# Emergency Department Patients' Perception of Care: Do Doctors Understand Their Patients?

**MMed Emergency Medicine**
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# Declaration

I confirm that *Emergency Department Patients' Perception of Care: Do Doctors understand their Patients?* is entirely my own work.

I confirm that I hold the degree MBChB from the University of Kwa Zulu Natal.

This dissertation is being submitted for the degree of Master of Medicine (Emergency Medicine).

I confirm that I have not submitted this dissertation for any other degree, diploma or professional qualification.

Full name: .....

Signature: .....

Date: .....

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## Glossary

***Advanced Nurse Practitioner*** An Advanced Nurse Practitioner (ANP) is a registered nurse who has completed specific advanced nursing education (generally a master's degree or doctoral degree) and training in the diagnosis and management of common as well as a few complex medical conditions. Advanced Nurse Practitioners provide a broad range of health care services.

Advacned Nurse Practitioners treat both acute and chronic conditions through comprehensive history taking, physical exams, physical therapy, ordering tests and therapies for patients, within their scope of practice. ANPs can serve as a patient's "point of entry" health care provider, and see patients of all ages depending on their designated scope of practice.

***Demographics*** Demographics or demographic data refers to selected population characteristics as used in government, marketing or opinion research, or the demographic profiles used in such research. Commonly-used demographics include race, age, income, disabilities, mobility (in terms of travel time to work or number of vehicles available), educational attainment, home ownership, employment status, and even location. Distributions of values within a demographic variable, and across households, are both of interest, as well as trends over time. Demographics are frequently used in economic and marketing research.

***Family Medicine*** Family medicine is the primary care medical specialty which provides continuing, comprehensive health care for the individual and family. The scope of family medicine encompasses all ages, both sexes, each organ system, and every disease entity.

Family Medicine is not limited by age, sex, organ system or type of problem, be it biological, behavioral or social. A family physician's care is based on knowledge of the patient in the context of the family and the community, emphasizing disease prevention and health promotion.

***Fast Tracking System*** The Fast Track system allows patients with acute but non-life-threatening conditions to be treated more quickly and then released. This system is designed to improve the efficiency and decrease the waiting time in the ED when the greatest numbers of people seek emergency treatment.

***Likert scale*** A Likert scale is a psychometric scale commonly used in questionnaires, and is the most widely used scale in survey research. When responding to a Likert questionnaire item, respondents specify their level of agreement to a statement. The scale is named after its inventor, psychologist Rensis Likert.

***Minor Injury Unit*** A Minor Injuries Unit, in the United Kingdom is a department largely staffed by advanced nurse practitioners (ANPs) working autonomously who look after minor injuries such as lacerations and fractures, and have access to X-ray facilities. There is some consultant input in training and

supervision. No appointment is needed, and waiting times are often shorter than at Emergency departments without MIUs.

***Psychometrics*** is the field of study concerned with the theory and technique of educational and psychological measurement, which includes the measurement of knowledge, abilities, attitudes, and personality traits. The field is primarily concerned with the study of measurement instruments such as questionnaires and tests. It involves two major research tasks, namely: (i) the construction of instruments and procedures for measurement; and (ii) the development and refinement of theoretical approaches to measurement.

***Triage*** Triage is a process of prioritizing patients based on the severity of their condition. This rations patient treatment efficiently when resources are insufficient for all to be treated immediately. The term comes from the French verb trier, meaning to separate, sort, sift or select. The outcome may result in determining the order and priority of emergency treatment, the order and priority of emergency transport, or the transport destination for the patient, based upon the special needs of the patient or the balancing of patient distribution in a mass-casualty setting.

***Wilcoxon signed rank test*** This is a non-parametric statistical hypothesis test for the case of two related samples or repeated measurements on a single sample. It involves comparisons of differences between measurements.

**Abstract**

The aim of my study is to directly compare the patient's perceptions of care received in the emergency department to that of the attending physician's. The aim is to give us better insight into how the patient experiences their care with a view to improving the level of care offered. The study elucidates the emphasis a patient places on apsects of their care such as empathy, communication, waiting times, etc.

The study was conducted at GFJooste Emergency Department over a period of eight weeks. Patients voluntarily, and with full anonymity, filled in a short questionnaire. The attending physician did the same. Questionnaires were collected and data fed into a database, analyzed and the results interpreted as follows.

# Chapter 1: Introduction

## *Background*

The National Department of Health clearly states in its mission objectives that "to improve quality of care of all levels of the health system is priority". The Department also aims to "improve the overall efficiency of the health care delivery system". The key words are improvement, quality and efficiency. Furthermore, the strategic plan for 2007 to 2010 is to "improve quality of care". (Department of Health's Strategic Plan 2007)

To be effective, an understanding of the meaning of quality of care is essential. Undoubtedly, evidence based medical management is the core, but it encompasses far more. Quality patient care involves:

- Communication
- Identifying, understanding and anticipating the needs of patients, by being sensitive to cultural differences, being aware of time requirements, being attentive and developing the skill to read patients and their expectations
- Instilling trust and confidence by treating patients with respect and courtesy, making them feel welcome and comfortable, staying energised and projecting a positive attitude, listening and obtaining feedback, and sending clear, appropriate messages to the patient.

Doctors often forget that they are providing a service and overlook the above essential elements, which are integral to providing quality healthcare. How do we know when we are satisfying our patients' needs and their perception of good healthcare? The business world does this effectively by routinely conducting

customer satisfaction surveys. By doing this, the corporations identify areas which are lacking, especially in the service industry. Other business strategies are already used in successful Emergency Departments(ED). (Safavi, K 2006)

One of the major characteristics of service is intangible, hence the core value of services is not like a physical product, but the spiritual experience and perception of patients. The final aim and ideal effect of service provision is to have the patient perceive and be satisfied with the service. Such perception is both at psychological and behavioural levels. Patients are seeking healthcare delivery as well perceptive satisfaction when entering an ED. Since perceptive satisfaction is a vital service objective, one of the key service management objectives shall be meeting and satisfying the patient's perception.

Patient perception, no matter how difficult to be measured, can be improved via continuous practice. Constantly taking patient oriented surveys is the preconditon to improving their perception. To fully understand, effectively manage and then exceed their expectations is the ultimate goal. This research will be the first step to achieving that goal.

In 2005, a survey conducted of 40000 households showed that 65% of respondents identified that both care and compassion are more important than technical proficiency when receiving medical care. (Safavi, K 2006) Power and associates conducted a study in 2000 of 2350 patients. The results showed that "satisfaction with the hospital experience was driven (in order of importance) by dignity and respect, speed and efficiency, comfort, information, and communication and emotional support" (J.D. Power and associates 2000)

Are good outcomes really what patients think about when they seek a good care provider for themselves or their family? According to studies, NO: "healthcare

consumers determine levels of quality largely on attributes such as respect and compassion, not technical proficiency". (Bjorvell H, Stieg J 1991) Communication, empathy, time spent with the physician and empathy have all been proven to affect patient satisfaction more greatly than clinical skill alone.

Even one aspect improved upon can have a significant effect. Krishel and Baraff, in 1993, showed that "improved ED information has a significant effect on patients' perceptions of the quality of care and overall satisfaction" (Krishel S, Baraff LJ 1993)

To date, there have been numerous attempts at trying to identify factors that improved or worsened the patient's experience in the ED. There is no evidence that directly compares patients' perceptions to the attending physician's perception. Mailed surveys, telephonic interviews and on site surveys are the three methods of data collection. (Hopton JL, Howie JG, Porter AM 1993)

Sun BC, et al used a mailed double sided, single page survey. (Sun BC, Adams JG, & Burstin HR 2001) Their response rate was 22.9%. Thompson, Yarnold, Williams and Adams used telephonic interviews to a random sample of patients over a 12 month period. Their yield was 44 %. (Thompson 1996) Yarris et al (2006) set out to determine which is the best way to conduct a patient satisfaction survey: they compared an on-site survey method to a mailed survey. (Yarris 2006) Regarding the on site group, the response rate was 53% vs a response rate of 23.9% for the mailed surveys. They concluded that "by measuring patient satisfaction by self administered on-site surveys while in the ED yields a significantly higher response rate than measuring satisfaction using mailed surveys." (Yarris 2006)

The type of question asked also affects the results obtained. In 2004 and 2005, 16 focus groups in six US cities were assembled to determine what healthcare

consumers thought to be the most significant characteristics of quality care delivered in hospitals. The results showed that consumers preferred four qualities :

- Doctor communication skills
- responsiveness of hospital staff
- comfort and cleanliness of the hospital environment
- doctor and hospital staff communication skills. (Bursch 1993)

Press Ganey Associates identified a list of the leading questions from inpatient satisfaction surveys that have the highest correlation with the patient's hospital experience. Out of 48 questions the following ten correlated most highly with overall satisfaction. (Press Ganey 2009)

| Question | correlation |
|---|---|
| 1. How well staff worked together to care for you | .79 |
| 2. Overall cheerfulness of the hospital | .74 |
| 3. Response to concerns/complaints made during your stay | .68 |
| 4. Amount of attention paid to your personal and special needs | .65 |
| 5. Staff sensitivity to the inconvenience of hospitalization | .65 |
| 6. How well doctors kept you informed | .64 |
| 7. Staff's efforts to include you in decisions about your treatment | .64 |
| 8. Doctors attitude toward your requests | .64 |
| 9. Skill of doctors | .63 |
| 10. Friendliness of staff | .62 |



Table 1 : Factors most highly correlated with overall satisfaction (Press Ganey 2009)

It is very clear that the top driver of patient satisfaction and loyalty is the perception of how one is treated as opposed to clinical competency. The 3 most frequent areas of dissatisfaction pertained to waiting times, communication and attitude of staff.

Measurement of patient and doctor satisfaction is difficult. The Likert 5 point scale is the psychometric response scale most widely used in survey research and was most commonly encountered amongst reviewed research. (Earl 2005)

### *Purpose of the Study*

The aim of this research is to determine the perceptions of patients attending a public sector ED with regard to their care, and to compare these with the perceptions of their attending doctor.

### *Significance of the Study*

The ED is an important component of health care systems. It is the site where individuals receive care in emergency situations but also where primary care services are often provided when doctors' offices and health clinics are closed. EDs may also be the first contact point for those without family physicians. In South Africa, there has been increasing concern regarding the mounting pressures on EDs. Frequent media reports document increases in wait times, overcrowding and the resulting compromised quality of care in EDs.

# Chapter 2: Literature Review

Patient experiences in ED settings is an under researched area in South Africa. Much of the research that examines user attitudes towards ED care has been conducted in other international settings, mainly the United Kingdom and the USA. Further, the majority of research focuses on assessing patient satisfaction using quantitative methods and global measures of satisfaction. Despite the lack of focus on patient perceptions of and experiences in ED settings, the existing research is still important for identifying aspects of ED care that shape overall levels of patient satisfaction.

Research has identified three main determinants of patient satisfaction with ED care: physician–patient interaction; information/communication between the physician and patient; and waiting times (Trout, Magnusson, & Hedges 2000). From the studies so far, of these three, interpersonal dimensions of the physician–patient relationship, which include how compassionate or sensitive physicians are to patients ' needs as well as their 'bedside manner', have been demonstrated to be the most important determinant of patient satisfaction (Avis, Bond, & Arthur, 1995; Bursch, Beezy, & Shaw 1993; Cohen 2006; Hall & Press 1996). For example, Hall and Press, using data from a national random sample of emergency departments in the US found that patients who feel physicians take them seriously and provide clear information have an increased likelihood of satisfaction. Similarly, Thompson, Yarnold, Williams and Adams (1996), in a study of patient satisfaction with care received in a suburban hospital in the US found that patients who described their interactions with health care staff positively were more likely to be satisfied than those who did not. In general, this research has shown that when patients perceive a physician's interpersonal skills to be high, they are more satisfied with their overall care.

Research has also demonstrated that patients who feel adequately informed about care and treatment processes tend to be more satisfied with care than those who are not informed (Bjorvell & Stieg, 1991; Bursch et al., 1993; Cohen, 2006; Hall & Press, 1996; Krishel & Baraff, 1993; Rhee & Bird, 1996; Sun, Adams, & Burstin, 2001; Sun, Adams, Orav, Rucker, Brennan, Burstin, 2000; Thompson et al., 1996; Watson, Marshall, Fosbinder, 1999). For example, in their study of patient satisfaction at five urban, teaching hospital EDs in the US, Sun et al. (2001) showed that patients who felt they received poor explanations of causes of health problem and poor explanations of test results were associated with decreased levels of satisfaction.

