report, will be available through this platform. This will lead to increased visibility of indicators on PSC through the OECD database—and it is envisioned that countries will continue to adopt and report comparable survey results in future years.

61.   Building on this progress in harmonising surveys on patient safety culture, the development and implementation of harmonised modules in broader health staff surveys could provide valuable and comparable data on whether progress is achieved in improving key aspects of the working conditions of

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[6] The 2023 Database Report may be found here: https://www.ahrq.gov/sops/databases/nursing-home/index.html

[7] The Database Report may be found here: https://www.ahrq.gov/sops/databases/asc/index.html

[8] The Database Report may be found here: https://www.ahrq.gov/sops/databases/medical-office/index.html

[9] The Database Report may be found here: https://www.ahrq.gov/sops/databases/hospital/index.html

[10] https://www.flsenate.gov/Session/Bill/2020/763

health workers. Based on a preliminary review of existing health staff surveys in some countries, these surveys typically cover three key dimensions of the quality of the working conditions: 1) work stress and burnout; 2) job satisfaction; and 3) intention to leave job (OECD, 2024[17]). To some extent, PSC measurement itself could help address these questions, as research from Norway found that safety culture dimensions predicted related outcomes such as 'pleasure at work' and 'turnover intention' (Olsen et al., 2024[5])

62.   The increased use of patient safety culture metrics to inform policy making and health systems performance monitoring is another opportunity for expanded utility of PSC metrics. A recent example is the inclusion of indicators on patient safety culture in the Belgian National Health System Performance Assessment (HSPA), which assesses the health system holistically, based on measurable indicators. The strategic objectives of the Belgian HSPA are: 1) To inform the health authorities about the performance of the health system and to provide needed information for policy planning; 2) To provide a transparent and accountable view of the health system performance, and; 3) To monitor the health system performance over time. The items included in the HSPA related to patient safety culture are illustrated in Figure 2.14. Other countries with established HSPA type systems may consider the inclusion of PSC metrics in their national reports as a way to further institutionalize the assessment and drive improvement in performance.

Figure 2.14. Patient Safety Culture Measures included in the Belgian National HSPA

Hospital safety culture										
QS-9 *New*	Health workers thinking that staffing levels in hospitals are sufficient to handle the workload and work hours appropriate to provide the best care for patients (% of respondents, HSPC)	🔴	53	2022	NR	NR	NR	Belgian Hospital Survey on Patient Safety Culture , Hasselt University	-	-
QS-10 *New*	Health workers who have positive overall perceptions of patient safety in hospitals (% of respondents, HSPSC)	🟡	58	2022	NR	NR	NR	Belgian Hospital Survey on Patient Safety Culture , Hasselt University	-	-

Good (🟢), average (🟡) or poor (🔴) results, globally stable (ST), improving (+) or trend not evaluated (empty).
For contextual indicators (no evaluation): upwards trend (↗), stable trend (→), downwards trend (↘), no trend (C).

Source: Performance of the Belgian health system: Report 2024 | KCE (fgov.be)

63.   Additional opportunities remain in assessing new ways to analyse PSC data and to expand benchmarking opportunities to other settings. Long-term care is a setting where there are limited reliable international benchmarks on safety and quality, and where patient safety culture measurement could provide insights. There are a number of existing initiatives at the national level that could be leveraged to expand the understanding of safety in this setting. In Portugal, DGS is planning to extend Patient Safety Culture assessment to long term care facilities, using the HSPSC v2 with its adaptation to this context, and will develop a pilot study in 2024. France and the United States national initiatives to promote data on PSC in nursing homes and long-term care.

64.   Patient safety culture appears to be reaching the tipping point in being established as a international indicator with a large number of large-scale, national assessments using a harmonized tool. The results of these assessments show that there is still ample room for improvement, and the need to assess patient safety culture through sustained and ongoing survey assessments continues.

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Annex A. Characteristics of surveys included in analysis

	Brazil	Chile	Colombia	Israel	Mexico	Netherlands	Peru	Poland	Portugal	Korea	Saudi Arabia	Switzerland	Türkiye	United States
HSPSC version	v1	v2	v2	v2	v1	v1	v2	v2	v2	v2	v2	v1	v2	v2
Year(s) of data collection:	2021	Sep 2021 - Dec 2022	Sep 2021 - Nov 2022	2022		2019 - 2020	Sep 2021 - Dec 2022	2021	2023	2021~2022	2022	2023	2021	2020-2022
Total number of sites:	31	23	11	36	1314	5	17		7		392	5	1,146	400
# hospitals with more than 500 beds:	0				7				1		21	5	126	
# hospitals with less than 500 beds	31				1307				6		371	0	1,020	
# "teaching" hospitals									1		2	5	67	
Total number of participants (total across all sites):	20,199	11,735	4,911	4,567	102,669	2,961	7,912	15,653	2,541	8,750	145,657	11,951	102,293	
# of physicians	1,637	1,740	754	660	23,193	442	1,185	1,644	299	878	27,907	1,855	8,893	
# of nurses	8,093	4,567	1,983	2025	55,424	1,522	2,813	6,090	1,197	5,192	68,800	5,062	42,549	65,152
# of other clinical staff	1,273	2,370	822	839	2,605	496	1,447	1,945	275	1,366	27,601	1,823	8,685	55,680
# support staff	2,739	2,088	926	195	2,189	249	1,728	3,977	738	1,115	6,081	2,584	33,294	29,498
# of management	647	970	426	814	24,463	76	739	1,680	32	1,660	7,812		2,761	15,322
Average response rate (pooled across all sites):	67%	57%	39%			41%	62%		24%	44%	61%	23%	74%	44%
Average hospital response rate (average of hospital level rates):	68%	45%	43%				75%	19%	32%		70%	23%	74%	48%
Average number of respondents per hospital:	652	503	443		78		458		372	583	371	2,394	89	516

