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HIMSS Customer Relationship Management Technology in Healthcare Survey

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Introduction

Healthcare is undergoing massive transformation. The drive toward value-based care is spurring an increasingly interconnected healthcare ecosystem as shared risk, deepened partnerships and the proliferation of non-traditional care teams begin to take shape. With a growing imperative to better serve their patients, providers are turning to customer relationship management (CRM) technologies to manage the numerous relationships inherent in healthcare and to better communicate with their patients through multiple modalities (e.g., voice, video, text, apps).

The *HIMSS Exploring Customer Relationship Management (CRM) Technology for Healthcare Task Force* designed a set of 16 survey questions directed to stakeholders within the healthcare arena. The survey was included in HIMSS e-newsletters including the *Information XChange*, *Clinical Informatics Insights*, *Physician Newsletter* and *Be in the Know with HIMSS Nursing Informatics*. There was also a HIMSS news item announcing the survey, which was sent to targeted audiences via email. Responses were collected over the two-month period of January and February 2018.

The goal of this survey was to assess:

1. The current state of use of CRM in healthcare
2. Attitudes towards CRM technology in healthcare

In total, 72 responses were received for the survey conducted online via the HIMSS Survey URL.

Results and Analysis

Organization Type and Role of Participants

In order to characterize the responses to the survey, respondents were asked, “In what type of organization do you work?” “Organization type” response options included: private sector healthcare (hospital), private sector healthcare (non-hospital), public sector healthcare (hospital), public sector healthcare (non-hospital), academic education/research institution, HIE organization/interoperability framework (e.g., Carequality, CARIN Alliance), payer and vendor. There was also an option to select “other” and write in a different worksite.

The survey also instructed respondents to, “Please indicate what type of role or position you hold at your organization.” “Position/role” response options included: administrator, information systems/technology professional, clinician, researcher, product/project management, sales and marketing, consultant and vendor. There was also an option to select “other” and write in a different role.

