Hospitalist Perspectives on
Electronic Medical Records

Society of Hospital Medicine
Health IT Committee
2016-2017 Roster

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The charge of the IT Committee is to develop initiatives and programs to promote and develop best practices for hospitalists engaged in hospital and health IT related initiatives. The committee will make recommendations about SHM’s health information technology agenda to the SHM Board.

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Website: www.hospitalmedicine.org/practicemanagement
According to HealthIT.gov, from 2001 to 2011, the number of doctors using an Electronic Medical Record (EMR) system grew from 18% to 57%. Spurred by the legislative goal of ‘meaningful use,’ that figure is now estimated at 83%. Acute-care hospitals have led the nation in the adoption of and investment in EMR systems. Perhaps the population best served to evaluate EMR effectiveness are hospitalists and front-line clinicians caring for patients in these hospitals.

The Society of Hospital Medicine (SHM) represents 57,000 practicing hospitalists. Hospital medicine is the fastest-growing medical specialty in history. Hospitalists are front-line providers managing the care of acutely ill, hospitalized patients, while often working to enhance the performance of hospitals and healthcare delivery systems. The dual role of practitioner and leader affords a distinct viewpoint and ability to provide invaluable feedback on EMR design. The SHM Health Information Technology (HIT) Committee has been working to find ways to promote effective development and adoption of the clinical information systems, which are vital to achieve quality, safety and efficiency goals. As such, the HIT Committee conducted a survey of hospitalists regarding their experiences with EMRs.

The potential benefits of EMRs are easy to imagine — from safety, efficiency, billing and more. Since the passage of the Health Information Technology for Economic and Clinical Health (HITECH) Act, deployment of predominately large EMR vendor systems and the simultaneous demise of ‘home grown’ systems, research and physician sentiment continue to cast doubt on whether these benefits have been realized. Signed into law in early 2009, the HITECH Act aims to promote the adoption and meaningful use of health information technology. It contains specific incentives designed to accelerate the adoption of EMR systems among providers. The HITECH Act also increases the potential legal liability for non-compliance while providing for more enforcement.

While it is easy to understand why the investment in EMR systems should be beneficial, quantifying how information systems affect a clinician’s ability to deliver care is difficult. Perhaps the most easily identifiable goals of EMRs are to increase access to data, improve information sharing and retrieval, and improve patient care. These types of tasks should be performed in an efficient, intuitive manner without disruptions of existing workflows. Users should be able to develop a mental model of how they expect the software to function, attain the function and deploy a standardization across systems.

As an example, the airline industry as a whole focused on the safety and usability of cockpit design. Once the optimal design was agreed upon, standardization of those features occurred across the world. Conversely, EMR features vary tremendously between and within the same vendor installations. This is compounded by the fact that research on ideal features/systems (to provide safe, high-quality care) is lacking.
Introduction

Physician burnout has been intimately tied to frustrations with EMRs. Shanafelt et al., (2015) published a study in the Mayo Clinic Proceedings, which found that EHR use was tied to lower physician satisfaction as a result of the time spent on clerical tasks, as well as higher rates of physician burnout. It is a common misperception that EMRs have been designed and maintained with appropriate governance and input from practicing providers. In reality, most EMRs are billing systems that, rather than appropriately being refactored as needs change, have been racking up years of “tech debt” to meet varying competing interests and deadlines (i.e., regulatory guidelines, clinical functionality, research needs, etc.). Instead of improving information sharing and retrieval, EMRs often impede communication efforts and can suffer systemwide failures or frequent downtimes preventing utilization of the whole system. To make matters worse, much of the collaboration between EMR vendors and their clients is forestalled by private vendor restrictions on public discussions or visually sharing of EMR features. Despite repeated reports of safety concerns and inadequacies in EMRs from front-line clinicians, few if any changes have been implemented over the past decade. Additionally, driven largely by business-related metrics, vendor development cycles for improvement are on the order of months to years — a speed unacceptable when providing high-quality patient care with significant safety ramifications.