Finally, perceived and actual waiting times have been shown to be a significant determinant of patient satisfaction (Bursch et al., 1993; Hall & Press, 1996; Hutchison, Ostbye, Barnsley, Stewart, Matthews, Campbell, 2003; Krishel & Baraff, 1993; McMillan, Younger, & DeWine, 1986; Spaite, Bartholomeaux, Guisto, Lindberg, Hull, Eyherabide, Lanyon, Criss, Valenzuela, Conroy 2002; Thompson et al., 1996; Watson et al., 1999). In general, research has shown that as waiting times (either actual or perceived) increase, patient satisfaction decreases. In their study of patient satisfaction, Maitra and Chikhani (1992) found a significant inverse correlation between satisfaction and waiting time to see the doctor and total wait time in the ED. Thompson et al. (1996) also showed that when patients perceive waiting times to be less then expected overall satisfaction increases. In a study conducted at a University Medical Centre in Arizona, Spaite et al. (2002) found that when waiting times were reduced, satisfaction improved significantly not just for waiting times but for other measures included in their analysis (i.e. staff were perceived as more kind and compassionate and improvements in the care received).

Beyond characteristics of the care received, individual attributes such as socio-demographic factors have also been shown to influence patient satisfaction. For example, research has shown that as age increases, satisfaction with health care increases (Cohen, 2006; Hansagi, Carlsson, & Brismar, 1992; Sun, Adams, & Burstin, 2001 and Sun et al., 2000). In addition, individuals from lower income groups tend to be more dissatisfied with ED care than individuals from higher income groups (Cohen, 2006). Few studies have shown a significant link between gender and satisfaction (Boudreaux et al., 2001; Cleary & McNeil, 1988; Cohen, 2006).

Much of the previous international research has found that most patients have high levels of satisfaction with ED care (Bjorvell & Stieg, 1991; Hansagi et al., 1992; Lewis & Woodside, 1992). However, a study conducted by Hutchison et al. (2003) examining differences in patient satisfaction among 433 patients using walk-in clinics, family practices and emergency departments in four urban locations in Ontario revealed higher levels of satisfaction among patients using family practices and walk-in clinics than those using emergency departments.

Morris, Head and Volkar showed that patient satisfaction with visits to the emergency department worldwide had increased overall for nearly five years leading up to 1989. This is a testament to the providers' focus on improving quality and meeting patient needs. (Morris, Head, Volkar 1989)

In the 2010 Emergency Department Pulse Report, Press Ganey analysed the evaluations of 1.5 million patients across 1893 hospitals. Despite the economic downturn, patient satisfaction also followed an upward trend. This is as a direct result of conducting surveys in the previous years and addressing the problems highlighted

by the patients. This is exactly what I hope to achieve. In the executive summary, they clearly state that the improvement was due to the following measures:

- Informing patients about delays
- Controlling pain and improved staff education regarding analgesia

They also highlight that the priorities suggest that treating patients as human beings is more important that the quality of the facilities and equipment in the ED.

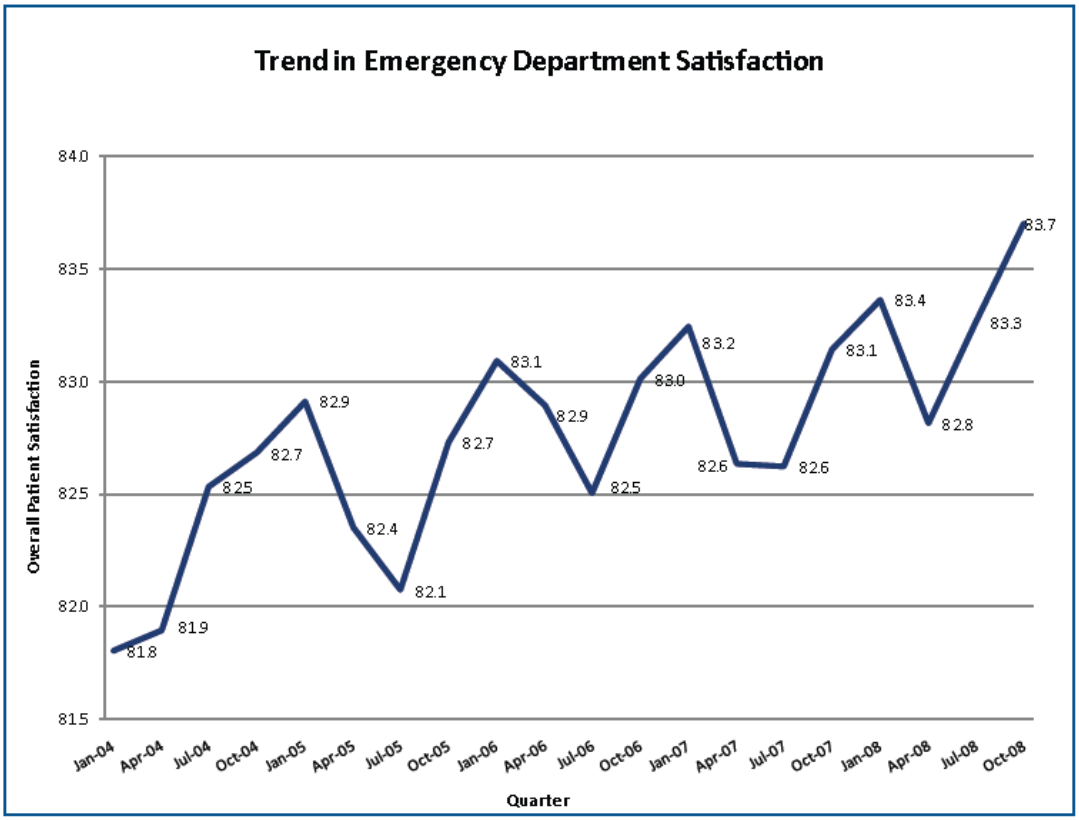



Figure1 : Trends in ED Satisfaction (ED Pulse Report, Press Ganey Associates, 2010)

From Figure 1, one also notes the dip in satisfaction in the spring months which is possibly a carry-over from the crowded ED's during the beginning of the year.

Of tremendous interest was the priority index published. Patients ranked the following in order of priority :

Priority 1 : Information about delays

Priority 2 : Pain control

Priority 3 : Staff empathy

Priority 4 : Overall care

Priority 5 : Nurses concern and communication



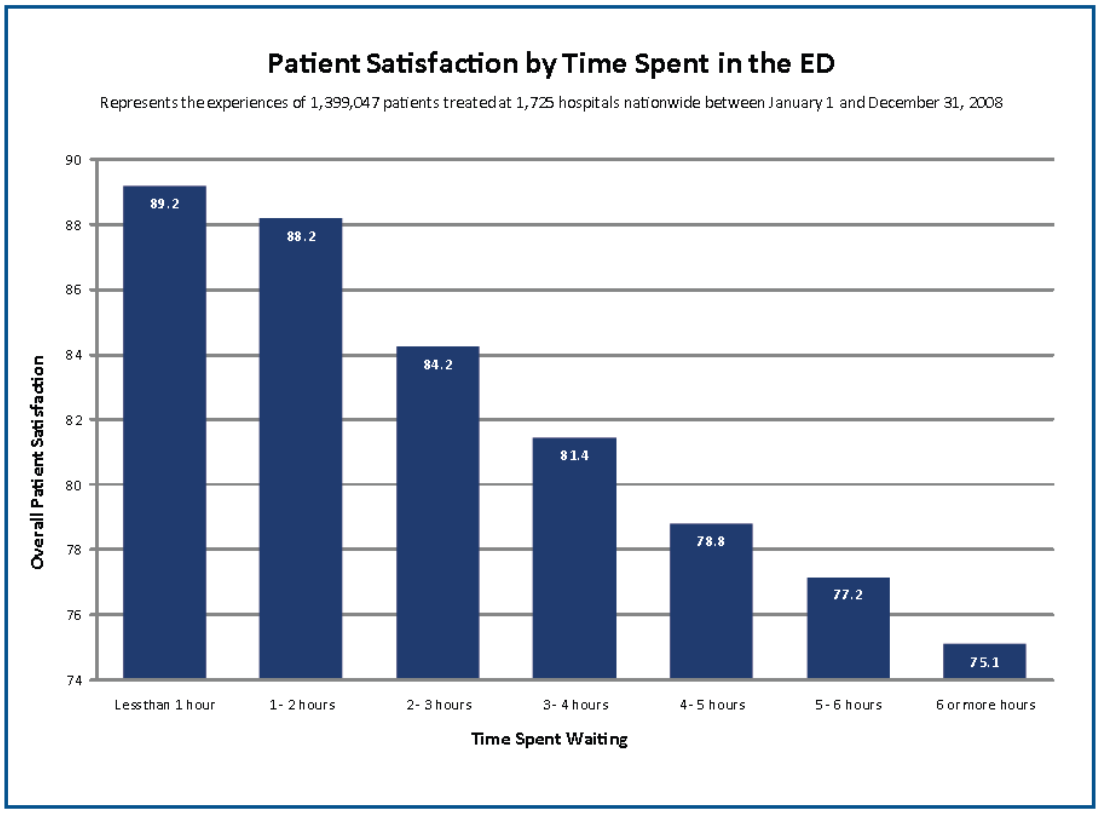



Figure 2: Patient Satisfaction by Time Spent in the ED (ED Pulse Report, Press Ganey Associates, 2010)

As shown in figure 2, patient satisfaction strongly correlates with the amount of time spent in the Emergency Department. My study will also, as shown later, show the same trend. They also noted correlation between the time of the day at which the patient arrives and the level of satisfaction. Information like this can help us ensure adequate staffing at times when satisfaction dips to address the issue.

Figure 3 illustrates the importance of communication. Even if the waiting time was long, good communication about delays kept patient satisfaction up.



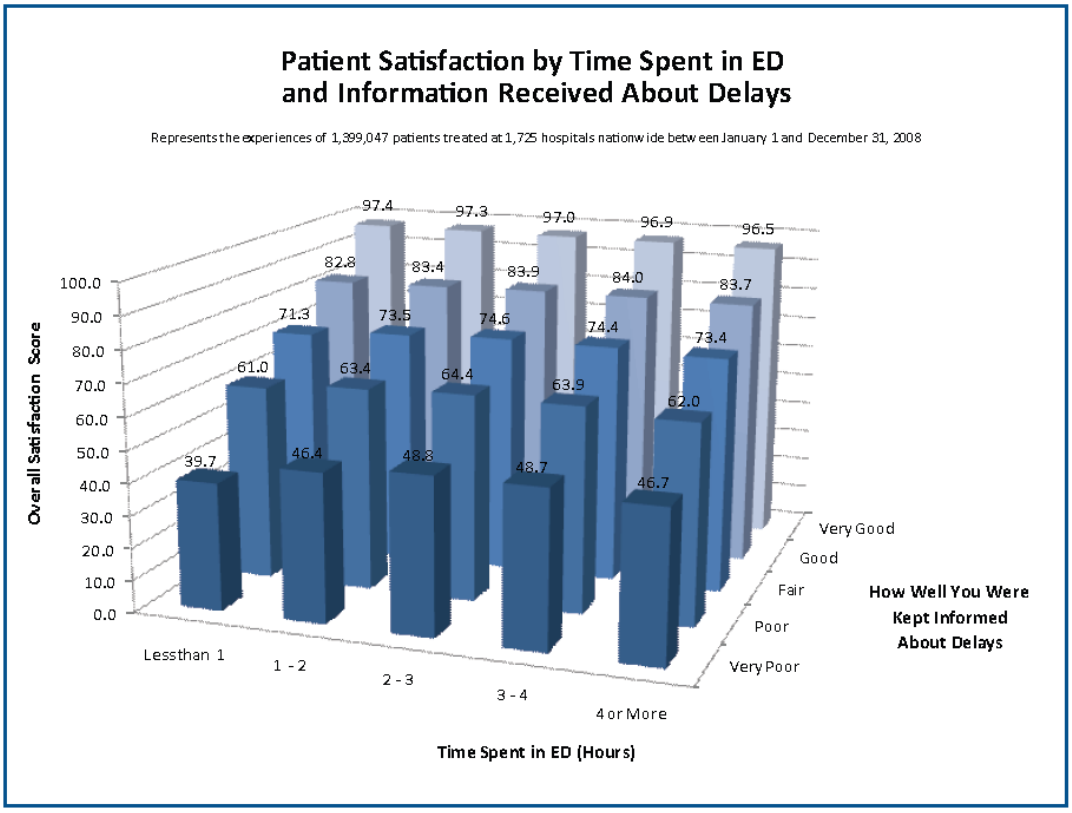



Figure 3 : Patient satisfaction relating to information received regarding delays (ED Pulse Report, Press Ganey Associates, 2010)

