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# WHAT CLEAN REALLY MEANS TO A HEALTHCARE ORGANIZATION'S CULTURE

*Insights into HCAHPS cleanliness data correlation coefficients, data analysis, and perceptions*

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If people do not feel safe, or if they feel they don't have the support or resources to provide safe care, poor PX scores, high infection rates, and staff attrition can result.

Hospitals and healthcare organizations stay competitive in today's consumer-driven environment by continually improving the experiences of patients and families, as well as healthcare providers, and employees. A growing body of evidence supports the need for high-performing healthcare organizations to commit to building healthy workplace environments (Merlino & Raman, 2013; Grawitch & Ballard, 2016; Jiménez, Winkler & Dunkl, 2017). In other words, not only should organizations prioritize goals to improve patient and family experiences, they also need to focus efforts on improving workplace culture. One specific department that is cardinal to organizational outcomes is environmental services (EVS). From fostering a culture of safety to improving HCAHPS as well as employee engagement, the EVS department plays a vital role in transforming the culture of an organization.

# CULTURE OF SAFETY

The effects of organizational culture in the health care environment extend beyond operations, processes, and stewardship; culture affects the people who are responsible for providing care to the people who need care. Just as emphasis should be placed on the health, safety, and well-being of the patients being served, organizations also need to emphasize those outcomes for their workplace personnel, across all care teams. This begins with care teams perceiving the care provided and workplace environment as high quality. This happens from the moment they enter the front door of the organization, and it continues as they move through the entire facility. A clean environment translates to a safe environment, from the perspectives of patients and families receiving care, as well as the perspectives of care teams providing care.

A healthy culture is a safe culture and is essential to positive outcomes. Psychologist Abraham Maslow developed the theory 'hierarchy of needs' (Figure 1). According to Maslow's theory, humans seek first to satisfy the lowest level of needs, such as air, food, and water. Once this is achieved, humans continue to satisfy each higher level of need until all are reached. Adopting this theory for the workplace, we'd say paychecks meet basic human needs like food and shelter. High-performing organizations understand the new economic reality: providing safe environments, providing a sense of security, and helping care teams feel purpose and meaning in their work are the differentiators (Perlo, Balik, Swensen, Kabcenell, Landsman & Feeley, 2017). It is up to organizations to provide the right conditions and environments so that caregivers can achieve their highest potential and produce outstanding work (Nielsen, et al., 2017).

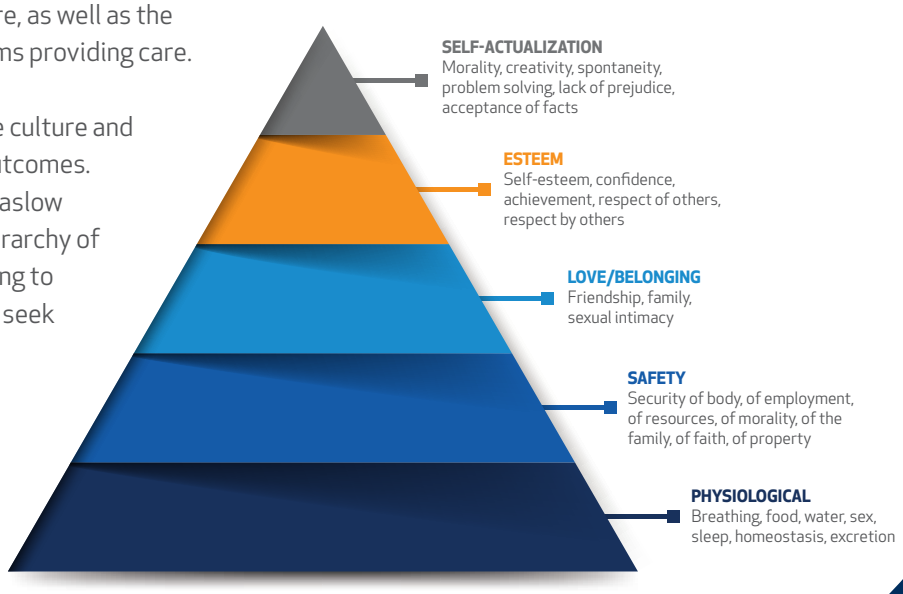


**FIGURE 1**

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## INFECTION PREVENTION

While the total impact of the hospital environment cleanliness on healthcare-acquired infections (HAIs)-acquired infections remains an open question for study, it's clear the environment has some impact, such as the increased risk for a patient to acquire a multidrug-resistant organism from a room where the previous occupant was infected (Huang et al., 2006, Shaughnessy et al., 2011, Nseir et al., 2011). The CDC recommends hand hygiene to combat HAIs, but studies suggest hand hygiene compliance in hospitals is only around 50% (Grol & Grimshaw, 2003, Larson 1988).

To reduce the chance of surface-to-hand transmission, and to increase handwashing compliance for everyone, an EVS department can address both links in the chain: keeping touchpoints clean and demonstrating hand-washing compliance to encourage others to actively participate in infection prevention.

