CE

Trauma Resuscitations and Patient Perceptions of Care and Comfort

Aaron J. Wright, MSN, RN, FNP-C

ABSTRACT

Patients subjected to common trauma resuscitation practices can have varied emotional responses to certain aspects of their initial evaluation and care. Thirty-four patients admitted to the hospital after blunt traumatic injury were randomly selected to complete a self-reported questionnaire regarding their comfort levels with certain aspects of their initial trauma care and resuscitation. Most patients reported higher levels of comfort with procedures generally expected by the lay public and lower levels of comfort with those procedures less well known or for which they were not prepared. Analysis of survey data showed a larger percentage of discomfort with the digital rectal examination than with other aspects of trauma care. Notably, data analysis also showed a significant percentage of patients who were reluctant to disclose receiving a digital rectal examination. Additional investigation into the validity and reproducibility of these trends is warranted; however, there is legitimate evidence that there is room to improve a patient's perception of comfort during a trauma resuscitation and initial workup through improved communication and procedure disclosure.

Key Words

Patient comfort, Rectal examination, Trauma resuscitation

Patients brought to a major university level 1 trauma center after blunt injury and subject to a standard trauma resuscitation procedure can have varied emotional perceptions to specific aspects of their care. A trauma provider's requirement to quickly and systematically identify life-threatening injuries is well known and has historically led to the development of specialized prehospital care and trauma centers.[1] The rapid and accurate decisions made through an adherence to Advanced Trauma Life Support guidelines is believed to improve patient survival.[2,3] However, it is possible that an adherence to these algorithmic guidelines could foster a rigid and impersonal approach to the care of the trauma patient that may result in patient's psychological distress. There are several aspects of standard prehospital and emergency department trauma care that may not be well known or anticipated by patients. This collision of current trauma practice and the unplanned nature of traumatic injuries may exacerbate patient discomfort. In this qualitative study, 34 patients (12 women and 22 men) were asked general comfort and satisfaction questions using a Likert questionnaire regarding their trauma care. In addition, patients were asked to rate their emotional response to 8 specific aspects of standard trauma care. Patients in this study assigned lower levels of comfort with some specific trauma practices which may not be well known to or understood by the general public.

RESEARCH QUESTIONNAIRE

The questionnaire employed in this study was a specifically developed survey, which contained 3 pages and 22 questions and was self-administered. Katherine Kolcaba's Comfort Theory provided the conceptual framework for the development of the tool (see the Appendix).[4] Fourteen of 22 questions answered were designed to elicit patients' general feelings of comfort, satisfaction, and relations with their health care providers as well as their overall care. The relevant categories of emotional and evaluative responses are known to occur with routine frequency in trauma patients.[5,6] The additional 8 questions probed practices and procedures specific to trauma patients that could create or exacerbate psychological distress. These areas were primarily identified through interviews with trauma nurses and resident trauma surgeons in a busy level 1 trauma center. The potentially stress-provoking areas identified were the placement of a cervical immobilization collar, placement upon a spinal immobilization backboard, limited privacy, removal or cutting of clothing, placement of multiple intravenous (IV) catheters, digital rectal examination (DRE), urinary catheterization, and computed tomographic (CT) imaging. Additional support for the development of all of the questions in this survey was done through PubMed literature searches pertaining to emergency department patient satisfaction, trauma patient perceptions, and quality of care.[7-10] The final questionnaire was subsequently submitted for suitability and

Author Affiliation: UC Davis Medical Center, Sacramento, California.

Correspondence: Aaron J. Wright, MSN, RN, FNP-C, UC Davis Medical Center, 2315 Stockton Blvd, Trauma Program Rm 4212, Sacramento, CA 95817 (aaron.wright@ucdmc.ucdavis.edu).

DOI: 10.1097/JTN.0b013e31823a49eb

understandability to the university's Center for Nursing Research as well as its institutional review board.

POPULATION

Patients 18 years or older met the criteria for enrollment in the study if they had been brought to the hospital via air or ground ambulance after sustaining a blunt force mechanism of injury and if their initial hospital Glasgow Coma Scale (GCS) score was 13 or greater. The survey was administered randomly to consenting patients admitted to the surgical wards within 72 hours of their admission to the hospital. Patients with a known acquired or congenital cognitive delay were excluded from participation, whereas those individuals with potential transitory memory impairments from medication administration or drug and alcohol intoxication were included. Pregnant women were excluded from the study, as they do not uniformly undergo certain aspects of a standard trauma care in the university hospital's region, such as backboard immobilization, rectal examination, and CT imaging.