Note: Information on characteristics of previously reported survey data can be found in Annex B of Developing international benchmarks of patient safety culture in hospital care: Findings of the OECD patient safety culture pilot data collection and considerations for future work

# Annex B. Participants on the OECD Expert Group on Patient Safety Culture

Name	Country	Position
Suzanna Henderson	Australia	Australian Commission on Safety and Quality in Health Care
Annemie Vlayen	Belgium	Federal Public Service of Health, Food Chain Safety and Environment and Hasselt University
Anne MacLaurin	Canada	Canadian Patient Safety Institute
Kyle Kemp Feria Bacchus	Canada	Accreditation Canada
Cristian Felipe Lara Roman Javiera Fuentes Contreras Solana Terrazas Martins	Chile	Subsecretaría de Salud Pública
Solvejg Kristensen	Denmark	Aalborg University Hospital
Teele Orgse	Estonia	
Karolina Olin	Finland	Turku University Hospital
Laure MISRAHI Candice LEGRIS	France	HAS
Vasiliki Kapaki	Greece	Institute of Agri-food and Life Sciences, University Research & Innovation Center, H.M.U.R.I.C., Hellenic Mediterranean University
Yaron Niv	Israel	Quality and Patient Safety
Yael Applbaum Ziona HAKLAI Yaffa Ein-Gal	Israel	Israel Health Ministry
Michele Loiudice Sara Carzaniga Flavia Cardinali	Italy	AGENAS
Annamaria Bagnasco Gianluca Catania Tommaso Bellandi	Italy	Experts collaborating with AGENAS
Ken Taneda	Japan	National Institute of Public Health, Ministry of Health, Labour and Welfare
Seung Eun Lee	Korea	Yonsei University
Omar Aguilar Sánchez Marcela Sanchez Zavala	Mexico	General Directorate of Quality and Healthcare
Ellen Catharina Tveter Deilkås Joy Buikema Fjærtoft	Norway	The Norwegian Directorate of Health
Ingeborg Strømseng Sjetne	Norway	Norwegian Institute of Public Health
Carla Pereira Natália Pereira Ana Luísa Resendes Margarida Eiras	Portugal	Directorate-General of Health (Portugal)
Andrzej Warunek Olga Konopka	Poland	National Centre for Quality Assessment in Healthcare
Gratiela-Denisa	Romania	National Authority for Quality Management
Vesna Zupancic	Slovenia	Ministry of Health
Urban Nyhlén Marianne Aggestam	Sweden	The National Board of Health and Welfare
Cordula Wagner Caroline Schlinkert	Netherlands	NIVEL
Dilek Tarhan Öznur Özen Ayfer ERDOĞAN AYTEKİN	Türkiye	Department of Health Quality, Accreditation and Employee Rights
Caren Ginsberg Pam Owens	United States	AHRQ
Denys Lau	United States	CDC

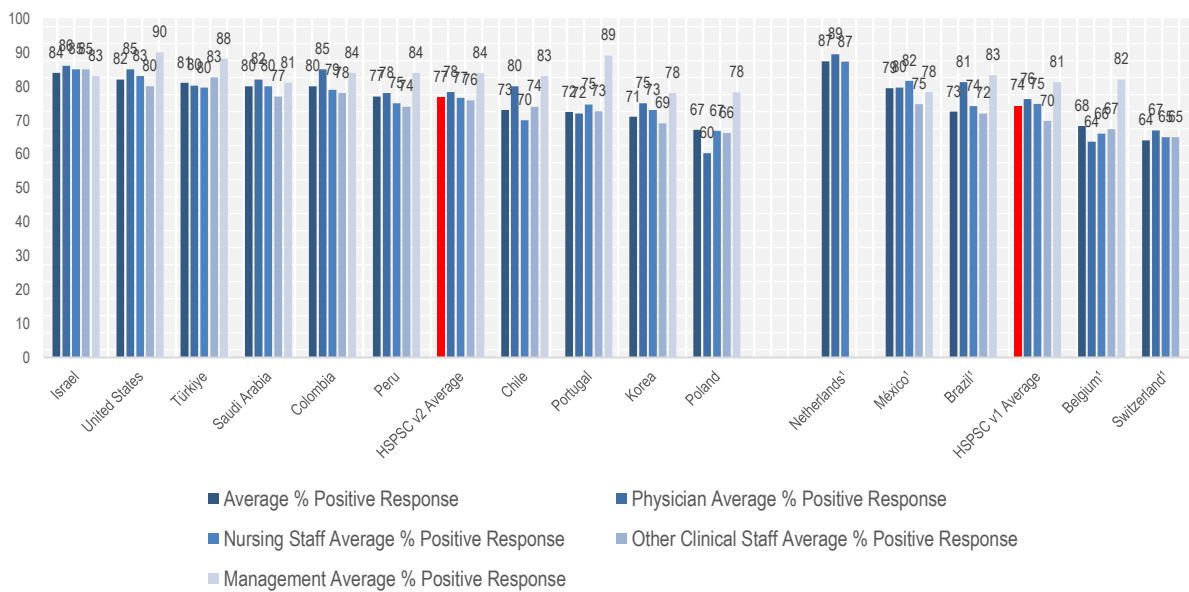| Anas Amr Ali Asery	Saudi Arabia	Saudi Patient Safety Center
Alejandro Arrieta	Expert	HMA, Florida International University
Melinda Sawyer	Expert	United Health Group
Tejal Gandhi	Expert	Press Ganey Associates LLC

