

# BURN INJURIES

SUSTAINED BY DISPLACED SYRIAN CHILDREN: CHARACTERISTICS, RISK FACTORS AND RECOMMENDATIONS FOR PREVENTION.

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# OUTLINE

- ◆ Burn Definition and Classification
- ◆ Burn Public Health Problem Globally, Regionally, and Locally
- ◆ Refugee Burn Study: Methodology and Data
- ◆ Key findings
- ◆ Recommendations

# BURN INJURY: Definition and Classification

## ➤ Definition

Burn - Injury (heat, cold, electrical, chemical, or radiation) causing damage to skin tissues.

## ➤ Causes

- a. Thermal Burns (Scald, Flame and Contact)
- b. Chemical Burns (Acid)
- c. Electrical Burns (High voltage)
- d. Radiation Burns (Sunburn)
- e. Cold Burns (Frostbite)

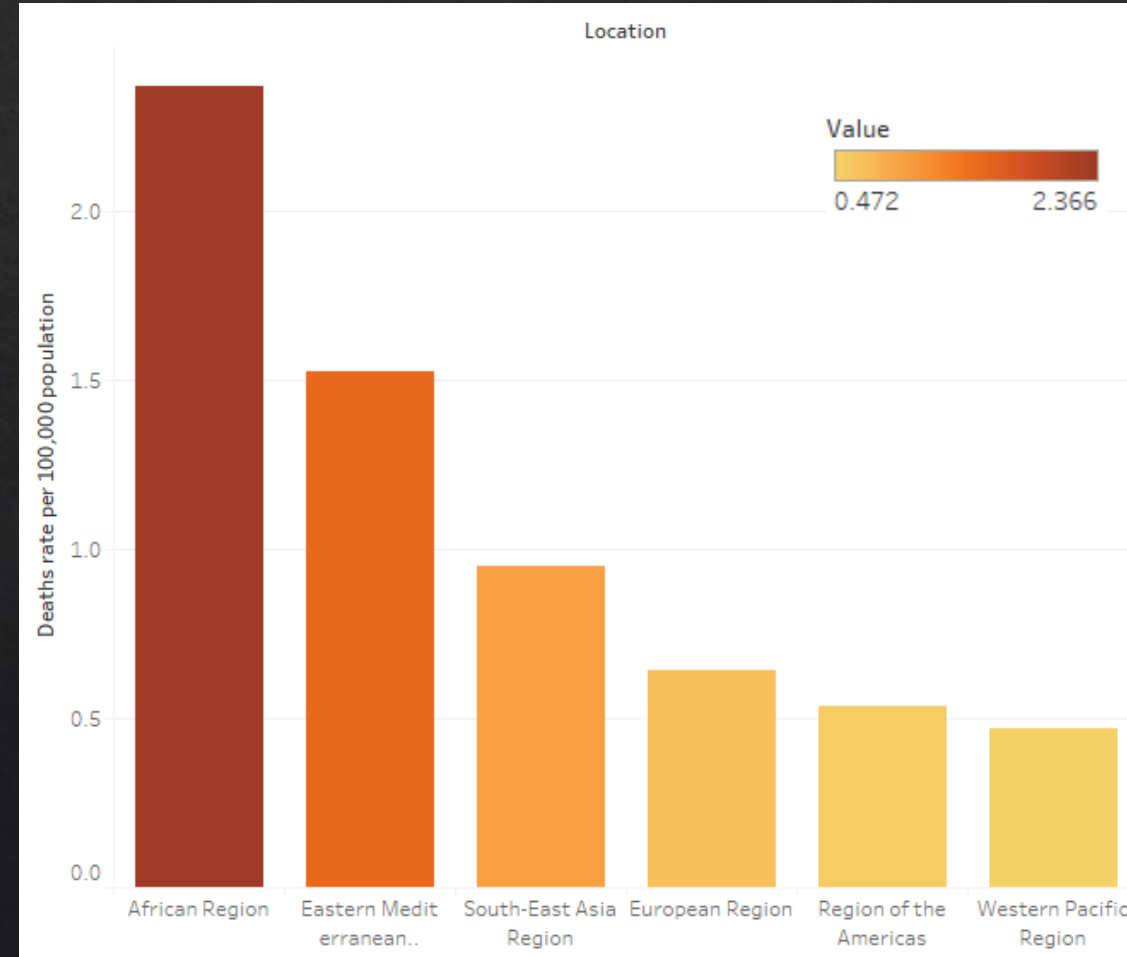
## ➤ Classification

1. First Degree (mild)
2. Second Degree
3. Third Degree
4. Fourth Degree



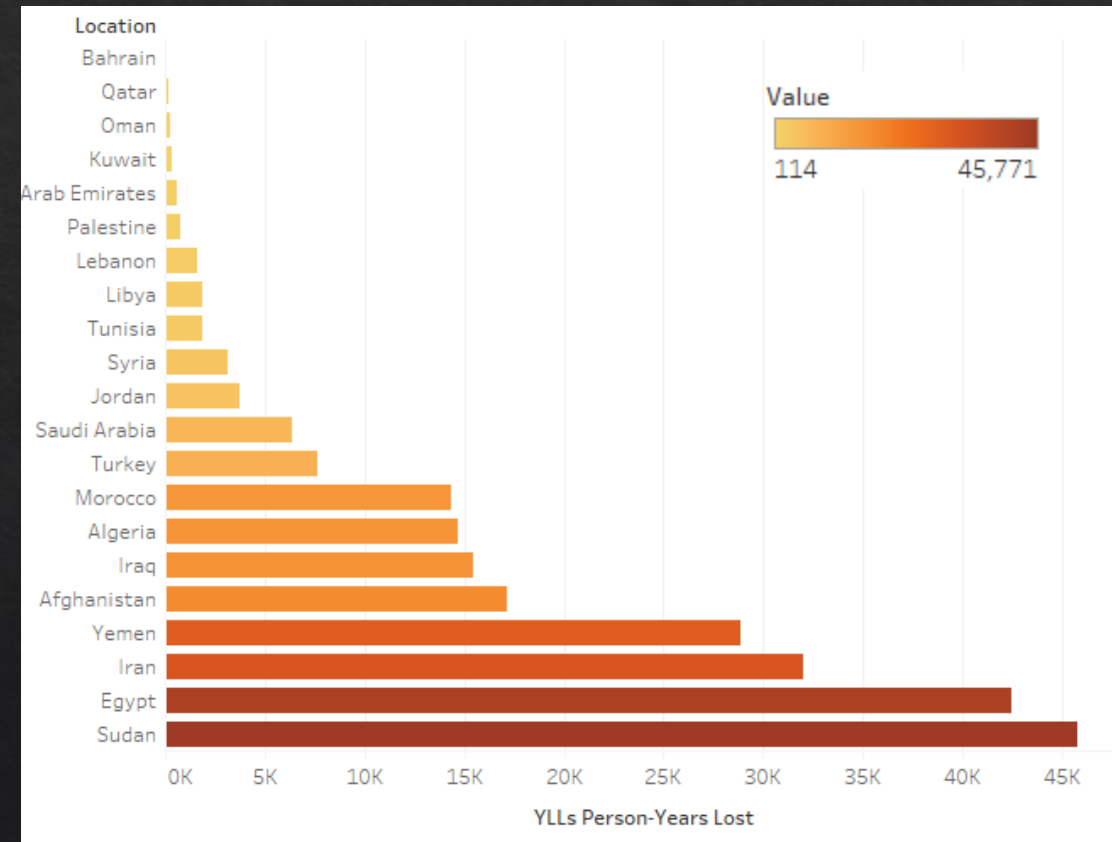
# BURN INJURY: Public Health Problem

- ◇ Burns - One of the most common causes of morbidity and mortality worldwide.
- ◇ The burden of burns adversely affects the pediatric population. Burns are the 5<sup>th</sup> leading cause of non-fatal childhood injuries
- ◇ More than 3.4 M children (20 Y) in 2017, with almost 27,000 deaths
- ◇ Over **95%** of fatal burns occur in low- and middle-income countries (LMICs)
- ◇ Middle Eastern Region- 2<sup>nd</sup> highest number of fatal burns in the World



