Post-Hoc CIT: A Useful Method for Qualitative IS Research

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Abstract

Critical Incident Technique (CIT) is an underutilized method in IS research [31], despite heavy use in other management disciplines. This paper proposes that an adaptation of traditional CIT -- post-hoc critical incident (CI) analysis -- can be usefully applied to qualitative data collected in prior studies, to shed new light on IS theories using deductive or inductive analysis. To demonstrate the potential of post-hoc CIT we report on a pilot study that analysed nine incidents extracted from interview transcripts from two prior health IT case studies. We offer suggestive findings: one set based on deductive analysis of the extracted incidents and another based on inductive analysis. We discuss opportunities to use post-hoc CIT in future IS studies.

1. Introduction

No research method is perfect [42]; every method gives rise to limitations which must be taken into account when interpreting the findings. Many IS scholars have called for increased methodological pluralism in our field [1] [7] [47], reasoning that, taken together, multiple studies focused on a particular phenomenon will collectively contribute to stronger theories and implications for practice. It is thus helpful to identify promising yet underutilized research methods which can help offset the limitations of other methods and/or reveal findings that are not revealed by other methods. This paper reports on a pilot test demonstrating the potential of an adaptation of one underutilized IS research method -- critical incident technique (explained below) -- for analyzing user behavior. Based on illustrative examples from the pilot test we provide preliminary evidence that post-hoc CIT (CIT applied to qualitative data previously collected in prior studies) is a useful method to add to the IS research toolkit.

The rationale for data reuse is based on the observation that qualitative research often generates large quantities of data, not all of which contribute to a researcher’s intended purposes at the time (or because the value of some data may not initially be apparent to the researcher). Consider a loosely structured interview which veers off topic. In analyzing the interview transcript, the researcher may not at first see value in topical “detours” like this. Other data may be underutilized because when collected it was not easily separable from that which the researcher sought (e.g., researcher captures a digital copy of a corporate annual report for its financials, and later wants to focus on the Letter to Shareholders). Thus, initial publications may not fully reflect all data gathered in a study. Later, data can be further harvested, “asking new questions of the data and making different interpretations” based on other theories, analytic techniques or perspectives [20, p. 293]. Thus researchers “more fully exploit the potential of existing data.” [20, p. 297].

Critical Incident Technique (CIT) is “a procedure for gathering certain important facts concerning behavior in defined situations” [24, p. 331]. Proponents claim that for some research purposes CIT is preferred over attitude surveys, experiments, in-depth interpretive ethnographies, and other methods. A recent review reports that CIT is underutilized in IS research, despite extensive use in marketing and industrial psychology [31]. We report on a pilot study that re-analyzed transcripts from two prior health IT case studies to extract and analyze incident reports in those data sets. Our pilot study addressed two questions: How useful is post-hoc CIT for 1) corroborating, extending or challenging theory (deductive analysis)? 2) exploring or generating new theory (inductive analysis)? Our deductive analysis compared critical incident (CI) reports per existing theory about informational factors that influence patient safety. Our inductive analysis coded CI reports and fragments for concepts not previously identified in prior literature (to our knowledge), using a method similar to that used in grounded theory studies.

The paper is organized as follows. We discuss CIT origins and use, then describe our post-hoc CIT method for extracting incidents from transcripts of interviews conducted for two prior case studies. We present the findings regarding deductive and inductive analysis of these CI reports, and conclude with observations about post-hoc CIT’s potential as a research method for IS, and suggestions for using post hoc CIT in future IS studies.
2. CIT

CIT is a useful method for analyzing behavior. Flanagan [24] defined an incident as “any observable human activity that is sufficiently complete in itself to permit inferences and predictions to be made about the person performing the act. To be critical the incident must occur in a situation where the purpose or intent of the act seems fairly clear to the observer and where its consequences are sufficiently definite to leave little doubt concerning its effects.” [24, p. 327]. Most CIT studies rely on retrospective first-person accounts of subjects’ own or others’ behavior in extreme or atypical episodes (those with particularly positive or particularly negative outcomes), elicited through structured interviews. “CIT” also describes the processes of classifying CIs and incident fragments and analyzing them. [31]. Although most CIT studies elicit incident descriptions, a reasonable adaptation is to select CIs embedded from broader sets of qualitative data. Flanagan offered two “basic principles” underlying the CI elicitation or selection technique [24, p. 355]: a) “Reporting of facts regarding behavior is preferable to the collection of interpretations, ratings and opinions based on general impressions.” b) “Reporting should be limited to those behaviors which, according to competent observers, make a significant contribution (whether positive or negative) to the activity.”