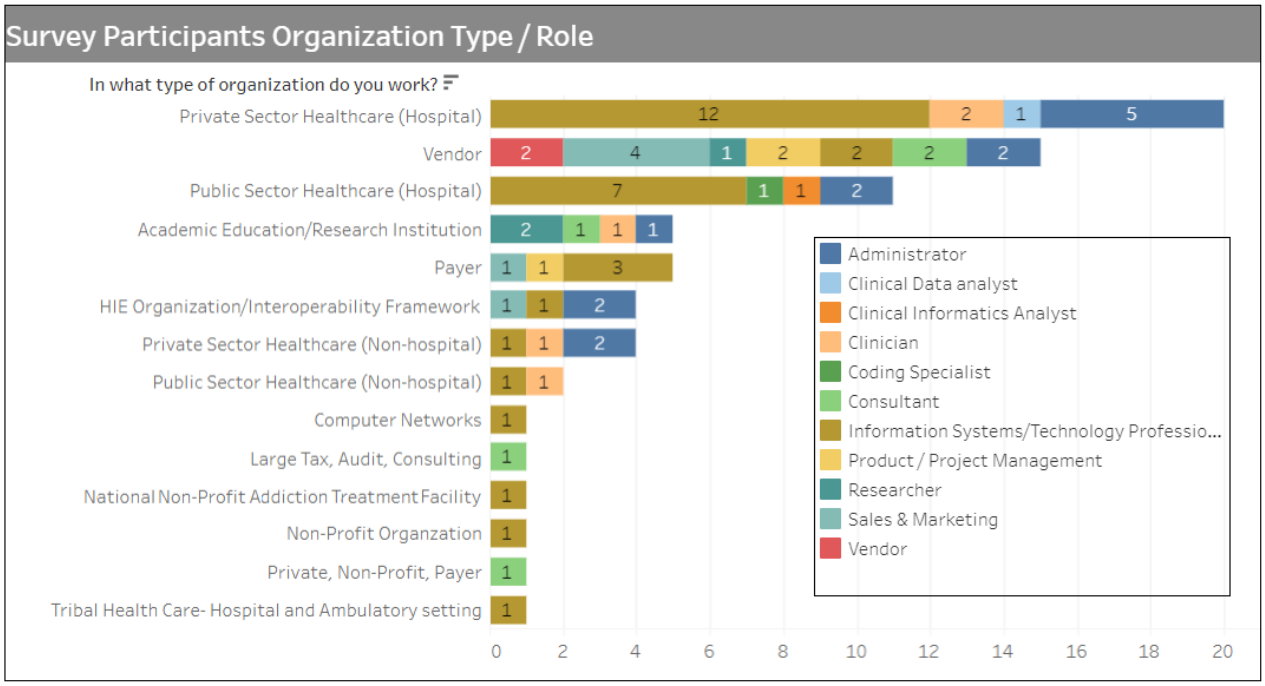

Figure 1. Type of organization and role of survey respondents.

Results:

“Private sector healthcare (hospital)” was the most common response we received for “organization type.” Hospitals from both the private and public sector contributed to

almost half of the responses (46%) in this survey. Information technology (IT) professionals contributed to 43% of the total respondents when classified by self-identified role within the organization. 28% of the respondents were from the private sector hospitals and another 15% were from public sector hospitals. In addition, 21% of the respondents to this survey were from vendor organizations. 36% of the respondents were in other categories.

Analysis:

In order to better understand our results, it is important to keep in mind the role and type of position that our respondents held within their organization. IT professionals were the most likely to respond at 43% of respondents, followed by administrative professionals at 19%. Of those responding from public and private sector hospitals, IT professionals contributed over 60% of the responses. Clinicians only contributed 5.56% of responses.

Because those working in IT roles responded to our survey at a higher rate than others, we may infer that those who work in IT within the healthcare system best understand CRM and that there is far less familiarity with CRM among those in other roles in an organization. However, these other roles are also impacted by the potential for CRM in healthcare, and had we received more responses from these roles, the results may have differed.

In order to obtain a more complete picture of the perceptions and use of CRM in healthcare, we will need to engage other non-IT groups to get their input and opinions.

Use of CRM Technology in an Organization

In order to determine the current rate of use of CRM technology in healthcare, the survey asked respondents, “How would you categorize the use of CRM technology in your organization?” Options included: “standard practice enterprise-wide,” “regular, but not widespread use,” “intermittent use,” “not used at all” and “I don't know.”