# BURN INJURY: Public Health Problem

- ◇ EMR ~**466,000** children 0-19 Y in 2017, more than 100,000 occurred in war and conflict areas.
- ◇ Fatal Burns in EMR **4,100** children in 2017
- ◇ Years of Life Lost (YLLs) – **239,301.7** person-years lost
- ◇ Non Fatal Burns – leading cause of morbidity (hospitalization, significant disfigurement, physical impairment, stigma, psychological problems, and considerable economic burden).



# LEBANON BURN INJURY: Exacerbated Burden

- ◇ 5<sup>th</sup> leading cause of non-fatal pediatric injuries in Lebanon
- ◇ 11<sup>th</sup> leading cause of deaths for children aged 1-9Y.
- ◇ Regional War ~1.5 million Syrian Refugees settled in Lebanon (30% children 0-19y)
- ◇ Refugees – Poor living conditions, harsh environment, limited access to healthcare.

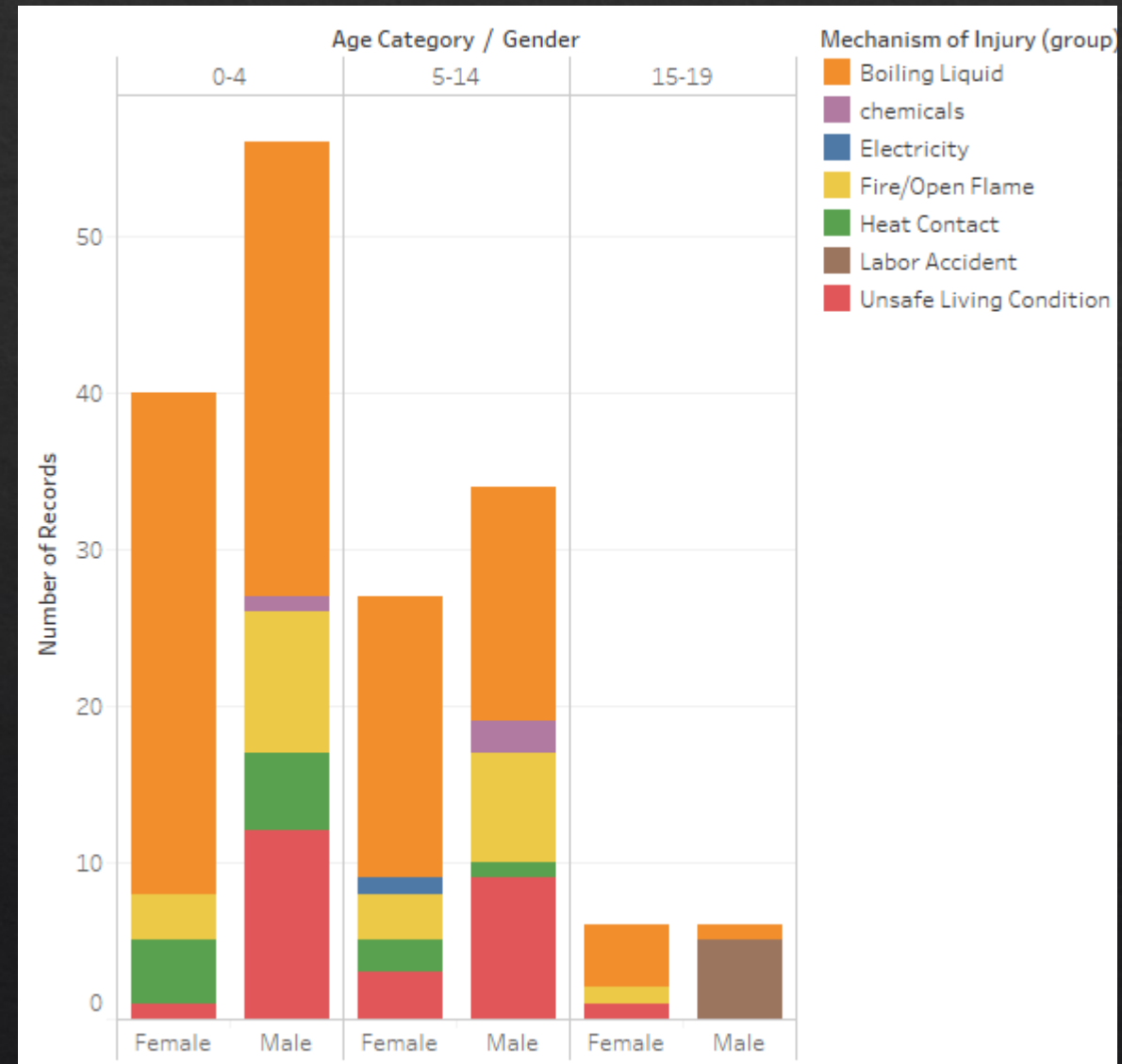


# STUDY METHODOLOGY

- **Objective:** Assess the characteristics and circumstances of pediatric burns and to highlight their underlying risk factors
- **Population:** Syrian Refugee Children and Youth 0-19 Y in Lebanon
- **Methodology:** Mixed Methods Approach (Quantitative + Qualitative)
- **Data source:** TAHADI and INARA
- **Inclusion/Exclusion Criteria:** Refugees residing in Lebanon; Burns occurred as a result of living conditions. Burns due to bombs/explosives in Syria were excluded.
- **Study Period:** Injury cases from 2010 to 2018