Annex C. Performance on PSC domains

Teamwork (v1 Teamwork Within Units)

Figure A C.1. Teamwork (v1 *Teamwork Within Units*)
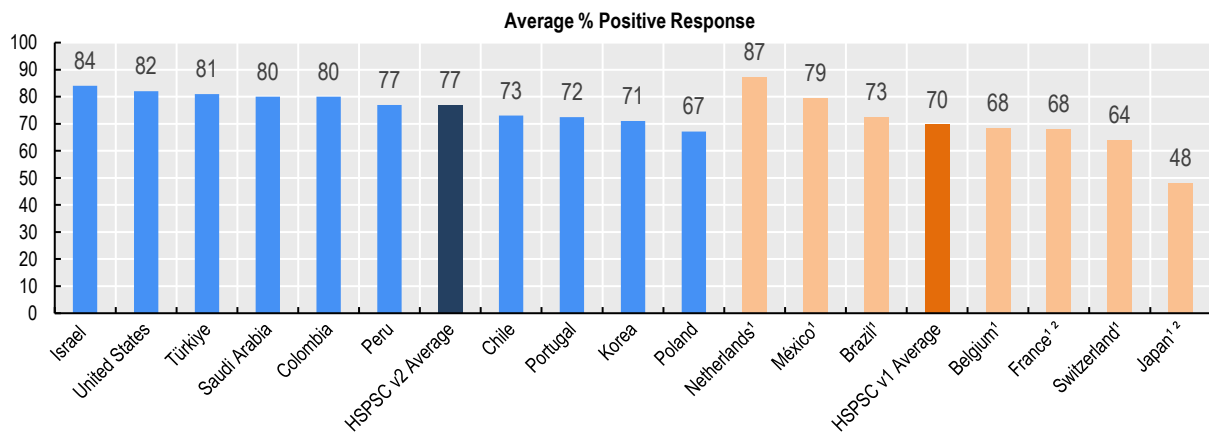
Average % Positive Response

Note: Data from 2019-2023. 1. HSPSC v1 2. Data from previous PSC pilot data collection.
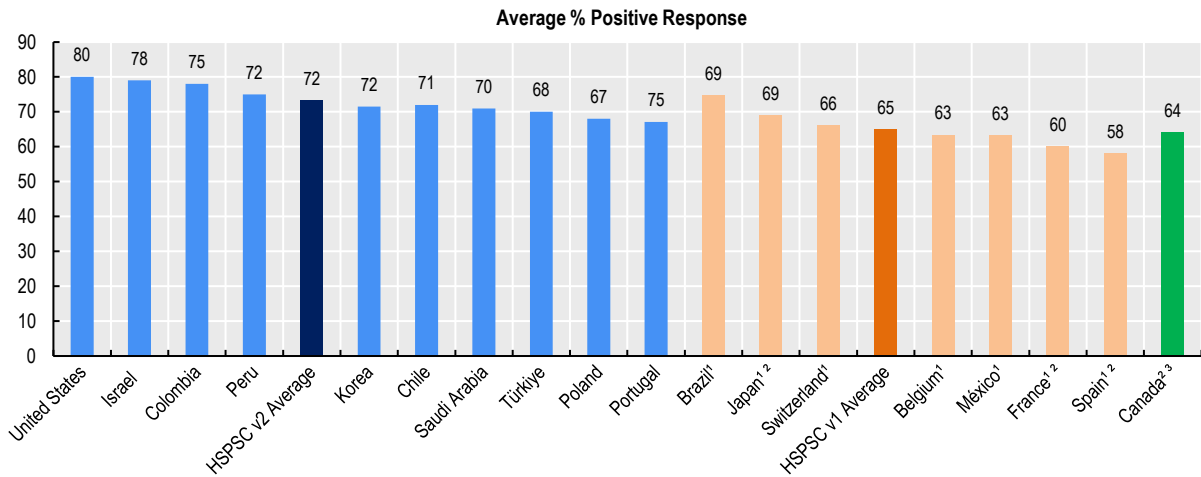Source: OECD Pilot Data Collections on Patient Safety Culture

Figure A C.2. Teamwork (v1 *Teamwork Within Units*), by job type

- ■ Average % Positive Response
- ■ Physician Average % Positive Response
- ■ Nursing Staff Average % Positive Response
- ■ Other Clinical Staff Average % Positive Response
- ■ Management Average % Positive Response