Thirty-nine patients during a 17-month period were asked to participate in the study. Thirty-four patients consented and provided survey responses. Twelve women aged 25 to 75 years (mean age = 47 years, median age = 43.5 years) and 22 men aged 19 to 74 years (mean age = 45.5 years, median age = 45 years) provided survey responses. The average initial hospital GCS score for both men and women was 14.8, with a range from 14 to 15. Six women (50%) had positive urine or serum toxicology screens, whereas 14 men (64%) tested had positive toxicology screens. The frequency and mechanism of injuries for patients enrolled in this study were 17 motor vehicle crashes (7 women and 10 men), 10 falls (3 women and 7 men), 2 assaults (1 woman and 1 man), 1 all-terrain vehicle crash (1 man), 1 automobile versus pedestrian (1 man), 1 crush injury (1 man), 1 found down (1 man), and 1 sports-related collision (1 woman).

SURVEY QUESTIONS

Questions 1 Through 4: Rating of Overall Care and Care by Specific Providers

Patient answers in this section were self-reported on a 5-point Likert scale. On this scale, a score of "1" represented a patient's perception of "poor" care, a score of "3" represented a perception of "average" care, and a score of "5" represented a perception of "excellent" care. Question 1 asked patients to rate their perception of overall care given during their first few hours of trauma care. Question 2 asked patients to rate their perception of the care provided by prehospital medical personnel. Questions 3 and 4 asked patients to rate their perceptions of physicians and nurses, respectively.

Questions 5 Through 14: General Rating of Specific Emotional States

Patient answers in this section were self-reported on a 5-point Likert scale. On this scale, a score of "1" denoted that a patient "never" felt the specified emotional state, a score of "3" represented that a patient "sometimes" felt this emotional state, and a score of "5" represented "constantly" felt the emotional state. Questions 5 through 14 queried whether patients felt "angry," "calm," "cared for," "out of control," "peaceful," "powerless," "safe," "scared," "thankful," and "violated."

Questions 15 Through 22: Direct Questions Regarding Specific Portions of Trauma Practices

Patients provided self-reported "yes" or "no" responses as to whether or not they underwent 8 specific procedures in standard trauma care in questions 15 through 22. Patients were asked whether they had been placed in a cervical collar, placed on a backboard, felt as if there were a lot of hospital personnel in the resuscitation room, had their clothing removed by someone other than themselves, had an IV catheter placed, underwent a DRE, had a urinary catheter inserted, and if they underwent CT imaging. If respondents indicated that they had undergone the specific procedure, they were then asked to indicate how emotionally comfortable they were with that practice with 3 choices. Through multiple-choice selection, patients could indicate that they were "completely" comfortable, "somewhat" comfortable, or "not at all" comfortable with the procedure.

Patient Comment Section

One-third of the last page of the survey included an open-ended section where patients would be allowed to provide any additional information about their emotional state during their initial trauma care.

RESULTS

In questions 1 through 4, respondents' perceptions of care as rated from "poor" to "excellent" on a 1- to 5-point Likert scale were obtained. Analysis showed that overall care scores ranged from 3 to 5, with a mean score of 4.5. Prehospital care scores ranged from 4 to 5, with a mean score of 4.7. Both physician and nursing care scored within a range of 2 to 5, with mean scores of 4.6 (Table 1).

In questions 5 through 14, respondents' perceptions of time spent in various emotional states as scored on a 1- to 5-point Likert scale were analyzed (Table 2). Scores of 1 were associated with "never," whereas scores of 5 were linked with "constantly." The 5 positive emotional states and the 5 negative emotional states studied all provided a range of scores from 1 to 5. A mean score of 4.2 was calculated for respondents feeling of being "cared for." The emotional states of feeling "safe" and

TABLE 1 Questions 1 Through 4: Patient Perceptions of Care From "Poor" to "Excellent" on a 1- to 5-Point Likert Scale (All Respondents)

Area of Care	Mean	Median	Range
Overall care	4.5	5	3-5
Prehospital care	4.7	5	4-5
Physician care	4.6	5	2-5
Nursing care	4.6	5	2-5

"thankful" both provided mean scores of 4. Patients' rating of time spent feeling "calm" gave an average score of 3.3. A mean score of 3.1 was generated for respondents' feelings of being "peaceful." The time spent in the emotional state of feeling "powerless" elicited a mean score of 2.9. A mean score of 2.7 was assigned to patients' perception of time feeling "scared." Respondents related their time feeling "out of control" with a mean score of 2.2 and their time feeling "angry" with an average score of 1.9. Respondents' mean score for time feeling "violated" was 1.6.