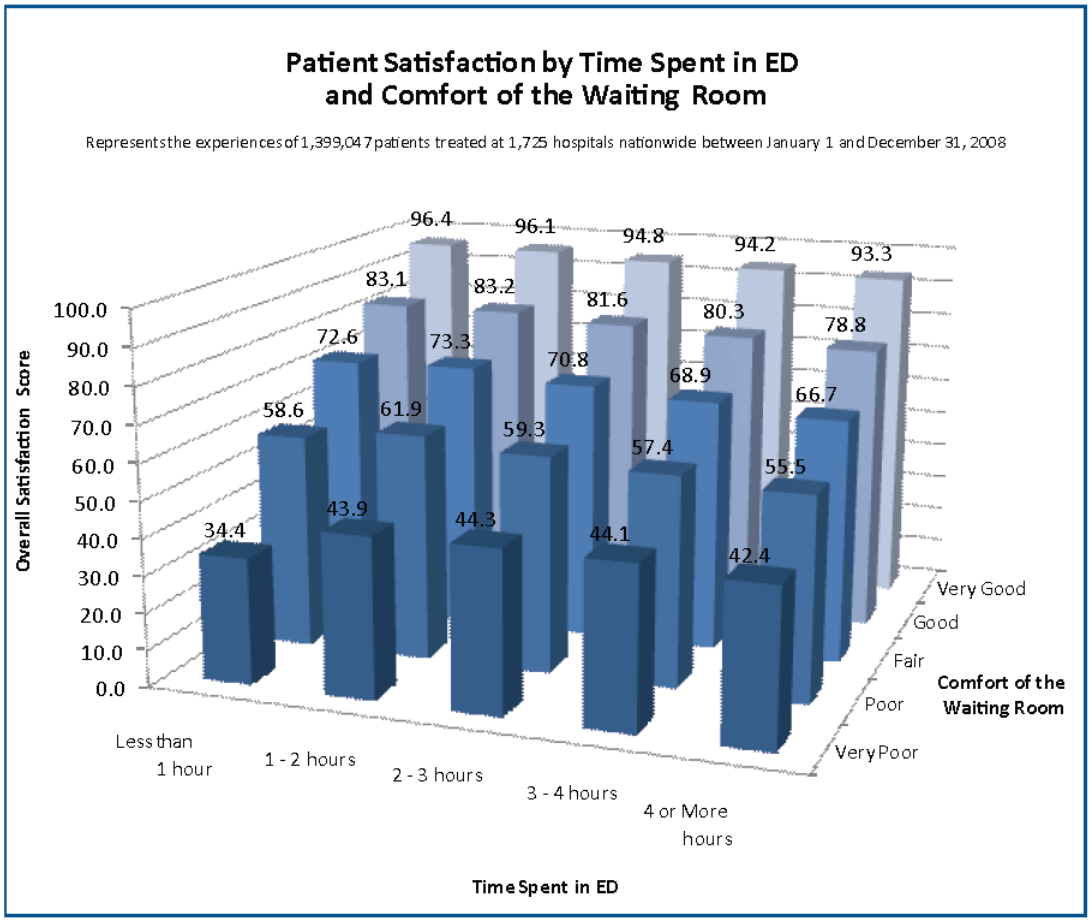



Figure 4 : Patient satisfaction relating to time spent in ED and the comfort of the waiting room (ED Pulse Report, Press Ganey Associates, 2010)

In addition to good communcation about delays, EDs that cannot reduce wait times can recover some patient satisfaction by improving the comfort of their waiting rooms, as shown in Figure 4.

### *Emergency Physician-Staff Collaboration*

Emergency Physician interaction is one of the most salient parts of the ED visit for patients. Engaging with the attending emergency physicians is crucial in all improvement efforts as their buy-in is essential to overall success in the ED. The ED physicians should also actively participate in many of the hospital committees and

boards. The hospital in turn should respond to many of the emergency physicians' needs. By working collaboratively and keeping the physicians in touch with the financial status of the hospital, the organization is able to effectively develop plans that meet the needs of the hospital and the physician. Each success builds the culture of teamwork and collaboration in the ED. (Watson, Marshall, Fosbinder 1999)

### *Collaboration with Other Departments*

Success in the ED also requires assistance from other departments. Large-scale initiatives must include the input of other departments that support the ED. It is also important to acknowledge the other departments input and efforts after successful changes are implemented. The ED manager at hospitals should always make a special effort to recognize ancillary departments that contribute to the ED's success.

### *Current services and their roles*

The original function of the ED was to provide medical care for those unable to afford a general practitioner (GP) (Fry 1960, Blackwell 1962). After the British NHS, health care became free for all British citizens, and the elimination of the use of emergency departments as substitutes for GPs was anticipated (Clarkson 1956). However, early research indicated this did not occur (Fry 1960, Lamont 1961). In response, The Platt Report (2002) recommended a name change from 'casualty' to 'emergency' (ED) to highlight the departments' work for major emergencies only. Nevertheless, ED attendances have continued to increase steadily since this time,with the majority of the ED workload continuing to be minor injuries/illnesses (Audit Commission 2006). I use this example as we are faced with the same dilemma in South Africa.

The Emergency Department continues to be misused by the public. Ongoing education is essential to ensure correct referrals and appropriate public use of their EDs which leads to less overcrowding, and dramatically improved patient level of satisfaction.

### *Summary from the literature review*

The continued success of EDs across the nation depends on building a culture that promotes high quality care and service excellence. The daily commitment to meeting this goal must include empowering staff members to identify ways in which they can meet the needs of individual patients. Improvement comes from the application of knowledge. It requires using data to drive decisions and always pursuing better results. For too long in South Afrirca we have focused solely on clinic and diagnostic skills and have neglected other factors that improve patient satisfaction. A lack of available data in the South African context and almost no research conducted in this field in South African Emergency Departments is testament to this neglected apect of the patient management. A new drive towards improvement on all fronts is much needed and with knowledge gleaned from this dissertation I hope to initiate such a drive.

# Chapter 3: Methodology

## *Location*

The study took place at the GFJooste Emergency Department. Written consent from the management staff at GF Jooste Hospital was obtained.

## *Inclusion Criteria*

All patients above the age of 18 attending the Emergency Department were considered for participation.

The study included both discharged and admitted patients. The patients completed the questionnaire upon discharge or prior to admission to a ward before leaving the Emergency Department.

Patients were required to be literate in the English language.



## *Exclusion Criteria*

Patients were excluded if :

- they refused to complete the study questionnaire
- they were under 18 years
- they were unable to read and write in English

### *Data collection*

An on-site method of data collection was used, as it appeared to be the most accurate and as the population being sampled at GF Jooste Hospital is unlikely to have easy access to a telephone or postal services.

Five questions pertaining to waiting time, communication, care, cleanliness and overall management were asked.

The time frame for data collection was initially forecast at 2 weeks. Due to a low response rate this had to be extended to a 2 month period. Data collection began in February and extended to March 2009. Data collection ceased once 100 matched patient and doctor questionnaires had been collected.

The patient questionnaires (Appendix II) were distinctly coloured and had guidelines printed on the reverse side. Patients were handed the forms upon arrival to the ED and were asked to deposit the completed questionnaires into a secured collection box upon leaving the ED.

The doctor's questionnaire (Appendix III) was also distinctly coloured. It had guidelines on the reverse side. After managing a patient, the attending doctor completed the questionnaire and then deposited the completed form into one of the clearly marked and secured collection boxes.

The third form was the data collection form (Appendix IV). This form was filled in by a research assistant for each patient upon discharge from the ED. This form served as a factual reference. It showed the background of the case in which patient and doctor perceptions were being directly compared (an example where this will be helpful is a patient with fracture neck of femur presents and receives analgesia, treatment and admission within 3 hours (a world class standard), yet the patient is still dissatisfied). This will give us better insight into what satisfies and dissatisfies the

patient. If the same patient did not receive treatment for 12 hrs, yet was still very satisfied, it might show us the power of the attending physician's empathy and communication in making the patient understand the delay and still be greatly satisfied with their management in the emergency department. Hence the pivotal role of the data collection form.

All responses from the doctor and patient questionnaires were tabulated. (Appendix V)

The green, yellow, orange and red colours refer to the triage category of the respective patient. Patients at the GFJooste Emergency Department are triaged according to the South African Triage Scale (Appendix VI).



### *Ethics*

Patient and doctor participation was voluntary and anonymous.

Once a questionnaire was completed it was immediately deposited by the participant into a secure collection box.

Only the research assistant had access to said box.

Data was treated confidentially and immediately secured by the research assistant. The data was entered into an Excel database which was password protected. Only the research assistant and myself had access to said database.

There was no requirement for signed patient consent.

Ethics approval was granted by the University of Cape Town.

# Chapter 4: Results and Findings

## *Illustration of results*

GF Jooste Hospital is a secondary level hospital in Manenberg and is the busiest hospital in Cape Town serving 1.1 million people. The patient mix illustrated in Table 1 and Figure 5 is not a refelection of all the patient attendances at GF Jooste's ED but rather an analysis of the the subset who were able to fill in the questionnaires. This explains the larger percentage of category green patients. Category Red patients would have been unable to fill in the questionnaires in the ED. In a future study one could allow for the questionnaire to be completed upon discharge, hence improving data capture and providing a more comprehensive analysis of patient attendances.



*Table 1: Patient Mix with respect to Triage Categories*

| Triage Category | Freq. | Percent |
|---|---|---|
| **Green** | 48 | 48 |
| **Orange** | 15 | 15 |
| **Yellow** | 37 | 37 |
| **Total** | **100** | **100** |

*Figure 5: Patient Mix with respect to Triage Categories*

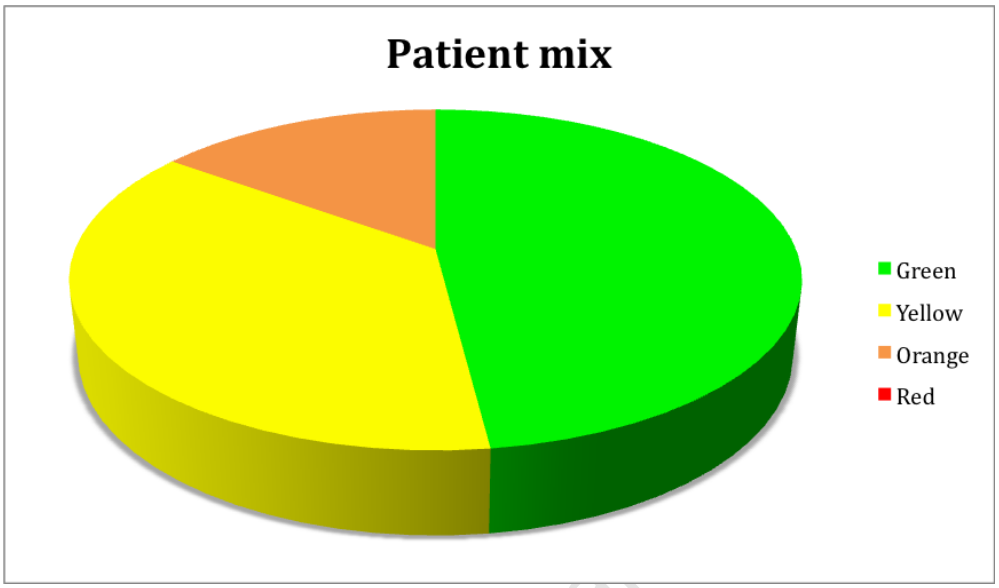





Figure 5 is a graphical illustration of the data provided in Table 1. This serves to highlight a limitation of the study where not all triage categories are truly reflected. A large percentage of Category Orange patients were also unable to fill in the questionnaires due to the severity of their presenting complaints.

Table 2 tabulates the patient and doctor responses to each question and directly compares the number of responses in each category. The table serves to compare the patient and doctor responses directly. It also clearly shows the majority of the responses fall into the Average, Good and Excellent Categories. This highlights the high “perceived” quality of care on both the doctor and patients’ parts.

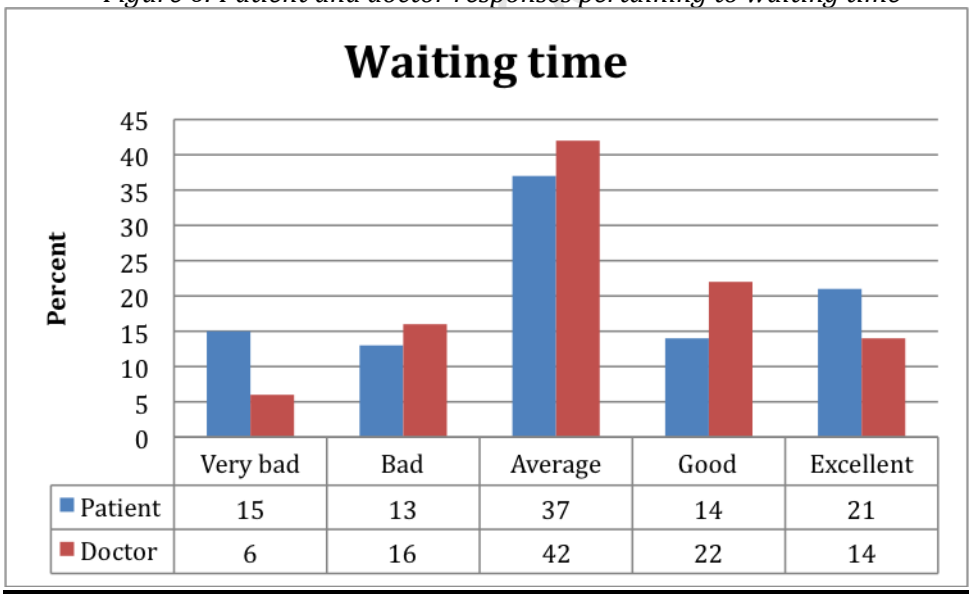
*Table 2: Patient and doctor responses pertaining to waiting time, communication, nursing care, cleanliness and overall management*

| **Waiting time** | **Patient (n=100)** | **Doctor (n=100)** |
|---|---|---|
| Very bad | 15 | 6 |
| Bad | 13 | 16 |
| Average | 37 | 42 |
| Good | 14 | 22 |
| Excellent | 21 | 14 |
| **Communication** | | |
| Very bad | - | - |
| Bad | 2 | 1 |
| Average | 2 | 7 |
| Good | 32 | 54 |
| Excellent | 64 | 38 |
| **Nursing care** | | |
| Very bad | 2 | - |
| Bad | - | 5 |
| Average | 21 | 12 |
| Good | 43 | 60 |
| Excellent | 34 | 23 |
| **Cleanliness** | | |
| Very bad | 6 | 2 |
| Bad | 2 | 11 |
| Average | 43 | 31 |
| Good | 27 | 54 |
| Excellent | 22 | 2 |
| **Overall management** | | |
| Very bad | 1 | - |
| Bad | 2 | - |
| Average | 13 | 13 |
| Good | 44 | 58 |
| Excellent | 40 | 29 |

Figures 6, 7, 8, 9 and 10 are graphical illustrations comparing the patient and doctor responses. Each figure illustrates the results from a specific question only. The graphs highlight 2 key points. Firstly, the doctor and patient reponses show great similarity illustrating the level of understanding between doctor and patient. Secondly, the satisfaction with the level of care becomes apparent as the vast majority of the results fall into average category and above.