Flanagan’s early CIT studies analyzed Air Force pilots’ behavior, yielding an inventory of necessary skills for military pilots. Many human resources CIT studies similarly generate skill definitions for particular job roles. Services marketing studies used CIT to investigate causes of customer satisfaction and dissatisfaction [8] [9] [10] [23] [33]. Subjects are usually asked to describe incidents involving extremely effective or extremely ineffective (“critical”) behavior (e.g., in-flight close calls or particularly effective pilot handling of dangerous situations; customer service representatives’ service encounter behavior). Some adapted CIT studies do not insist on this “critical” requirement. Flanagan [24, p. 331] proposed that CIT “does not consist of a single rigid set of rules governing such data collection. Rather it should be thought of as a flexible set of principles which must be modified and adapted to meet the specific situation at hand.” In his view, if incidents are gathered in such a way that “the purpose ... of the act seems fairly clear” and there is “little doubt concerning its effects” [24] the extreme/atypical criterion may be relaxed. Another adaptation in many organizational psychology CIT studies is to incorporate subjects’ descriptions of emotions/psychological states along with behavioral details [13].

Flanagan used inductive methods to categorize behavior, using techniques similar to the discovery of grounded theory [27]. Other CIT researchers (e.g. [12] use both inductive (open) coding (letting data reveal themes to the researcher) and deductive coding (e.g., reporting evidence consistent with or different from previously-proposed behavioral categories). Although most often used in multi-site studies, CIT has been used in single case studies and cross-case comparison studies [16]. Thus, over time CIT has evolved in terms of research purposes and techniques used.

A recent ten-year review [31] of papers in the eight journals comprising the so-called IS Senior Scholars Basket (EJIS, ISJ, ISR, JAIS, JIT, JMIS, JSIS, MISQ) identified just two papers that used CIT in a manner fully faithful to Flanagan’s call for elicitation and analysis of behaviorally-grounded, unambiguous descriptions of critical individual behavior, leading clearly to very positive or very negative outcomes) [45] [46]; eleven papers used a partial/adapted version of CIT.

Examples of adapted CIT include IS studies which elicited typical behaviors or outcomes; included incident fragments that did not tell a complete story (clear protagonist, plot, and conclusion); studies that did not reveal criteria used to select incidents for analysis; or papers that did not discuss incidents per se in their Findings (e.g., [15]). Though few recent IS studies fully utilized CIT, it is clear that CIT studies can yield valuable findings.

3. A Post-Hoc CIT Pilot Study: Method

CIT analysis can be deductive or inductive; for our pilot study we chose to apply both induction and deduction to incidents extracted from two prior case studies. For the deductive analysis, we analyzed incidents in light of an existing theory on handoff information quality. In order to explain this theory, we note that Glaser and Strauss (1999) distinguished between “substantive” theory, which addresses a specific phenomenon in the real world, and “formal” theory, which addresses multiple phenomena with seemingly different surface features but an underlying common thread. For example, one substantive theory could address cancer patients’ experiences, while another considers how recently incarcerated prisoners adapt to prison life. Linking these seemingly disparate phenomena is a formal theory of social isolation.