The final 8 questions relating to respondents' feelings of comfort with respect to specific aspects of trauma procedures and practices were analyzed and are outlined in Table 3. For each of the questions 15 through 22, patients' response to whether or not they underwent a specific trauma procedure was recorded in the first 2 columns. Their answer was cross-referenced with their medical record to determine accurate and inaccurate responses. Their answer accuracy was recorded in the third and fourth columns in Table 3. Response accuracy for the issue of "clothing removal" could not be recorded since it was not documented in the patients' medical records and was noted as "N/A." Similarly recorded as "N/A," response accuracy was deemed to be immeasurable for respondents' reporting of "a lot of staff" present for their resuscitation since individual responses to the number of staff is subjective and based on patient preference. The level of relative comfort with certain procedures is listed in the last 3 columns in Table 3. The associated percentages of respondents comfort answer choices listed are all rounded to the nearest whole percent age and are based on the denominator of respondents who correctly reported "yes" to each procedure.

The majority (69%) of respondents felt "somewhat comfortable" with cervical collar placement. Nineteen percent felt "completely comfortable," and 13% felt "not at all comfortable" with the procedure. Only 1 respondent incorrectly stated that he or she had not been placed in a cervical collar. Backboard immobilization was found to be "somewhat comfortable" by 54% of respondents, whereas an equal percentage (23%) of respondents reported "completely comfortable" or "not at all comfortable" with the practice. Sixty-six percent of patients felt "completely comfortable" with having a lot of staff present for their initial resuscitation. Twenty-one percent of respondents felt

TABLE 2 Questions 5 Through 14: Patient Perceptions of Time Spent in Various Emotional States From "Never" to "Constantly" on a 1- to 5-Point Likert Scale (All Respondents)

Emotional State	Mean	Median	Range
Angry	1.9	1	1-5
Calm	3.3	3	1-5
Cared for	4.2	4.5	1-5
Out of control	2.2	2	1-5
Peaceful	3.1	3	1-5
Powerless	2.9	3	1-5
Safe	4	4	1-5
Scared	2.7	2.5	1-5
Thankful	4	4.5	1-5
Violated	1.6	1	1-5

TABLE 3 Questions 15 Through 22: Specific Medical Procedures and Practices

Procedure	Report		Incorrect		Completely Comfortable	Somewhat Comfortable	Not At All Comfortable
	Yes	No	Yes	No			
Cervical collar	32 (10♀ 22♂)	1 (1♀)	0	1 (1♀)	6 (19%) (2♀ 4♂)	22 (69%) (7♀ 15♂)	4 (13%) (1♀ 3♂)
Backboard	26 (10♀ 16♂)	4 (1♀ 3♂)	0	0	6 (23%) (4♀ 2♂)	14 (54%) (5♀ 9♂)	6 (23%) (1♀ 5♂)
A lot of staff	32 (11♀ 21♂)	1 (1♀)	N/A	N/A	21 (66%) (8♀ 13♂)	9 (21%) (1♀ 8♂)	2 (1%) (2♀)
Clothing removal	32 (11♀ 21♂)	2 (1♀ 1♂)	N/A	N/A	13 (41%) (5♀ 8♂)	15 (47%) (5♀ 10♂)	4 (13%) (1♀ 3♂)
IV placement	33 (12♀ 21♂)	0	0	0	21 (64%) (7♀ 14♂)	11 (33%) (5♀ 6♂)	1 (3%) (1♂)
DRE	12 (4♀ 8♂)	20 (7♀ 13♂)	0	15 (4♀ 11♂)	1 (8%) (1♂)	5 (42%) (3♀ 2♂)	6 (50%) (1♀ 5♂)
Urinary catheter	18 (5♀ 13♂)	16 (7♀ 9♂)	0	1 (1♀)	8 (44%) (4♀ 4♂)	8 (44%) (1♀ 7♂)	2 (11%) (2♂)
CT scan	32 (11♀ 21♂)	1 (1♀)	0	1 (1♀)	23 (72%) (7♀ 16♂)	9 (28%) (4♀ 5♂)	0 (0%)

Abbreviations: CT, computed tomography; DRE, digital rectal examination; IV, intravenous; N/A, not able to validate in medical record and/or subjective.