The HIT Committee presents the following summary of our hospitalist community’s experiences with EMRs and aims specifically to call attention to the patient safety risks and dangers of continuing to ignore the issues identified. This paper is not a systematic review of previous articles, but rather a confirmation of the facts from a point of view that has not been explored — hospitalists’ attitudes toward EMRs. The purpose of this paper is to effect change on EMR systems by informing conversations with decision makers: lawmakers, EMR companies, C-Suites or IT professionals.

Survey Methods

SHM’s HIT Committee developed and administered an anonymous voluntary online survey assessing hospitalists’ attitudes toward EMRs. The survey consisted of 28 questions, which included eight demographic and 20 questions on attitudes, utilizing a 5-point agreement Likert scale. The survey tool is included in Appendix 1. After the instrument was finalized and tested, SHM began to market the survey through targeted email newsletters, banner ads and social media platforms to obtain a convenience sampling. The survey period lasted two months during which 462 participants completed the survey. Table 1 lists the demographics of the respondents. Though the data that is presented in this report was garnered via convenience sampling of SHM members, demographics of those respondents are fairly balanced. Throughout the paper you will find data presented using demographic filters.

Table 1*
Hospitalist Survey Respondents Demographics:

<table>
<thead>
<tr>
<th>Survey Participation</th>
<th>Eligible Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Survey Participants" /></td>
<td><strong>462</strong></td>
</tr>
</tbody>
</table>

*Note: The tables add up to 100.1% due to displaying the tenth of the decimal rather than the thousandth.
# Employment Model

<table>
<thead>
<tr>
<th>Model</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital, Health System or Integrated Delivery System</td>
<td>271</td>
<td>59.2%</td>
</tr>
<tr>
<td>Private Local/Regional Hospitalist-Only Medical Group</td>
<td>27</td>
<td>5.9%</td>
</tr>
<tr>
<td>Multi-State Hospitalist Management Company</td>
<td>20</td>
<td>4.4%</td>
</tr>
<tr>
<td>Private Multi-Specialty or Primary Care Medical Group</td>
<td>17</td>
<td>3.7%</td>
</tr>
<tr>
<td>University, Medical School or Faculty Practice Plan</td>
<td>114</td>
<td>24.9%</td>
</tr>
<tr>
<td>Other Employment/Ownership Model</td>
<td>9</td>
<td>2.0%</td>
</tr>
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</table>

## Clinical Weeks Per Year

<table>
<thead>
<tr>
<th>Weeks Per Year</th>
<th>N</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>0-5</td>
<td>33</td>
<td>7.2%</td>
</tr>
<tr>
<td>6-10</td>
<td>35</td>
<td>7.6%</td>
</tr>
<tr>
<td>11-15</td>
<td>44</td>
<td>9.5%</td>
</tr>
<tr>
<td>16-20</td>
<td>38</td>
<td>8.2%</td>
</tr>
<tr>
<td>21-25</td>
<td>58</td>
<td>12.6%</td>
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<tr>
<td>26-30</td>
<td>122</td>
<td>26.5%</td>
</tr>
<tr>
<td>31-35</td>
<td>16</td>
<td>3.5%</td>
</tr>
<tr>
<td>36-40</td>
<td>27</td>
<td>5.9%</td>
</tr>
<tr>
<td>41-45</td>
<td>4</td>
<td>0.9%</td>
</tr>
<tr>
<td>46-52</td>
<td>84</td>
<td>18.2%</td>
</tr>
</tbody>
</table>

## Job Title

<table>
<thead>
<tr>
<th>Title</th>
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<th>%</th>
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</thead>
<tbody>
<tr>
<td>MD Hospitalist</td>
<td>268</td>
<td>60.1%</td>
</tr>
<tr>
<td>Hospitalist Leader</td>
<td>111</td>
<td>24.9%</td>
</tr>
<tr>
<td>NP/PA Hospitalist</td>
<td>27</td>
<td>6.1%</td>
</tr>
<tr>
<td>Informatics Leader</td>
<td>16</td>
<td>3.6%</td>
</tr>
<tr>
<td>Other</td>
<td>24</td>
<td>5.4%</td>
</tr>
</tbody>
</table>