In health care, one substantive patient safety theory states that adverse drug events result from violation of one or more of Five Rights [18] [19] – right patient, drug, dose, time and route (e.g., by mouth versus intravenously). A related substantive theory focuses on clinical handoffs [6] [10] [29] [35] [44]: when people or computers pass incorrect information (wrong patient, drug and so on) patient safety is jeopardized [10] [17]. Conversely, an effective handoff can detect prior errors or process flaws before they cause patient harm [2] [29]. Distractions during handoffs may impair clini-
cians’ ability to attend to key information or to remember to perform important tasks [41]. Poor physician handwriting can lead to propagation of incorrect information during handoffs; many previous studies report that computerized provider order entry (CPOE) reduces this problem. However, some studies report that CPOE does not always reduce adverse events [3] [4] [5] [14] [40]. A formal theory of handoff information quality aims to resolve such discrepancies by offering propositions about how handoffs specifically impact information validity, accuracy, completeness and timeliness – whether in health care or other handoff situations (such as in interlinked financial systems or collaborative work with offshore partners) [29].

The purpose of our pilot study was to evaluate post-hoc CIT’s potential as another research method for the IS researcher’s toolkit -- not to reach conclusions about health IT and patient safety. We used post-hoc CIT to analyze data gathered in semi-structured interviews in prior studies. While we thus did not elicit CIs (interview segments clearly describing behavior and outcomes) we did select, extract, classify and analyze CIs. We briefly describe the two prior case studies next.

The CH study examined medication processes on a community hospital unit [17]. Interviewees discussed their efforts to improve patient safety and provided details about medication administration processes and technologies. This study concluded that poor handoffs led to medication errors by passing incomplete, inaccurate, untimely or invalid information (thus proposing handoff information quality theory). The RX study examined how specific aspects of a new system (RX) and other resources affected clinical collaboration in three emergency departments [28] [30]. Interviews in the RX study explored institutional, technical, and organizational assets and capabilities in use, and substitutive, complementary, and non-complementary effects.

In both prior studies some interviewees took narrative “side trips” from the main line of inquiry, some of which yielded critical incident reports, defined for the pilot study as an interview segment that addressed a medication administration episode in narrative form, with specific characters, clearly described behavior of one or more characters, an unfolding sequence of events, and a resolution. This is consistent with Flanagan’s rule [24, p. 327] that a CI report should be sufficiently clear that “the purpose or intent of the act seems fairly clear to the observer and where its consequences are sufficiently definite to leave little doubt concerning its effects.” To identify CIs we independently reviewed the transcripts from 20 interviews conducted for Cases CH and RX, using the selection criteria described above. We compared our choices to verify that all interview fragments meeting the CI criteria were identified. We discussed whether to include preambles (deciding yes, when there is a clear connection between preamble and CI; four CI preambles were thus retained). Six candidate CI’s were excluded from the data set because they did not fully satisfy the inclusion criteria (did not point to specific characters, behavior, events, or resolution). The final set consisted of five CI descriptions from CH and four from RX. The extracted incidents are presented in Table 1.

### 4. Analysis of Findings

Our aim was to investigate post-hoc CIT for deductive and inductive analysis in IS research. The nine critical incidents comprising our pilot study data set is a small number compared with what would be needed for a full CIT study, yet these few CIs provided numerous intriguing findings, suggesting that post-hoc CIT is a valuable method. As is typical of CIT research, each CI yielded multiple evidentiary fragments. Several rounds of deductive coding were conducted. One round yielded evidence from Case CH that corroborated most of the Five Rights:

- **Patient:** CH5 (old versus young Mr. Smith)
- **Drug:** CH3 (“incorrect medication”)
- **Dose:** (evidence in several incidents)
- **Time:** CH2: shouldn’t be 9Am
- **Route:** (no evidence in incidents data).

Violations of four of five Rights (patient, drug, dose, time) are revealed in a sample of just five CH critical incidents. Thus, our pilot study findings suggest that CIT can be an efficient research method for revealing relevant behavioral observations. We further observe that while both case studies aimed to understand patient safety issues related to medication administration, the CH case was set on a post-operative floor in a hospital, and the initial case study sought to learn how medication was actually ordered and administered versus how it was supposed to be ordered and administered (official policies and procedures). RX was set in three emergency departments which were testing a new system (RX), whose purpose was to provide hard-to-obtain information about a patient’s medication history in circumstances when a patient was unconscious or otherwise incapacitated. That case study sought to examine clinicians’ attitudes toward, and behavior with, the new RX system. None of the four extracted RX case CIs deals with the Five Rights. Possibly interviewees in that study were focused more on the new RX system than on specific treatment episodes, or possibly the lack of issues related to the Five Rights was simply a random finding due to the very small sample of just
We also did several rounds of inductive open coding, consistent with Flanagan’s preferred CIT analysis method and with the discovery of grounded theory [27]. Our purpose in the inductive rounds was to identify interesting findings that would be worthy of further study. These inductive rounds spotted incidents that point to issues related to unexpected IS uses; and patient care experiences. We describe these findings next.