# PERCEPTION OF CLEANLINESS MATTERS

Sentence change: Top performing organizations understand that short-term tactics do not cultivate long-term success. This first impression, and all the perceptions that follow, serve as the foundation of the patient experience (PX), as well as the experience of their families and care teams. This directly impacts margins, market share, and staff morale. Bottom line: if people do not feel safe, or if they feel they don't have the support or resources to provide safe care, decreased PX scores, high infection rates, and staff attrition prevail. With the inception of publicly reported surveys and collection data such as HCAHPS, which stands for Hospital Consumer Assessment of Healthcare Providers and Systems, organizational performance and outcome measures help consumers and care teams make informed decisions about the culture, safety, and care delivery of US healthcare organizations.

# SIGNIFICANCE OF CLEANLINESS

In addition to providing transparent data to consumers and care teams, the Centers for Medicare and Medicaid Services (CMS) also reimburses or penalizes healthcare organizations on performance measures. Since improving the quality of healthcare is a national priority, hospital performance measures are increasingly being used to benchmark quality through CMS (IOM, 2001; CMS). Under the Patient Protection and Affordable Care Act (P.L.111–148), CMS reimburses hospitals based on their performance. Specific to the Patient Experience of Care Domain score, which is also referred to as the Person and Community Engagement Domain, hospitals increase their chances of maximizing reimbursement dollars based on the Hospital Value-Based Purchasing (VBP) program.

There are nine measures from HCAHPS that are included in the Hospital VBP. This includes six composite measures (Communication with Nurses, Communication with Doctors, Staff Responsiveness, Communication about Medicines, Care Transition, and Discharge Information), two individual measures (Cleanliness of Hospital Environment, and Quietness of Hospital Environment), and one global measure (Hospital Rating, formerly known as Overall Rating of Hospital).

Source: https://www.ahrq.gov/cahps/quality-improvement/improvement-guide/5-determining-focus/index.html

Program Summary

Understanding the Fiscal Year 2019 Hospital Value-Based Purchasing Program

*"CMS rewards hospitals based on the quality of care provided to patients, not just quantity of services provided. Under the Hospital VBP Program, Medicare makes incentive payments to hospitals based on one of the following:*

- ***Achievement:*** *How well they perform on each measure compared to other hospitals' performance during a baseline period*
- ***Improvement:*** *How much they improve their performance on each measure compared to their performance during a baseline period"*[1]

*Ultimately, the patient experience considers various aspects of the healthcare system, including communication, safety, and hospital environment to determine if high-quality care is provided and perceived by those rendering services. According to Jha, Frye & Schlimgen (2017): "patient engagement, satisfaction – patient and staff, clinical effectiveness, personalization, patient safety, and admission and discharge process were the variables that demonstrated a strong correlation with patient experience benefits."*

[1] "CMS Program Summary: Understanding the Fiscal Year 2019 Hospital Value-Based Purchasing Program," https://www.qualityreportingcenter.com/globalassets/iqr_resources/09_vbp_fy2019_ppsrrelease_programsummary_vfinal508.pdf

# DATA ANALYSIS & INTERPRETATION

Organizations that continuously improve PX data and initiatives understand that short-term actions are less likely to impact long-term success. It is critical for organizations to utilize qualitative and quantitative data analysis as the underpinning of their improvement processes. Conducting different kinds of analyses helps organizations identify relative strengths and weaknesses:

- Review HCAHPS scores to national and peer benchmarks.
- Review trends of patient comments specific to departments, behaviors, and processes.
- Compare current HCAHPS scores to the organization's past performance (year over year improvements).
- Assess which aspects of performance are most relevant for improvement.

Understanding the relevancy of improvement initiatives is critical. Percentiles indicate how often patients gave positive assessments of their hospital experience. With "top-box" scores, the higher, the better. For example, on "Cleanliness of Hospital Environment," 5% of hospitals scored 90 or higher (95th percentile) in the "top-box," while 5% scored 63 or lower (5th percentile). The median (50th percentile) score on this measure was 75 (Figure 2).

**FIGURE 2: HCAHPS PERCENTILES**

| Hospital Percentile | Communication with Nurses | Communication with Doctors | Responsiveness of Hospital Staff | Communication about Medicines | Cleanliness of Hospital Environments | Quietness of Hospital Environments | Discharge Information | Care Transition | Hospital Rating | Recommend the Hospital |
|---|---|---|---|---|---|---|---|---|---|---|
| **Top-Box Score** | | | | | | | | | | |
| 95th (near best) | 91 | 92 | 88 | 80 | 90 | 81 | 93 | 67 | 88 | 88 |
| 90th | 88 | 89 | 84 | 76 | 86 | 76 | 92 | 62 | 84 | 84 |
| 75th | 84 | 85 | 76 | 70 | 81 | 68 | 90 | 57 | 78 | 79 |
| 50th | 80 | 81 | 69 | 65 | 75 | 61 | 87 | 53 | 73 | 72 |
| 25th | 77 | 78 | 63 | 61 | 70 | 54 | 85 | 49 | 67 | 66 |
| 10th | 74 | 75 | 59 | 58 | 65 | 49 | 82 | 45 | 62 | 59 |
| 5th (near worst) | 71 | 73 | 56 | 55 | 63 | 45 | 79 | 42 | 58 | 55 |
| **Bottom-Box Score** | | | | | | | | | | |
| 5th (near best) | 1 | 1 | 1 | 6 | 1 | 2 | 7 | 1 | 2 | 0 |
| 10th | 1 | 2 | 3 | 9 | 2 | 3 | 8 | 2 | 3 | 1 |
| 25th | 3 | 3 | 5 | 13 | 5 | 6 | 10 | 4 | 5 | 3 |
| 50th | 4 | 4 | 8 | 17 | 7 | 9 | 13 | 5 | 7 | 4 |
| 75th | 5 | 6 | 11 | 20 | 10 | 13 | 15 | 6 | 10 | 6 |
| 90th | 8 | 8 | 15 | 23 | 13 | 17 | 18 | 8 | 13 | 9 |
| 95th (near worst) | 9 | 9 | 17 | 26 | 15 | 20 | 21 | 9 | 15 | 11 |