"somewhat comfortable," and 1% of respondents were "not at all comfortable" with the number of personnel in the room. Forty-seven percent of respondents reported that they were "somewhat comfortable," and 41% reported being "completely comfortable" with having their clothing removed. Thirteen percent of respondents felt "not at all comfortable" with this practice. With respect to IV placement, 64% of respondents felt "completely comfortable," 33% felt "somewhat comfortable," and 3% felt "not at all comfortable" with this procedure. Half (50%) of the respondents who reported that they had undergone a DRE felt "not at all comfortable" with the procedure. Forty-two percent of patients felt "somewhat comfortable" with the DRE, whereas 8% felt "completely comfortable" with the examination. Fifteen of 20 respondents who reported that they had not undergone a DRE did so falsely. Equal percentages (44%) of respondents felt "completely comfortable" and "somewhat comfortable" with the practice of urinary catheterization. One respondent incorrectly stated that he or she had not undergone urinary catheterization. Eleven percent of respondents felt "not at all comfortable" with urinary catheterization. Comfort with CT imaging, generated the largest number of "completely comfortable" responses at 72%. Twenty-eight percent of patients felt "somewhat comfortable" with CT imaging, and no respondents felt "not at all comfortable" with the procedure. One respondent incorrectly stated that he or she had not undergone CT imaging.

Fourteen respondents (7 women and 7 men) left information in the comment section. Twelve of 14 respondents reported favorably to their care, with comments expressing appreciation and thanks for providing care in a time of duress. Two respondents expressed their displeasure with their care. One woman stated that she did not like having limited explanation and no preparation for certain parts of her care including rectal examination and clothing removal. She also noted that the care felt impersonal and rude. One man reported that he did not at all feel comfortable with any of the care and procedures he experienced during his admission.

DISCUSSION

There are multiple limitations to consider when interpreting the data and results of this study. The research questionnaire employed in this study is author designed and has never been used before. As such it has not been validated or been subjected to scientific scrutiny. Furthermore, the number of respondents is too small and the age range is too broad to make any accurate statistical inferences. In addition, the attempt to create a more homogeneous study population by investigating only those who sustained blunt force trauma may have had

an skewing effect on the nature of the respondents and their answers.

There are also other well-known pitfalls of interpreting data from self-reported surveys. Respondents cannot ask for clarification of questions and often choose the extremes of the response scales as a matter of convenience.[11,12] While self-reported data can be free of direct interviewer bias by offering respondents the chance to answer sensitive questions in private, an author's biased query can undermine the validity of the survey tool.[11,12] Any observations or trends found in the analysis of the survey data may also be biased by the self-selective nature of those respondents who are willing to participate in a survey.[11,12]

Despite the scientific limitations of the study, a few trends were identified. Several patients noted that they understood the medical necessity of certain aspects of their care and responded favorably to general satisfaction and emotional qualifiers. Most patients expressed feeling completely comfortable with aspects of their care they felt to be medically necessary such as a large amount of personnel present for their resuscitation, IV catheter placement, and the need for CT imaging. However, many felt less comfortable with several procedures also common to trauma resuscitations. Patients felt mixed or lower levels of comfort with the practices of backboard immobilization and forced clothing removal. However, the most uncomfortable procedure for patients in this survey was the DRE. Furthermore, the relative accuracy or willingness to affirm whether they had undergone a DRE is markedly lower than respondent accuracy in all other areas.

There may be multiple etiologies to the low accuracy of DRE reporting in this study. The survey question may have been poorly written or presented in a manner difficult for the patient to understand. In addition, while initial GCS and toxicology screening appeared to have little to no effect on the remembrance of the other aspects of their care, it may be significant in this case because of the brevity of the DRE as compared with the length of time patients were exposed or subjected to the other procedures. Another postulate is that these answers mirror the phenomenon observed in patients' attitudes of shame and reluctance to disclose rectal examinations in the area of colorectal and prostate cancer screening.[13–15] Furthermore, adding to a patient's reluctance to affirm that the DRE had been performed is the notion that the examination can be considered a sex act and may generate mixed feelings with regard to sexual and gender identities for the patient.[16,17]