4.1 Unexpected System Uses or Outcomes

In Rx2 a nurse discusses what was expected of the Rx system and what actually proved beneficial. This is consistent with prior research that finds that IS can confer unanticipated benefits. Yet, little is known about the mechanisms through which unanticipated benefits are discovered – an important question for IS research.

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In CH4 a nurse forces 50 pills into the gagging elderly patient. Perhaps thinking it is not unusual for an elderly patient to choke, this novice nurse appears to have conscientiously done what she thought the system instructed her to do, despite the procedural difficulty (similar to the CH2 nurse who incorrectly felt that a system message to give a dose at 9 am took precedence over a doctor’s order that it be done once a day). These incidents point to opportunities to investigate conscientious human errors. CH4 also provides a particularly vivid description of two experienced nurses puzzling through how to deal with an inept novice while abiding by a “no blame, no shame” policy. Further investigation of other emotionally-charged critical incidents involving IS use (e.g., those involving close calls or fatalities) may yield useful and deeper insights into how employees interact with systems during crises.

The discovery of grounded theory is a process in which the researcher listens to subjects’ own voices in the qualitative data, with special attention to the data that point in directions other than those described by existing theories [27]. Our pilot study demonstrates that inductive post-hoc CI analysis can be quite useful as a starting point to spot potentially fruitful new branches of inquiry. Some new branches will bear useful fruit; others might not.

5. Limitations and Conclusions

The evidence from this pilot study suggests that post-hoc CIT analysis offers strong potential as a research method for productive qualitative data reuse. Per Gogan et al. [31] our post-hoc technique would be classified as partial (or adapted) CIT, since we did not elicit incident reports but we did use CIT to select and analyze CI reports and we did adhere to Flanagan’s guidelines regarding narrative clarity. Two investigators identified incidents using clear criteria, independently coded the data, and achieved consensus on the pilot findings. There are several limitations to acknowledge. We analyzed just nine critical incident reports, culled from 20 interviews that were initially conducted for different purposes. One definitely cannot claim theoretical saturation from a CIT set this small; to build or extend theory using deductive analysis we would need to draw CIs from a much larger data set.

However, some findings in (for example) the Habit Theory deductive round of coding point to opportunities to design new studies to extend theory (such as by investigating how system-embedded habits interact with human habits; user ambivalence about habit, and habit’s relationship to peoples’ awareness of a system’s fitness for use in particular circumstances). So, even with a small sample, benefits can be achieved through revelatory examples in critical incidents gathered via post-hoc CIT. If our primary aim was inductive exploration, a larger and richer set of incidents would be desirable, yet observations from the pilot-test inductive rounds already point to interesting opportunities to design studies to explore (for example) conscientious system-related errors or publicity-seeking and system use. Our pilot study aimed to demonstrate how to reanalyze data using CIT and to discover whether such analysis is useful. For these purposes, our sample was sufficient.

Considered from the standpoint of confidence in the study findings, our deductive analysis revealed a limitation of post-hoc CIT: the researcher cannot know in advance whether a given data set will have a sufficiently high number of critical incidents to support deductive analysis (for case Rx, we were not able to confidently report whether lack of support for patient safety theory was due to the small sample size or to some other factor). The researcher who relies on deduction must be prepared to abandon a post-hoc CIT study or identify one or more additional sources of data if the incident selection process does not yield a sufficient number of CIs for the intended study purpose.