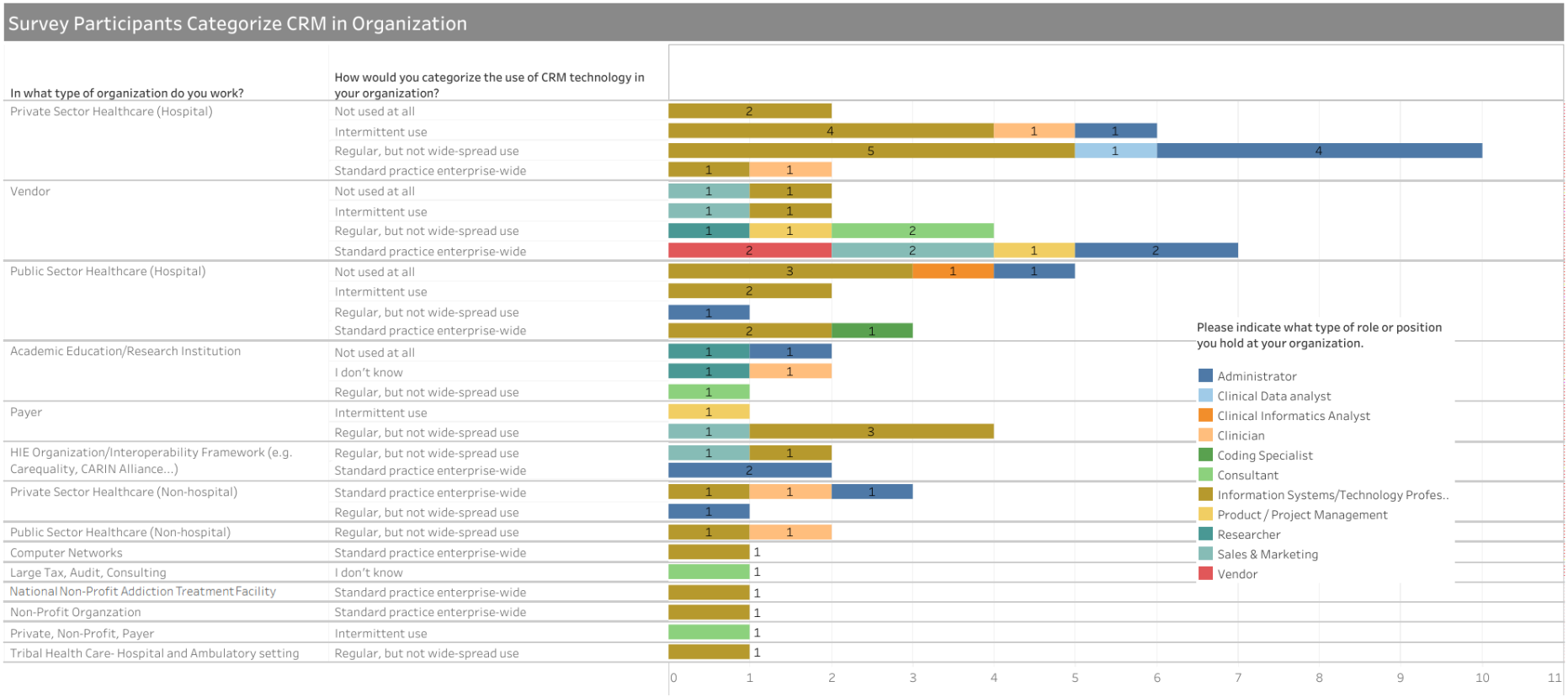

Figure 2. Respondents were asked to categorize their organization's use of CRM. The number of responses from each worksite are pictured above, also broken down by role or position of the respondent.

Results:

The total survey participants that used CRM in their organization came from 14 different types of organizations, as illustrated in Figure 2, ranging from private and public sector hospitals, vendors, payers, consulting, for-profit and non-profit. Of those with more than one response, 73% of vendors responded that CRM is used regularly or as standard practice in their institution. Private sector hospitals responded that CRM is used at least regularly at a rate of 60%, while those at public sector hospitals indicated regular or standard use at a rate of 36%.

Analysis:

It is interesting to note that vendor organizations are the most likely to categorize use of CRM as standard enterprise-wide (47%). This is perhaps not surprising given that marketing is a key use case for vendor organizations, and it is often the most closely associated use case with CRM technology. It is also interesting that public sector hospitals are less likely to say they use CRM than private sector hospitals. However, given the small sample size, this may or may not reflect an overall trend in the hospital industry.

CRM Engagement by Group

In order to determine with whom the organizations are using CRM to engage, the survey asked, "Which groups do you currently leverage your CRM to engage?" Responses included: patients, external providers, internal providers, employees, suppliers and public health practitioners. There was also an option to select "other" and write in a different response. Respondents could select as many of these options as they liked.

This question was only asked to individuals that responded to the question, "How would you categorize the use of CRM technology in your organization?", with answers of "standard practice enterprise-wide," "regular, but not widespread use" and "intermittent use."

