



UNIVERSITY of
RWANDA

College of Medicine and Health Sciences
School of Medicine and Pharmacy

**The use of analgesia for trauma patients at CHUK Emergency
Department (ED)**

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Master's in Emergency Medicine and Critical Care 2019

Registration number: 216358612

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DECLARATION

I, hereby declare that this is my own work: **“The use of analgesia for trauma patients at CHUK Emergency Department (ED)”** under supervision and guidance of my professors in Emergency Medicine.

Jean MURAGIZI

Signature... 

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Signature..... Date.....22 April 2019...

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Signature..... Date.....May 14th 2019

ACKNOWLEDGEMENT

All thanks God Almighty, for having gifted me with perseverance to pursue my way this far

I sincerely thank my dear parents who raised me up and gave me support in my education process.

I sincerely thank my beloved wife Nadine N. BARUTA and my children for being closer to me all the time.

Thanks to the government of Rwanda for its sponsorship of my training

I am grateful to all my supervisors, and my colleagues, all staff in emergency and intensive care unit departments for the help and contribution in the accomplishing of this work.

Also, many thanks to my brothers and sisters and family for any support.

ABSTRACT

Introduction

Pain is an unpleasant experience and represents the main complaint of visits to the emergency department (ED) for patients seeking healthcare. This study was conducted in order to determine the time to analgesia for trauma patients present at Emergency Department with pain score above >4(moderate and severe pain), at University Teaching Hospital-Kigali (CHUK) which is the tertiary referral public hospital in Kigali, Rwanda.

Methods

This is an observation, review of inpatients charts, single-centered study of 260 patients done at the emergency department of tertiary level hospital CHUK in Kigali/Rwanda from July 2018 to December 2018. We determined the timeliness pain management for trauma patients presented at emergency department with pain above 4(moderate and severe pain) and how the treatment it differs relates to various categorical predictor variables such as age, gender, occupation, and insurance status.

Results:

Male (77.31%) were the predominant gender and the majority of them were between ages 31-45 years (31.92%), jobless Children represented (27.69%) and patients 70% of patients had Mutuel for health insurance. We calculated odds ratios for a variety of predictor variables and did not find any significant association with time to analgesia.

Conclusions

The majority of patients consulting the ED at CHUK did not receive pain medication treatment within an appropriate time course. Trauma is a public health concern in Rwanda and the management of traumatic pain is often a concern for health workers. We recommend strategies to increase analgesia delivery, educating medical personnel on diagnosis and treatment of pain at appropriate times and to improve documentation of pain management in the ED.

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ACRONYMS AND ABBREVIATIONS

ANHMRC: Australian National Health and Medical Research Council

CHUK: Centre Hospitalier Universitaire de Kigali

CMHS: College of Medicine and Health Sciences

ED: emergency departments

ECCM: Emergency and Critical Care Medicine

ED: Emergency Department

HICs: High-Income Countries

IRB: Institutional Review Board

LMICs: Low and Middle-Income Countries

NRS: Numerical Rating Scale

RTA: Road traffic accident

VAS: Visual Analogue Scale

WHO: World Health Organization

CHAPTER1. INTRODUCTION

1.1 Background

Pain is an “unpleasant sensory and emotional experience associated with actual or potential tissue damage.” [1] Pain is the most common patient complaint in emergency departments (EDs), in some studies accounting for 78% of visits [2]. Providing adequate and timely pain management to the injured patient is critical for healthcare providers in the ED setting [3]. Traumatic injuries account for 10% of the deaths worldwide, more than malaria, HIV and tuberculosis combined and the burden of trauma is felt in low and middle income countries (LMICs) related to lack of emergency care services [4]. Appropriate pain management for injured patients has been shown to improve healing, reduce stress, shorten hospital length of stay, lower cost and lower the risk of chronic pain. Ultimately, the patient’s morbidity and mortality are reduced. [5]

Many patients worldwide do not receive adequate or timely analgesia for pain relief [6]. Developing countries tend to focus on achieving the United Nations Millennium Development Goals like eliminating poverty and hunger while promoting primary education for all. [7] In LMICs, effective pain management has a lower priority than other aspects of healthcare and pain relief is not available to large numbers of patients. Under-treated pain is related to geographical factors, lack of staff, funding and inadequate assessment and training for physicians and nurses working in emergency department [8, 9]. Even in high income countries (HICs), studies suggest that up to 70% of trauma patients with acute fracture pain do not receive analgesia in the ED, and 40% of those who did receive analgesia waited longer than 2 hours for it. [6] Lack of pain management after trauma is a predictor of physical disability and can lead to long-term poor outcomes [10]

In an attempt to address oligoanalgesia, the assessment of pain at triage has been implemented in many countries. A verbal numeric pain scale (1-10) has been added to the vital signs upon initial patient presentation in many HICs. Triage pain assessment and the verbal numeric pain scale has demonstrated a decreased time to analgesia by allowing the nurse to initiate the analgesia at time of triage and before physician evaluation [11]. There are many pain scales, but the 0–10 Numerical Rating Scale (NRS) and Visual Analogue Scale (VAS) have been the most validated [12]. The NRS has been implemented in LMICs to improve pain management practice [13, 14].