Demographics
### Demographics

#### Age Range

<table>
<thead>
<tr>
<th>Age Range</th>
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<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-29</td>
<td>15</td>
<td>3.4%</td>
</tr>
<tr>
<td>30-34</td>
<td>58</td>
<td>13.0%</td>
</tr>
<tr>
<td>35-39</td>
<td>87</td>
<td>19.5%</td>
</tr>
<tr>
<td>40-44</td>
<td>84</td>
<td>18.8%</td>
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<tr>
<td>45-49</td>
<td>68</td>
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<tr>
<td>50-54</td>
<td>54</td>
<td>12.1%</td>
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<tr>
<td>55-59</td>
<td>32</td>
<td>7.2%</td>
</tr>
<tr>
<td>60-64</td>
<td>44</td>
<td>9.9%</td>
</tr>
<tr>
<td>65-69</td>
<td>1</td>
<td>0.2%</td>
</tr>
<tr>
<td>70-74</td>
<td>1</td>
<td>0.2%</td>
</tr>
<tr>
<td>75-79</td>
<td>2</td>
<td>0.4%</td>
</tr>
</tbody>
</table>

#### Number of Years with Inpatient EMR System

<table>
<thead>
<tr>
<th>Years</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–1 year</td>
<td>57</td>
<td>12.8%</td>
</tr>
<tr>
<td>1–3 years</td>
<td>124</td>
<td>27.9%</td>
</tr>
<tr>
<td>3–5 years</td>
<td>107</td>
<td>24.1%</td>
</tr>
<tr>
<td>5–10 years</td>
<td>111</td>
<td>25.0%</td>
</tr>
<tr>
<td>10+ years</td>
<td>45</td>
<td>10.1%</td>
</tr>
</tbody>
</table>

#### Inpatient EMR System

<table>
<thead>
<tr>
<th>System</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epic Systems Corporation</td>
<td>193</td>
<td>42.4%</td>
</tr>
<tr>
<td>Cerner Corporation</td>
<td>128</td>
<td>28.1%</td>
</tr>
<tr>
<td>MEDITECH</td>
<td>49</td>
<td>10.8%</td>
</tr>
<tr>
<td>Allscripts</td>
<td>25</td>
<td>5.5%</td>
</tr>
<tr>
<td>McKesson</td>
<td>16</td>
<td>3.5%</td>
</tr>
<tr>
<td>Computers Programs and Systems Inc. (CPSI)</td>
<td>6</td>
<td>1.3%</td>
</tr>
<tr>
<td>GE Healthcare</td>
<td>4</td>
<td>0.9%</td>
</tr>
<tr>
<td>Athena Health</td>
<td>1</td>
<td>0.2%</td>
</tr>
<tr>
<td>Waiting Room Solutions (WRS)</td>
<td>1</td>
<td>0.2%</td>
</tr>
<tr>
<td>Custom Built By Our Institution</td>
<td>10</td>
<td>2.2%</td>
</tr>
<tr>
<td>Other</td>
<td>22</td>
<td>4.8%</td>
</tr>
</tbody>
</table>
In addition to the previous demographics, we also asked hospitalists to self-proclaim their technical aptitude on a 0–100 slider scale, 100 representing the highest technical aptitude. As hospitalists are, in general, younger than most specialties, our theory was that our members are technically advanced, which these question results seemed to confirm (at least by self-evaluation):

**Hospitalist Views Toward EMRs and EMR Vendors**

A staggering 85% of providers reported spending more time interacting with their inpatient EMR system than interacting with their patients. To re-iterate this statistic, a provider’s day in an acute-care hospital setting was spent more with screen time than patient face time.

Of all respondents, 40% reported being happy with their EMR. When looking at specific EMR companies, only 21% of non-Epic users reported being happy with their EMR compared to 65% of Epic users. Interestingly, and contrary to this result, was when given the option to easily change EMR vendors, 52% of respondents stated they would.