*Figure 6: Patient and doctor responses pertaining to waiting time*




| | Very bad | Bad | Average | Good | Excellent |
|---|---|---|---|---|---|
| Patient | 15 | 13 | 37 | 14 | 21 |
| Doctor | 6 | 16 | 42 | 22 | 14 |

*Figure 7: Patient and doctor responses pertaining to Communication*

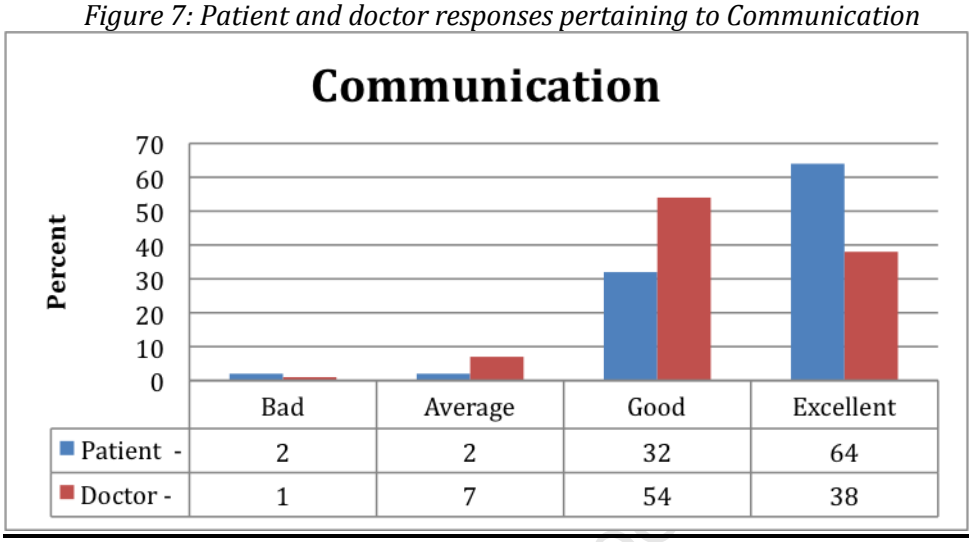



*Figure 8: Patient and doctor responses pertaining to nursing care*

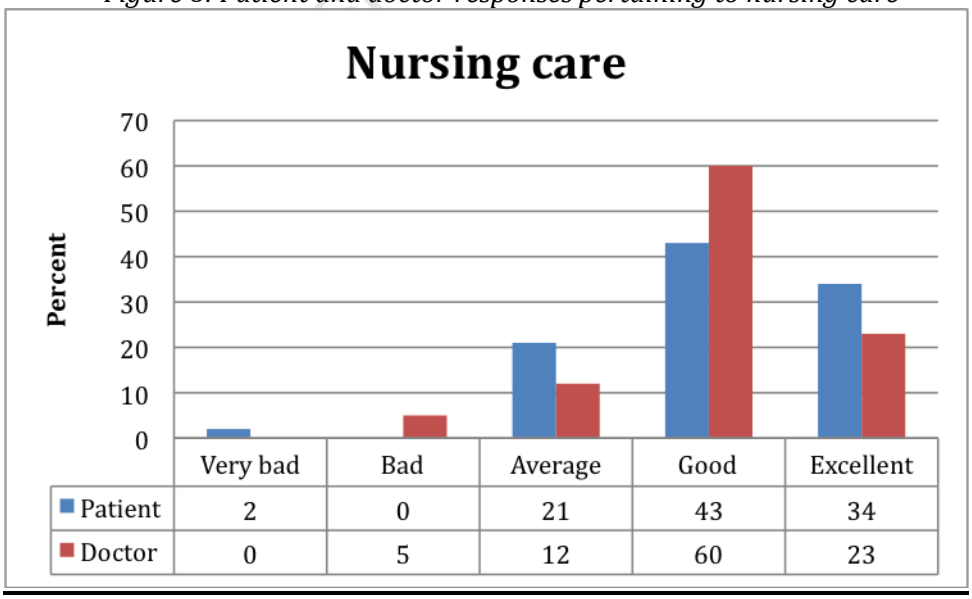
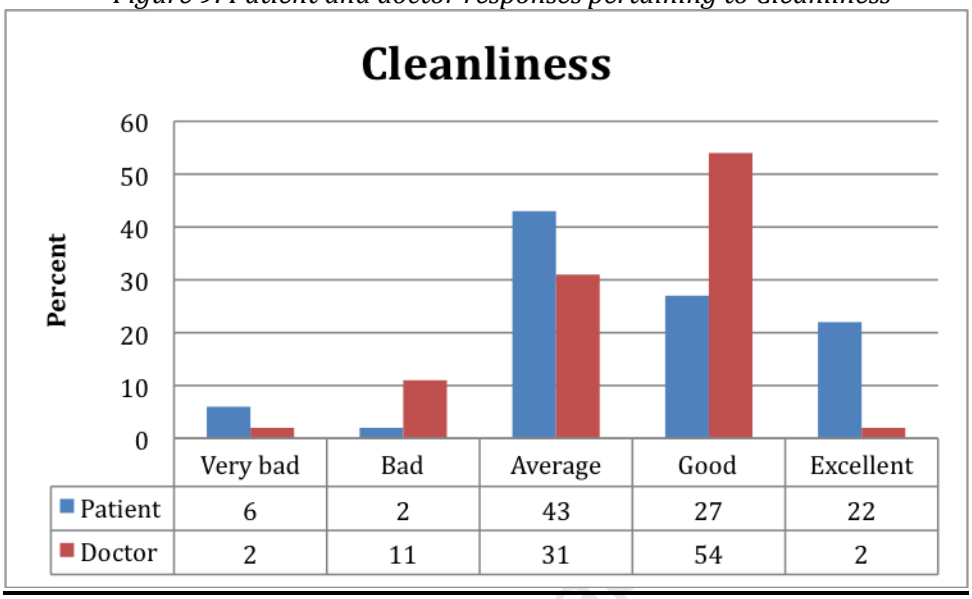


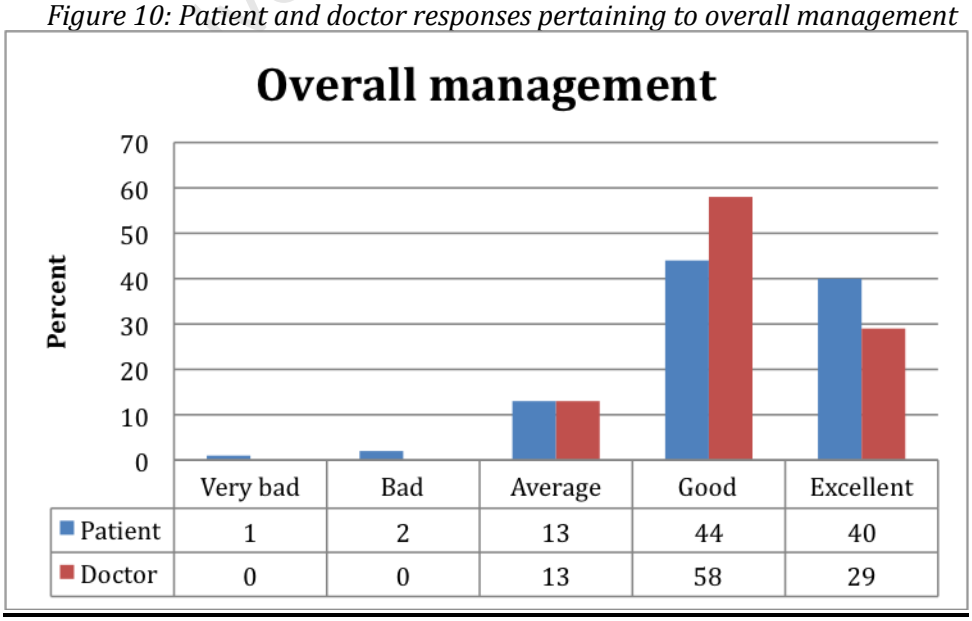
*Figure 9: Patient and doctor responses pertaining to Cleanliness*




| | Very bad | Bad | Average | Good | Excellent |
|---|---|---|---|---|---|
| Patient | 6 | 2 | 43 | 27 | 22 |
| Doctor | 2 | 11 | 31 | 54 | 2 |



*Figure 10: Patient and doctor responses pertaining to overall management*




| | Very bad | Bad | Average | Good | Excellent |
|---|---|---|---|---|---|
| Patient | 1 | 2 | 13 | 44 | 40 |
| Doctor | 0 | 0 | 13 | 58 | 29 |

*Table 3: Comparing patient and doctor likert scale scores for waiting time, communication, nursing care, cleanliness and overall management*

| | | Number | Mean score | Median score | Standard deviation | P-value* |
|---|---|---|---|---|---|---|
| Waiting time | Patient | 100 | 3.13 | 3 | 1.307747 | 0.4841 |
| | Doctor | 100 | 3.22 | 3 | 1.069126 | |
| Communication | Patient | 100 | 4.58 | 5 | 0.638496 | 0.0005 |
| | Doctor | 100 | 4.29 | 4 | 0.640312 | |
| Nursing care | Patient | 100 | 4.07 | 4 | 0.855818 | 0.7429 |
| | Doctor | 100 | 4.01 | 4 | 0.745288 | |
| Cleanliness | Patient | 100 | 3.57 | 3 | 1.046929 | 0.1724 |
| | Doctor | 100 | 3.43 | 4 | 0.794616 | |
| Over all management | Patient | 100 | 4.2 | 4 | 0.816497 | 0.3387 |
| | Doctor | 100 | 4.16 | 4 | 0.631177 | |

**P-value derived from Wilcoxon signed-rank test*



The results in table 3 shows no significant difference between the patient's and doctor's average likert scale scores for waiting time, nursing care, cleanliness and overall management, except for communication the average likert scale score is significantly higher among patients (P=0.0005). This confirms that the doctors partaking in this study at GFJooste ED do understand their patients.

In table 4, the link between waiting time and level of satisfaction is illustrated. An important finding was that the time waiting to be attended to by an Emergency doctor was far more important than the total time spent in the ED as a predictor of the level of satisfaction experience by the patient. The category green patient waited an average of 271 mins to be seen whereas the category orange patient waited an average of 43 mins to be seen. The category orange patient, however spent a total of 451 min vs the average total stay of 295 mins for the category green patient. The level of satisfaction was higher amongst category orange patients clearly illustrating that is the time waiting to be seen and no the total time spent in the ED that predicts the level of satisfaction experienced.

Another important point illustrated is that althought the category green patient waited 271 mins to be seen, they only spent a further 24 mins in the ED before being discharged. This is a strong argument for the introduction of “fast-tracking” category green patients. This is also an illustration that category green patients could easily have been treated at a primary care level. Further education and perhaps better information provided at the triage desk could help alleviate these long waiting times. The introduction of the advanced nurse practitioner (ANP) in the larger ED’s will also address this issue as has been succesfully done in most EDs in the United Kingdom and Ireland.



*Table 4: Correlation Between Waiting Time, Average time spent in the ED and Level Of Satisfaction amongst Category Green, Yellow and Orange Patients*

| Triage Category | Waiting Time in Minutes | Total Time in ED in minutes | Level of Satisfaction (Cumulative score out of 25 as per patient questionnaire) |
|---|---|---|---|
| Green | 271 | 295 | 18.6 |
| Yellow | 240 | 386 | 19.6 |
| Orange | 43 | 451 | 21.6 |

Table 5 lists the first of the freetext responses to the questions posed to the patients in their questionnaires introduction. Achieving a diagnosis ranked as the factor most pleasing in only 2 of the patients. Whereas empathy shown by the doctor featured in 20 respondents answers. Communication and courtsey were also frequently named amongst the factors that most satisfied our patients.