Pain does not discriminate based on gender, age or race. However, studies show analgesia treatment disparities. Effective administration of analgesia can differ based on many factors revealing vulnerable groups. Women get less analgesia than men and people with high income get more analgesia [15]. Another study reveals children receive less analgesia than adults after cardiac surgery [16]. In the United States, people of color receive less analgesia [17].

In East Africa, a study found that 28.7% of patients with moderate pain scores received analgesia prior to 51.4% of patients who had severe pain scores. The severity of pain influenced the time for pain management of those with severe pain, but the factors related to pain management were not determined in the study [13].

In Rwanda, cultural factors, lack of training, nurse behaviors (e.g. that opioids cause addiction for the patient), lack of physicians and overcrowded EDs are associated with poor pain management [9]. Pain does not discriminate based on gender, age or race, however, studies show analgesia treatment disparities exist. Effective administration of analgesia can differ based on many factors revealing vulnerable groups. Women receive less analgesia than men and people with high income get more analgesia [15]. Another study revealed children receive less analgesia than adults after cardiac surgery [16].

The United Kingdom Royal College of Emergency Medicine has established best practice guidelines for pain management in adults and recommends patients with severe pain should receive analgesia within 20 minutes of arrival to the ED [18]. The Australian National Health and Medical Research Council (NHMRC) recommends 30 minutes for patients presenting in pain to the ED. Time to analgesia and pain score documentation are important clinical indicators utilized in the assessment of ED quality of care and services delivered [19]. Since 1994, Rwanda has experienced rapid development with roads, transport (increasing of motorcycles, cars and bicycles) and buildings. This development has been associated with an increase in traumatic injuries which affect the people and thus reduce economic capacity at the family and individual level, as well as the larger national level in terms of cost of treatment [20-21]. And guidelines have developed for pain management [22]. Our study evaluates the epidemiology of pain and time to analgesia at a tertiary University-associated teaching hospital in Kigali, Rwanda. No previous studies have been done on this topic in Rwanda. We seek to gain knowledge that will improve healthcare and patient outcomes.

1.2 Aims and objectives

1.2.1 Aims

To determine understand the epidemiology (patient demographics, pain scores, injury types, method of transport, final diagnosis, and analgesia types) of time to analgesia used in patients with traumatic injuries

1.2.2 Objectives

1. To determine to analgesia use based on patient demographics, pain scores, injury types, method of transport, and diagnosis
2. To determine if trauma patients are receiving analgesia on time based on pain scoring at triage
3. To improve future use of analgesia in the CHUK ED

CHAPTER 2. METHODOLOGY

2.1. Study Description

This study is Prospective observational, study charts review of inpatients at ED to determine the time to analgesia for trauma patients in the emergency department at CHUK who report a score of 4 or higher on the pain scale at triage, which includes “Moderate” and “Severe” pain ratings per the Numeric Rating Scale.

2.2. Study site

This is a single-center, prospective, observational study conducted at the ED of University Teaching Hospital-Kigali (CHUK), Rwanda from July 2018 – December 2018.

2.3. Patient population

3.3.1 Inclusion criteria

All trauma patients presenting to the ED with a pain score ≥ 4 per the NRS or VAS were eligible for this study. Patients were enrolled through a convenience sampling when study personnel were present in the ED which was occurred for 54 days of the 182 day accrual period.

2.3.2 Exclusion criteria

Patients with non-traumatic injuries and/or those present with a pain score < 4 were excluded in this study.

2.3. Study Outcomes

We collected data from patient charts and inpatient records prospectively in real time during the patient’s time in the ED and in hospital care. Demographic information included age, gender and employment status. In addition, we documented the triage time of the patient, the time seen by the doctor, the time the analgesia was prescribed and the time the analgesia was delivered to the patient. The primary outcome for this study was time to analgesia for trauma patients with a pain score greater than 4 as it related to various variables such as gender, insurance status and mechanism of injury.

2.4. Study Procedures

Prior to study enrollment, patients were informed of the study, and written consent was obtained.

2.4.1. Follow-up if cohorts study or trial

No follow-up intended.