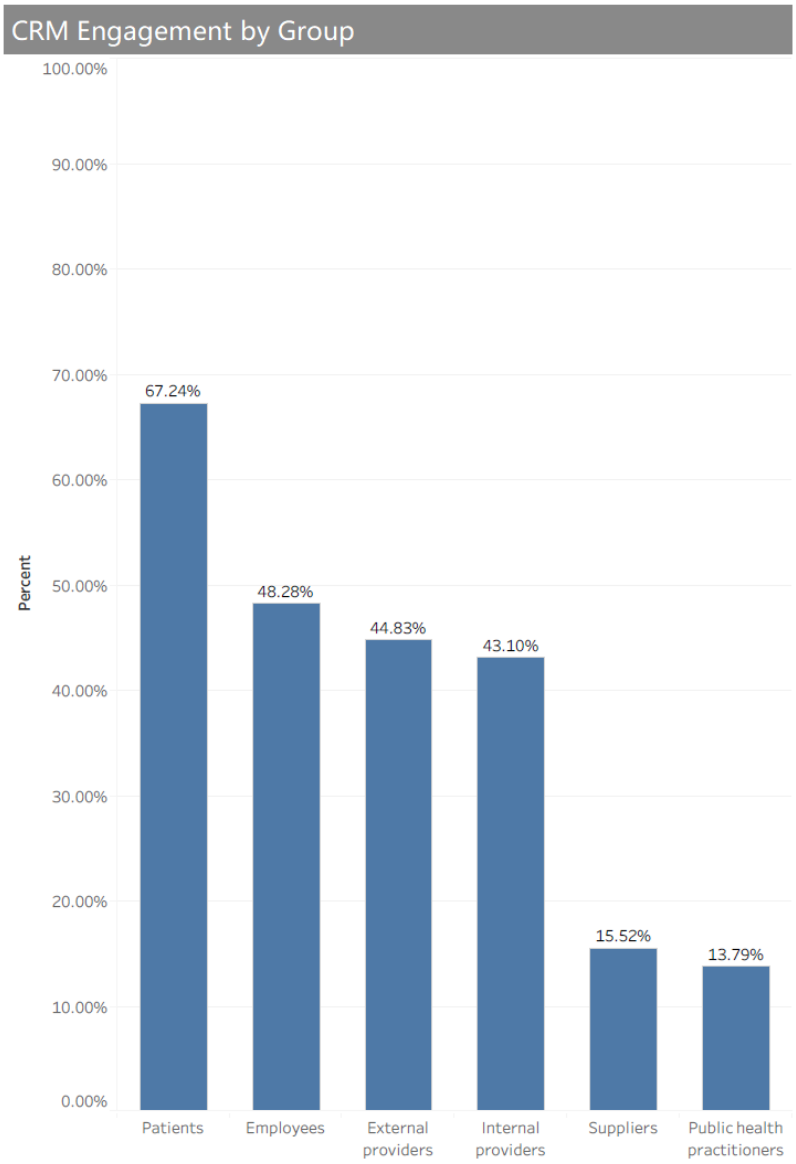

Figure 3. Percentage of responses to "Which groups do you currently leverage your CRM to engage?" Respondents could select unlimited options. This question was asked of the 58 respondents who indicated that they were aware of CRM use at their organization.

Results:

The total number of respondents to this question was 58. Patients received the highest percentage of responses, with 67% (39 respondents). Employees are being engaged in 48% of organizations that currently use CRM. Providers, both internal (43%) and external (44%), were indicated to be engaged by over 40% of respondents.

Analysis:

It is evident that providers (both internal and external), employees and patients are the major targets of engagement with CRM technology in a healthcare organization. This matches expectations of engagement in other industry settings where the targets are the organization's employees and customers. Engagement of employees may signify the importance of delivery and implementation of CRM in a healthcare setting, similar to other business sectors. Healthcare is unique when it comes to provider and patient interaction, and hence CRM must be leveraged in a manner that keeps the provider-patient relationship at its center.

Use Cases to Support Organizational Goals

As a part of this survey, we sought to determine which CRM use cases were most perceived to support the goals of respondents' organizations. The survey asked, "How would you rank order the following use cases for CRM in healthcare in their ability to support your organizational goals? Please drag the five use cases you feel are most applicable to the right, with the most applicable of those on top." This allowed respondents to pick their top five use cases and rank them from most to least supportive of their organizational goals. The use cases provided as options were:

- Outreach and marketing (health promotion; patient education, targeted marketing)
- Network management (of external physician and community service providers)
- Patient services (contact management, registration, eligibility and benefits determination, preference management)
- Patient access (scheduling; messaging, reminders, notifications; outbound work-list management)
- Care management (clinical case management, care plan collaboration, results follow-up)
- Population health (program enrollment and tracking, care gap management)
- Journey management (pre-, during and post-visit activity management, patient tracking)
- Concierge medicine (resource planning, travel management)
- Patient-generated health data (digital submission of forms, assessments, surveys, collect device data)
- Public health (emergency communications with public health agencies and the general public in the event of outbreaks and disasters)
- Employee engagement (service awareness to all employees [wellness, flu shot]; employee help desk)

