

**SMART-ER  
EDWARD HOSPITAL**

**Publication Year: 2013**

**Summary:**

Our callback clerk uses the cloud-based Smart-ER database to facilitate next-day ED patient callbacks. The entire ED Leadership team uses the Smart-ER module called Active Issues Manager, which is an issues/complaint management workflow.

**Hospital:** Edward Hospital

**Location:** Naperville, IL

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**Category:**

- E: Exit from the ED

**Key Words:**

- Complaint Management
- Patient Experience
- Patient Engagement

**Hospital Metrics:**

- Annual ED Volume: 90,000
- Hospital Beds: 300
- Ownership: Non-profit
- Trauma Level: 2
- Teaching Status: No

**Tools Provided:**

- Standard 5-Question Set for the Emergency Department
- Emergency Physician Month-End Report Example

**Clinical Areas Affected:**

- Emergency Department

**Staff Involved:**

- Administrators
- Case Management
- ED Staff
- IT Staff
- Nurses
- Physicians

## Innovation

Emergency departments (EDs) require an efficient way to assess patient wellbeing and uncover concerns after a hospital interaction. EDs always strive to improve satisfaction ratings, mitigate risk, avoid unnecessary admissions, and hold providers accountable. Finally, managing issues and complaints is a large part of the job for ED leaders and they can benefit from a smooth workflow.

Listed below are the main system features of Smart-ER, which are listed on the website, <http://smart-er.net>

- Hospital Upload - EMR data is extracted and automatically uploaded to a secure cloud server. A copy of the ED Data Field Set is attached.
- Callback System - Any computer becomes a call center such that phone numbers are automatically dialed. Standard questions that allow external benchmarking are provided and custom questions may be added. A copy of the Standard ED Question Set is attached.
- Self-Assessment - Appropriate patients are sent a request to complete an electronic self-assessment by email (or text) in the patient's preferred language. The message contains a unique URL that links to a portal whereby patients can use their computer or smart phone to complete a brief wellbeing check and information about the experience.
- Active Issues Manager (AIM) - When a patient reports a medical concern or service complaint, built-in triggers will notify your staff in a variety of ways. Issues are relayed to designated service line managers and directors in the manner that each prefers. The AIM system optimizes the workflow for ED leaders that respond to issues and complaints.
- Detailed Reporting - Reports containing departmental demographics, assessment results, and staff performance are generated monthly. Clinical provider metrics tie to productivity, satisfaction and utilization and each individual is compared to benchmarks.

## Results

Edward Hospital's ED is a top-tier hospital on a national basis in regard to patient satisfaction (and each quarter we achieve a 95th-99th percentile ranking). Smart-ER helps us maintain that goal by checking patients' wellbeing, holding staff accountable for their satisfaction performance, and by addressing issues/complaints rapidly.

## Timeline

Smart-ER was designed over the past two years. We began beta testing this innovation in mid-2012. The complaint management (AIM) module was added in early 2013.

## Innovation Implementation

Edward Hospital was the initial beta test site. Smart-ER was further improved upon based on opportunities at Edward that were identified. Before implementing Smart-ER we had no means of engaging patients electronically in order to check on their well-being and experience. We also did not have a smooth, consistent workflow for ED leaders to deal with issues and complaints.

The best way to detail the innovation and why it was implemented is to talk about the value it provides to various groups.

- Patients: If you were in the ER yesterday, today you would receive an email (or text message) link to portal with a 1-minute self-assessment to check on your wellbeing and experience. If you are worse, a message automatically notifies the ER by email or fax. If you have any other issue, the information is sent to the appropriate ED leader.

- Providers: There is comfort in knowing your patients are reliably being reassessed the next day. There are real-time notifications of issues so that any problems can be addressed (e.g., difficult arranging necessary follow-up). There are monthly performance reports so that performance is measured and can then be improved.
- Hospital: Smart-ER improves satisfaction, mitigates risk, and provides an efficient workflow for callback staff (same questions as in self-assessment also in callback database). The Active Issues Manager (AIM) module allows managers to use smartphones to address issues (respond to patients, notify heads of departments, and collect data for monthly reports).
- ACO: ACOs are mandated by government and private payers to measure care quality and satisfaction. Healthcare is poised for a paradigm shift from fee-for-service to fee-for-value. Smart-ER assures that patients are engaged and that the patients' perception of value is incorporated into the process.