Note: Data from 2019-2023. 1. HSPSC v1

Source: OECD Pilot Data Collections on Patient Safety Culture

Organizational Learning—Continuous Improvement

Figure A C.3. Organizational Learning—Continuous Improvement
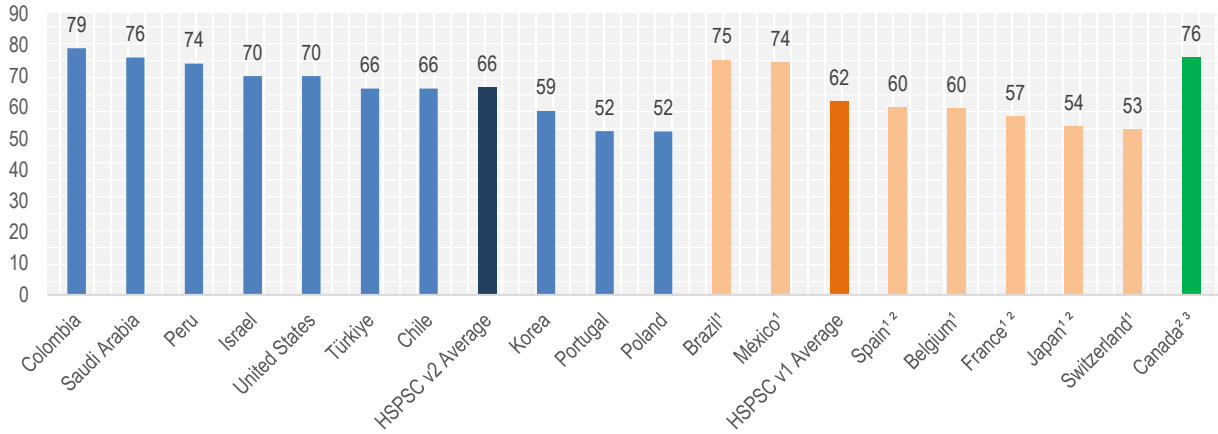
Note: Data from 2019-2023. 1. HSPSC v1 2. Data from previous PSC pilot data collection.