- Supplier engagement (facilitate device/therapy orders/subsequent issuance of the device to patient; supplier sponsorship and marketing)
- Donor management (profile management, donor relationship management, donor tracking)

In order to analyze the responses to this question, we assigned each use case a score. This score was determined by assigning a value to each response: five points to the top-ranked use case, four points to the second-ranked use case, three points to the third-ranked use case, two points to the fourth-ranked use case, and one point to the fifth-ranked use case. We then summed the points awarded to each use case to determine a "use case score."

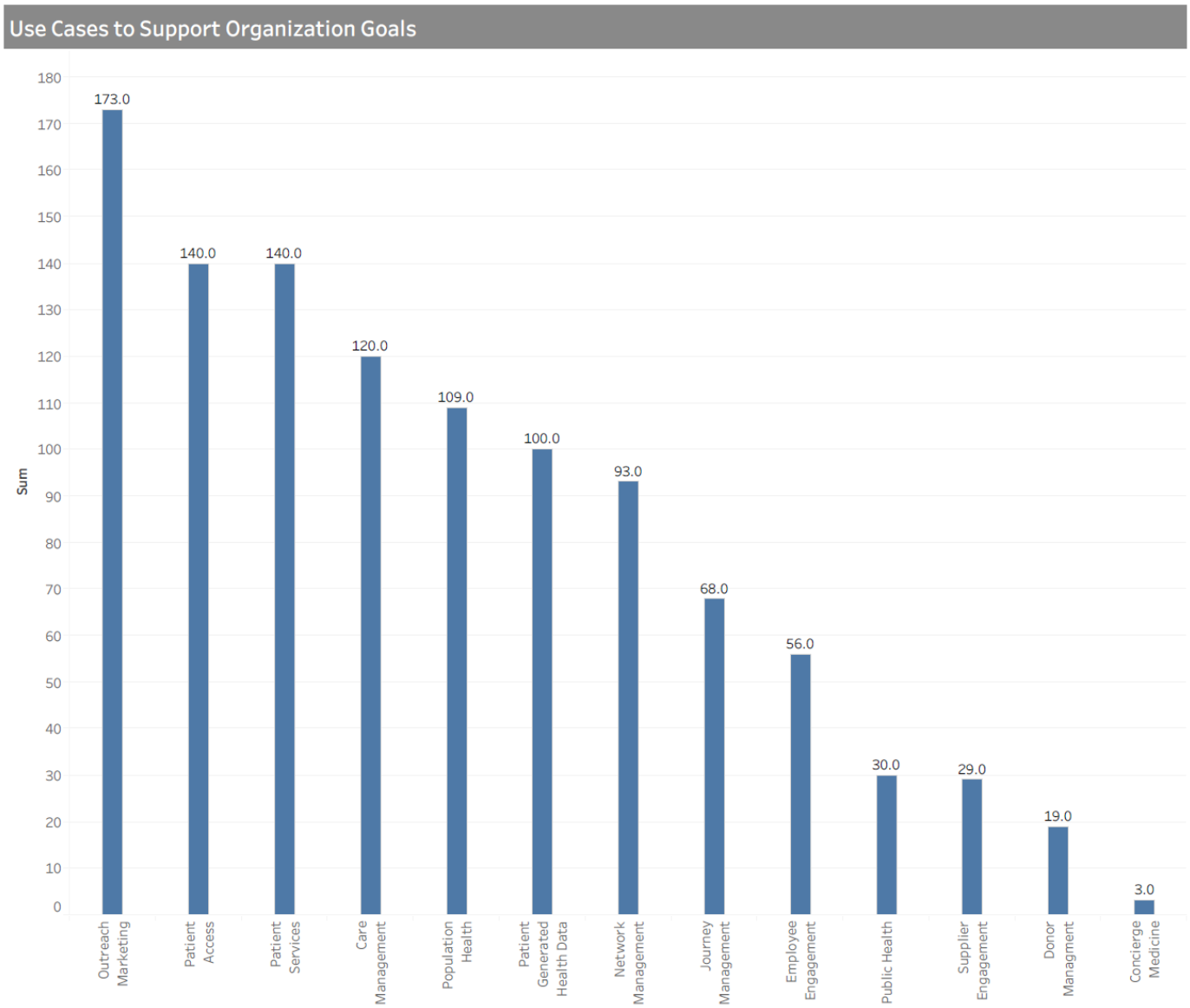

Figure 4. Use case scores for each use case. Respondents ranked their top five use cases from most applicable to least applicable; scores shown were calculated as described in the text.

Results:

Highest on the calculated use case score, outreach and marketing was considered the most applicable use case to support organizational goals, with the highest score of 173. Patient access and patient services tied for second, at a score of 140. Public health, supplier engagement, donor management and concierge medicine were the five lowest ranking use cases; these together combined at an 81 value score, lower than value derived from the next highest score, network management, alone (with a score of 93).

Analysis:

In order to interpret these results, it is important to understand the full definition of each use case used in the survey (listed above) and to understand that biases may play a role in which use cases respondents chose. The legacy role of CRM is for marketing purposes, and hence people often associate CRM most with this use case; these results are consistent with this perception. However, the view of CRM may dramatically change over time as its role expands in healthcare and other industries. Other use cases besides outreach and marketing that received high-value scores included: patient access, patient services, care management, and population health use cases. This result underlines the importance and need to focus on the clinical aspect of patients' care and their experience.

Understanding the Barriers to Implementation of CRM in a Healthcare Organization

In order to explore the potential barriers for CRM implementation in a healthcare organization, the following question was posed, "Please indicate to what degree the following are (or were) barriers to implementation of CRM in your organization." Respondents were asked to rank each potential barrier on a scale of 1–5, where 1 = not a barrier and 5 = complete blocker.

We chose to represent this data in the below box plot. Box plots are made of five key components: the median, the upper and lower hinges, and the upper and lower whiskers:

- The median is the 50th percentile value, the middle number in a data set.
- The hinges are intended to identify/denote values near the 25th and 75th percentiles (or upper and lower quartiles). These values may not be exact, as the distance away from these values depends on the size of the data set.

- The whiskers identify/denote the furthest data points within 1.5 interquartile ranges of the hinges, where the interquartile range [IQR] is the distance between the two hinges.
- Any data points outside of the upper or lower whiskers are deemed outliers.

