

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.elsevier.com/locate/burns

Assessing guidelines for burn referrals in a resource-constrained setting: Demographic and clinical factors associated with inter-facility transfer



A. Klingberg^{a,*}, L. Wallis^b, H. Rode^c, T. Stenberg^a, L. Laflamme^{a,d},
M. Hasselberg^a

^a Department of Public Health Sciences, Karolinska Institutet, Widerströmska Huset, Tomtebodavägen 18 A, 171 77 Stockholm, Sweden

^b Division of Emergency Medicine, Faculty of Medicine and Health Sciences, Stellenbosch University, Private Bag X24, Bellville 7535, South Africa

^c Department of Paediatric Surgery, Red Cross War Memorial Children's Hospital and Faculty of Health Sciences, University of Cape Town, South Africa

^d University of South Africa, Pretler Street, Pretoria 0002, South Africa

ARTICLE INFO

Article history:

Accepted 26 January 2017

Keywords:

Burns

Trauma care

Emergency care

Referral criteria

Children

Sub-Saharan Africa

ABSTRACT

Aim: The aim was to assess demographic and clinical factors associated with inter-facility referrals for patients with burns in a resource-constrained setting.

Methods: This was a cross-sectional case review of patients presenting with a burn at the trauma unit at the Red Cross War Memorial Children's Hospital (RXH) in Cape Town, South Africa.

Results: Six hundred and eleven—(71%) children were referred to the burns or the intensive care unit and 253 children were treated and discharged from the trauma unit. Of those admitted as inpatients 94% fulfilled at least one of the criteria for referral and 80% of those treated and discharged fulfilled the criteria for referral.

Conclusions: Almost three out of four children evaluated at the trauma unit were referred to the burns unit for further management. However, a large number of patients were treated and discharged from the trauma unit despite being eligible for referral.

© 2017 Elsevier Ltd and ISBI. All rights reserved.

1. Introduction

Burn care has advanced in the past decades, resulting in better outcomes in patients with major burns. Unfortunately, children in low and middle-income countries (LMIC) are still disproportionately affected [1], and clinical outcomes are often worse in resource-constrained health care systems [2].

South Africa has a high incidence of burns, with children less than four years old at highest risk: their average annual rate is 6.0/10,000 child-years, with boys affected to an extent higher than girls [3]. While children with minor burns may successfully be treated at primary care level, those with severe or complex burns often require treatment at higher levels of care to minimise physical and psychosocial consequences.

Trauma systems should aim to ensure timely and appropriate care within the financial and resource limitations of the

* Corresponding author.

E-mail address: anders.klingberg@ki.se (A. Klingberg).

<http://dx.doi.org/10.1016/j.burns.2017.01.035>

0305-4179/© 2017 Elsevier Ltd and ISBI. All rights reserved.

health systems; utilization of proper triage is an important part of achieving this goal. Accurate triage is the match between injury severity and the level of care. The care and referral paths will also depend on the local context and available resources. To support decision making, referral criteria are used to guide health practitioners when deciding whether to transfer a patient to a higher level of care.

While studies have previously assessed adherence to burn referral criteria in high-income settings, indicating many patients are not always referred according to the established criteria [4-7], studies from LMICs are scarce. One recent study from another part of South Africa found that many patients were often inappropriately referred to the burns unit [8]. Another study from South Africa studying pathways to care found that two of the most critical barriers to access to care were clinical assessment and referrals of the patients [9]. The underlying reasons for the over- and under-referrals within burn care are multifaceted, but include insufficient knowledge among emergency department (ED) staff on burn management [10], errors in burn estimation [11], and lack of dressings and topical solutions [10].

In the Western Cape of South Africa, the provincial government has set up a network of services and facilities to treat these large numbers of burns. These services were established to de-escalate management of burns to the appropriate levels of care comprising primary healthcare facilities and clinics, regional and district hospital and tertiary institutions [12]. To improve referral of patients, referral criteria have been implemented [13]. However, the extent to

how these criteria are appropriate to the burden of burns in the region and the local health system is unknown.

The aim of this study was to assess demographic and clinical factors associated with inter-facility referrals for patients with burns in a resource-constrained setting. Two research questions were formulated: (1) What is the magnitude of over- and under-referral among children presenting to the emergency department? (2) What are the clinical and demographic differences between children referred to an in hospital burn unit and children treated and discharged at the emergency department?

2. Methods

2.1. Design and setting

This study was a cross-sectional case review of patients with a burn presenting to the emergency department and reviewed at the trauma unit (TU) at the Red Cross War Memorial Children's Hospital (RXH) in Cape Town. The RXH is the only health institution dedicated to children within the Western Cape Province, offering a wide-ranging set of services of specialist paediatric care. The RXH is also a referral hospital for the entire country of South Africa and neighbouring countries for specialized care. The hospital serves approximately 260,000 patients annually and has 300 beds, with about 1300 burn patients attending the TU during 2015. Patients are predominantly from impoverished areas. The Burns Unit at the RXH is

Referral criteria for transfer to burns centre in the Western Cape Province of South Africa.

- 1 Age under 2 years
- 2 Partial thickness burns >15 TBSA
- 3 Full thickness burns >15 TBSA
- 4 Anatomical site - Face, hands, genitalia, perineum, major joints, circumferential burns. These burns can also be dealt with at level 1 or 2, but discretion must be used.
- 5 Inhalation injury requiring ventilation for over 48 hours
- 6 Mechanism of injury:
 - Exposure to ionising radiation injury
 - High pressure steam injury
 - High tension electrical injury (>1000 volts)
 - Hydrofluoric acid injury >1% TBSA
 - Suspicion of non-accidental burn injury
- 7 Existing Co-morbidity:
 - Cardiac limitation and/or MI within 5 years
 - Respiratory limitation of exercise
 - Uncontrolled type 1 diabetes
 - Pregnancy
 - Medically or disease induced immune-suppression for any reason
 - Existing psychiatric or suicidal tendencies
 - Suspected drug/alcohol abuse
- 8 Severe associated injuries, e.g., polytrauma and crush syndrome

Fig. 1 – Western Cape Referral criteria for transfer to a burns centre [13].

Download English Version:

<https://daneshyari.com/en/article/5636161>

Download Persian Version:

<https://daneshyari.com/article/5636161>

[Daneshyari.com](https://daneshyari.com)