2.4.2. Measurement of exposures and confounders

Possible confounders identified for this study included:

- Elapsed time to presentation for different injuries
- Injury types
- Patient gender
- Consistency of recording triage times and analgesia administration times
- Availability of different analgesics in ED
- Administration of analgesia prior to arrival (by patient, or by pre-hospital services)

2.4.3. Measurement of outcomes

The primary outcome measured was the time to analgesia for trauma patients with pain score ≥ 4 in CHUK ED.

2.4.4. Sample Size

A minimum of 260 patients were needed for a 95% confidence level, 0.5 standard deviation, and a confidence interval of +/- 5%.

2.4.5. Data Management

All data was collected on paper forms and then entered into a password protected excel database for storage. The following demographic data was collected: medical record number, age, sex (but no names). Only investigators for this study had access to the data. They each used a unique login ID and password to keep the data confidential. Information was not shared with those not on the study team or those who do not have a need to know. No identifying information was collected in this study. Study data was identified and stored in a password-protected Microsoft Excel spreadsheet of which only study members could access during the duration of the study.

2.5. Statistical Analysis

We used R 3.5.1 (R Foundation for Statistical Computing, Vienna, Austria) for data analysis. Analysis consisted of Chi-Squared and Fisher's Exact tests to assess for any associations between bivariate data. We defined the binary outcome based on the time to analgesia with cutoff of 60 minutes was used to categorize the time to analgesia. For CHUK, 60 minutes is an appropriate threshold for this clinical setting and the time it takes for patients to proceed through triage and be evaluated by the physician.

2.6. Ethical considerations

The University of Rwanda ethical and research committee (CMHS IRB) accepted this study proposal, the permission to conduct this study was given from CHUK Ethics, Our research have been approved after being reviewed by CMHS ethical committee.

CHUK ethical committee has approved the same protocol after being reviewed by its committee (Approval documents on annex)

2.6.1 Confidentiality

Any identifying information collected in this study was demographic in nature. Names or other identifying information of participants was not recorded. The study questionnaires will be kept locked and any data stored in excel was password protected.

CHAPTER 3.RESULTS

3.1. Patient demographics

In total 260 patients were enrolled. Males (77.3%) were the predominant gender and the majority of them were between ages 31-45 years (31.9%) with a mean age of 32.4years \pm 18.8 years (Tables 2 & 3). The youngest patient enrolled was 1 year and the oldest was 89 years. Among our patients most of them were insured (70%) (Table3). The most common occupation was farming (25.0%) (Table4). The majority of patients (87.7%) presented with a pain score between 4 and 6 (moderate pain). Road traffic accidents were the main mechanism of injury (56.2%), followed by falls (23.1%) and assaults (9.23%) (Table5). The most common type of road traffic accident (RTA) were accidents between motorcycles and cars (41.0%) ,only1.2 % received pain management in 15 minutes of arrival and 46.9% received pain killer within 4-5 hours.

3.2 Primary Outcomes

The majority of patients presented in moderate pain score (87.7%) versus severe pain (12.3%) (Table7). Of the 260 patients enrolled in this study, 8.5% (22) received analgesia within sixty minutes. Of these 22 patients, 18 had a moderate pain score and the remaining 4 had a severe pain score. We assessed the impact of Gender, Insurance Status, Age, Day of the Week, Transport Method, and Type of Injury on time to analgesia (Table 9). No significant relationship was found between any of the predictor variables and time to analgesia.

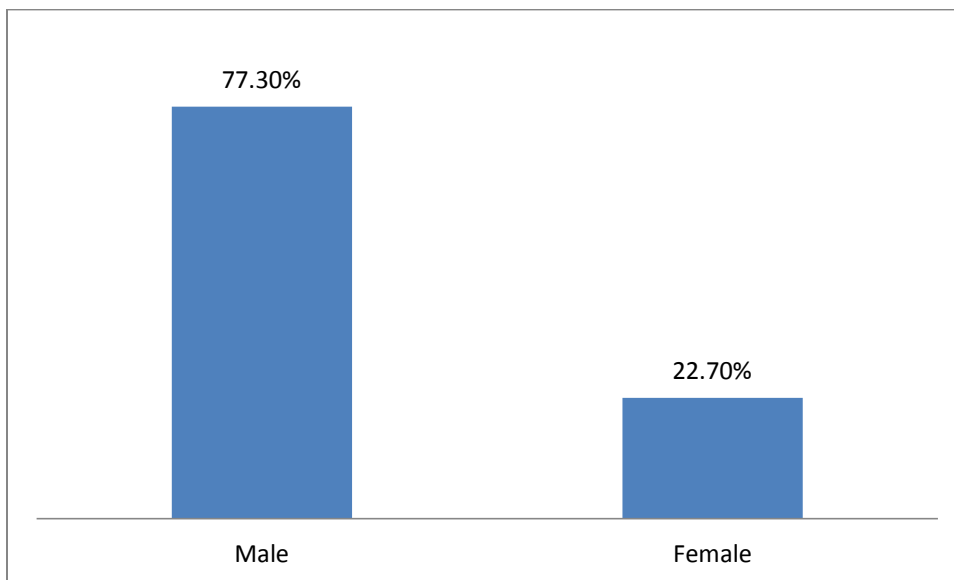


Figure1. Distribution of Gender (n=260)