*Table 5: Factors which pleased patients*

| **Factors Pleasing Patients (In ascending order)** | **No. of patients who named this factor** |
|---|---|
| Receiving meals in the ED | 1 |
| Effective relief of symptoms | 2 |
| Achieving a diagnosis | 2 |
| Cleanliness of the waiting room | 3 |
| Short waiting time | 6 |
| Courtesy of the Staff | 10 |
| Effective communication by doctor | 16 |
| Empathy shown by the doctor | 20 |
| No factor named | 19 |
| Overall Service | 21 |

In Table 6, lack of comfort in the waiting room and long waiting times featured prominently as factors displeasing patients. This adds weight to aforementioned studies, illustrating that if we understand our patient needs, we will be far better prepared to service such needs and expectations.



*Table 6: Factors which displeased patients*

| **Factors Displeasing Patients (In ascending order)** | **No. of patients who named this factor** |
|---|---|
| Being seated next to a psychiatric patient | 1 |
| Unlcean toliet facilities | 5 |
| Attitude of the doctor | 6 |
| Lack of place and comfort in the waiting room | 13 |
| No factor named | 30 |
| Long waiting time | 45 |

*Table 7 : Factors limiting optimal care of the patients based on doctor opinion*

| **Factors Limiting Optimal Care of Patients According to the Doctors Surveyed** | **No. of doctors who named this factor** |
|---|---|
| Delays in obtaining lab results | 2 |
| Difficulty in referring patients to tertiary centres | 3 |
| Difficulty in booking investigations | 5 |
| Lack of available beds in the wards | 10 |
| Lack of consultant supervision | 11 |
| Lack of examination space | 14 |
| Inadequate staffing | 17 |
| Large patient load | 29 |
| No limiting factors | 9 |



Table 7 tabulates the doctors' freetext responses to the open question posed in the doctor questionnaire. Thus far we have concentrated primarily on patient perception and opinion. The large patient load was cited as the leading factor limiting optimal care in the respondents' opinion. A lack of examination space is also attributable to the large patient numbers. Inadequate staffing may be perceived and it would be intersting to obtain the perceptions from similar sized EDs with different staffing quotas. This would provide more insight into this aspect of doctor perception as well as regarding the other factors listed. With the advent of Emergency Medicine in South Africa and an ever increasing number of Emergency Physicians and Emergency Medicine Consultant posts being produce, the lack of consultant supervision will soon be addressed. Also of note, a lack of available bed space continues to hamper patient care in the ED in the opinion of the respondents. These factors highlight areas on which attention should be focused on, in order to improve patient care. Similar surveys could highlight factors needing improvement unique to a specific ED.

# Chapter 5: Discussion

## *Yes, the doctors at GF Jooste do understand their patients!*

The attending doctors participating in this study were very capable of accurately gauging their patient's experience. Furthermore, they even underestimated their interaction with their patients with regards to communication. Recent and significant changes within the ED at GFJooste as well as with regards to the whole Emergency Medical Services in the Western Cape have contributed to these results. Emergency Medicine continues to grow as a speciality, improving patient care across EDs. The South African Triage Score was developed and implemented. There have been infrastructure upgrades and new EDs opened across the Western Cape. All these postive changes have helped improve the cohesion between doctor and patient and improve the quality of care offered, as evidenced by the results. Understanding our patients' needs is only the first step on a long road towards improving their care.



## *The Emergence of Emergency Medicine in South Africa*

Improved supervision, the creation of more Emergency Physician posts, the implementation of evidence-based protocols, embarking on research projects within the Emergency Department, defining the role of the Emergency Department, improving the allied Emergency Medical Services are all the tremendous gains brought about the introduction of the speciality. As aforementioned it would have been of great interest to have conducted patient satisfaction surveys before and after

the advent of Emergency Medicine in South Africa. This may still be possible in the provinces that have lagged behind with the introduction of Emergency Physicians and the results will provide more impetus to the ever advancing role of the Emergency Physician. With all these benefits, the junior doctor working in the ED has more time and energy to truly interact with the patient, hence this improved understanding of our patients.

### *The Introduction and the Implementation of the South African Triage Score*

Until recently South Africa had no triage system in place for the Emergency Department. However from 2004, the Cape Triage Group began developing the Cape and now South African Triage Score. (Bruijns SR, Wallis LA, Burch CV 2006, 2008) The Cape Triage Group has also constantly attempted to validate and improve the Triage Score and has worked hard to implement the use of the score nationally. Much of the development has coincedentally taken place at GFJooste Hospital. Again, this has provided great benefit to the patients presenting to the GFJooste ED and later to all national EDs in the public sector. The patients have no doubt been appreciative of these changes. The improved triage system enhances the flow of the patient through the Emergency Department, allowing the attending physician to provide an enhanced service. This has undoubtedly been a key factor in the results shown in this study.

### *Infrastructure upgrades within the Emergency Department at GF Jooste*

Also of note is that in the last 4 years, that have been significant strides towards improving the comfort, security and privacy offered in the Emergency Department at GFJooste. I mention all these structural and administrative changes as they have without a doubt positively influenced patient perception in the ED. All the studies quoted earlier showed that empathy, comfort, waiting times are for more likely to affect perception than clinical skills alone. The morale of the attending physician would have also greatly responded to these positive changes. I believe these changes have contributed towards the positive results illustrated in my study. Once again, I reiterate that it would have been of great value to have done a survey prior to all these changes being implemented.



### *Our Patient Patients*

The patients served at GFJooste ED are from a disadvantaged socio-economic background. Studies in the US have shown that patients from a lower socio-economic background tend to be less satisfied than their more affluent counterparts (Cohen, 2006). This does not sem to be the case in South Africa. This would be an interesting aspect to explore in future research. The patients at GFJooste often travel for long distances and at tremendous relative cost to themselves to reach the ED. They are often grateful for the medical care received and still respect and revere the medical profession. This is especially true amongst the older patient demoraphic and remains true in the Western world (Cohen, 2006; Hansagi, et al., 1992; Sun et al., 2001 and Sun et al., 2000) Again this would make for an interesting study. The total

time spent in the ED averaged 295, 386 and 451 minutes for orange, yellow and green category patients respectively. The average time spent for all category patients across the USA in 2010 was 247 minutes. (Press Ganey and Associates, 2010) Our patients still reported fair levels of satisfaction despite their long time spent in the ED. It can be summized that the patients attending GFJooste are fairly forgiving. Perhaps they are cognisant of the effort being made into improving the ED over the last few years. The one noticeable difference in the usual routine within the ED at GFJooste and other EDs are the extensive handover rounds conducted 3 times daily in GFJooste. In the UK EDs for example, the handover round is not conducted at the patient bedside and lasts on average 10 minutes. At the GFJooste ED, during the handover round, each patient is re-examined and briefly re-interviewed. The patient may see this as additional interaction with their physician and hence will explain why the patients rated the communication offered by the doctors significantly higher than the doctors themselves. The ED doctors do not see this as time spent with the patient, but the patient may definitely do so. The academic rounds are also conducted at the patient bedside. In an international setting, the academic “round” is often conducted in meeting rooms away from the patient bedside. The ED physician physical presence during these handover and academic rounds at GFJooste ED undoubtedly contributes to patient satisfaction. This is evidenced by the fact that the doctors undersetimated the level of communication offered to their patients.

### *The Data Collection Form and the Inadequate Use thereof*

The third form for input was the data collection form (Appendix IV). This form was filled in by a research assistant for each patient upon discharge from the ED. This form served as a factual reference. It showed us the background of the case in which patient and doctor perceptions were being directly compared (an example where this will be helpful is a patient with fracture neck of femur presents and receives analgesia, treatment and admission within 3 hours (a world class standard), yet the patient is still dissatisfied). This form would have given us better insight into what satisfies and dissatisfies the patient. If the same patient did not receive treatment for 12 hrs, yet was still very satisfied, it might have shown us the power of the attending physician's empathy and communication in making the patient understand the delay and still be greatly satisfied with their management in the emergency department. Hence the proposed pivotal role of the data collection form. Unfortunately, this form was under-utilized in this data analysis as it would have introduced far too many variables. Perhaps the data gathered can be of use in a future study.



### *The link between waiting time and the level of satisfaction*

Table 4 shows the correlation between waiting time, time spent in the ED and the level of satisfaction amongst patients. It is obvious to see the dip in satisfaction as the time spent in the ED increased.

Patient satisfaction is an important dimension of good medical care. In addition to being a desirable outcome in its own right, patient satisfaction is also associated with

health status and with health-related behaviours such as compliance with medical regimens and appointment-keeping.

Most of the category green patients have local clinics and access to their regular family physicians; however they chose to attend a busy emergency department. These patients' frustration with not being able to see a doctor at their local clinic or their regular family physician might have resulted in lower levels of satisfaction with care received. They might have entered the ED with a negative perception of the health system due to restricted opening times at their local clinics, dissatisfaction with their local clinic doctor or GP and this may also have significanlty affected their level of satisfaction in the ED being surveyed. However, it is also possible that some walk-in patients are hard to please and were "doctor-shopping." The scores would then reflect, in part, this element of their personalities. Physician selection bias is also possible, given the differential participation rates across settings. The difference in patient satisfaction between category green patients on the one hand and perceived “true” emergency department patients on the other may be due in part to differential training of the doctors working in these settings.



### *Limitations of the Study*

Limited to adult patients who are literate in English. It was the initial intention to distribute patient questionnaires in Xhosa, Afrikaans and English. This however drastically increased the costs regarding printing and would have also led to a large number of unused questionnaires being discarded. It was therefore decided to limit the questionnaires to English.

The study was also limited to patients who were able to fill in the questionnaire at the point of collection in the ED. Hence Category Red patients were effectively excluded, as were the majority of Category Orange patients due to the severity of their presenting complaints. In future studies one could allow for completion of the questionnaires upon discharge from the ward, hence including more patients across all triage categories.

This was a single centre study only.

This study made use of convenience sampling rather than randomisation of participants.

There was no correlation to the spectrum of pathology which may skew the data and the patient responses.

The study was limited to a 2 month period. It was, however, not limited to any time period during the day and participants were recruited at any time. I mention this as evidence has shown (as previously discussed) that patient satisfaction does vary within the seasons of the year as well as the time of day. No such studies have been done in South Africa however, but it is a point worth considering.

# Chapter 6: Recommendations

## *Information regarding waiting times*

Transit time in the ED is made up of different episodes of waiting time. Many of our patients were not satisfied with the waiting time and this might have affected their perceptions of the quality of care. Waiting time is a key factor in patient satisfaction in EDs. An effective way to achieve satisfied patients is to manage perceptions and expectations of waiting time. Studies have shown that, if patients are being informed about the waiting time, they are more satisfied. Murray and Berwick (2003) found, in their work with quality improvements, that delays in care are the result of unplanned, irrational scheduling and resource allocation. It is a question of balancing supply and demand. Miró Ò, Sánchez M, Espinosa G, Coll-Vinent B, Bragulat E & Millá J (2003) studied patient flow and found that both external and internal factors can affect ED effectiveness and waiting times. It is necessary to study the whole care process in the ED to make the care more effective and of better quality.

### *The argument for fast tracking green patients*

Referring to Table 4 it is alarming to note that while the category green patients spent an average of 271 minutes waiting to be attended to, the attending doctor required only an average of 24 minutes to take the history, investigate, diagnose and treat the patient. This surely is a strong argument for instituting fast-tracking of patients. This can be accomplished in a number of ways, two of which have been successfully implemented worldwide. I refer to the introduction of Minor Injury Units within busy Emergency Departments, the introduction of Advanced Nurse Practitioners and the presence of Family Physicians within major EDs. All the above have been done with great success in other countries. Surely the time for such a change in South Africa is now.

The UK focused on modifying ED services in order to be able to treat lower category triage attenders. This was expected to be achievable by improving communication and working relationships between GPs and other hospital divisions and EDs, training more ED staff, and the availability of GPs within EDs to provide continual access to primary care. The difficulty in implementing the latter strategy, however, was recognized and the involvement of the nurse practitioner in the role has been implemented (Morris F, Head S & Holkar V 1989)

The role of the Minor Injury Unit (MIU) can fall within both themes due to its independent and in-house locations. Staffing and facilities for independent MIUs have links with local EDs, bridging community and emergency services, while those coexisting within EDs are providing 'minor' patient care away from the mainstream ED workload. Thus greater prominence has been placed on service alteration rather

than patient relocation, which is in contrast to the emphasis within the literature. Additionally, nurse education between general practice and ED nurses has been identified as beneficial in understanding opposite roles (Crouch R & Dale J 1994).

Overall, MIUs and nurse practitioners have been evaluated favourably (Beales J & Baker B 1995, Dolan B & Dale J 1997, Beales J 1997), with patients stating increased satisfaction and an increase in quality of service.