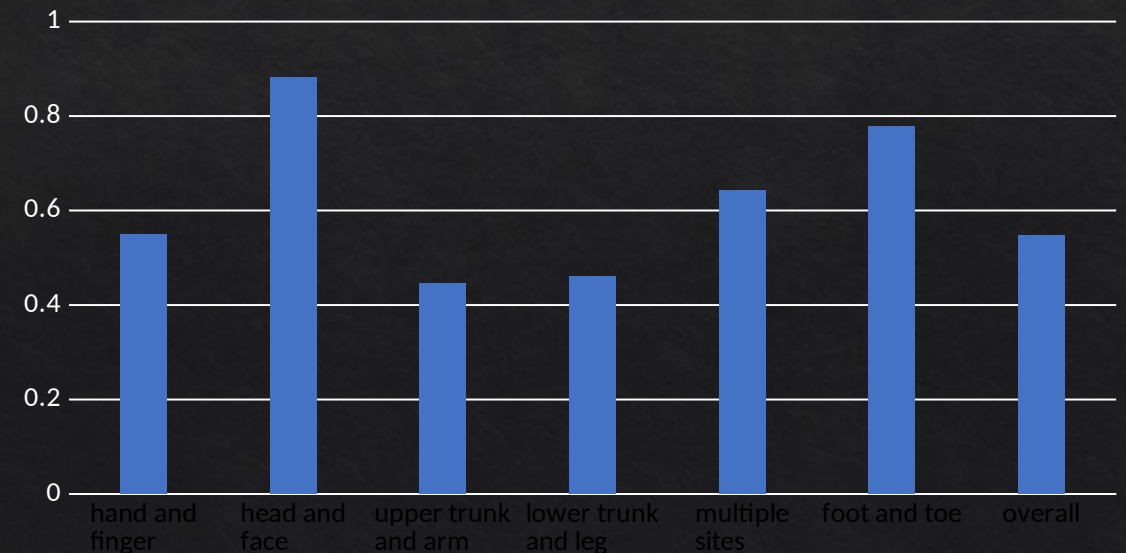
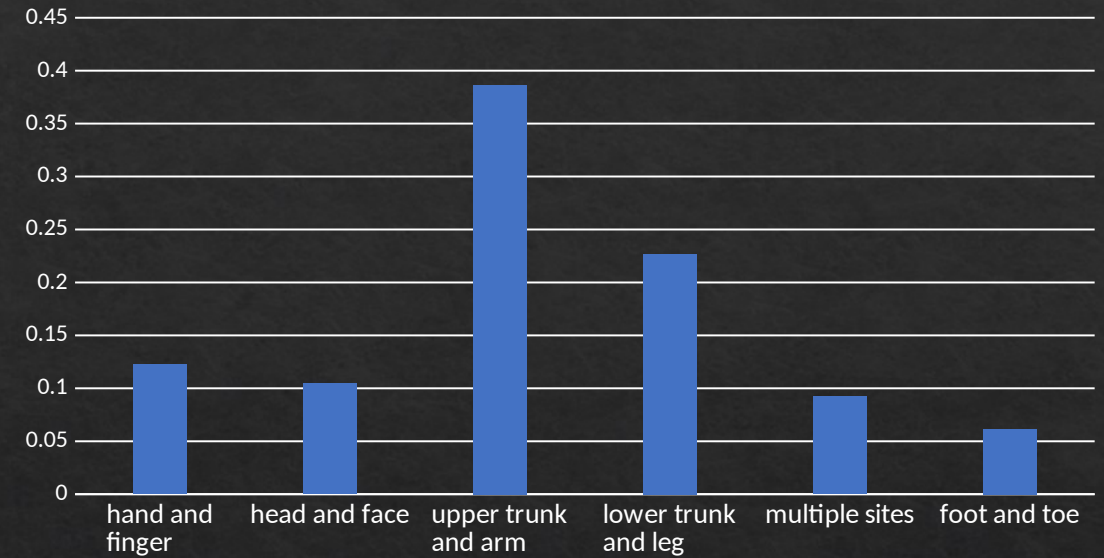
# KEY FINDINGS- Quantitative Data

- Total: 347 cases patient records. 179 cases met the study criteria
- **56%** were males. The mean age 5.5 y (SD ± 4.4 years)
- Most common cause of burns was Boiling Liquid (**58.6%**), Fire/Open flame (**12.8%**)
- Almost **40%** of burns cases – 2<sup>nd</sup> to 3<sup>rd</sup> degree burns
- Children [0-4] - potential at-risk group, highest proportion of burns (**53.6%**) -.
- Male Children [15- 19] - high proportion of labor related burns.
- No significant differences were found for mechanism of burn between males and females.