Age	Frequency
1-8	31(11.9%)
9-18	25(9.6%)
19-30	69(26.5%)
31-45	83(31.9%)
46-59	28(10.8%)
>60	24(9.2%)

Table 1 Distribution of Age (n=260)

Insurance	Frequency
Mutuelle	182(70%)
None	62(23.9%)
Other	16(6.2%)

Table 2 Distribution of Insurance (n=260)

Occupation	Frequency
Bicyclist	6(2.3%)
Motorcycle driver	25(9.6%)
Farmer	65(25%)
Students	49(18.9%)
No-job and children	72(27.7%)
Drivers	5(1.9%)
Others	38(14.6%)

Table 3 Distribution of Occupation (n=260)

Mechanism of Injury	Frequency
Assault	24(9.2%)
RTA	146(56.2%)
Fall	60(23.1%)
Burn	10(3.9%)
Others	20(7.7%)

Table 4 Mechanism of Injury (n=260)

Mechanism of injury	Female(frequency)	Male(frequency)
Assault	4(0.5%)	20(7.7%)
RTA	28(10.8%)	118(45.4%)
Fall	20(7.7%)	40(15.4%)
Burn	3(1.2%)	7(2.7%)
Others	4(1.5%)	16(6.2%)

Table 5 Mechanism of Injury by Sex (n=260)

Arrival Method	Frequency
DH Ambulance	135(51.9%)
EMS	89(34.2%)
Private car	34(13.1%)
Moto	2(0.8%)

Table 6 Arrival Method (n=260)

Pain score	Frequency
Moderate	228(87.7%)
Severe	32(12.3%)

Table 7 Pain score (n=260)

Opioids and Acetaminophen, given together, were the primary analgesia prescribed for both moderate and severe pain. Opioids alone were the second most common form of pain treatment (figure1).

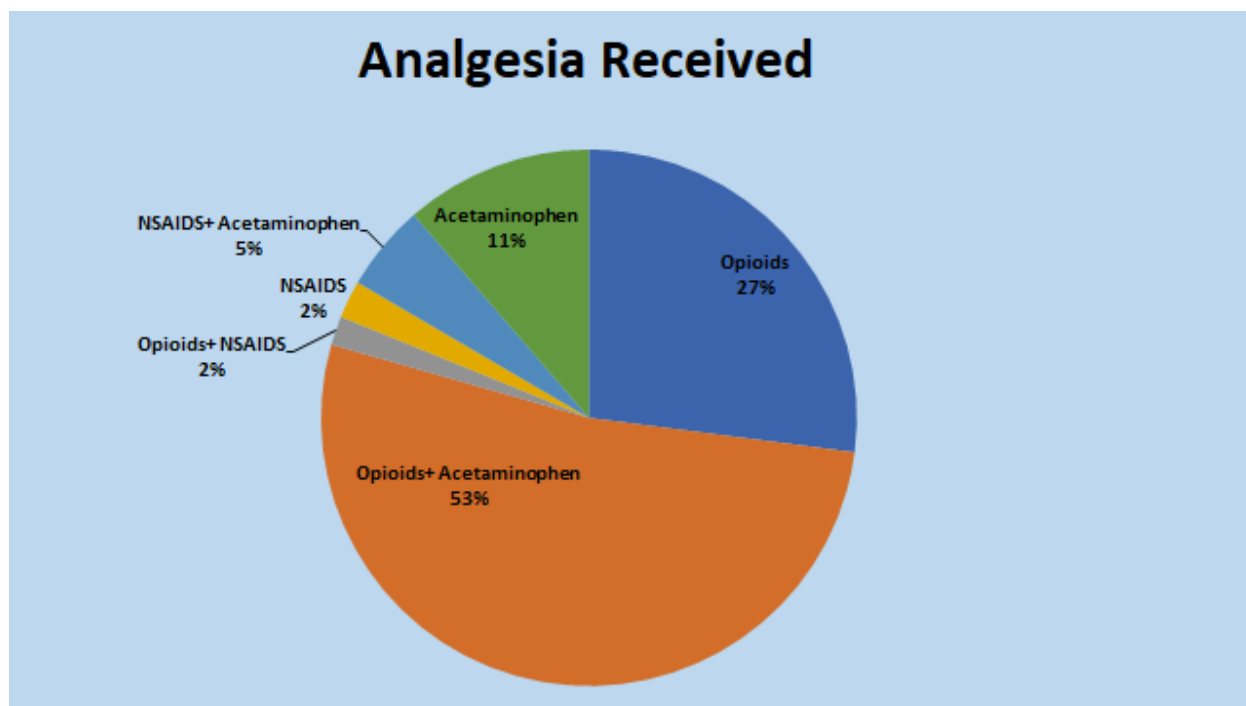


Figure 2 Types of pain medications according to pain scores (n=260)