Given the general discomfort and other potential emotional reactions to the DRE, a reevaluation of its utility and usefulness in the trauma setting may be warranted. Notably, the DRE is routinely skipped in pediatrics because it can be painful, frightening, and confusing to the child.[18] The examination is also devalued in the examination of the incarcerated because of a higher probability of "bodypacking" with sharpened objects or weapons in the rectum, which could injure the examiner.[19] Several studies over the last decade have routinely shown that the DRE has little utility in the setting of trauma when other clinical indicators of spinal cord injury or gastrointestinal injury are present.[20-22] Furthermore, adding to the DRE's limitations is that most examiners have little training and experience in its performance and interpretation.[20,23,24] The rectal examination may not be viewed as having lasting harmful effects on the patients by medical providers; however, medicolegal issues of assault and battery have arisen when the trauma patient is not properly informed of the DRE's necessity or the patient has actively refused the examination.[25]

While patients in this survey have shown that they generally felt well cared for and appreciative of their care in a time of in extremis, there is room for improvement. Enhanced patient comfort may be achieved through an augmentation of the delivery method in which trauma care is rendered. As an alteration the methodical routine of the examination and resuscitation of a trauma patient can have mortal consequences, any change in trauma care should be closely scrutinized. Perhaps, patients can have greater comfort with some of the lesser-known procedures through a trauma provider's prospective or retrospective explanation of their need and utility. If the trauma care community continues to value its practices, an equal area of emphasis should be placed upon the need to disclose the necessities of these practices to the patient in a manner consistent with informed consent. A routine adjunct to standard trauma care should include a short patient debriefing session in which patients would be allowed to feel as if they are a partner in their care. In general, patients feel more satisfied and comfortable with their care if they are allowed to feel that they are actively involved in and aware of medical decisions.[26,27] In addition, brief and informative discussions with nurses and physicians that allow patients to provide the emotional details of their trauma can influence the perception of care.[5,8] A dedicated trauma provider must strike a balance between the rapid assessment of the critically injured patient, informed consent, and the requirement to disclose medical procedures to deliver optimum care.

CONCLUSIONS

The vast majority of respondents rated their general care highly. This was also true for the rating of care rendered by prehospital personnel, physicians, and nurses. Mean and median scoring in these first 4 queries showed that most patients felt that their care was nearly "excellent." Patients followed these assertions with favorable emotional responses to their care. Most rated their feelings of being "cared for," "safe," and "thankful" consistently

between "sometimes" and "always." In addition, patients quantified their time experiencing the contrasting emotional states of being "angry," feeling "out of control," or being "violated" with reliable scores between "never" and "sometimes." Respondents further scored their time experiencing feelings of being "calm," "peaceful," "powerless," or "scared" in the range of "sometimes."

With regard to queries about specific trauma care practices, patients showed a tendency to assign higher levels of comfort with well-known medical practices, such as being surrounded by multiple medical personnel, IV catheter placement, and CT imaging. In contrast, there were mixed or lower levels of comfort with those procedures that may not be as well known, perceived as restraining, or could infringe upon patient privacy such as cervical collar placement, backboard immobilization, clothing removal, and urinary catheterization. Most notably, the majority respondents who stated that they had a DRE felt "not at all" comfortable with the procedure. Although the sample size of the study was relatively low, there appeared to be little discrepancy between the majority of answers provided by either gender. Of unknown significance and certainty, a slight increase in the percentage of men versus women who felt less comfortable with the practices of backboard immobilization, DRE, and urinary catheterization was noted.

As a measure of validating the responses to the last set of questions, 6 of the final 8 survey questions were compared with each respondent's medical record to determine the accuracy of their response. No individual within this study falsely reported that he or she had undergone any of the previously listed typical trauma procedures. No individual falsely reported that he or she had not undergone backboard immobilization or IV catheter placement. The practices of cervical collar immobilization, urinary catheterization, and CT scan imaging generated 1 false-negative response per procedure by a female respondent with a positive serum ethanol screen. The practice of DRE was incorrectly reported as having not been done by 56% respondents who had undergone the examination. Two of 4 women who incorrectly responded and 7 of 11 men who incorrectly responded had positive toxicology screens for drugs, alcohol, or a combination of both.