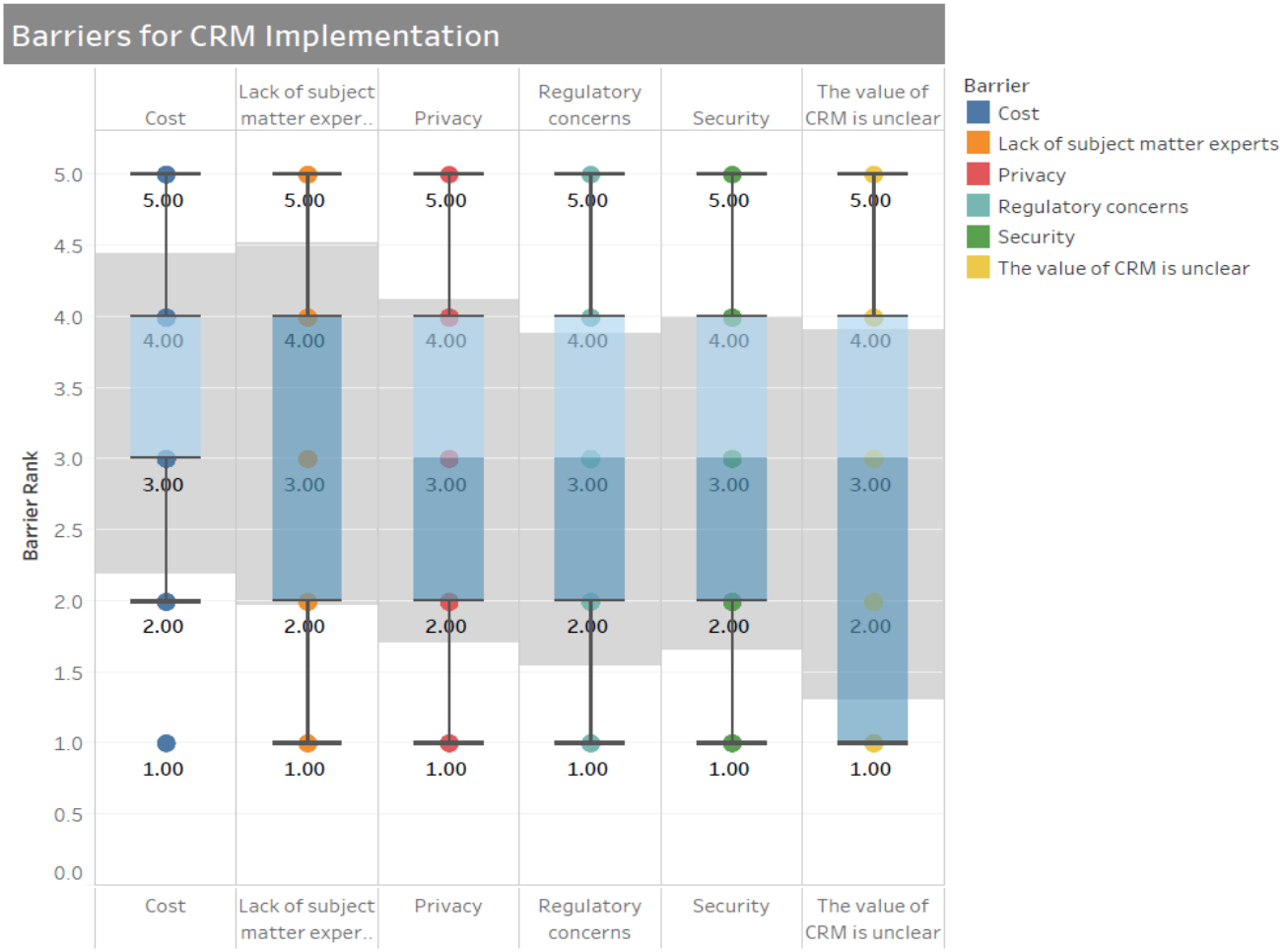

Figure 5. Respondents were asked to rank each potential barrier on a scale of 1–5, where 1 = not a barrier and 5 = complete blocker. Grey = standard deviation; Blue = whisker.

Results:

The median rank was near 3.0 for each potential barrier except cost, which had a median rank of 3.5. Thus, there is no one barrier that stands out more than the others as a significant barrier to CRM implementation within healthcare.

Analysis:

Cost was the only factor where the median rank was higher than the others, at 3.5, indicating that cost may be of the most concern when it comes to CRM implementation.

The range of responses was broadest for "The value of CRM is unclear," indicating that there may be some ambiguity regarding the definition of CRM and how CRM can be used and implemented in a healthcare setting.

None of these factors stands out as a single major blocker for CRM implementation, which could indicate that we have missed a blocker. However, based on this data, we also cannot eliminate the possibility that a combination of blockers have a cumulative effect and act as a combined barrier to this implementation. Another potential blocker that was not included is the challenge of determining how to best utilize CRM along with existing technology and applications. For example, the ability of CRM to be easily integrated with an organization's EHR for care management use cases may be a blocker.

Other Potential Barriers for Consideration

In order to determine whether there are other major barriers to CRM in healthcare, we asked the respondents, "Are there other barriers, concerns or shortcomings of CRM technology you have observed that may make it difficult to implement and/or use within the healthcare environment?" There was a free-form text box to allow for responses to this question. Twenty respondents provided 22 examples of barriers.

