

**UC Davis**  
**Nutrition**

**Title**

Nutrition in Major Burn Patients

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**Data Availability**

The data associated with this publication are not available for this reason: N/A



## INTRODUCTION

- Major burns (burns >20% body surface area) can cause a patient's body to enter a hypermetabolic state, in which increased calories and protein are required to meet elevated nutritional demands.
- Adequate nutrition can help avoid severe consequences that arise from inadequate nutrients, such as weight loss, wound healing, and infections.
- Normally, patients are given a rate-based feeding regimen. However, this method often falls short of meeting the patient's nutritional demand.
- Recently, volume-based feeding has been introduced as a superior alternative.

## OBJECTIVE

- To compare short term and long-term health outcomes in major burn patients receiving volume-based feeding and rate-based feeding regimens.

## METHODS

- Retrospective chart review of major burn patients admitted to UCDCMC from 2016-2021 (n=331)
  - Inclusion Criteria:
    - Any patient admitted to UCDCMC with a burn  $\geq$  20% TBSA
    - $\geq$ 18 years of age
  - Exclusion Criteria:
    - <20%TBSA burn
    - < 18 years of age

FIGURE 1 – Burn Characteristics

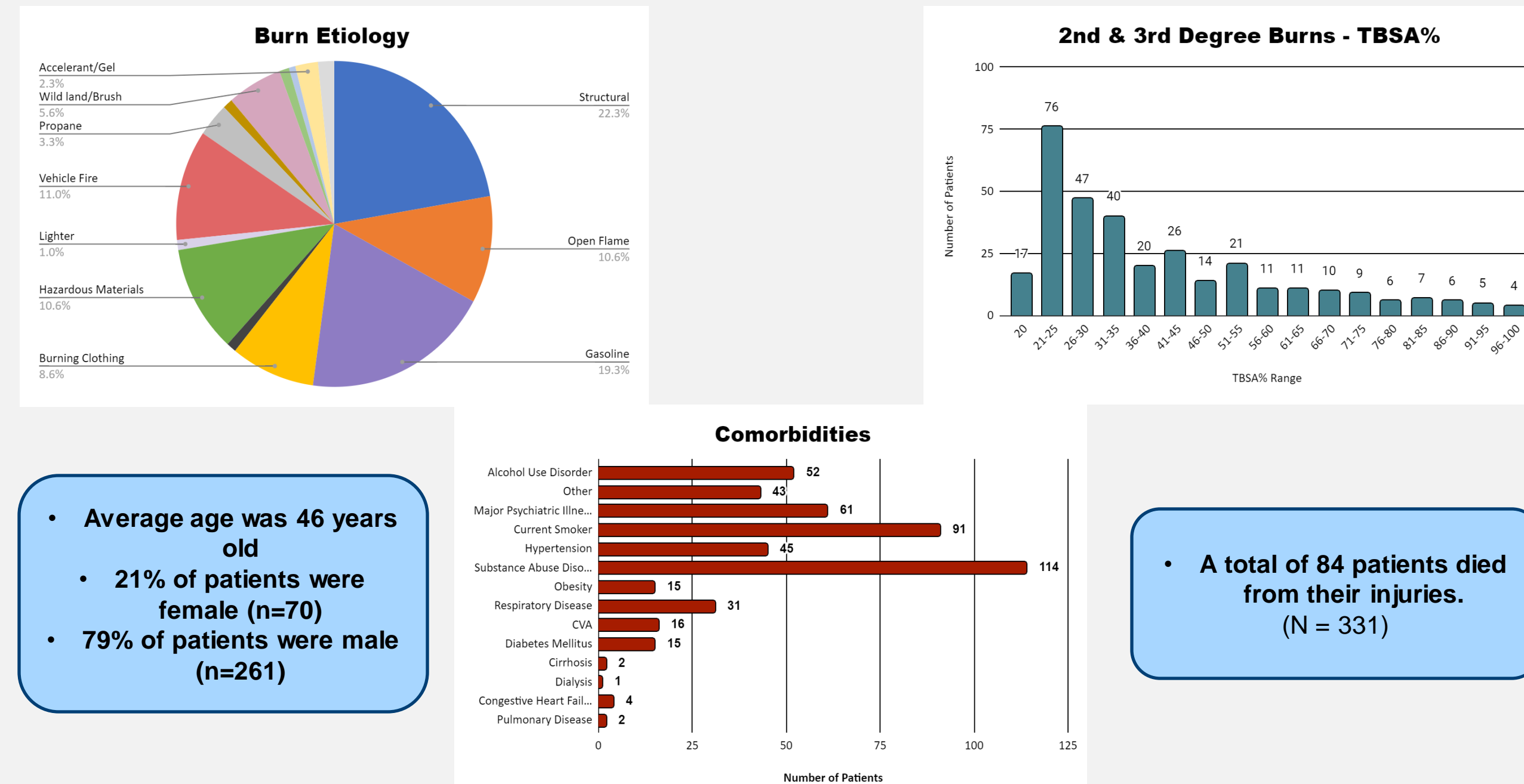


FIGURE 2 – Health Outcomes



## RESULTS

- Patients receiving volume-based regimen vs rate-based regimen were found to have a decreased hospital length of stay, days in the ICU, and days on a ventilator.
- A volume-based regimen also reduced the days to 95% wound closure.
- On average, patients on a volume-based regimen experienced less weight loss.

## LIMITATIONS

- Limited amount of time to collect all the relevant data such as
  - % caloric/protein needs delivered
  - lab values (albumin, transferrin, nitrogen)
- Unable to assess patient's long-term health years after discharge.

## DISCUSSION

- While there isn't enough data to say that a volume-based feeding regimen is superior to a rate-based feeding regimen, our data suggests that there are fewer serious long term health outcomes when patients are on a volume-based feeding regimen.

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