### *Level of comfort, security and cleanliness in the waiting room*

From our respondents some of the most frequent negative comments centred around the level of comfort and security in the waiting room. Cleanliness of the patient toilets also featured prominently. This serves to highlight the points raised earlier that often simple, seemingly trivial, measures can vastly improve patient satisfaction. Should we not listen to our patients simple requests?

When previous quality surveys where done, whether a patient spent one hour or four hours in the emergency department, those who rated the waiting room as “very poor” in comfort had dramatically lower overall satisfaction with their visit than those who rated the comfort of the waiting room as “very good.” Hospitals can analyze their patients’ comments to find ways to improve the comfort level. Simple things such as repairing the air conditioning or replacing the chairs may have a noticeable effect on the patients’ perception of the ED.

### *Decreasing the time that the patient spends in the ED*

As highlighted previously we do need to contiuously focus on this aspect. Tackling overcrowded EDs will improve both patient and doctor levels of satisfaction. And there are many ways in which we can do this. Public education is foremost, but this will take a concerted sustained effort which will yield results in the long term. In the interrim this study has provided clear evidence for the cases of possible fast-tracking, introduction of minor injury units and advanced nurse practiitoners in our larger EDs.



### *Improving our patients' stay in the ED*

Our patients have spoken and we should listen. They did not demand new EDs, nor did they ask for the latest medical equipment. Not a single complaint was made about medical competence. All they wanted was better information, cleaner toilets and a feeling of comfort and security while waiting for the many hours that they pateintly endure. Surely these are simple measures which they deserve. The issue of potential bias towards the patients that we perceive to be as inappropriate also needs to be addressed. The patient firmly believed that their problem warranted Emergency Care at the level that GFJooste provides. They should not be punished for this but rather educated regarding the different options available for future use. So how will patients know? Since we expect them to attend services 'appropriately', this is important.

Previously, patients in EDs attended due to uncertainty of the seriousness of their condition, or because they perceived it to be an emergency. Without everyone undergoing professional medical training this is unlikely to change. Therefore, are we now expecting patients automatically to be able to distinguish between an emergency and a minor injury? If patient perception doesn't change, remaining ED units may continue to have high percentages of patients, which (a) defeats the object of doctors and (b) has cost implications due to increased duplication of services. This latter point is also of concern when considering that the literature highlighted patients' lack of perception of community and GP facilities.

This raises the question: Will ED staff in this instance retain the negative attitudes previously formed on attenders with the associated implications for patient care? Furthermore increased attention to the basics such as providing early analgesia and improved triage also need to be continually addressed.



### *The way forward*

From the above it can be seen that certain measures have been implemented in other countries successfully. Similar steps need to be in South Africa. Another benefit of this study is that it is simple to perform and easily reproducible. It can be reproduced in other EDs in different localities to further understand patient needs, as patient requirements will differ in different socio-demographic localities. Similar surveys can also be used to monitor progress in EDs as we strive towards enhancing patient care.

# Chapter 7: Conclusions

The challenge faced by hospitals in providing emergency care are intense. Prolonged waiting times, under-resourced and overcrowded EDs are all immense obstacles. However patients are willing to wait for care as long as they are kept informed about the wait-time and that they are received by empathetic staff. This study and many others continue to suggest that how well patients are treated as human beings is more important than the quality of the facilities and equipment in the ED. This study has confirmed that despite the obstacles aforementioned, patient perception of their care remained satisfactory due to adequate communication and empathy on the part of the health care-provider.

In South Africa, there is a paucity of research looking at the qualitative aspect of patient care. More studies need to be done in this field to better understand our patients so that we may strive towards providing optimal care. Further measures such as conitnued patient and health care provider education, improved and continued implementation of the South African Triage Score, fast-tracking of Category Green patients, introduction of Advanced Nurse Practitioners and minor-injury units will all contribute to improving the level of Emergency Care offered in South Africa.

## References

Atkinson R., Atkinson R., Smith E. & Hilgard E. (2007) Introduction to Psychology. Harcourt Brace Jovanovitch, New York.

Attree M (2001) - A study of the criteria used by healthcare professionals managers and patients to represent and evaluate quality care.
J Nurs Manag. 2001 Mar;9(2):67-78

Attree M (2001) Patients' and relatives' experiences and perspectives of 'good' and 'not so good' quality care.
J Adv Nurs. 2001 Feb;33(4):456-66

Audit Commission (2006) By Accident or Design: Improving Emergency Care in Acute Hospitals. Audit Commission, London.

Avis M, Bond M & Arthur A (1995) Satisfying solutions? A review of some unresolved issues in the measurement of patient satisfaction.
J Adv Nurs. 1995 Aug;22(2):316-22

Bailey A, Hallam K & Hurst K (1987) Triage on trial.
Nursing Times. 1987 Nov 4-10;83(44):65-6

Beales J & Baker B (1995) Minor injuries unit: expanding the scope of emergency provision.

Accid Emerg Nurs. 1995 Apr;3(2):65-7

Beales J (1997) Innovation in emergency management: establishing a nurse practitioner-run minor injuries/ primary care unit.

Accid Emerg Nurs. 1997 Apr;5(2):71-5

Bellavia J, Brown D (1991) A misuse of resources.

Nursing Times. 1991 Oct 30-Nov 5;87(44):26-9

Berwick DM (2003) Improvement, trust, and the healthcare workforce.

Qual Saf Health Care. 2003 Dec;12(6):448-52.

Bjorvell H, Stieg J (1991) Patient's perception of healthcare received in an emergency department.

Ann Emerg Med. 1991 Jul;20(7):734-8.

Blackwell B (1962) Why patients come to a casualty department.

Lancet. 1962 Feb 17;1(7225):369-71

Blank FS, Mader TJ, Wolfe J, Keyes M, Kirschner R & Provost D (2001) Adequacy of pain assessment and pain relief and correlation of patient satisfaction in 68 ED fast-track patients.

J Emerg Nurs. 2001 Aug;27(4):327-34

Boudreaux ED & O'Hea EL (2004) Patient satisfaction in the emergency department: a review of the literature and implications for practice.
J Emerg Med. 2004 Jan;26(1):13-26

Boudreaux E, Friedman J, Chansky ME, & Baumann B (2004) Emergency department patient satisfaction: Examining the role of acuity.
Acad Emerg Med. 2004 Feb;11(2):162-8

Brebner JA, Ruddick-Bracken H, Norman JN & Page JG (1996) The nurse practitioner: management of minor trauma.
Accid Emerg Nurs. 1996 Jan;4(1):43-6

Bruijns SR, Wallis LA, Burch CV (2008) A prospective evaluation of the Cape Triage Score in the emergency department of an urban public hospital in South Africa
Emerg. Med J. 2008;25;398-402

Bursch B, Beezy J, Shaw R (1993) Emergency department satisfaction: What matters most?
Ann Emerg Med. 1993 Mar;22(3):586-91

Clarkson P (1956) Casualty departments in teaching hospitals
Lancet. 1956 Jul 7;271(6932):31-5

Cleary PD & McNeil BJ (1988), Patient satisfaction as an indicator of quality care

Inquiry. 1988 Spring;25(1):25-36

Cohen G (2006), Age and health status in a patient satisfaction survey.

Social and Science Medicine. 1996 Apr;42(7):1085-93

Crouch R & Dale J (1994) Identifying feelings engendered during triage assessment in the accident and emergency department: the use of visual analogue scales.

J Clin Nurs. 1994 Sep;3(5):289-97

Crouch R., Dale J., Haverty S. & Winsor S. (1996) Piloting an A&E and practice nurse educational exchange.

British J Nurs. 1996 Dec 12-1997 Jan 8;5(22):1387-90

Dale J & Dolan B (1996) Do patients use minor injury units appropriately?

J Public Health Med. 1996 Jun;18(2):152-6

Davies T. (1986) Accident department or general practice?

British Med J (Clinical Research Ed). 1986 Jan 25;292(6515):241-3

Davison AG, Hildrey AC & Floyer MA (1983) Use and misuse of an emergency department in the east end of London.

J Royal Society Med. 1983 Jan;76(1):37-40

Dolan B & Dale J (1997) Characteristics of self-referred patients attending minor injury units.
J Accid Emerg Med. 1997 Jul;14(4):212-4

Dolan B, Dale J & Morley V (1997) Nurse practitioners: the role in A&E and primary care.
Nurs Stand. 1997 Jan 15;11(17):33-8

Earl R. Babbie 2005. The Basics of Social Research: Wadsworth Publishing Company, 3rd Revised Edition. ISBN-10 1993: 0534630375

Fry L (1960) Casualties and casuals.
Lancet. 1960 Jan 16;1(7116):163-6

Gordon DB, Pellino TA, Miaskowski C, McNeill JA, Paice JA, Laferriere D & Bookbinder M (2002) A 10-year review of quality improvement monitoring in pain management: recommendations for standardized outcome measures.
Pain Manag Nurs. 2002 Dec;3(4):116-30

Graham J (2002) Adult patients' perceptions of pain management at triage: a small exploratory study.
Accid Emerg Nurs. 2002 Apr;10(2):78-86

Hall MF & Press I. (1996) Keys to patient satisfaction in the emergency department: Results of a multiple facility study

Hosp Health Serv Adm. 1996 Winter;41(4):515-32

Hansagi H., Carlsson B., & Brismar B. (1992), The urgency of care need and patient satisfaction at a hospital emergency department

Health Care Manage Rev. 1992 Spring;17(2):71-5

Hopton JL, Howie JG, Porter AM (1993) The need for another look at the patient in general practice satisfaction surveys.

Fam Pract. 1993 Mar;10(1):82-7

Hostutler JJ, Taft SH & Snyder C (1999) Patient needs in the emergency department. Docotrs' and patients' perceptions.

J Nurs Adm. 1999 Jan;29(1):43-50

Huggins KN, Gandy WM & Kohut CD (1993) Emergency department patients' perception of nurse caring behaviours.

Heart Lung. 1993 Jul-Aug;22(4):356-64

Hutchison B, Østbye T, Barnsley J, Stewart M, Mathews M, Campbell MK, Vayda E, Harris SB, Torrance-Rynard V, Tyrrell C (2003), Patient satisfaction and quality of care in walk in clinics, family practices and emergency departments: The Ontario walk in clinic study.

Canadian Medical Association Journal 2003 Apr 15;168(8):977-83

Idvall E, Rooke L, Hamrin E (1997) Quality Indicators in clinical nursing : a review of the literature.

J Adv Nurs. 1997 Jan;25(1):6-17

Jankowski RF & Mandalia S (1993) Comparison of attendance and emergency admission patterns at accident and emergency departments in and out of London.

BMJ. 1993 May 8;306(6887):1241-3.

J. D. Power and Associates (2000) The distinguished hospital program

http://businesscenter.jdpower.com/Default.aspx?f=/jdpacontent/corpcomm/Services/content/certification_healthcare.htm

Krishel S, Baraff LJ (1993) Effect of emergency department information on patient satisfaction.

Ann Emerg Med. 1993 Mar;22(3):568-72

Lamont D (1961) The casualty dilemma.

Lancet. 1961 Nov 25;2(7213):1190-3

Larrabee JH & Bolden LV (2001) Defining patient-perceived quality of nursing care.

J Nurs Care Qual. 2001 Oct;16(1):34-60

Lewis B.R. & Bradbury Y. (1982) The role of the nursing profession in hospital accident and emergency departments.

J Adv Nurs. 1982 May;7(3):211-21

Lewis KE & Woodside RE (1992) Patient satisfaction with care in the emergency department.

J Adv Nurs. 1992 Aug;17(8):959-64

Mabrook AF & Dale B (1998) Can nurse practitioners offer a quality service? An evaluation of a year's work of a nurse led minor injury unit.

J Accid Emerg Med. 1998 Jul;15(4):266-8

Maitra A & Chikhani C (1992), Patient satisfaction in an urban emergency department.

Br J Clin Pract. 1992 Autumn;46(3):182-4

McMillan JR, Younger MS, & DeWine LC (1986), Satisfaction with hospital emergency department as a function of patient triage

Health Care Manage Rev. 1986 Summer;11(3):21-7

Miró Ò, Sánchez M, Espinosa G, Coll-Vinent B, Bragulat E & Millá J (2003) Analysis of patient flow in the emergency department and the effect of an extensive reorganisation.

Emerg Med J. 2003 Mar;20(2):143-8

Morris F, Head S & Holkar V (1989) The nurse practitioner: help in clarifying clinical and educational activities in emergency departments.

Health Trends. 1989 Dec;21(4):124-6

Murray M & Berwick DM (2003) Advanced access: reducing waiting and delays in the primary care.

Journal of the American Medical Association. 2003 Feb 26;289(8):1035-40

Myers P (1982) Management of minor medical problems and trauma: general practice or hospital?

J Royal Society Med. 1982 Nov;75(11):879-83.

Øvretveit J (1997) Would it work for us? Learning from quality improvement in Europe and beyond.

Joint Commission Journal of Quality Improvement. 1997 Jan;23(1):7-22

Platt Report (2002) Emergency Services. Her Majesty's Stationery Office, London.