When asked if they would revert back to paper if they could, 25% stated they would. Given the level of dissatisfaction with current systems, this low percentage of providers wanting to go back to paper notes shows the general belief in the potential of these systems and that hospitalists are committed to moving forward in health information technology. As one provider noted, “I would not go back to paper, because now I can read everyone’s handwriting.” The same provider also commented that it is “Easier to take phone calls on patients because I can access patient records from anywhere in the hospital.” We believe the level of dissatisfaction is not a resistance to technology; instead it represents the frustration between where EMRs currently stand and the potential of where they could be. Predictably, the percentage of those desiring to go back to paper is related to age:
Hospitalist Perspectives on EMR Interoperability and Accessibility

Accessibility and interoperability are considered to be the core features of EMR systems. Our survey confirmed even these core features are falling short. EMR accessibility was defined as the availability of patient records to the authorized provider at any time, from any location. This includes retrieving information from internal and external sources, transmitting information to external providers, and having remote access to the system when out of the hospital.

Transitions to and from the hospital are some of the most dangerous events in caring for acutely ill patients. Making informed clinical decisions requires having knowledge of medical history. This increases safety, improves medical decisions and is cost effective by preventing repeated labs or studies. The reality is that many providers are forced to make complex decisions with limited to no information about patients, especially those from outside of their system. Our survey showed that 41% of hospitalists feel they rarely or never have access to records, labs and studies from external facilities.

Nearly half of the respondents (45%) agreed that EMR systems improved their ability to communicate with other providers within their hospital or health system. There is significant variation between vendors in agreement on this measure. Compared to other vendors, Epic system users (67%) agreed that their EMR improved intra-system communication, with the next highest vendor at only half this percentage.
Hand-offs to and from a hospital are critical safety events for patients, yet our survey shows that hospitalists are not able to effectively send information to external facilities. In fact, one of the lowest scores in the data addressed the ability of the EMR system to send information to external facilities — only 16% stated their inpatient EMR system efficiently sends patient information to external facilities. As one provider stated, “EMRs do not talk to each other.” This means that a hospitalist is unable to get information back to a primary care provider (PCP) who is caring for a patient after he or she is hospitalized.

On a positive note, two-thirds of respondents indicated that remote access to their own EMR system was easy. While this likely leads to charting and other important work being performed outside of the hospital, which can worsen burnout and stress, this feature needs to be available to all practicing providers caring for patients.

Lastly, accessibility also references unbroken network uptime. In our survey, 79.1% of respondents reported that an outage of their EMR system had compromised patient safety at one point. System downtime, both planned and unplanned, is an event that can cause significant patient safety risks. The frequency of these events, which can occur monthly, can result in an inability to access records, document or place orders on patients. Even simple downtime events, like twice-yearly time changes, can lead to hours of an entire acute-care hospital being unable to utilize EMR systems, often leaving practitioners blind.

**Hospitalist Perspectives on EMR and Patient Safety**

In this era of rapid nationwide EMR adoption, it is essential to understand the effect it has had on patient safety. While several studies have noted the improvements that EMRs and health information technology tools have provided for patient safety, there are several unique safety risks and unintended consequences associated with EMR implementation.\(^1\)\(^-\)\(^8\) Current reasons presumed for such EMR patient safety concerns include their design, implementation and how they are used.\(^1\)\(^9\) In the words of one provider, there are “too many alerts/annoying pop ups etc., that are frequently wrong and just disrupt my workflow.” More research and understanding of these patient safety risks associated with EMRs, and physician input, is needed.\(^1\)\(^10\)
As it pertains to the relationship between EMRs and patient safety, only 28% of respondents agreed that their EMR system contains all of the features needed to provide the best care for their patients. Interestingly enough, younger respondents to this question seemed to believe that EMR systems contained the features necessary to provide the best care more than older respondents:

Despite the potential for clinical decision support features to enhance patient safety, our survey demonstrated that less than one in five (18%) respondents agreed that clinical decision supports are helpful during the course of care — an indication that the current way that EMR systems are providing this support is not being effectively designed and implemented for hospitalists’ use.