Induction is less constrained by sample size, particularly when a researcher’s purpose is to discover grounded theory. Recalling Piaget, whose seminal work was based on observing a single child [39], a single intriguing finding in a CIT study (whether traditional or post hoc CIT) can point to possibilities worthy of further study and thus is a worthwhile outcome. Our pilot study revealed interesting findings about the emotional context of health IT; the heretofore unexplored phenomenon of clinicians primed to consider a hospital’s publicity/marketing efforts; the heuristic reasoning underlying physicians’ decisions to use or not use a system; and other interesting topics worthy of further study. If a CIT data set is small (as in this pilot study) the researcher is obliged to point this out as a limitation. If a data set is larger (many incidents) or richer (detailed incident descriptions), the researcher may be able to develop the necessary evidence-based arguments to propose grounded theory.

It is also important to evaluate post hoc data reuse separately from CIT. Through reuse, qualitative researchers can embrace the multi-theoretic exploration and theory-building opportunities their (or others’) data offer. Proponents of grounded theory advise researchers to listen carefully to their informants. One way to “listen” is to revisit your own data again and again; another is to invite other researchers to listen to your subjects and offer new interpretations of the data. Sociologists report that data reuse gives researchers cost-effective access to valuable data [20], [21]. IS researchers can also make good use of data from their own and others’ studies. The pilot study reported here demonstrates that deductive analysis of CIT data can reveal findings that corroborate, extend or challenge
existing theories, and that inductive analysis can reveal intriguing findings that suggest avenues for further study, which might eventually yield testable and useful new theories.

Sociologists have developed repositories of anonymized qualitative data collected in prior studies [20], [21] – such as Qualidata in the UK (now part of the UK Data Service; see UKdataservice.ac.uk), and the Henry A. Murray Research Archive at Harvard University (www.murray.harvard.edu). The IS community could launch similar initiatives. Data collected in prior qualitative studies could be used in post-hoc CIT studies, technology history studies, cross-case studies, and studies using other methods. If IS scholars were to come forward with their data sets (appropriately anonymized), and store these in a central repository for use by other scholars, a valuable trove of material could be put to use in training doctoral students or to help IS researchers who lack access to research sites.

Numerous researchers in marketing, human resources management, organizational behavior and other fields see CIT as a highly effective way to safely study behavior. The pilot study reported here, and CIT studies published thus far in the IS literature, point to CIT as a valuable method for post-hoc data reuse in IS research. Here we briefly discuss two possible ways to use post-hoc CIT in health IS research.

Similar to some discourse studies [25] one path would treat news accounts as data. For example, anecdotes describing extremely successful or unsuccessful patient care episodes are frequently reported in news media stories (e.g., surgeons implanting “smart” devices that allow amputees to control the movements of prosthetic hands, clinicians’ inability to reach an accurate diagnosis, major medical mistakes such as amputating the wrong limb or administering a fatal overdose). A post-hoc CIT study might gather such news accounts, involving extremely successful or unsuccessful patient care episodes when health IS was implicated, and from those descriptions select critical incidents (applying incident selection criteria similar to those employed in our pilot study) to analyze whether and how behavior by people in particular roles in successful incidents differs from behavior in unsuccessful IT-enabled care episodes. A preferred path is to conduct first-person critical incident interviews with the parties involved in episodes such as these (full/native CIT), and an even more powerful method is to directly observe and video record surgeons or other clinicians at work. Few IS researchers are permitted to conduct studies based on the “gold standard” of direct behavioral observation; most CIT studies in this domain rely on first- or second-person retrospective accounts. New studies can analyze data reused from those studies.

CIT is a valuable research method for identifying necessary IS-related skills for particular job roles. For example, as urology shifts from traditional surgical techniques to use of robotic tools for minimally invasive surgery, it has been suggested that medical students who played video games as youngsters might have stronger skills for robotic surgery than those who did not [43]. A study in the human-computer interaction (HCI) discipline might videotape medical students using robotic tools in surgery simulation exercises. A post-hoc CIT study, reusing data from one or more prior HCI studies, could zero in on those instances when subjects’ displayed particularly effective behaviors (e.g., making an incision that spares an important nerve) or particularly ineffective behaviors (e.g., removing too little or too much of simulated cancerous tissue). The results of a post-hoc CIT study, by focusing on the “critical” behaviors, might strengthen or extend the findings from the original HCI study.