Source: OECD Pilot Data Collections on Patient Safety Culture

Figure A C.4. Organizational Learning—Continuous Improvement, by key job category
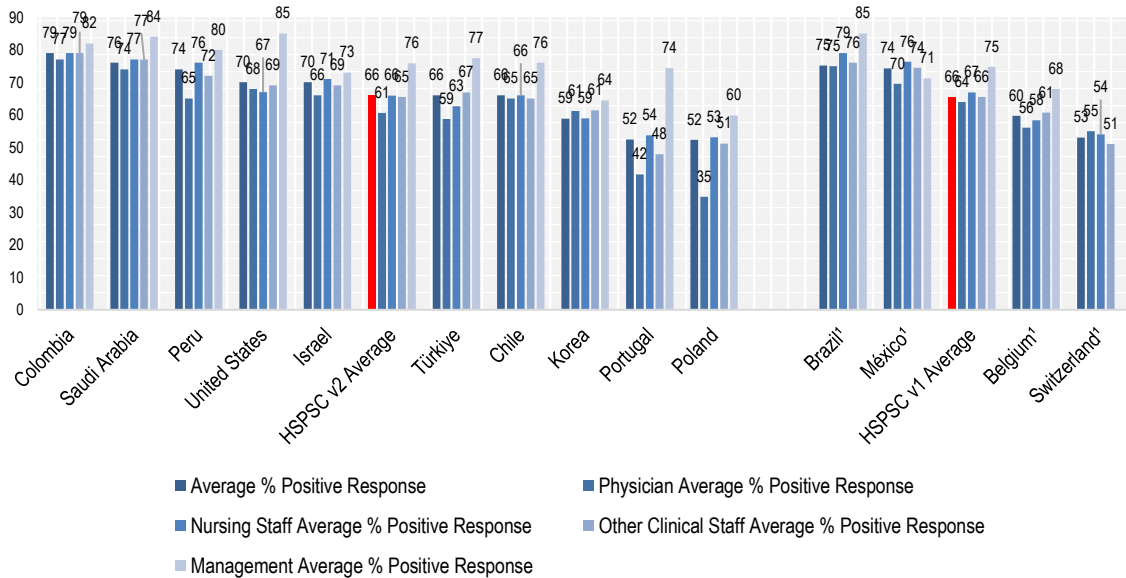
Note: Data from 2019-2023. 1. HSPSC v1
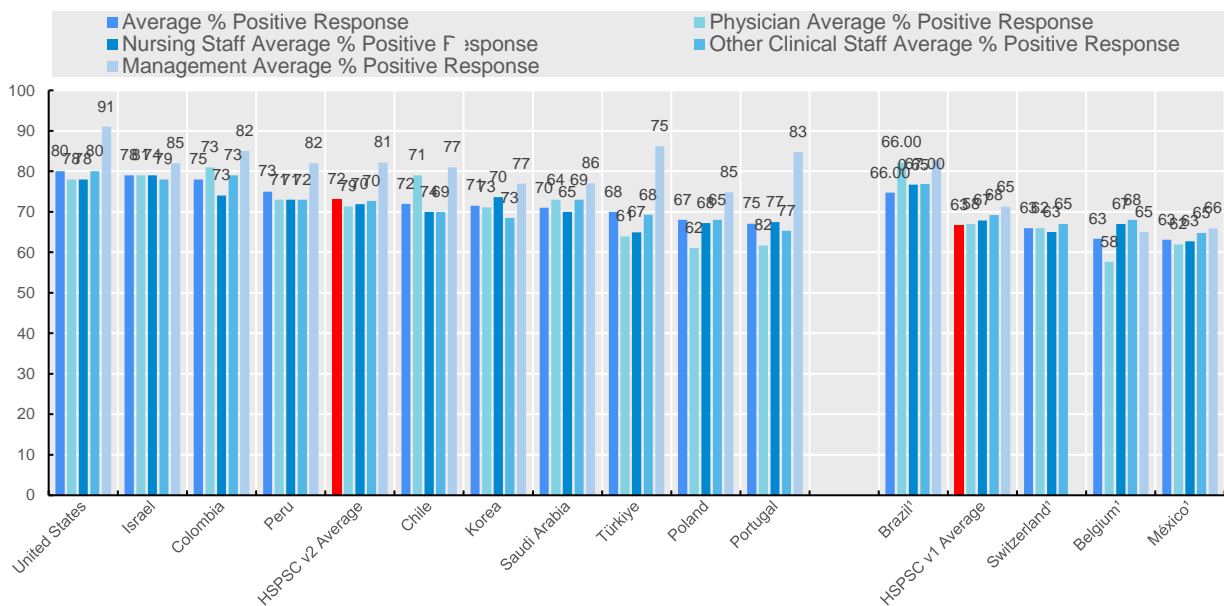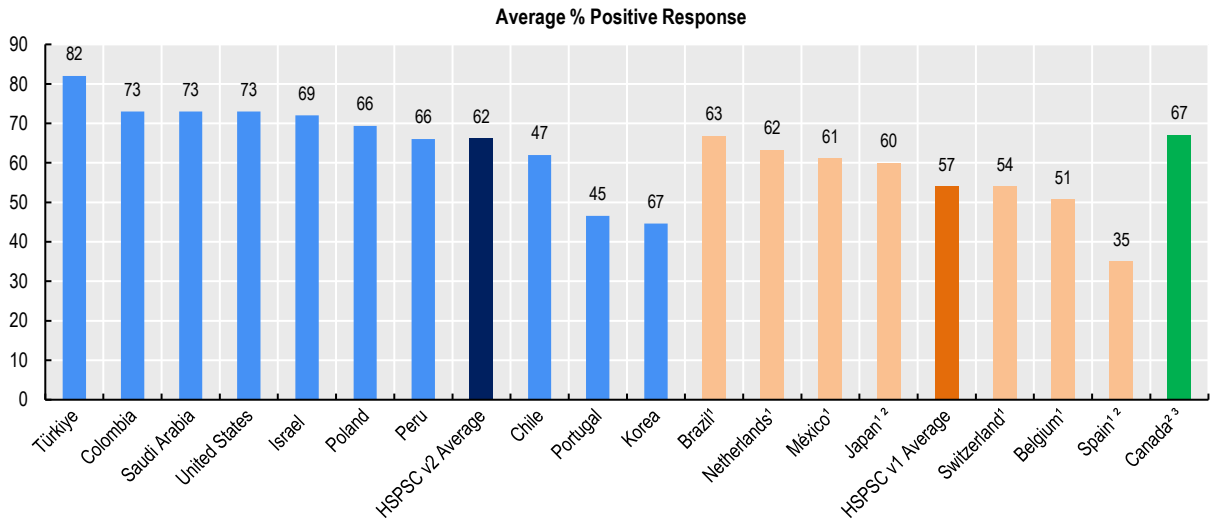Source: OECD Pilot Data Collections on Patient Safety Culture

