State of Burn Care In Zambia Southern Africa-a Scoping Review

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Burn Care in Zambia

- In Zambia burn care- delivered within General surgical units
- Specialist care (physiotherapy/Nutrition)- provided as requested
- Burn care is a subspeciality
- Ideally delivered in independent multidisciplinary teams adressing patient needs[1-2]
- Advantage of burn teams-better coordination of services and costs [1]

The aim of this study was to provide a comprehensive analysis of the state of burn care in Zambia, looking for advancements in key components of burn care;

- Surgery
- Nutrition
- Pain management
- Rehabilitation
- Health worker training
- Community prevention programs

Methods

- Scoping review undertaken using the African Journals online, Zambia Medical Journal, Pub-med, the University of Zambia Thesis Repository
- Article reference lists
- Specific author searches.
- Google search
- Data was extracted on study characteristics, patient demographics, clinical course, burn prevention, surgery, analgesia, physiotherapy and health worker training.

Results Article Search Flow Chart

Excluded 4269
Not from Zambia
Not on burns
Article not accessible

Total Reviewed Articles- 19

Total articles - 4288+ 53 Issues

Zambian Medical Journal- 53 Issues

Pub Med (2533)

UNZA Thesis Repository (972)

African Journals Online (775)

Google pages, Reference lists, Author Search

(5)

Results

- 19 papers were reviewed.
- Published from 1979-2023.
- Study type-six interventional studies, retrospective studies and cross-sectional studies respectively.
- Sixty-one percent of the studies were conducted in Lusaka at the University Teaching Hospital
- Two-thirds published by senior physicians or foreign researchers.

Article Summary

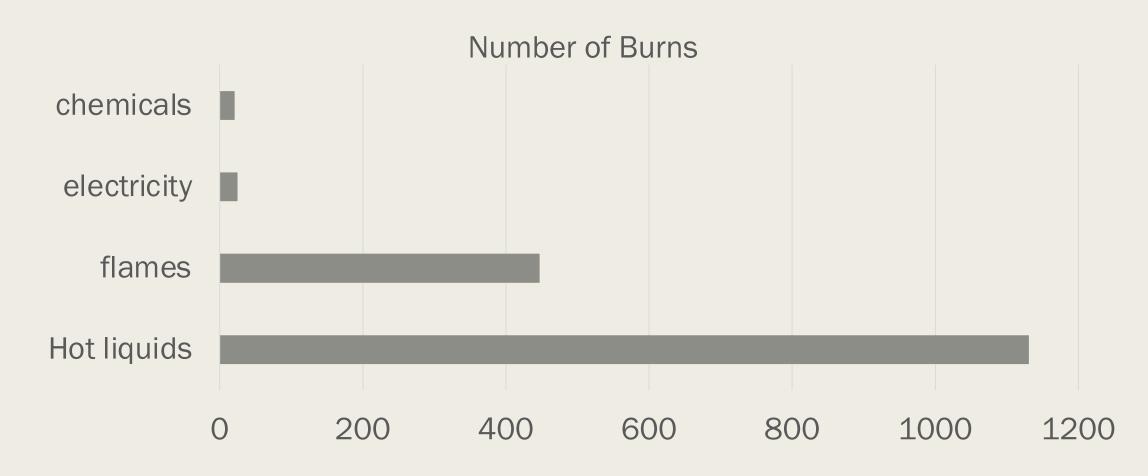
		published in journal			
Author	Year	(yes/No)	Study Design	Setting	Location
Sharma	1979	yes	Interventional	Hospital	Lusaka-UTH
Nath	1996	iyes	Retrospective	Hospital	Lusaka-UTH
			Prospective		
Zimba	1999	no	Cross-sectional	Hospital	Lusaka-UTH
			Retrospective		
Mugala	2006	Yes	Cohort	Hospital	Chingola
Chanda	2007	yes	Retrospective	Hospital	Lusaka-UTH
Mtonga	2010	yes	Retrospective	Hospital	Lusaka-UTH
					Eastern- ST
Edwards	2011	yes	Retrospective	Hospital	Francis
Goran	2011	yes	Retrospective	Hospital	Country-wide
					Eastern
Edwards	2011	yes	Retrospective	Hospital	Province
			Prospective		
Sheyo	2012	lyes	Cohort	Hospital	Lusaka-UTH

Article summary

Author		published in journal (yes/No)	Study Design	Setting	Location
		() / · · · · /		o a same	Eastern
Heard	2013	yes	Cross-sectional	School	Province
					Eastern
Heard	2013	yes	Interventional	school	Province
Maimbo	2014	yes	Interventional	Hospital	Lusaka-UTH
Mwape	2016	Yes	Interventional	Hospital	Lusaka-UTH
Mugala	2016	Yes	Interventional	Hospital	Chingola
			Randomised		
Liche	2018	yes	Trial	Hospital	Lusaka-UTH
			Prospective		
Ziwa	2018	yes	Analytical	Hospital	Lusaka-UTH
Munjili	2020	no	Cross-sectional	Hospital	Kabwe General
Pikiti	2023	yes	Cross-sectional	Hospital	Lusaka-UTH

- The total number of burns patients identified in this study was 8710,
- The mean age was 7.8 years
- Male to female ratio was 1.
- Mean total burnt surface area was < 10%

Commonest cause of burns was scalding (70%).