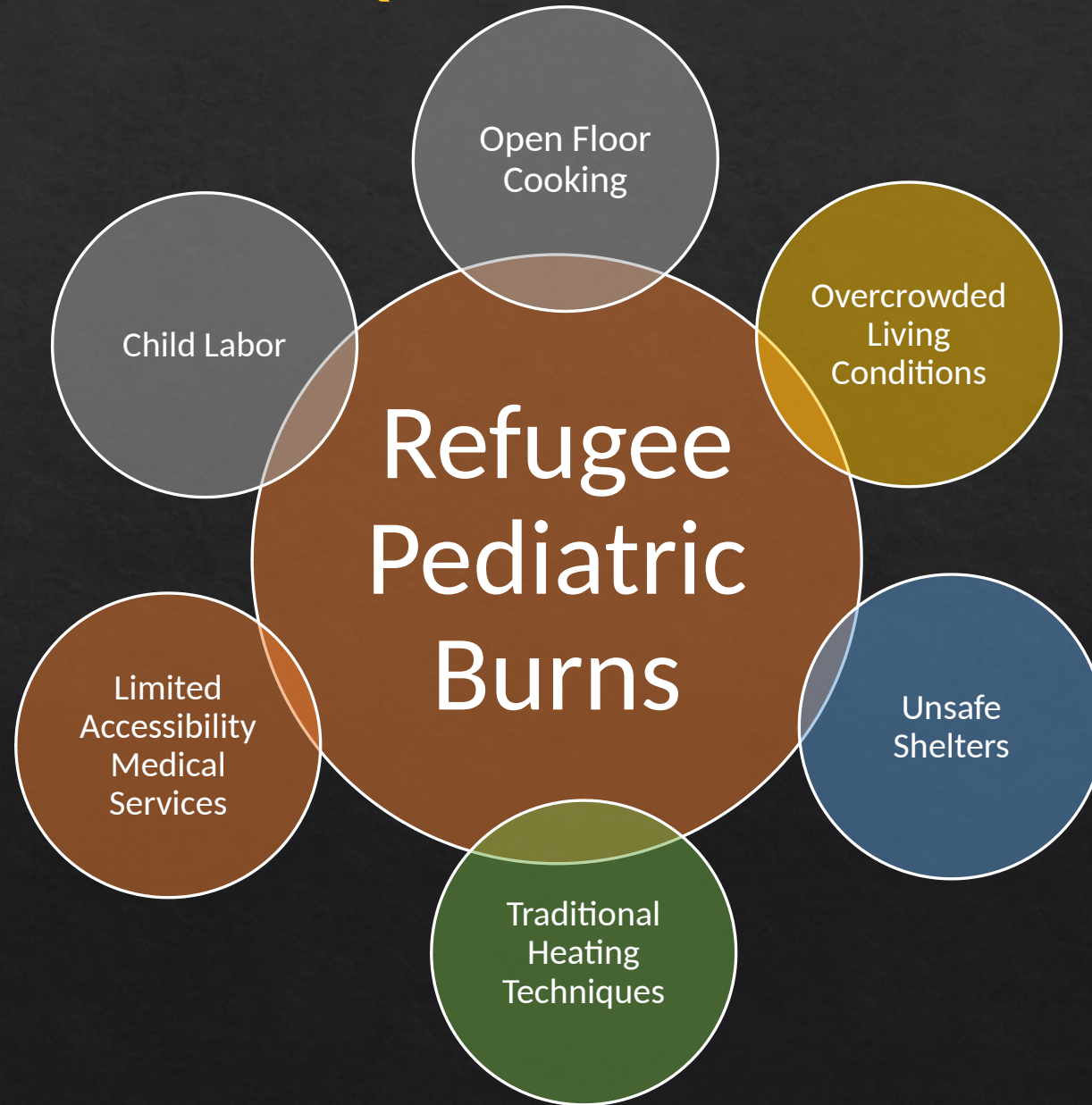


# KEY FINDINGS- Quantitative Data

- Upper trunk and Arm burns were significantly high (35.2%) compared to other body parts
- Females with **Upper Trunk and Arm** burns due to *boiling liquids* were among the potential at-risk group
- Males with **Head and Face** burns were significantly higher in relation to other body parts injured



# KEY FINDINGS- Qualitative Data



# RECOMMENDATIONS

1. Adopt evidence-based interventions to refugee context
  - Integrate and implement these strategies into programs and services.
2. Provide awareness and education to parents, caregivers, and camp supervisors (safe cooking and serving, heating practices)
3. Provide access to a health care facilities and offer early burn care.
4. Modify camp infrastructure - provide dedicated and separate cooking
5. Build burn prevention capacity and literacy through education and training of health professionals.
6. Design and implement government supported policies.



# Thank you

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## Acknowledgment

INARA - International Network For Aid Relief and Assistance, Lebanon

TAHADDI- NGO, Lebanon

Study Team: Dr. Ghassan Abu Sittah and Dr. Ahmad Oneissi, AUBMC Surgery Department, Lebanon

Dr. Ian Pike, Alex Zheng, BC Children's Hospital, Vancouver, Canada