REFERENCES

1. Mackersie R. History of trauma field triage development and the American College of Surgeons criteria. *Prehosp Emerg Care*. 2006;10(3):287-294.
2. American College of Surgeons. *ATLS Provider Manual*. 8th ed. Chicago, IL: American College of Surgeons; 2008.
3. Jayaraman S, Sethi D. Advanced trauma life support training for hospital staff. *Cochrane Database Sys Rev*. 2009;(2):CD004173. Doi: 10.1002/14651858.CD004173.pub3.
4. Kolcaba K. A theory of holistic comfort for nursing. *J Adv Nurs*. 1994;19(6):1178-1184.
5. O'Brien J, Fothergill-Bourbonnais F. The experience of trauma resuscitation in the emergency department: themes from seven patients. *J Emerg Nurs*. 2004;30(3):216-224.
6. Richins M. Measuring emotions in the consumption experience. *J Consum Res*. 1997;24:127-146.
7. Goldwag R, Berg A, Yuval D, Benbassat J. Predictors of patient dissatisfaction with emergency care. *Isr Med Assoc J*. 2002;4:603-606.
8. Hayes J, Tyler-Ball S. Perceptions of nurses' caring behaviors by trauma patients. *J Trauma Nurs*. 2007;14(4):187-190.
9. Wiman E, Wikblad K. Caring and uncaring encounters in nursing in an emergency department. *J Clin Nurs*. 2004;13:422-429.
10. Wiman E, Wikblad K, Idvall E. Trauma patients' encounters with the team in the emergency department—a qualitative study. *Int J Nurs Stud*. 2007;44:714-722.
11. Davies H. Bias in surveys. *Hosp Med*. 1999;60(12):898-900.
12. Evans S. Good surveys guide. *BMJ*. 1991;302:302-303.
13. Beeker C, Kraft J, Southwell B, Jorgensen C. Colorectal cancer screening in older men and women: qualitative research implications for intervention. *J Commun Health*. 2000;25(3):263-278.
14. Consedine N, Horton D, Ungar T, Joe A, Ramirez P, Borrell L. Fear, knowledge, and efficacy beliefs differentially predict the frequency of digital rectal examination versus prostate specific antigen screening in ethnically diverse samples of older men. *Am J Mens Health*. 2007;1:29-43.
15. Naccarato A, Reis L, Matheus W, Ferreira U, Denardi F. Barriers to prostate cancer screening: psychological aspects and descriptive variables---is there a correlation? *Aging Male*. 2011;14(1):66-71.
16. Ogumbo J. Rectal exam mistaken for sodomy, a patient's personal experience! *Afr Health Sci*. 2003;3(3):146.
17. Winterich J, Quandt S, Grzywacz J, et al. Masculinity and the body: how African-American white men experience cancer screening exams involving the rectum. *Am J Mens Health*. 2009;3(4):300-309.
18. Kristinsson G, Wall S, Crain E. The digital rectal examination in pediatric trauma: a pilot study. *J Emerg Med*. 2007;32(1):59-62.
19. Priar L, Martin T. Searching and disarming criminals. *J Crim Law Criminol*. 1954;45(4):481-485.
20. Esposito T, Ingraham A, Luchette F, et al. Reasons to omit the digital rectal exam in trauma patients: no fingers, no rectum, no useful additional information. *J Traum*. 2005;59(6):1314-1319.
21. Guldner G, Brzenski A. The sensitivity and specificity of the digital rectal examination for detecting spinal cord injury in adult patients with blunt trauma. *Am J Emerg Med*. 2006;24:113-117.
22. Porter J, Ursic C. Digital rectal examination for trauma: does every patient need one? *Am Surgeon*. 2001;67:438-441.
23. Lee M, Hodgson C, Wilderson L. Predictors of self-perceived competency in cancer screening examinations. *J Cancer Educ*. 2002;17(4):180-182.
24. Shlamovitz G, Mower W, Bergman J, et al. Poor test characteristics for the digital rectal examination in trauma patients. *Ann Emerg Med*. 2007;50(1):25-33.
25. Chan S. Forced rectal exam stirs ethical questions. *New York Times*. January 16, 2008. http://cityroom.blogs.nytimes.com/2008/01/16/forced-rectal-exam-stirsethics-questions/.
26. Donavan J, Blake D. Patient noncompliance: deviance or reasoned decision-making? *Soc Sci Med*. 1992;34:507-513.
27. O'Connor A, Drake E, Fiset V, Page J, Crutin D, Llewellyn-Thomas H. *Annotated Bibliography of Research on Shared Decision Making, 1966 to 1996: Patient Decision Support Interventions and Evaluation Measures*. Toronto, Ontario, Canada: National Cancer Institute of Canada; 1997.