Press Ganey.com 2009. Patients Tell You What to Improve. Retrieved from: www.pressganey.com/cs/research_and_analysis/patient_satisfaction

Press Ganey and Associates, The 2010 Emergency Department Pulse Report. Retrieved from :

www.pressganey.com

Rhee KJ & Bird J (1996) Perceptions and satisfaction with emergency department care.

J Emerg Med. 1996 Nov-Dec;14(6):679-83

Rock D & Pledge M (1991) Priorities of care for the walking wounded: Triage in accident and emergency.

Prof Nurse. 1991 May;6(8):463-5

Safavi, K 2006. Patient centered pay for performance: Are we missing the target?

J Healthc Manag. 2006 Jul-Aug;51(4):215-8

Safer MA, Tharps QJ, Jackson TC & Leventhal H (1979) Determinants of three stages of delay in seeking care at a medical clinic.

Medical Care. 1979 Jan;17(1):11-29

Sandhu H, Dale J, Stallard N, Crouch R, Glucksman E (2009) Emergency nurse practitioners and doctors consulting with patients in an emergency department: a comparison of communication skills and satisfaction

Emerg Med J. 2009 Jun;26(6):400-4

Spaite DW, Bartholomeaux F, Guisto J, Lindberg E, Hull B, Eyherabide A, Lanyon S, Criss EA, Valenzuela TD, Conroy C (2002) Rapid process redesign in a university based emergency department: Decreasing waiting time intervals and improving patient satisfaction

Ann Emerg Med. 2002 Feb;39(2):168-77.

Strategic Plan 2007:15-20. Department of Health, South Africa

http://www.doh.gov.za/docs/index.html

Sun BC, Adams J, Orav EJ, Rucker DW, Brennan TA, Burstin HR (2000), Determinants of patient satisfaction and willingness to return with emergency care.

Ann Emerg Med. 2000 May;35(5):426-34

Sun BC, Adams JG, & Burstin HR (2001), Validating a model of patient satisfaction with emergency care.

Ann Emerg Med. 2001 Nov;38(5):527-32

Tanabe P & Buschmann M (1999) A prospective study of ED pain management practices and the patient's perspective.

J Emerg Nurs. 1999 Jun;25(3):171-7

Taylor C, Benger JR (2004) Patient satisfaction in emergency medicine.

Emerg Med J. 2004 Sep;21(5):528-32

Thompson DA, Yarnold PR, Williams DR, Adams SL (1996) Effects of actual waiting time, perceived waiting time, information delivery, and expressive quality on patient satisfaction in the emergency department.

Ann Emerg Med. 1996 Dec;28(6):657-65

Trout A, Magnusson AR, & Hedges JR (2000), Patient satisfaction investigations and the emergency department: What does the literature say?

Acad Emerg Med. 2000 Jun;7(6):695-709

Vukmir RB (2006) Customer satisfaction

Int J Health Care Qual Assur Inc Leadersh Health Serv. 2006;19(1):8-31

Vukmir RB (2006) Customer satisfaction with patient care: "Where's the Beef?"

J Hosp Mark Public Relations. 2006;17(1):79-107

Walsh M. (1990) Patient's choice: GP or A&E department?

Nursing Standard. 1990 Nov 28-Dec 4;5(10):28-31

Walsh M. (1993) Delaying attendance at A&E departments.

Nurs Stand. 1993 Mar 3-9;7(24):33-5.

Walsh M. (1995) The health belief model and the use of accident and emergency services by the general public.

J Adv Nurs. 1995 Oct;22(4):694-9

Watson WT, Marshall ES & Fosbinder D (1999) Elderly patients' perceptions of care in the emergency department.

J Emerg Nurs. 1999 Apr;25(2):88-92

Welch SJ (2010) Twenty years of patient satisfaction research applied to the emergency department: a qualitative review

Am J Med Qual. 2010 Jan-Feb;25(1):64-72

Williams K (1984) Who uses the accident service?

Injury. 1984 Jul;16(1):35-7

Worth C & Hurst K (1989) Accident and Emergency. False alarm?

Nurs Times. 1989 Apr 12-18;85(15):24-7

Yarnold PR, Michelson EA, Thompson DA, Adams SL (1998) Predicting patient satisfaction: a study of two emergency departments.

J Behav Med. 1998 Dec;21(6):545-63

Yarris LM, Adams AL, Margaret N, Frakes B, Brooks H, Norton RL. 2006. What is the best way to measure patient satisfaction in the ED?

Annals of Emergency Medicine ;48 (4) ; 524-526

# Appendices

## *Appendix I*

Appendix I

To Whom It May Concern:

Re : Research Proposal

This letter serves to confirm that Zeyn Mahomed has been granted approval to conduct his patient perception survey at GF Jooste Hospital

Many thanks

signature removed

## *Appendix II*

## Patient Questionnaire

**1. How do you rate the time you had to wait between arriving and being attended to ?**

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

**2. How well did the doctor communicate to you and give you information?**

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

**3.How do you rate the nursing care?**

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

**4.How do you rate the cleanliness and hygiene of the emergency unit?**

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

**5.How do you rate your overall treatment?**

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

**6.Name one factor that displeased you the most :**

_____

**7.Name one factor that pleased you the most :**

_____

*Appendix III*

# Doctor Questionnaire

| |
|---|
| |

**1. How do you rate this patient's waiting time?**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

**2. How well did you think you did in communicating the necesary information to this patient?**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

**3. How do you rate nursing care of this patient?**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

**4. How do you rate the cleanliness and hygiene of the emergency unit at time of attending to this patient?**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

**5. How do you rate the overall management of this patient?**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| | | | | |

**6. Name one factor that most limited optimal care of this patient :**

_____

_____

## *Appendix IV*

Emergency Centre Data Form Append. x D

**BASIC DATA**

Age : Gender :

Date of Arrival : Time of Arrival :

Referred by : ☐ Self ☐ GP ☐ Clinic or hospital

Main Complaint : _____

Triage Code : ☐ Red **R** ☐ Orange **O** ☐ Yellow **Y**

☐ Green **G** ☐ Blue **B**

Time Seen By Doctor :