Supervisor, Manager, or Clinical Leader Support for Patient Safety (v1 Supervisor/Manager Expectations & Actions Promoting Patient Safety)

Figure A C.5. Supervisor, Manager, or Clinical Leader Support for Patient Safety (v1 Supervisor/Manager Expectations & Actions Promoting Patient Safety)

Average % Positive Response

United States 80, Israel 78, Colombia 75, Peru 72, HSPSC v2 Average 72, Korea 72, Chile 71, Saudi Arabia 70, Türkiye 68, Poland 67, Portugal 75, Brazil[1] 69, Japan[1,2] 69, Switzerland[1] 66, HSPSC v1 Average 65, Belgium[1] 63, México[1] 63, France[1,2] 60, Spain[1,2] 58, Canada[2,3] 64

Note: Data from 2019-2023. 1. HSPSC v1 2. Data from previous PSC pilot data collection.
Source: OECD Pilot Data Collections on Patient Safety Culture

Figure A C.6. Supervisor, Manager, or Clinical Leader Support for Patient Safety (v1 Supervisor/Manager Expectations & Actions Promoting Patient Safety), by key job category

Note: Data from 2019-2023. 1. HSPSC v1 =
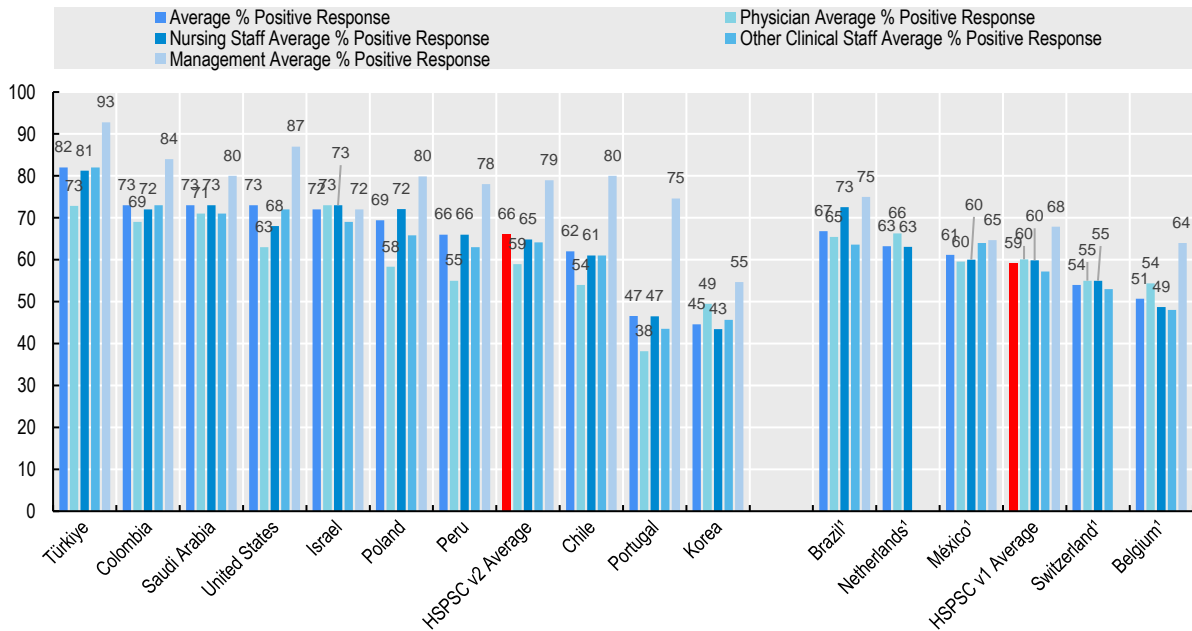Source: OECD Pilot Data Collections on Patient Safety Culture

Communication About Error (v1 Feedback & Communication About Error)

Figure A C.7. Communication About Error (v1 Feedback & Communication About Error)

Note: Data from 2019-2023. 1. HSPSC v1
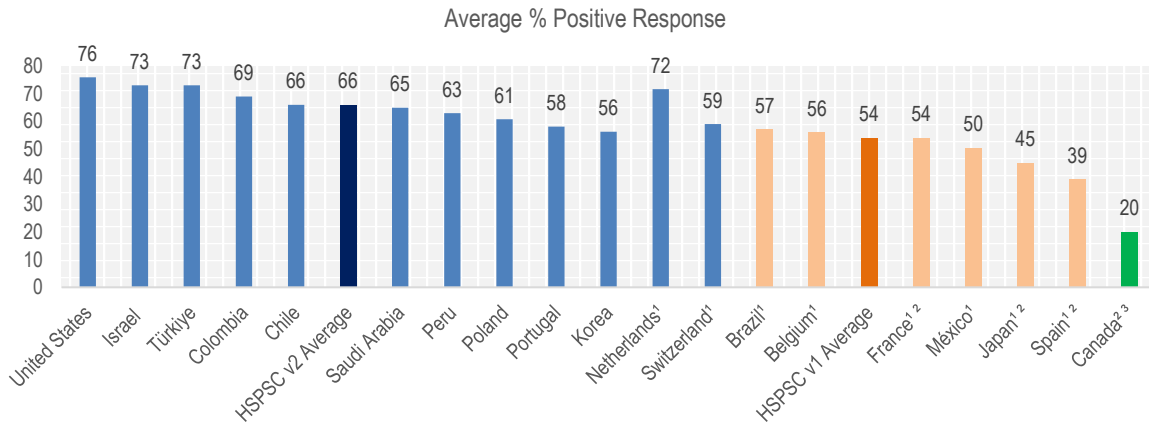Source: OECD Pilot Data Collections on Patient Safety Culture

Figure A C.8. Communication About Error (v1 Feedback & Communication About Error), by job type

Note: Data from 2019-2023. 1. HSPSC v1
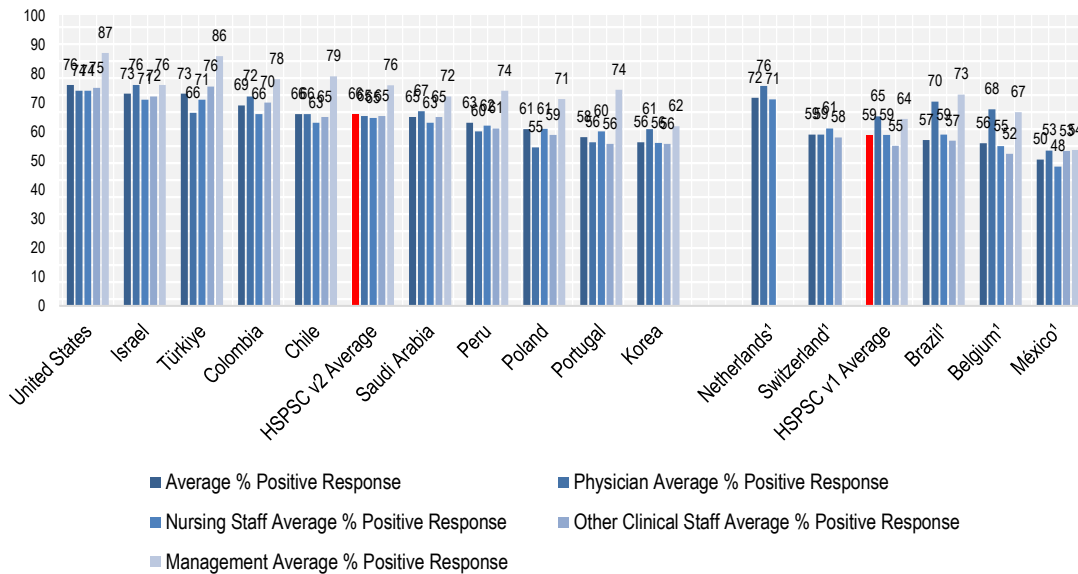Source: OECD Pilot Data Collections on Patient Safety Culture