Table 1: Responses to "Are there other barriers, concerns or shortcomings of CRM technology you have observed that may make it difficult to implement and/or use within the healthcare environment?" Four applicable responses from the question, "Do you have additional thoughts on how CRM can be used in the healthcare sector?" were also included in this table.

Enterprise Risk Management Domain	Number of Responses	Examples
Operational	2	• Other higher priorities being worked on • Culture and workflow change within the organization to make the needed changes
Legal/Regulatory	4	• HIPAA (2 responses) • Identification/clarification of who will own the data
Human Resources	6	• Obstructionist IT department • Politics • Staff/patients/providers don't want to be trained (3 responses)
Technology	11	• Interoperability (10 responses) • Downloading of an app prevents usage
Strategic	4	• Lack of coordinated goals • Key leaders do not understand the value (2) • Foresight to apply CRM to the needs of healthcare

The most significant barrier suggested by survey respondents appears to be interoperability, which was not included as an option in the previous survey question described in Figure 5. The responses were grouped by enterprise risk management domain (ERM) as CRM is an enterprise solution with associated enterprise risks and

benefits. Healthcare lags behind other industries in the implementation of ERM[1,2]. Routine application of ERM where appropriate increases diffusion of this important approach.

Additional Thoughts on Uses for CRM in the Healthcare Sector

As a part of this survey, we also wanted to determine what other ideas our respondents might have for the use of CRM in healthcare. We asked, "Do you have additional thoughts on how CRM can be used in the healthcare sector?" There was a free-form text box to allow for responses to this question. Fifteen respondents provided 16 comments. Four responses were not germane to the question. As previously mentioned, these four responses were pertinent to the question of barriers, concerns and shortcomings, and are included in Table 1.

[1] NEJM Catalyst. What is Risk Management in Healthcare. April 25, 2018. Retrieved from https://catalyst.nejm.org/what-is-risk-management-in-healthcare/

[2] Carroll RL. Chapter 1. Enterprise Risk Management – What's it all About? In Carroll R, Nakamura P and Vose RV (Eds). 2013. Enterprise Risk Management Handbook for Healthcare Entities 2nd Ed. American Health Lawyers Association: Washington, D.C.

Table 2: Responses to, "Do you have additional thoughts on how CRM can be used in the healthcare sector?"

CRM Capability	Number of Responses	Examples
Communication	3	• To provide a flexible portal for patients • Seamless communication across the care continuum • To create conversation and interaction
Care Coordination	3	• Collection of patient outcomes data from home/wearable devices • Give patients immediate lifestyle-changing instructions • Event registration
User Experience	2	• Personalization of the patient experience • Improve provider/member/employee experience

Responses were considered "novel" if they had not previously been considered by the task force or included in the survey. These include the suggestion that CRM be used for event management, real-time patient education, and collection of patient-outcome data from home and wearable devices.

The task force spent time discussing what event management might mean in a healthcare setting. Suggestions included registering for classes, in that patients might register for prenatal education, diabetes, or management and healthy lifestyle classes. Employees might register for role-specific training and organizational events.

Conclusion and Future Considerations

Given the small sample size of respondents and overrepresentation of IT professionals, it is difficult to draw strong conclusions from this survey. The overall observations are that vendors are the most likely to report use of CRM technology as a part of standard practice; patients are the most commonly reported group to be targeted for engagement with CRM; and outreach and marketing is considered the most important use case for CRM to support organizational goals.

We were unable to identify one specific blocker that needs to be overcome for CRM implementation to move forward in healthcare, though open-ended responses suggested that interoperability concerns may be a blocker worth further investigation. In order to explore this and determine specific pain points, it would be helpful to speak with individuals in more depth about their experiences implementing CRM.

In order to draw additional conclusions about the perceptions and state of CRM in healthcare, more engagement and responses from clinicians, administrators and other roles within healthcare organizations is necessary. Given that IT professionals were the most likely group to respond to this survey, this may indicate a need for additional education of other groups in order to get them engaged in CRM implementation.

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2018-2019 HIMSS Exploring CRM Technology for Healthcare Task Force
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