**INVESTIGATIONS DONE**

☐ No investigations done **I01**

☐ FBC **I02** ☐ CEUG **I03** ☐ LFT **I04** ☐ TSH **I05**

☐ INR **I06** ☐ Trop T **I07** ☐ CK **I08** ☐ CRP **I09**

☐ X-MATCH **I10** ☐ Lipase **I11** ☐ Blood Cultures **I12**

☐ Arterial Blood Gas **I13** ☐ Ward Hb **I14**

☐ Fingerprick glucose **I15**

☐ Other Blood tests : _____ **I16**

☐ X-Rays **I17** ☐ Ultrasound **I18** ☐ CT Scan **I19** ☐ MRI **I20**

☐ IVP **I21** ☐ Doppler **I22** ☐ Echo **I23**

☐ Other Radiological Investigations : _____ **I24**

☐ Pregnosticon **I25** ☐ Urine dipstix **I26**

☐ Urine for MC&S **I27**

☐ Other Urine tests :_____ **I28**

☐ ECG **I29** ☐ Sputum **I30**

☐ Other : _____ **I31**

Emergency Centre Data Form

**TREATMENT**

☐ Dressings **T01** ☐ Removal of Foreign Body **T02** ☐ Sutures **T03**

☐ I&D **T04** ☐ Tetanus **T05** ☐ Advice **T06**

☐ Manipulation **T07** ☐ I.V Cannula **T08** ☐ POP **TO9**

☐ Lavage **T10** ☐ Procedural Sedation **T11** ☐ CVP **T12**

☐ Intubation **T13** ☐ Non-invasive ventilation **T14** ☐ ICD **T15**

☐ Analgesia **T17** ☐ IV Antibiotics **T18** ☐ Oxygen **T19**

☐ Thoracotomy **T20** ☐ Nebs **T21** ☐ DPL **T22**

☐ Prescription **T23** ☐ Defibrillation **T24** ☐ Pacing **T25**

☐ Cardioversion **T26** ☐ U Catheter **T27** ☐ CPR **T28**

☐ IV rehydration **T29** ☐ Suprapubic Catheter **T30** ☐ NGT **T31**

☐ Kept for overnight treatment/observation **T32**

☐ Kept for consultant review **T33** ☐ Physical restraint **T34**

☐ Chemical restraint **T35**

☐ Other _____ **T36**

**DISPOSITION :**

☐ Admitted **D01** ☐ Emergency theatre **D02** ☐ Died **D03**

☐ High Care **D04** ☐ Referred to primary care **D05** ☐ OPD **D06**

☐ TB Clinic **D07** ☐ Absconded **D08**

☐ Discharged Home **D09** ☐ Refused treatment **D10**

☐ To come back for review **D11** ☐ Referred to Tertiary Centre **D12**

☐ Psychiatric institution **D13**

**Date of leaving EC :** **Time of leaving EC :**

**DIAGNOSIS**

Diagnosis : _____

☐ Provisional ☐ Confirmed

## *Appendix V*

**Tabulation of all responses**

| Patient | PQ1 | PQ2 | PQ3 | PQ4 | PQ5 | Ptotal | DQ1 | DQ2 | DQ3 | DQ4 | DQ5 | Dtotal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3 | 4 | 4 | 4 | 5 | 20 | 4 | 4 | 5 | 4 | 4 | 21 |
| 2 | 4 | 5 | 5 | 4 | 5 | 23 | 4 | 4 | 3 | 3 | 4 | 18 |
| 3 | 3 | 4 | 3 | 3 | 4 | 17 | 5 | 5 | 4 | 4 | 5 | 23 |
| 4 | 4 | 5 | 5 | 4 | 4 | 22 | 3 | 3 | 2 | 3 | 4 | 15 |
| 5 | 1 | 5 | 4 | 3 | 5 | 18 | 4 | 4 | 5 | 4 | 4 | 21 |
| 6 | 2 | 4 | 4 | 1 | 3 | 14 | 3 | 4 | 4 | 2 | 4 | 17 |
| 7 | 5 | 5 | 5 | 5 | 5 | 25 | 4 | 5 | 5 | 2 | 5 | 21 |
| 8 | 3 | 5 | 5 | 3 | 5 | 21 | 3 | 4 | 4 | 2 | 4 | 17 |
| 9 | 3 | 5 | 5 | 3 | 4 | 20 | 3 | 4 | 4 | 4 | 4 | 19 |
| 10 | 2 | 5 | 4 | 3 | 4 | 18 | 2 | 4 | 4 | 4 | 3 | 17 |
| 11 | 5 | 5 | 4 | 4 | 5 | 23 | 3 | 4 | 4 | 3 | 4 | 18 |
| 12 | 3 | 4 | 4 | 3 | 4 | 18 | 5 | 5 | 4 | 3 | 5 | 22 |
| 13 | 5 | 5 | 5 | 4 | 5 | 24 | 3 | 5 | 4 | 3 | 4 | 19 |
| 14 | 5 | 5 | 5 | 5 | 5 | 25 | 5 | 5 | 5 | 4 | 5 | 24 |
| 15 | 2 | 4 | 3 | 2 | 3 | 14 | 3 | 4 | 4 | 4 | 4 | 19 |
| 16 | 4 | 5 | 5 | 5 | 5 | 24 | 5 | 5 | 5 | 4 | 4 | 23 |
| 17 | 5 | 4 | 4 | 4 | 4 | 21 | 5 | 4 | 4 | 4 | 4 | 21 |
| 18 | 3 | 4 | 5 | 5 | 4 | 21 | 3 | 4 | 5 | 4 | 4 | 20 |
| 19 | 3 | 4 | 4 | 4 | 4 | 19 | 5 | 5 | 5 | 4 | 5 | 24 |
| 20 | 5 | 5 | 5 | 4 | 4 | 23 | 2 | 3 | 4 | 4 | 3 | 16 |
| 21 | 4 | 4 | 5 | 5 | 4 | 22 | 3 | 4 | 4 | 4 | 4 | 19 |
| 22 | 5 | 5 | 4 | 3 | 5 | 22 | 5 | 5 | 5 | 5 | 5 | 25 |
| 23 | 3 | 4 | 4 | 3 | 4 | 18 | 2 | 4 | 3 | 1 | 4 | 14 |
| 24 | 5 | 5 | 5 | 5 | 5 | 25 | 3 | 4 | 4 | 4 | 4 | 19 |
| 25 | 3 | 4 | 3 | 3 | 4 | 17 | 3 | 5 | 4 | 4 | 4 | 20 |
| 26 | 3 | 4 | 3 | 3 | 4 | 17 | 3 | 4 | 4 | 4 | 4 | 19 |
| 27 | 3 | 5 | 4 | 3 | 5 | 20 | 4 | 4 | 3 | 2 | 3 | 16 |
| 28 | 2 | 5 | 4 | 3 | 3 | 17 | 3 | 5 | 4 | 4 | 4 | 20 |
| 29 | 3 | 4 | 4 | 3 | 4 | 18 | 1 | 4 | 4 | 2 | 4 | 16 |
| 30 | 3 | 4 | 3 | 3 | 3 | 16 | 2 | 4 | 4 | 4 | 5 | 19 |
| 31 | 1 | 5 | 3 | 3 | 2 | 14 | 4 | 5 | 5 | 4 | 5 | 23 |
| 32 | 1 | 5 | 4 | 4 | 4 | 18 | 2 | 5 | 4 | 3 | 4 | 18 |
| 33 | 1 | 5 | 3 | 5 | 3 | 17 | 3 | 5 | 4 | 3 | 5 | 20 |
| 34 | 1 | 5 | 5 | 4 | 5 | 20 | 4 | 5 | 5 | 4 | 4 | 22 |
| 35 | 3 | 5 | 4 | 5 | 5 | 22 | 4 | 4 | 4 | 4 | 4 | 20 |
| 36 | 3 | 5 | 4 | 3 | 4 | 19 | 4 | 5 | 4 | 3 | 5 | 21 |
| 37 | 4 | 5 | 4 | 5 | 4 | 22 | 3 | 4 | 4 | 3 | 4 | 18 |
| 38 | 1 | 5 | 1 | 1 | 5 | 13 | 3 | 4 | 4 | 4 | 4 | 19 |
| 39 | 3 | 2 | 4 | 1 | 4 | 14 | 1 | 5 | 5 | 4 | 5 | 20 |
| 40 | 3 | 4 | 4 | 4 | 5 | 20 | 3 | 4 | 4 | 3 | 5 | 19 |
| 41 | 3 | 5 | 4 | 3 | 4 | 19 | 2 | 5 | 4 | 4 | 5 | 20 |
| 42 | 2 | 5 | 3 | 3 | 4 | 17 | 3 | 4 | 4 | 3 | 3 | 17 |
| 43 | 5 | 5 | 5 | 5 | 5 | 25 | 1 | 5 | 4 | 3 | 5 | 18 |
| 44 | 1 | 5 | 3 | 4 | 4 | 15 | 2 | 4 | 3 | 3 | 3 | 15 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| 46 | 5 | 5 | 5 | 5 | 5 | 25 | 3 | 3 | 4 | 4 | 3 | 17 |
| 47 | 5 | 5 | 5 | 5 | 5 | 25 | 3 | 3 | 4 | 4 | 3 | 17 |
| 48 | 2 | 3 | 3 | 3 | 3 | 14 | 2 | 4 | 2 | 3 | 4 | 15 |
| 49 | 1 | 5 | 3 | 4 | 4 | 15 | 2 | 4 | 3 | 3 | 3 | 15 |
| 50 | 5 | 5 | 5 | 5 | 5 | 25 | 1 | 5 | 4 | 3 | 5 | 18 |
| 51 | 2 | 5 | 3 | 3 | 4 | 17 | 3 | 4 | 4 | 3 | 3 | 17 |
| 52 | 3 | 5 | 4 | 3 | 4 | 19 | 2 | 5 | 4 | 4 | 5 | 20 |
| 53 | 3 | 4 | 4 | 4 | 5 | 20 | 3 | 4 | 4 | 3 | 5 | 19 |
| 54 | 3 | 2 | 4 | 1 | 4 | 14 | 1 | 5 | 5 | 4 | 5 | 20 |
| 55 | 1 | 5 | 1 | 1 | 5 | 13 | 3 | 4 | 4 | 4 | 4 | 19 |
| 56 | 4 | 5 | 4 | 5 | 4 | 22 | 3 | 4 | 4 | 3 | 4 | 18 |
| 57 | 3 | 5 | 4 | 3 | 4 | 19 | 4 | 5 | 4 | 3 | 5 | 21 |
| 58 | 3 | 5 | 4 | 5 | 5 | 22 | 4 | 4 | 4 | 4 | 4 | 20 |
| 59 | 1 | 5 | 5 | 4 | 5 | 20 | 4 | 5 | 5 | 4 | 4 | 22 |
| 60 | 1 | 5 | 3 | 5 | 3 | 17 | 3 | 5 | 4 | 3 | 5 | 20 |
| 61 | 1 | 5 | 4 | 4 | 4 | 18 | 2 | 5 | 4 | 3 | 4 | 18 |
| 62 | 1 | 5 | 3 | 3 | 2 | 14 | 4 | 5 | 5 | 4 | 5 | 23 |
| 63 | 3 | 4 | 3 | 3 | 3 | 16 | 2 | 4 | 4 | 4 | 5 | 19 |
| 64 | 3 | 4 | 4 | 3 | 4 | 18 | 1 | 5 | 4 | 2 | 4 | 16 |
| 65 | 2 | 5 | 4 | 3 | 3 | 17 | 3 | 5 | 4 | 4 | 4 | 20 |
| 66 | 3 | 5 | 4 | 3 | 5 | 20 | 4 | 4 | 3 | 2 | 3 | 16 |
| 67 | 3 | 4 | 3 | 3 | 4 | 17 | 3 | 4 | 4 | 4 | 4 | 19 |
| 68 | 3 | 4 | 3 | 3 | 4 | 17 | 3 | 5 | 4 | 4 | 4 | 20 |
| 69 | 5 | 5 | 5 | 5 | 5 | 25 | 3 | 4 | 4 | 4 | 4 | 19 |
| 70 | 3 | 4 | 4 | 3 | 4 | 18 | 2 | 4 | 3 | 1 | 4 | 14 |
| 71 | 5 | 5 | 4 | 3 | 5 | 22 | 5 | 5 | 5 | 5 | 5 | 25 |
| 72 | 4 | 4 | 5 | 5 | 4 | 22 | 3 | 4 | 4 | 4 | 4 | 19 |
| 73 | 5 | 5 | 5 | 4 | 4 | 23 | 2 | 3 | 4 | 4 | 3 | 16 |
| 74 | 3 | 4 | 4 | 4 | 4 | 19 | 5 | 5 | 5 | 4 | 5 | 24 |
| 75 | 3 | 4 | 5 | 5 | 4 | 21 | 3 | 4 | 5 | 4 | 4 | 20 |
| 76 | 5 | 4 | 4 | 4 | 4 | 21 | 5 | 4 | 4 | 4 | 4 | 21 |
| 77 | 4 | 5 | 5 | 5 | 5 | 24 | 5 | 5 | 5 | 4 | 4 | 23 |
| 78 | 2 | 4 | 3 | 2 | 3 | 14 | 3 | 4 | 4 | 4 | 4 | 19 |
| 79 | 5 | 5 | 5 | 5 | 5 | 25 | 5 | 5 | 5 | 4 | 5 | 24 |
| 80 | 5 | 5 | 5 | 4 | 5 | 24 | 3 | 5 | 4 | 3 | 4 | 19 |
| 81 | 2 | 4 | 4 | 1 | 3 | 14 | 3 | 4 | 4 | 2 | 4 | 17 |
| 82 | 5 | 5 | 5 | 5 | 5 | 25 | 4 | 5 | 5 | 2 | 5 | 21 |
| 83 | 3 | 5 | 5 | 3 | 5 | 21 | 3 | 4 | 4 | 2 | 4 | 17 |
| 84 | 3 | 5 | 5 | 3 | 4 | 20 | 3 | 4 | 4 | 4 | 4 | 19 |
| 85 | 3 | 4 | 4 | 3 | 4 | 18 | 5 | 5 | 4 | 3 | 5 | 22 |
| 86 | 5 | 5 | 4 | 4 | 5 | 23 | 3 | 4 | 4 | 3 | 4 | 18 |
| 87 | 2 | 5 | 4 | 3 | 4 | 18 | 2 | 4 | 4 | 4 | 3 | 17 |
| 88 | 3 | 4 | 4 | 4 | 5 | 20 | 4 | 4 | 5 | 4 | 4 | 21 |
| 89 | 4 | 5 | 5 | 4 | 5 | 23 | 4 | 4 | 3 | 3 | 4 | 18 |
| 90 | 3 | 4 | 3 | 3 | 4 | 17 | 5 | 5 | 4 | 4 | 5 | 23 |
| 91 | 4 | 5 | 5 | 4 | 4 | 22 | 3 | 3 | 2 | 3 | 4 | 15 |
| 92 | 1 | 5 | 4 | 3 | 5 | 18 | 4 | 4 | 5 | 4 | 4 | 21 |
| 93 | 4 | 4 | 5 | 3 | 1 | 17 | 3 | 2 | 3 | 4 | 5 | 17 |
| 94 | 5 | 5 | 5 | 4 | 5 | 24 | 4 | 4 | 3 | 3 | 4 | 18 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 95 | 4 | 5 | 5 | 4 | 4 | 22 | 3 | 3 | 2 | 3 | 4 | 15 |
| 96 | 1 | 5 | 4 | 3 | 5 | 18 | 4 | 4 | 5 | 4 | 4 | 21 |
| 97 | 4 | 5 | 5 | 4 | 5 | 23 | 4 | 4 | 3 | 3 | 4 | 18 |
| 98 | 4 | 5 | 4 | 3 | 5 | 21 | 4 | 4 | 3 | 2 | 3 | 16 |
| 99 | 3 | 4 | 3 | 3 | 4 | 17 | 3 | 4 | 4 | 4 | 4 | 19 |
| 100 | 2 | 5 | 4 | 3 | 3 | 17 | 3 | 5 | 4 | 4 | 4 | 20 |

## *Appendix VI*

<table>
<tr><td>Colour</td><td>RED</td><td>ORANGE</td><td>YELLOW</td><td>GREEN</td><td>BLUE</td></tr>
<tr><td>TEWS</td><td>7 or more</td><td>5-6</td><td>3-4</td><td>0-2</td><td>DEAD</td></tr>
<tr><td>Target time to treat</td><td>Immediate</td><td>less than 10 mins</td><td>less than 60 mins</td><td>less than 240 mins</td><td rowspan="16">DEAD</td></tr>
<tr><td>Mechanism of injury</td><td></td><td>High energy transfer</td><td></td><td></td></tr>
<tr><td rowspan="14">Presentation</td><td rowspan="5"></td><td>Shortness of breath - acute</td><td rowspan="3"></td><td rowspan="14">ALL<br>OTHER<br>PATIENTS</td></tr>
<tr><td>Coughing blood</td></tr>
<tr><td>Chest pain</td></tr>
<tr><td>Haemorrhage - uncontrolled</td><td>Haemorrhage - controlled</td></tr>
<tr><td>Seizure – current</td><td>Seizure - post ictal</td><td rowspan="4"></td></tr>
<tr><td rowspan="4"></td><td>Focal neurology - acute</td></tr>
<tr><td>Level of consciousness reduced</td></tr>
<tr><td>Psychosis / Aggression<br>Threatened limb</td></tr>
<tr><td>Dislocation - other joint</td><td>Dislocation - finger or toe</td></tr>
<tr><td>Fracture - compound</td><td>Fracture - closed</td></tr>
<tr><td rowspan="4">Burn – face / inhalation</td><td>Burn over 20%</td><td rowspan="4">Burn - other</td></tr>
<tr><td>Burn - electrical</td></tr>
<tr><td>Burn - circumferential</td></tr>
<tr><td>Burn - chemical</td></tr>
<tr><td></td><td>Poisoning / Overdose</td><td>Abdominal pain</td></tr>
<tr><td>Hypoglycaemia - glucose less than 3</td><td>Diabetic - glucose over 11 & ketonuria</td><td>Diabetic - glucose over 17 (no ketonuria)</td></tr>
<tr><td rowspan="2"></td><td rowspan="2">Vomiting - fresh blood<br>Pregnancy & abdominal trauma or pain</td><td>Vomiting - persistent<br>Pregnancy & trauma</td></tr>
<tr><td>Pregnancy & PV bleed</td></tr>
<tr><td>Pain</td><td></td><td>Severe</td><td>Moderate</td><td>Mild</td></tr>
<tr><td></td><td colspan="4">Senior Healthcare Professional's Discretion</td></tr>
</table>

## *Appendix VII*

UNIVERSITY OF CAPE TOWN

**Health Sciences Faculty**
**Research Ethics Committee**
**Room E52-24 Groote Schuur Hospital Old Main Building**
**Observatory 7925**
**Telephone** [021] 406 6338 • **Facsimile** [021] 406 6411
**e-mail:** lamees.emjedi@uct.ac.za

**24 April 2008**

**REC REF: 169/2008**

**Dr Z Mahomed**
11 La Savina
The Island Club
Century City
Cape Town
7441

Dear Dr Mahomed

**PROJECT TITLE: EMERGENCY UNIT PATIENTS' PERCEPTIONS OF CARE: DO DOCTORS UNDERSTAND THEIR PATIENTS?**

Thank you for submitting your study to the Research Ethics Committee for review.

It is a pleasure to inform you that the Ethics Committee has **formally approved** the above-mentioned study

**Approval is granted for one year till the 30th April 2009.**

Please note that the ongoing ethical conduct of the study remains the responsibility of the principal investigator.

**Please quote the REC. REF in all your correspondence.**

Yours sincerely

signature removed

**PROFESSOR M BLOCKMAN**
**CHAIRPERSON, HSF HUMAN ETHICS**

Federal Wide Assurance Number: FWA00001637.
Institutional Review Board (IRB) number: IRB00001938

lemjedi