### Cost/Benefit Analysis

The cost of Smart-ER in any ambulatory setting is currently 50 cents per discharged patient. So, in a 45,000 volume ED with a 25% admission rate, the cost is about \$50 per day. Because Edward Hospital is a beta test site, this fee was waived. We have one full-time individual hired as a callback clerk to help reach patients and all trouble shoot non-clinical issues. The cost to Edward Hospital is about \$40,000 annually (with benefits) for that position.

### Advice and Lessons Learned

Smart-ER clients can expect it to take a month (or so) to get approval from IS and to set up the upload. It is a simple extract though and without the need for an HL-7 interface so the set-up time is just several hours. The main hurdle is traversing your institution's approval process for PHI upload to a secure server. A copy of the PHI Security Process is attached.

### Sustainability

To maintain a hybrid re-contact solution meaning patients are re-contact both by clerk/nurse callback and electronically by Smart-ER's self-assessments sent by email, a hospital must hire the callback staff. That cost is much lower (about half) than a system without a means to reach patients electronically.

### Tools to Download

- [Standard 5-Question Set for the Emergency Department](#)
- [Emergency Physician Month-End Report Example](#)



## Standard 5-Question Set for the Emergency Department

How are you feeling today compared to when you were seen in the ER?

- Better
- Same
- Worse

Pop-up: Record your comments and then call your PCP for advice or return to the ER now.

Notification: Fax to ED and email to charge nurse group

Do you have any questions about home care, medications, or follow-up appointments?

- No
- Yes

Pop-up: Record comments; then call the PCP for advice or ER Case Manager (555-555-5555) about follow-up.

Notification: Email to case manager

\*Please rate the doctor by the level of concern that was shown: <attending/resident/midlevel name>

- 5 - Very High
- 4 - High
- 3 - Average
- 2 - Low
- 1 - Very Low

Pop-up: We apologize for this experience. Recorded comments are forwarded to the ER leaders.

Notification: Email to medical director

\*Please rate the nurse by the level of concern that was shown: <nurse name>

- 5 - Very High
- 4 - High
- 3 - Average
- 2 - Low
- 1 - Very Low

Pop-up: We apologize for this experience. Recorded comments are forwarded to the ER leaders.

Notification: Email to nurse director

Would you like to add anything else about your experience?

- No
- Yes

Pop-up: We apologize for this experience. Recorded comments are forwarded to the ER leaders.

Notification: Email to administrator

\*This question cannot be modified if external benchmarking is desired.



# Emergency Physician Month-End Report

**[Redacted] Hospital Dr. [Redacted]**  
**June 2013**

## Quality (patient wellbeing)

Q: "How are you feeling today compared to when you were seen in the ER?"  
 A: "Worse" 4 (0.5%) Group mean/range (0.8%/0%-1.5%)

Q: "Do you have any questions about home care, medications, or follow-up appointments?"  
 A: "Yes" 6 (0.7%) Group mean/range (0.7%/0%-2.7%)

## Utilization

Admission rate	21.2%	Group mean/range (26.5%/18.3%-34.7%)
Transfer rate	0.0%	Group mean/range (0.7%/0.0-2.1%)
Turnaround time		
– discharges	97 min	Group mean/range (88/72-113)
– admissions	144 min	Group mean/range (150/129-241)
3-day return/admitted	0	Group mean/range (1/0-2)

## Efficiency

Hours worked	88.5		
Patients seen	185	(2.10 PPH <sup>1</sup> )	Group mean PPH 2.05 (67%tile)
WLU <sup>2</sup> mean	1.05	(2.21 WPH <sup>3</sup> )	Group mean WPH 2.01 (78%tile)

<sup>1</sup>PPH = patients per hour

<sup>2</sup>WLU = workload units, which normalizes when disproportionate hours worked in higher or lower acuity areas.. Triage level is used as a surrogate for patient acuity such that ESI 1 or 2 = WLU 1.4, ESI 3 = WLU 1.0 and ESI 4 or 5 = WLU 0.7.

<sup>3</sup>WPH = workload units per hour

## Satisfaction and Teamwork

Telephone contact	34
Self-assessment (email)	50
<u>Self-assessment (SMS)</u>	<u>0</u>
Total contacted	84

Q: "Please rate the doctor by the level of concern that was shown:"  
 A: "Very High" 64 (76%/91%tile) Group mean/range (71%/63%-79%)

## Comments (n= 5)

- He was the best!
- Would have liked for the doctor to explain about diagnosis in detail.
- Doctor could have been more thorough and nothing was accomplished.
- Good with explanation of problem
- Wonderful, concerned!