Factor		Analgesia Within 60 minutes	Analgesia after 60 minutes	P value
Gender	Male	20(7.69%)	181(69.6%)	p=0.13
	Female	2(0.77%)	57(21.9%)	
Insurance status	Yes insurance	15(5.77%)	166(63.9%)	p = 0.86
	No insurance	7(2.69%)	72(27.7%)	
Age	Children	4(1.54%)	49(18.9%)	p = 0.82
	Adult	18(6.92%)	189(72.7%)	
Day of the week	Weekday	18(6.92%)	175(67.3%)	p = 0.469
	Weekend	4(1.54%)	63(24.2%)	
Transport method	DH Ambulance	8(3.08%)	127(48.9%)	p = 0.47
	Private car	4(1.54%)	30(11.5%)	
	EMS	10(3.85%)	79(30.4%)	
	Moto	0(0%)	2(0.8%)	
Type of Injury	Assault	1(0.38%)	23(8.9%)	p = 0.801
	Fall	7(2.69%)	55(21.2%)	
	RTA	11(4.23%)	132(50.8%)	
	Nature	1(0.38%)	8(3.08%)	
	Burn	1(0.38%)	9(3.5%)	
	Other	1(0.38%)	11(4.2%)	

Table 8 Assessment of factors associated with time to analgesia

Time to analgesia	Number	Percentages
0-15 Minutes	3	1.2%
16-30 Minutes	10	3.9%
31-45 Minutes	3	1.2%
46-60 Minutes	6	2.3%
1-2Hours	54	20.8%
2-3Hours	32	12.3%
3-4Hours	30	11.5%
4-5Hours	122	46.9%

Table 9 assessment for time to analgesia for pain score >4(moderate and severe pain)

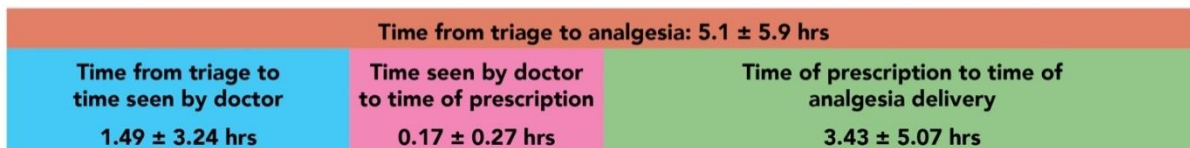


Figure 3 Breakdown of time from triage to time to analgesia for trauma patients with a pain score ≥ 4

At the emergency department trauma patients are evaluated by a physician in approximately 1.49 hours after triage and prescribed pain medications in 10 minutes after assessment. The time from prescription to analgesia ranges from minutes to over four hours (Figure 2).

CHAPTER 4. DISCUSSION

Trauma Patients present at the ED do not receiving pain management at time and trauma affecting mostly young Males and was the predominant gender (77.3%) and the majority of them were between ages 31-45 years (31.9%) with a mean age of 32.4 years \pm 18.8 years (Tables 2 & 3). Among our patients most of them were insured (70%) (Table 3). The majority of patients (87.7%) presented with a pain score between 4 and 6 (moderate pain). Road traffic accidents were the main mechanism of injury (56.2%), followed by falls (23.1%) and assaults (9.23%) (Table 5). The most common type of road traffic accident (RTA) were accidents between motorcycles and cars (41.0%), moderate pain score (87.7%) versus severe pain (12.3%) (Table 7). Of the 260 patients enrolled in this study, 8.5% (22) received analgesia within sixty minutes. Of these 22 patients, 18 had a moderate pain score and the remaining 4 had a severe pain score and only 1.2% received pain management in 15 minutes of arrival and 46.9% received pain killer within 4-5 hours, this study findings demonstrated that the time to analgesia in the ED at CHUK on average was more than one hour in patients presenting to the ED with moderate and severe pain post trauma, data were extracted from inpatients files at the ED. Furthermore, we did not identify any association between time to analgesia and variables such as insurance status, gender, age, occupation, and mechanism of injury.