APPENDIX Trauma Resuscitation and Patient Perception Study University of California, Davis Medical Center

PRINCIPAL INVESTIGATOR: AARON J. WRIGHT, MSN, RN, FNP-C

Thank you for participating in this study about your medical care experience. We appreciate your time.

PLEASE ANSWER SOME GENERAL QUESTIONS ABOUT YOUR RECENT TRAUMA CARE EXPERIENCE

Please circle the number that best represents your answer:

	Poor		Average		Excellent
1. How would you rate the overall care that you were given during the first few hours after your accident?	1	2	3	4	5
2. How would you rate the care you received from your paramedics, firemen, or emergency medical services?	1	2	3	4	5
3. How would you rate the care you received from your doctors when you first arrived at the hospital?	1	2	3	4	5
4. How would you rate the care you received from your nurses when you first arrived at the hospital?	1	2	3	4	5

PLEASE ANSWER THE FOLLOWING QUESTIONS ABOUT YOUR EMOTIONS DURING WHEN YOU FIRST ARRIVED AT THE HOSPITAL

Please circle the number that best represents your answer:

	Never		Sometimes		Constantly
5. I felt angry	1	2	3	4	5
6. I felt calm	1	2	3	4	5
7. I felt cared for	1	2	3	4	5
8. I felt out of control	1	2	3	4	5
9. I felt peaceful	1	2	3	4	5
10. I felt powerless	1	2	3	4	5
11. I felt safe	1	2	3	4	5
12. I felt scared	1	2	3	4	5
13. I felt thankful	1	2	3	4	5
14. I felt violated	1	2	3	4	5

PLEASE ANSWER THESE QUESTIONS ABOUT COMMON TREATMENTS AND PROCEDURES THAT TRAUMA PATIENTS UNDERGO

Please circle your answer:

15. Were you placed in a cervical collar or neck brace? This is the medical device used to prevent your neck from moving.

NO **YES** (if yes, please answer the follow-up question)

Emotionally, how comfortable were you with this procedure?

Not at all **Somewhat** **Completely**

16. Were you placed on a hard backboard? This is the large plastic or wooden board used to keep your back from moving.

NO **YES** (if yes, please answer the follow-up question)

Emotionally, how comfortable were you with this procedure?

Not at all **Somewhat** **Completely**

17. When you arrived at the hospital, did you feel like there were a lot of medical staff and hospital personnel in the room with their focus upon you?
NO **YES** (if yes, please answer the follow-up question)
Emotionally, how comfortable were you with this procedure?
Not at all **Somewhat** **Completely**
18. Were your clothes removed by someone other than yourself after your accident or injury?
NO **YES** (if yes, please answer the follow-up questvion)
Emotionally, how comfortable were you with this procedure?
Not at all **Somewhat** **Completely**
19. Did you have an IV placed or blood drawn?
NO **YES** (if yes, please answer the follow-up question)
Emotionally, how comfortable were you with this procedure?
Not at all **Somewhat** **Completely**
20. Did you have a digital rectal examination? This is the part of your physical examination where a doctor or nurse practitioner uses their finger to examine your butt or bottom.
NO **YES** (if yes, please answer the follow-up question)
Emotionally, how comfortable were you with this procedure?
Not at all **Somewhat** **Completely**
21. Did you have a Foley or urinary catheter placed? This is a procedure where a tube is passed into your bladder to collect your urine.
NO **YES** (if yes, please answer the follow-up question)
Emotionally, how comfortable were you with this procedure?
Not at all **Somewhat** **Completely**
22. Did you undergo a CT scan? A CT scanner is a type of x-ray machine where you are moved through a large ring to have pictures taken of your body.
NO **YES** (if yes, please answer the follow-up question)
Emotionally, how comfortable were you with this procedure?
Not at all **Somewhat** **Completely**
THANK YOU FOR PARTICIPATING IN THIS STUDY. THERE ARE NO MORE QUESTIONS. PLEASE FEEL FREE TO TELL US ABOUT YOUR EMOTIONAL EXPERIENCE WITH YOUR INITIAL TRAUMA CARE.