Less than half of the respondents (44%) agreed that their EMR system allowed them to effectively and accurately comprehend their patient’s clinical condition. Roughly one in seven (13%) respondents agreed that when a patient safety concern is identified in the EMR system, the vendor is quick to provide and implement a solution. This demonstrates that the majority of hospitalists believe that the core functions of EMRs are not designed and implemented in a way that assists in providing better and more effective care. Furthermore, hospitalists overwhelmingly believe that when patient safety concerns are found within the EMR system, EMR vendors are not quick to provide and implement solutions. A stronger partnership must occur between front-line providers, like hospitalists, and EMR vendors to continuously improve the EMR quality and adopt features to promote the goals of safe, effective, patient-centered, timely, efficient and equitable care that the Institute of Medicine and others envisioned with HIT.1,11,12 Of all the hospitalists polled, 74% indicated that their inpatient EMR does not help them provide the best possible care for their patients. 85% of the respondents believe that the design of their EMR does not help prevent errors. This leads us to believe that high quality care is delivered in spite of the barriers cast by the current state of EMRs. The potential for EMR systems to help, rather than hinder, patient safety can only be realized with greater collaboration in order to optimize design, implementation and usability.

Hospitalist Views Toward Usability and Training

Usability, and a belief in the effectiveness of a system, is a paramount determinant of provider satisfaction. It has long been reported that the current EMRs are not user friendly, leading to unnecessary complexity and inadequate training to ensure safe use. Many medical errors occur due to the EMR system.
We believe that if a system is designed appropriately, it would be intuitive and the training needs would be less intense. However, only 23% of respondents felt that their EMR was intuitive to use. There was a positive correlation between intuitiveness and years of EMR system use, yet even among physicians who used the same system for more than 10 years, less than a third found their EMR to be intuitive. A focus on human factor engineering and usability would improve these measures, as existing EMR systems are cumbersome and difficult.

**EMR System is Intuitive, by Years with Inpatient EMR Systems**

<table>
<thead>
<tr>
<th>Years with EMR Systems</th>
<th>Intuitive (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1 year</td>
<td>17.9%</td>
</tr>
<tr>
<td>1-3 years</td>
<td>23.4%</td>
</tr>
<tr>
<td>3-5 years</td>
<td>23.4%</td>
</tr>
<tr>
<td>5-10 years</td>
<td>22.0%</td>
</tr>
<tr>
<td>10+ years</td>
<td>29.5%</td>
</tr>
</tbody>
</table>

Only 33% of practicing hospitalists agreed that their initial EMR training prepared them to use the systems safely and effectively. While the general sense is that EMR training is not looked upon favorably by providers, in our survey only 19% felt that the training was too long. We feel this is a representation of the lack of safety most hospitalists feel using these systems rather than “more training” being the sole focus. Ultimately, system design should be emphasized to allow easier and safer use.

Usability also includes the ability to fit technology into our current workflow of caring for patients. The time spent documenting and using EMRs has increased significantly compared to paper records and providers feel a degradation in provider-patient relationships due to a focus on the EMR, even during patient interactions. In our survey, only 23% of providers reported an ability to interact with their patients and interface with the system simultaneously.

Usability also should improve the efficiency of providers. Efficiency was one of the primary benefits that EMR adoption was touted to provide to the healthcare system. Only 6% of respondents agreed that they have more face-to-face time with their patients.
Since 2009, SHM has been vocal about the deficits of current EMR technology and how the promise of these systems has yet to be realized (attached in Appendix 2). Sadly, more than seven years later, our survey suggests that these beliefs are still held by the majority of front-line clinicians in what is supposed to be the most advanced deployer of healthcare technology: United States acute-care hospitals. This is where the majority of investment in these systems has taken place, yet to those who are directly caring for our nation’s sickest patients, EMRs have yet to provide the necessary tools to deliver safe and effective care.

We believe hospitalists are especially qualified to evaluate these systems, and our survey paints a grim status on the effectiveness and usability of the systems they spend the majority of their time interacting with. These results should serve as a call to action to accelerate the pace of advancement and innovation in healthcare technology. Not only are the current systems not delivering in these vital areas, but they are also serving as the primary catalyst of physician burnout.