These findings are important because studies have shown that delays in analgesia are associated with poor patient outcomes [10]. In Rwanda, efforts are being made to improve management of trauma patients and this requires optimization of each step involved. The prehospital team brings the patient and after initial assessment, analgesia is delivered in the field. When the patient arrives to CHUK, it is important the patient with moderate to severe pain receives follow up on analgesia to prevent complications and improve the care of the patient. Furthermore, pain management protocols need to be standardized at all levels of health care and services to maximize outcomes for the patient. It often occurs when district hospitals do not provide adequate analgesia for the patient before being transferred to higher care centers. Lastly, we did not find any relationship between age, gender, occupation, insurance status and mechanism of injury with time to analgesia. This is also an important finding as it suggests patients are not being discriminated against while receiving care in the ED.

The ED at CHUK receives many trauma patients; it is the only trauma center in Rwanda. As such, pain management is a key part of patient care in the ED. Knowing that most patients are potentially receiving their first dose of analgesia after an hour of being in the ED can help us to collaborate with nurses and physicians to reduce this time. One point to acknowledge regarding this study is trauma patients often receive pain medication by the triage team; however, this is under documented. Often, the first documented dose of analgesia is done by the treating nurse after the patient has been evaluated by the doctor. To optimize patient care, proper documentation of pain management is critical to not only improve outcomes, but also prevent

avoidable side effects and save resources that can be better used for other trauma patients. Trauma patients also account for many ED visits in other tertiary care centers throughout East Africa and this study may also help to optimize their pain management procedures.

4.1. Limitations

Many interventions in the ED for pain management may be performed without adequate documentation and communication of analgesia initiated by Emergency Medical Services or referring health facilities prior arrival in ED and at time of presentation after triage in the emergency department before physician evaluation. Thus our data was only as good as the documentation provided by the emergency nurses. Additionally, the sampling methods were not continuous over the study period and as such there may exist bias in the sample. However, the sampling frame and enrollment occurred for more than half of the available accrument days and during all times of the day making the presence of systematic error less likely.

1.3 CHAPTER5. CONCLUSIONS AND RECOMMENDATIONS

The majority of patients consulting the ED at CHUK did not receive pain medication treatment within an appropriate time course. Trauma is a public health concern in Rwanda and the management of traumatic pain is often a concern for health workers. We recommend strategies to increase analgesia delivery, educating medical personnel on diagnosis and treatment of pain at appropriate times and to improve documentation of pain management in the ED.

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[https://webcache.googleusercontent.com/search?q=cache:4f1mwxABIWkJ:https://www.rcem.ac.uk/docs/College%20Guidelines/5w.%20Management%20of%20Pain%20in%20Adults%20\(Revised%20December%202014\).pdf+&cd=1&hl=en&ct=clnk&gl=us&client=firefox-b-ab](https://webcache.googleusercontent.com/search?q=cache:4f1mwxABIWkJ:https://www.rcem.ac.uk/docs/College%20Guidelines/5w.%20Management%20of%20Pain%20in%20Adults%20(Revised%20December%202014).pdf+&cd=1&hl=en&ct=clnk&gl=us&client=firefox-b-ab)
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Republic of Rwanda September 2012

7 ANNEX

UR IRB approval

Dr. Jean Muragizi
 School of Medicine and Pharmacy, CMHS, UR

Approval Notice: No 256 /CMHS IRB/2018

Your Project Title *“The Use Of Analgesia For Trauma Patients At CHUK Emergency Department (ED)”* has been evaluated by CMHS Institutional Review Board.

Name of Members	Institute	Involved in the decision		
		Yes	No (Reason)	
			Absent	Withdrawn from the proceeding
Prof Kato J. Njunwa	UR-CMHS		X	
Prof Jean Bosco Gahutu	UR-CMHS	X		
Dr Brenda Asimwe-Kateera	UR-CMHS	X		
Prof Ntaganira Joseph	UR-CMHS	X		
Dr Tumusiime K. David	UR-CMHS	X		
Dr Kayonga N. Egide	UR-CMHS	X		
Mr Kanyoni Maurice	UR-CMHS	X		
Prof Munyanshongore Cyprien	UR-CMHS	X		
Mrs Ruzindana Landrine	Kicukiro district		X	
Dr Gishoma Darius	UR-CMHS	X		
Dr Donatilla Mukamana	UR-CMHS	X		
Prof Kyamanywa Patrick	UR-CMHS		X	
Prof Condo Umutesi Jeannine	UR-CMHS		X	
Dr Nyirazinyoye Laetitia	UR-CMHS	X		
Dr Nkeramihigo Emmanuel	UR-CMHS		X	
Sr Maliboli Marie Josee	CHUK	X		
Dr Mudenge Charles	Centre Psycho-Social	X		

After reviewing your protocol during the IRB meeting of where quorum was met and revisions made on the advice of the CMHS IRB submitted on 29th May 2018, **Approval has been granted to your study.**

Please note that approval of the protocol and consent form is valid for **12 months**.