One can also conduct a post hoc CIT study to analyze data that were previously collected in one or more full/native CIT studies, in order to apply a new theoretical perspective to the incident analysis. CIT’s power derives from capturing detailed information about specific individual behavior in specific “critical” (particularly successful or particularly unsuccessful) incidents. While it is evident that a traditional critical incident study fully consistent with Flanagan’s original criteria (native CIT) can yield quite valuable findings, our pilot study offers evidence pointing to the value of post-hoc CIT studies that reuse previously-collected qualitative data. Reuse of data collected for one purpose to inform a critical incidents analysis has not been previously suggested in the IS literature; this is our main contribution.

As discussed in the Introduction, many IS researchers have called for increased methodological pluralism, since no research method is perfect and every method has limitations. The exploratory pilot study presented here suggests that post-hoc CIT is a fruitful (and, to our knowledge, heretofore unutilized) method for investigating the complex interplay of people and information systems. We have offered suggestions for future research using post-hoc CIT.

At this stage, we cannot make strong claims as to the relative efficiency or strength of post-hoc CIT versus other methods, except for the obvious argument that data reuse gives a researcher additional “bang for the buck.” If one accepts that methodological diversity can improve IS research, then CIT – whether post-hoc or in its native form – is one promising and underutilized method to consider for future studies. We invite further discussion of this promising research method, along with discussion of other methods which can help to corroborate, extend, challenge, or propose IS theory.
6. References


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## CH1 Physician Hospitalist: My First Week as an Intern

During my first week as an intern I ordered 10 times the right dose of digitalis. Fortunately, a very caring nurse called me up and gently said ‘I think you meant .1, not 1.’ So it’s important that you have checks and balances all the way.

## CH2 Physician, Geriatrics: Too Busy to Take Five Minutes

[re reporting adverse events in CH safety portal]. I should have put one in yesterday, but the pressure of work … I did report it to the nurse manager. … She went right to the nurse, because it was an error on her shift. … I know she talked to the nurse; … Vancomycin, which is potentially toxic to the kidneys, was … ordered every 24 hours and given at 4:30 in the afternoon in the emergency room. So it should have been given at 4:30 in the afternoon the next day, but the pharmacy sent up the [order] saying 9 AM, because that’s their once a day time.

A nurse recognized it shouldn’t have been 9AM, and crossed it off, but the nurse who was caring for the patient said, ‘No, that’s supposed to be given at 9AM.’ … and gave it. … No adverse effects from it, but … the nurse manager took it very seriously.

## CH3 Nurse: I Was Devastated

“ … I was devastated by what happened to the patient. The patient moved from intensive care to the floor. … The process was that medications transferred from the ICU to the floor, then pharmacy would pick up the medication [that] would not be continued on the floor and leave what would. There was an error in that process. Over a period of a few days a nurse administered an incorrect medication, with a subsequent patient death. I’ll never forget. …”

## CH4 Chief Nursing Officer: Nitro Pills!

This new nurse knew the patient was to get one dose of nitroglycerine, sublingual. … small white tablet, very small. You can fit probably 100 in this little tiny vial. … The nurse … gave the gentleman 50 nitro pills under his tongue. Now the patient, boy he’s gagging… What was she thinking? But you can’t say that … No shame and blame here, I’ve always got to be about learning, always about education. The guy, luckily, didn’t have any problems. His blood pressure dropped a little. … The poor little thing didn’t realize he could have crashed and gone into the ICU. … Now the next nurse goes in, to give [the patient] his nitro and he says, ‘I only get one? I got a whole bottle before.’ … Now I have to bring the [first] nurse back in. What were you thinking? ‘Well, it didn’t say on there that you only gave one. It just said nitro.’ … There was no logic in her thought process. He was choking on them, and he actually described it. … I can distinctly remember Jennifer running down the hall … she said, ‘you’re never going to believe what so-and-so did.’ … I had to … talk to the school of nursing about their training, because I’ve got to make sure I don’t have that event again.