These survey results validate that the goals of interoperability and accessibility have not been reached. This impacts not having vital information when admitting patients and an inability to effectively hand off information to PCPs on discharge. It is alarming that 74% of hospitalists indicated that their inpatient EMR does not help them provide the best possible care for their patients and 85% of respondents believe that the design of their EMR does not help prevent errors. Given the fact that hospitalists report spending more time interacting with the EMR system than their patients, this technology must be improved to achieve the value and promise we all believe it holds.

The survey instrument provided the opportunity for users to leave open comments, which generated 440 separate comments. 77% of those comments were classified as negative, 11% positive and 12% neutral. While the majority of the comments were colorfully tinged towards hospitalist dissatisfaction, comments had a wide range from stating that “EMR usability is underrated” to “untested dangerous technology”. The most popular subcategory addressed usability with a common theme of “Systems are designed for billing and not for patient care.”

While we do see variation among vendors, with Epic in general having more favorable responses, even the performance of the best vendor is sub-par. Like the aviation industry, we hope for standardization of proven safety technologies deployed across all systems.

By sharing these results, we hope to raise awareness of the unacceptable performance of existing systems. This continues to contribute to our slower than desired improvement in quality and safety as well as increasing provider frustration. We strongly believe that we need a renewed focus on initial goals of technology adoption in healthcare.

As a medical professional society, we have made a focus of producing leaders in health IT and continue toward this goal including promoting certification in Clinical Informatics by hospitalists. SHM members stand ready to collaborate to improve these systems with developers. However, current legislative measures focused only on adoption continue to hamper the required innovation. In addition, lack of interoperability and ease of switching systems forces us to operate with ineffective tools and an inability to exercise market forces to drive this industry forward.
Appendix 1

Survey Questions:

1. **Select your Employment Model**
   - [ ] Hospital, Health System or Integrated Delivery System
   - [ ] Private Local/Regional Hospitalist-Only Medical Group
   - [ ] Multi-State Hospitalist Management Company
   - [ ] Private Multi-Specialty or Primary Care Medical Group
   - [ ] University, Medical School or Faculty Practice Plan
   - [ ] Other Employment/Ownership Model

2. **What is your job title?**
   - [ ] MD Hospitalist
   - [ ] Hospitalist Leader
   - [ ] NP/PA Hospitalist
   - [ ] Informatics Leader
   - [ ] Other (please specify)

3. **How old are you?**

4. **How many weeks per year are you on inpatient clinical service?**

5. **Indicate your self-proclaimed technological aptitude on a scale of 1–100.**
   - [ ] Novice
   - [ ] Competent
   - [ ] Expert

6. **What is the name of your inpatient EMR system?**

7. **How long have you worked with this inpatient EMR system?**

8. **I am happy with my current inpatient EMR system.**
   - [ ] Completely Disagree
   - [ ] Disagree
   - [ ] Neutral
   - [ ] Agree
   - [ ] Completely Agree

9. **Initial training for my inpatient EMR system prepared me to use it safely and effectively the first time I used it for patient care.**
   - [ ] Completely Disagree
   - [ ] Disagree
   - [ ] Neutral
   - [ ] Agree
   - [ ] Completely Agree
Appendix 1

10. My inpatient EMR system is intuitive.
   - Completely Disagree
   - Disagree
   - Neutral
   - Agree
   - Completely Agree

11. The time I spent in training for my inpatient EMR system was too long.
   - Completely Disagree
   - Disagree
   - Neutral
   - Agree
   - Completely Agree

12. When caring for patients in the hospital, I can easily access records, labs and studies from external facilities.
   - Never
   - Rarely
   - Sometimes
   - A Lot
   - Every Time

13. My inpatient EMR system improves my ability to communicate with other providers within my hospital or health system.
   - Completely Disagree
   - Disagree
   - Neutral
   - Agree
   - Completely Agree

14. The inpatient EMR allows me to effectively and accurately comprehend my patient’s clinical condition.
   - Completely Disagree
   - Disagree
   - Neutral
   - Agree
   - Completely Agree