You are responsible for fulfilling the following requirements:

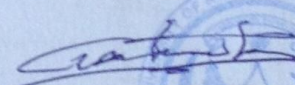
1. Changes, amendments, and addenda to the protocol or consent form must be submitted to the committee for review and approval, prior to activation of the changes.
2. Only approved consent forms are to be used in the enrolment of participants.
3. All consent forms signed by subjects should be retained on file. The IRB may conduct audits of all study records, and consent documentation may be part of such audits.
4. A continuing review application must be submitted to the IRB in a timely fashion and before expiry of this approval
5. Failure to submit a continuing review application will result in termination of the study
6. Notify the IRB committee once the study is finished

Sincerely,

Date of Approval: The 10th July 2018

Expiration date: The 10th July 2019

For Professor Kato J. NJUNWA
Chairperson Institutional Review Board,
College of Medicine and Health Sciences, UR


Prof. JB Galenkwa
Vice Chair



Cc:

- Principal College of Medicine and Health Sciences, UR
- University Director of Research and Postgraduate Studies, UR



CMHS INSTITUTIONAL REVIEW BOARD (IRB)

Kigali, 14/03/2019
N° 112/CMHS IRB/2019

Dr Jean Muragizi
School of Medicine and Pharmacy, CMHS, UR

Re: Amendment Request for Research Protocol

Dear Dr. Jean Muragizi,

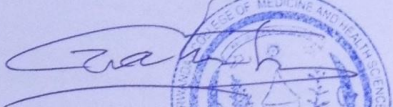
We thank you for submitting your request for research project amendments in the project titled *"The use of analgesia for trauma patients at CHUK Emergency Department (ED)"*.

After reviewing your protocol, the amendments have been approved with change of:

1. The expansion of research team as follow:
 1. Dr. UMUHIRE Olivier Felix as Supervisor
 2. Dr. Giles Cattermole, BM BCh FRCEM as Supervisor
 3. Joseph Urban Becker MD, FAAEM as Supervisor
 4. Vinay SHARMA as co-investigators

2. The period of data collection as July 2018-December 2018,
3. Changing the sample size at 260 patients.

We wish you success in this important study.


Professor GAHUTU Jean Bosco
Chairperson Institutional Review Board,
College of Medicine and Health Sciences, UR

Cc:
- Principal College of Medicine and Health Sciences, UR
- University Director of Research and Postgraduate Studies, UR



CMHS INSTITUTIONAL REVIEW BOARD (IRB)

Kigali, 3rd April, 2019
No 141 /CMHS IRB/2019

Dr. Jean MURAGIZI
School of Medicine and Pharmacy, CMHS, UR

Re: Amendment Request for Research Protocol

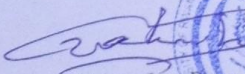
Dear Dr. Jean MURAGIZI

We thank you for submitting your request for research project amendments in the project titled
"The Use Of Analgesia For Trauma Patients At CHUK Emergency Department (ED)".

After reviewing your protocol, the amendments have been approved with a change in the following areas:

- Changes in the supervisory team; Dr. ADAM R. ALUISIO is a supervisor while Joseph Urban Becker is no longer part of the supervisors.
- The used consent form was submitted

We wish you success in this important study.


Professor Gahutu Jean Bosco
Chairperson Institutional Review Board
College of Medicine and Health Sciences, UR

Cc:
- Principal College of Medicine and Health Sciences, UR
- University Director of Research and Postgraduate studies, UR

CHUK ethical committee approval



CENTRE HOSPITALIER UNIVERSITAIRE
UNIVERSITY TEACHING HOSPITAL

Ethics Committee / Comité d'éthique

August 13th, 2018

Ref.: EC/CHUK/635/2018

Review Approval Notice

Dear Jean Muragizi,

Your research project: "The use of analgesia for trauma patients at emergency department, CHUK"

During the meeting of the Ethics Committee of University Teaching Hospital of Kigali (CHUK) that was held on 13th August 2018 to evaluate your protocol of the above mentioned research project, we are pleased to inform you that the Ethics Committee/CHUK has approved your protocol.

You are required to present the results of your study to CHUK Ethics Committee before publication.

PS: Please note that the present approval is valid for 12 months.