## CH5 Pharmacist: Dose is Too High for this Patient

[medication administration software] doesn’t have a way of flagging and announcing to people that there’s two patients with similar names. Some systems are able to do that, but [the software] is unable to do that now. …. I’ve been trying to ask [the software vendor]. Here I have two patients of the same name, how do you tell the difference? … The pharmacist called and said ‘This dose is too high for this patient.’ Apparently the higher dose was not supposed to be for the older Mr. Smith; It was for the younger Mr. Smith; that was the only clue in this order.

### Table 1a. CH Case: Five Critical Incidents
Rx1 Physician, Emergency Medicine: A Fishy Story

My usage honestly is not as much as I'd like. I get busy, I'm getting pulled in a lot of directions on a shift, I'm swamped. I either don't think about it, or … Usually there has to be a compelling reason. … Drug-seeking [is] … one of the biggest things that makes somebody want to use it. Doctors are caught in a very interesting pinch these days. JCAHO added assessing pain as a vital sign: … to not assess the patient's pain, grade it, and monitor it over time is as bad as not getting their pulse or blood pressure or temperature. … You have to monitor the pain and quantify it. … I have to give patients better analgesia. … [Yet] in Florida they arrested a physician and charged him with … manslaughter when a patient OD'd. … The patient was shopping around to lots of docs and had amassed a good number of pain pills, and overdosed on them. … They actually charged [the doctor] criminally! … We're in the crossfire … I have to more aggressively treat pain and at the same time we're responsible for knowing if the patient is abusing these pain medications.

I [used [the Rx system] one time … He was from a different area and can't get in touch with his doctor. It had … the hallmarks of a fishy story. Right before the weekend, I can't get in touch with anybody and it's for a condition that has absolutely no objective way to verify it. But the patient seemed to be in earnest and if he didn't get pain medication, he was going to be in a lot of pain for a very long time. … His story was he had run out of these. He got the last prescription 3-1/2 weeks ago from this doctor at this time for this purpose with this many pills. … I used [Rx] and it showed exactly what he told me he'd gotten. It made me very comfortable giving him a generous prescription to get him through this gap until he could … see that other doctor.

Many people have looked at this from the point of view of catching somebody, but it can work out the opposite way. It gives you the confidence you need to aggressively treat somebody's pain, rather than deny it to somebody you think is gaming or abusing the system.

Rx2 Nurse: Remember to Use the New System

A lot of people don't remember [that the system is available]. I do. … I had … a patient that was not able to communicate with us. I knew his name, date of birth and all that other information. Why not use Rx? I can find out what he's on. … We were working in one of the resuscitation rooms. … It was almost like a classic scenario. Someone said ‘Geez, I wish I had a meds list on this guy.’ I said ‘Why don't I look at Rx.’ It was like a commercial for Rx or something! … I did the override for the permissions because it was a critical situation. I got the patient's full medical list. … I found out what meds he was on, when he got them prescribed. It really helped in his case. It … gave us a full synopsis of his medical history based on his medications. And …, I think, his primary care physician's name…. That's important because then I can call the primary care physician … and ask a whole bunch of questions about him. … It's not the primary function [of Rx], but it works.

Rx3 IT Staff: A New Zip Code

… [Patient] had just moved from her home in [town A] to a nursing facility in [town B] … They entered [town B] zip code, because you enter the address where the person is currently residing. This nurse went ‘Oh, wait a minute. You just moved there two weeks ago.’ She put in [the previous] zip code and lo and behold, I got a complete return.

Rx4 IT Staff: This Company Does not Offer a Drug Benefit

[Some companies self-insure for medication coverage. A patient might be covered by {Insurance A} but not for the drug benefit] … We were trying to find the perfect patient to do a PR piece on, a patient who came in and for whatever reason couldn't tell us their meds. A young computer geek – I can even tell you what room he was in -- he was all up for it, ready to have his picture taken, ready to sign, whatever I needed. … [searched on Rx], and because [the patient] worked for {Firm }, I got zero return.

The other thing was, he thought we were already doing this. A lot of patients think we are able to access their medication history.

Table 1b Case Rx: Four Critical Incidents

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