15. My inpatient EMR system efficiently sends patient information to external facilities.
   - Completely Disagree
   - Disagree
   - Neutral
   - Agree
   - Completely Agree
16. I can easily access my inpatient EMR system remotely.
- Completely Disagree
- Disagree
- Neutral
- Agree
- Completely Agree

17. My inpatient EMR system contains all of the features I need to provide the best care for my patients.
- Completely Disagree
- Disagree
- Neutral
- Agree
- Completely Agree

18. When a patient safety concern is identified in my inpatient EMR system, the vendor is quick to provide and implement a solution.
- Completely Disagree
- Disagree
- Neutral
- Agree
- Completely Agree

19. Most clinical decision support alerts are helpful during the course of care.
- Completely Disagree
- Disagree
- Neutral
- Agree
- Completely Agree

20. Due to the efficiency of my EMR system, I have more face-to-face time with my patients.
- Completely Disagree
- Disagree
- Neutral
- Agree
- Completely Agree

21. My inpatient EMR helps me provide the best possible care for my patients.
- Completely Disagree
- Disagree
- Neutral
- Agree
- Completely Agree
22. I spend more time interacting with my inpatient EMR system than I do interacting with my patients.
   - [ ] Completely Disagree
   - [ ] Disagree
   - [ ] Neutral
   - [ ] Agree
   - [ ] Completely Agree

23. My inpatient EMR allows me to interact with my patients and interface with the system simultaneously.
   - [ ] Completely Disagree
   - [ ] Disagree
   - [ ] Neutral
   - [ ] Agree
   - [ ] Completely Agree

24. Patient safety has never been compromised due to an outage of my inpatient EMR system.
   - [ ] Completely Disagree
   - [ ] Disagree
   - [ ] Neutral
   - [ ] Agree
   - [ ] Completely Agree

25. The design of my inpatient EMR prevents me from making errors.
   - [ ] Completely Disagree
   - [ ] Disagree
   - [ ] Neutral
   - [ ] Agree
   - [ ] Completely Agree

26. If you had the option to easily switch to a different inpatient EMR vendor, would you?
   - [ ] Yes
   - [ ] No

27. If you had the option to revert back to paper notes, would you?
   - [ ] Yes
   - [ ] No

28. Please offer any additional comments regarding your inpatient EMR.
Appendix 2

Society of Hospital Medicine Position on Healthcare IT
SHM IT Task Force
November 2009

The Society of Hospital Medicine believes that the effective design and implementation of healthcare information technology (HIT) tools is necessary to achieve our safety, quality and efficiency goals. However there are three current issues impeding this goal: First, current off-the-shelf EMR software systems are inadequate and unproven in terms of advanced functionality for clinical decision support and poor usability for data entry and effective data display to enable physicians and staff to deliver efficient, high-quality care. Second, there is a severe shortage of expertise at a local, national and vendor level to guide safe and effective implementation of these systems in healthcare settings. And third, the relationship between institutions and vendors does not promote rapid improvement and adaptation of systems partly due to a lack of vendor engagement secondary to contract issues such as hold harmless and non-disclosure clauses. Each of these areas must be addressed to achieve our common goals and avoid potential patient harm, a frustrated workforce and spiraling costs.

The true value and promise of HIT systems is enabling effective clinical decision support at the point of care. To meet this goal, we require significant investment in research and development to create better software that is designed with clinical needs in mind applying human factors engineering principles and patient-centered cognitive support. Data must be presented in an actionable fashion and incorporate complex clinical decision support based on up-to-date common knowledge databases. Even with properly designed software, implementation requires training a large workforce adept in IT and clinical medicine to recognize and/or develop best practices in IT implementation, then to disseminate these. The success of healthcare IT should be judged not on only adoption rates or ‘meaningful use’ checklists, but on both quality and cost outcomes balanced with the impact on clinician workflow.

Hospitalists, many with skills sets in systems, IT, communication, leadership and quality, are uniquely positioned to lead in the design and implementation of EHR, CPOE and other healthcare IT solutions. In addition, the SHM IT Task Force can synthesize current HC IT literature to help disseminate evidence-based best practices in IT solutions, collaborate with vendors in development of needed functionality, and foster champions to aid the process at a local level.