Yours sincerely,

Dr. Rusingiza Emmanuel
The President, Ethics Committee,



University Teaching Hospital of Kigali <<University teaching hospital of Kigali Ethics committee operates according to standard operating procedures (Sops) which are updated on an annual basis and in compliance with GCP and Ethics guidelines and regulations>>

B.P. :655 Kigali- RWANDA www.chk.rw Tél. Fax : 00 (250) 576638 E-mail : chuk.hospital@chukigali.rw

Questionnaire
The use of analgesia for trauma patients with pain

A. Identification

Study ID number _____

Patient ID _____

Sex: Male Female

Year of birth _____

Occupation _____

Insurance _____ YES/NO __ MUSA /RSSB/ OTHERS _____

B. Mechanism of injury:

1. RTA: Patient on moto, hit: Moto Vehicle Pedestrian None Other _____

Patient on vehicle, hit: Moto Vehicle Pedestrian None Other _____

Patient on bicycle, hit: Moto Vehicle Pedestrian Other bicycle none other

Pedestrian, hit by: Moto Car/bus Bicycle other _____

2. Fell from a height: Tree Building Into hole Other _____

3. Crushed: Mine collapse Tree Landslide Carrying load Other _____

4. Assault: Stone Stick Knife/machete Hand/foot only Other _____

5. Burn : hot water potage fell in the fire electrical burn Other _____

6. Other mechanism _____

C. Time and analgesia delivery

Estimated date/time of injury. Date _____ Time _____

Analgesia received prior admission to ED YES/NO _____ EMS DH

other

Route of administration IV/IM/PO

Date /time of arrival at CHUK(ED) _____

Transport method to CHUK: EMS Private car DH ambulance walking
 other

Triage score _____ triage time _____

Triage color: Red Orange Yellow Green

Pain score ___/10

BP _____ HR _____ SPO2 _____ Temperature _____

Date /time seen by treating Dr _____ daytime, nigh duty, weekday, weekend

Analgesia prescriber GP _____ ER Resident _____ ER consultant _____ other _____

Final Diagnosis:

Time to analgesia prescribed Time _____

Type of analgesia delivery _____

Nurse level of education and Sexe A2, A1, A0 Sex: Male Femal

Disposition: ED, Observation Discharge other

INFORMED CONSENT FORM

1) Patient or Care taker consent form.

Hello, my name is _____. I am part of a research study in which we would like to learn about patients Pain management post trauma. We would also like to determine when patients with trauma like you are receiving analgesia after arrival at emergency department at CHUK. We wish to collect information which will be kept confidential. We hope this information will improve health professional performance of the management of pain post trauma. We will analyze your charts for information about the time of analgesia and what type of analgesia and what was the level of pain. We will not perform any invasive acts. With your permission, I will review your chart for the management of your pain. If I find an error in the chart or with the management of your pain, I will let the treating physician know about it.

If you have questions about the study, contact:

Dr. Jean MURAGIZI, MD, PGY-4

University of Rwanda; University Central Hospital of Kigali (CHUK)

Phone: +250 788857297

Dr. Olivier Felix UMUHIRE

University of Rwanda; University OF Rwanda and King Faisal Hospital (KFH)

If you have questions about your rights in the study, contact:

Professor Kato J. Njunwa

Chairperson, Institutional Review Board

Phone: +250788490522

Deputy Chairperson, Institutional Review Board

Phone: +250783340040

College of Medicine and Health Sciences, University of Rwanda

P.O. Box 3286

Kigali, Rwanda

Email: researchcenter@ur.ac.rw

Website: <http://cmhs.ur.ac/rw/>

Asset by children of 1-18 yearsAccept/refuse

Name of patient (Care taker).....Signature.....Date.

Umugereka: gusuzuma uko umurwayi wahatahwaswe mu gituzza avurwa

1.Ukwemera k'umurwayi cyangwa umurwaza we gukorerwaho ubushakashatsi.

Muraho neza, Amazina yanjye ni..... ndi umwe mu bari gukora ubushakashatsi ku kumenya uko umurwayi ahabwa imiti igabanya ububabare akigera muri CHUK nyuma yo gukora impanuka , kandi amakuru tuyakusanya mu buryo bw'ibanga aakazafasha abakozi bo mu buzima ku kongera ireme ry'ubuvuzi mugutanga imiti kugihe kubarwayi bakoze impanuka, n'ubwoko bw'imiti bahawe igabanya ububabare. Turareba mu mafishi muvurirwaho, imiti mwahawe . Nta ngaruka mbi bigira, ahubwo tubonye hari icyo abaganga bagukurikirana bibagiwe twahita tubibutsa. Mubitewemereye rero twareba mu mafishi yanyu,

Niba ufite ibibazobijyanyen'ububushakashatsi, binyuze kuri aba bakurikikira:

Dr. Jean MURAGIZI , MD, PGY-4

University of Rwanda; University Central Hospital of Kigali (CHUK)

Phone: +250 788857297

Numerical pain scale

Numerical Pain Scale

KAISER PERMANENTE
San Diego

For use in adults, adolescents & cognitively-appropriate pediatric patients



May use **FACES Scale** if patient has difficulty with use of numeric scale