Communication Openness

Figure A C.9. Communication Openness

Note: Data from 2019-2023. 1. HSPSC v1 2. Data from previous PSC pilot data collection.
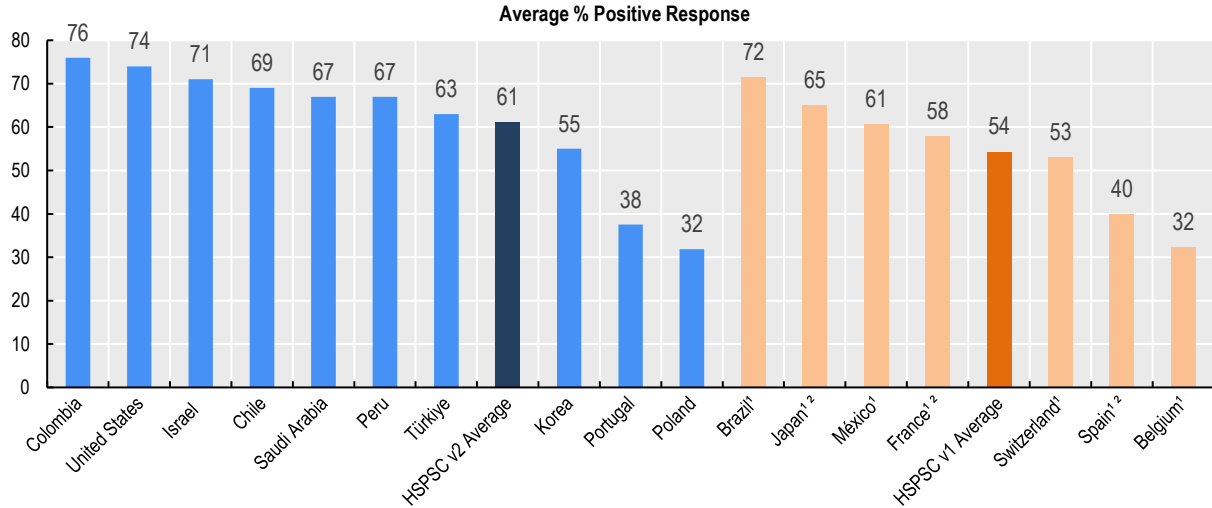Source: OECD Pilot Data Collections on Patient Safety Culture

Figure A C.10. Communication Openness, by Job Category

Note: Data from 2019-2023. 1. HSPSC v1
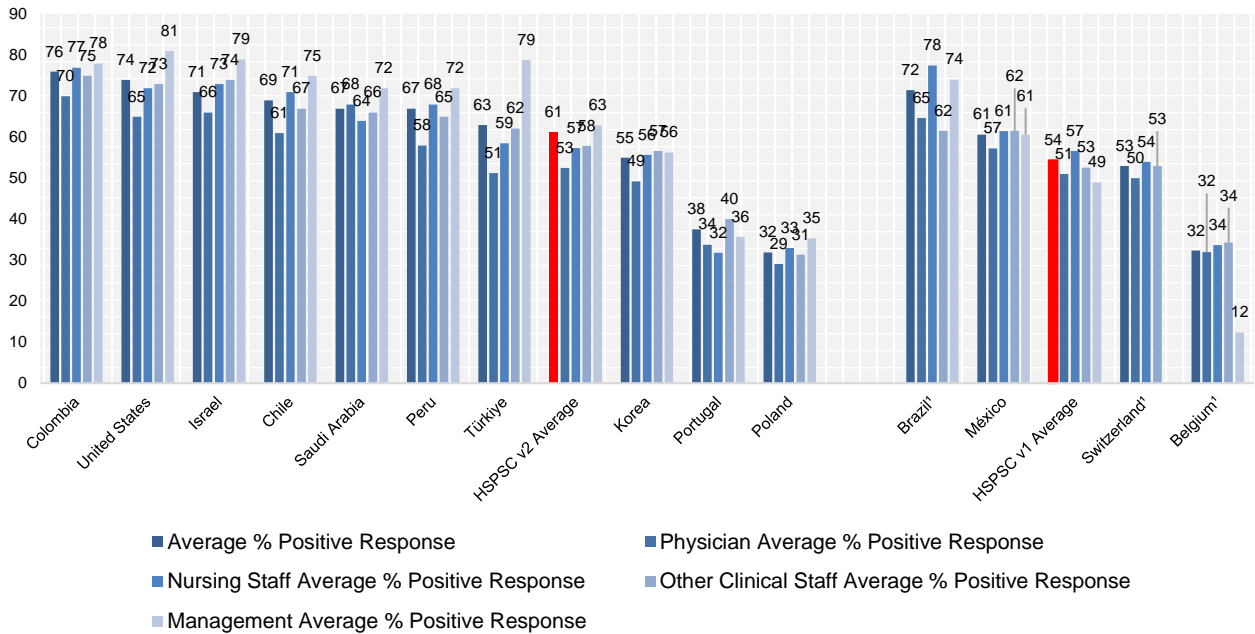Source: OECD Pilot Data Collections on Patient Safety Culture