Percentiles for HCAHPS "top-box" and "bottom-box" scores include 4,425 hospitals that received HCAHPS scores in July 2019. Becuase not all hospitals report their results on Hospital Compare, the number of hospitals may differ from those shown here. Surveys are from patients discharged between October 2017, and September 2018. Scores have been adjusted for survey mode and patient-mix.

# DATA ANALYSIS & INTERPRETATION

Cleanliness of the hospital environment is highly correlated with how a patient or family member rates Communication with Nurses (.39), Communication with Doctors (.28), Responsiveness of Hospital Staff (.35), and Communication About Medicines (.33) (Figure 3). The chart below includes patient-leve Pearson correlations of rescaled linear means of HCAHPS measures for patients discharged between July 2017and June 2018 (2.9 million completed surveys). Note: All correlations are significant at $p<0.001$. Correlation coefficient formulas are used to find how strong a relationship is between data. The formulas return a value between -1 and 1, where:

- 1 indicates a strong positive relationship.
- -1 indicates a strong negative relationship.
- A result of zero indicates no relationship at all.

### FIGURE 3: HCAHPS PATIENT-LEVEL CORRELATIONS

| | Communication with Nurses | Communication with Doctors | Responsiveness of Hospital Staff | Communication about Medicines | Cleanliness of Hospital Environments | Quietness of Hospital Environments | Discharge Information | Care Transition | Hospital Rating | Recommend the Hospital |
|---|---|---|---|---|---|---|---|---|---|---|
| Communication with Nurses | 1 | 0.54 | 0.57 | 0.50 | 0.39 | 0.33 | 0.28 | 0.44 | 0.65 | 0.58 |
| Communication with Doctors | | 1 | 0.39 | 0.44 | 0.28 | 0.27 | 0.29 | 0.41 | 0.52 | 0.48 |
| Responsiveness of Hospital Staff | | | 1 | 0.41 | 0.35 | 0.32 | 0.21 | 0.36 | 0.51 | 0.45 |
| Communication about Medicines | | | | 1 | 0.33 | 0.29 | 0.36 | 0.46 | 0.49 | 0.43 |
| Cleanliness of Hospital Env. | | | | | 1 | 0.28 | 0.18 | 0.28 | 0.41 | 0.37 |
| Quietness of Hospital Env. | | | | | | 1 | 0.13 | 0.26 | 0.35 | 0.29 |
| Discharge Information | | | | | | | 1 | 0.31 | 0.31 | 0.29 |
| Care Transition | | | | | | | | 1 | 0.48 | 0.45 |
| Hospital Rating | | | | | | | | | 1 | 0.76 |
| Recommend the Hospital | | | | | | | | | | 1 |

Source: www.hcahpsonline.org. Centers for Medicare & Medicaid Services, Baltimore, MD. October 27, 2019.

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Organizations that continuously improve PX data and initiatives understand that short-term initiatives are less likely to impact long-term success.

## SUMMARY

**In conclusion, safety is a measure of performance on patient experience surveys and review sites, making it an indicator of experience quality. It has been found that safe care environments impact patients' evaluation of the received care by delivering better health outcomes, such as: decreased wait times, lower readmission rates, and fewer incidences of patient falls, medical errors, and healthcare-acquired infections. Because patients are more likely to recommend a hospital if they perceive it to be clean, that makes cleanliness a target for improvement for all hospitals. The overall patient experience is affected by every interaction in a patient's health care journey, whether directly or indirectly involved in the delivery of care. How patients perceive the cleanliness of their care environment can not only influence key drivers of patient loyalty, but also enable the delivery of safe, high quality, and effective care through a reduced risk of healthcare-acquired infections. Since there is a strong correlation between patients' perception of cleanliness and hospital-acquired infections, a hospital's EVS department plays a vital role in patients' evaluation of their hospital experience.**

# KEY TAKEAWAYS

- Identify and value EVS departments as key stakeholders in the delivery of safe, effective, quality care.
- Optimize the cleanliness and perceived cleanliness of hospital rooms and common areas through open communication with EVS teams.
- Train and reinforce service excellence standards within EVS departments.
- Foster a culture of teamwork, communication, and collaboration between EVS staff and other organizational care teams.

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