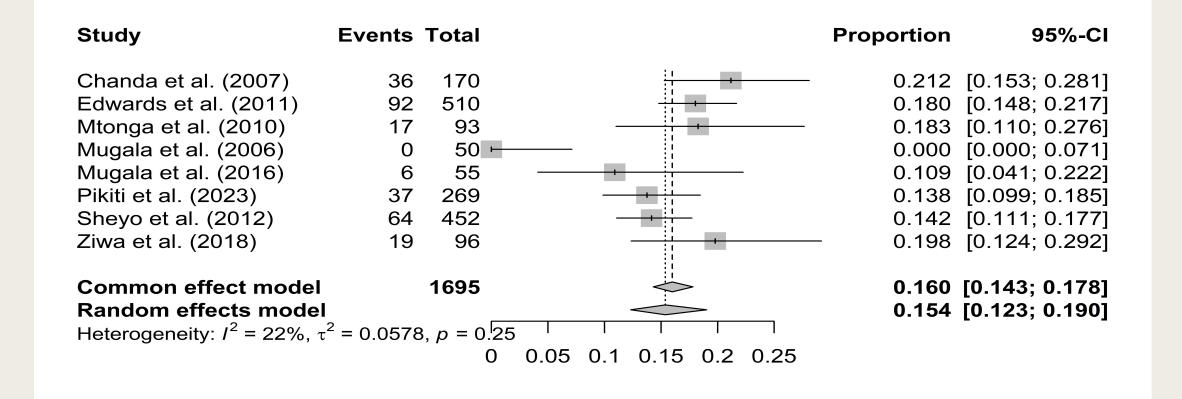
Infection rate

■ Average rate- 46.7% (27.9-66.5).

Study	Events	Total		Proportion	95%-CI
Chanda et al. (2007)	47	170		0.276	[0.211; 0.350]
Liche et al. (2018)	51	64		0.797	[0.678; 0.887]
Maimbo et al. (2014)	30	78	 	0.385	[0.277; 0.502]
Mugala et al. (2006)	16	50		0.320	[0.195; 0.467]
Mugala et al. (2016)	9	55		0.164	[0.078; 0.288]
Mwape et al. (2016)	42	46		0.913	[0.792; 0.976]
Pikiti et al. (2023)	107	269	-	0.398	[0.339; 0.459]
Sheyo et al. (2012)	194	452		0.429	[0.383; 0.476]
Common effect model		1184	\limits	0.419	[0.391; 0.447]
Random effects model				0.467	[0.279; 0.665]
Heterogeneity: $I^2 = 92\%$, $\tau^2 = 1.3096$, $\rho < 0.01$					
			0.2 0.4 0.6	0.8	

Mortality Rate

Average rate- 15.4% (12.3-19.0)



- □ The average length of hospital stay was 15.7 days.
- □ 2649 surgical operations were reported across five studies- high burden of contractures needing surgical intervention representing nearly 80% of burns surgical operations.
- Prevention studies showed low levels of burns prevention knowledge in communities.
- Research was non-existent on various burn-care components.

Recommendations for Burn Care by Zambian Research

Recommendations	Author
Need for burns centre creation	Maimbo et al, 2014
Burns prevention programs	Mugala et al, 2006; Goran 2011, Heard et al, 2013; Pikiti et al, 2023
Routine culture and sensitivity profile and enforcing infection prevention protocols	Mwape et al 2016; Mugala et al 2016; Ziwa et al, 2018
Health worker training (basic plastic surgery and emergency burn care)	Nath et al, 1996;Goran et al, 2011; Munjili et al, 2020

Conclusion

■ This study highlights a high disease burden of burns resulting in complications and limited research.

■ Strides to improve care must focus on increasing research funding, mentorship, translating research into practice, health worker training and community prevention efforts.

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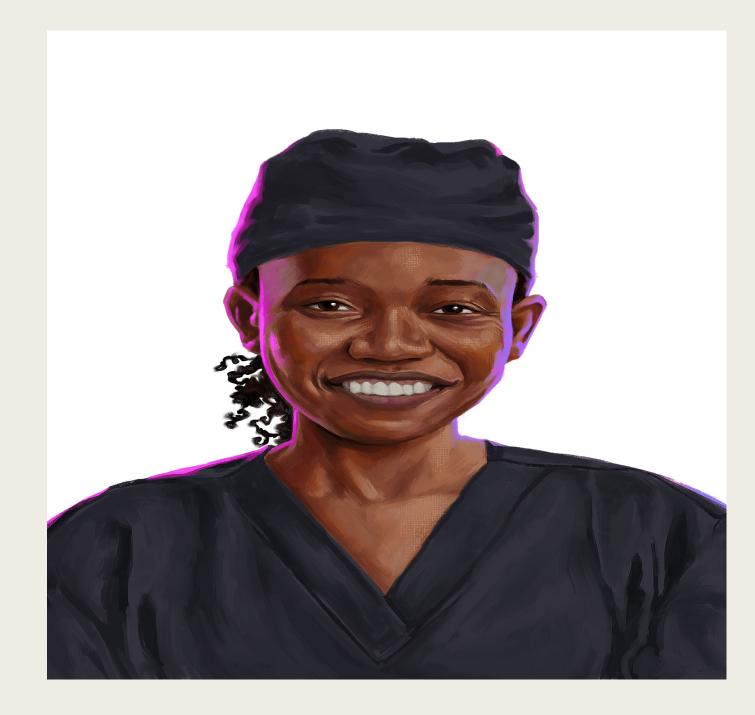
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