Reporting Patient Safety Events (v1 Frequency of Events Reported)

Figure A C.11. Reporting Patient Safety Events (v1 Frequency of Events Reported)

Note: Data from 2019-2023. 1. HSPSC v1 2. Data from previous PSC pilot data collection.
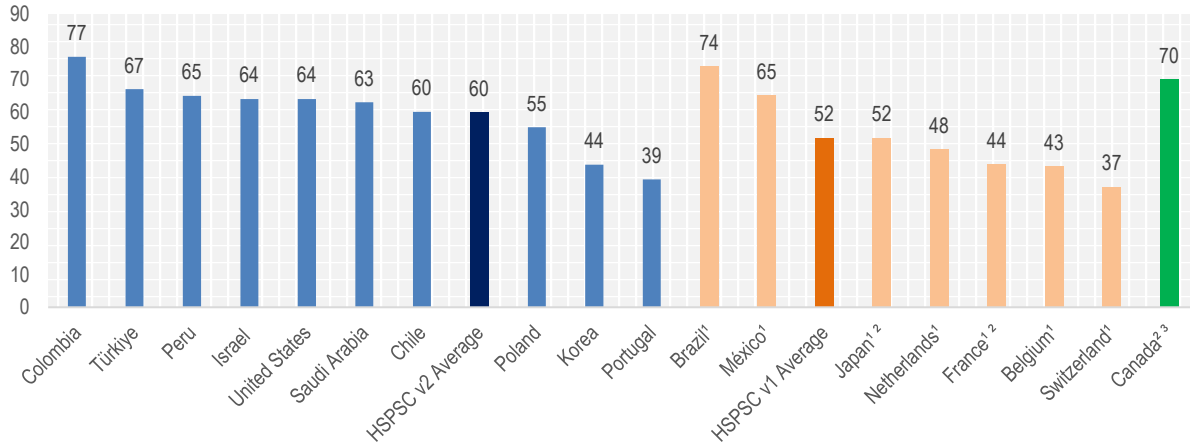Source: OECD Pilot Data Collections on Patient Safety Culture

Figure A C.12. Reporting Patient Safety Events (v1 Frequency of Events Reported), by job category

Note: Data from 2019-2023. 1. HSPSC v1.
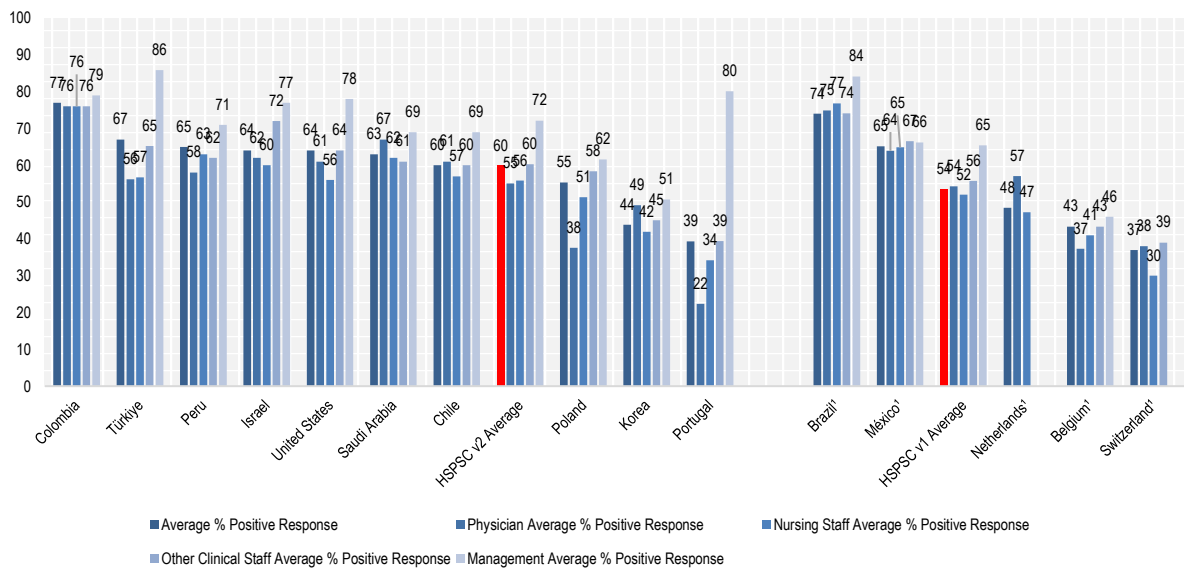Source: OECD Pilot Data Collections on Patient Safety Culture

Hospital Management Support for Patient Safety (v1 Management Support for Patient Safety)

Figure A C.13. Hospital Management Support for Patient Safety (v1 Management Support for Patient Safety)

Note: Data from 2019-2023. 1. HSPSC v1 2. Data from previous PSC pilot data collection.
Source: OECD Pilot Data Collections on Patient Safety Culture

Figure A C.14. Hospital Management Support for Patient Safety (v1 Management Support for Patient Safety), by job category

Note: Data from 2019-2023. 1. HSPSC v1
Source: OECD Pilot Data Collections on Patient Safety Culture

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