

# Impact of Area Deprivation Index and Distance From Hospital on Outcomes in Patients Undergoing Free Tissue Transfer to the Head and Neck

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## Background

- Low socioeconomic status (SES) is a known risk factor for head and neck cancer and trauma.
- Impact of neighborhood-level factors on free tissue transfer (FTT) outcomes after reconstruction is not well described.

## Objectives

This study examines the association of Area Deprivation Index (ADI), a metric of neighborhood disadvantage, with outcomes after FTT to the head and neck region.

## Methods

- A single-center retrospective review of patients undergoing FTT to the head and neck region from October 2019-February 2022.

**Primary Outcome:** Re-admission and Return to operating room

**Secondary Outcome:** Post-operative complications, Length of hospital stay

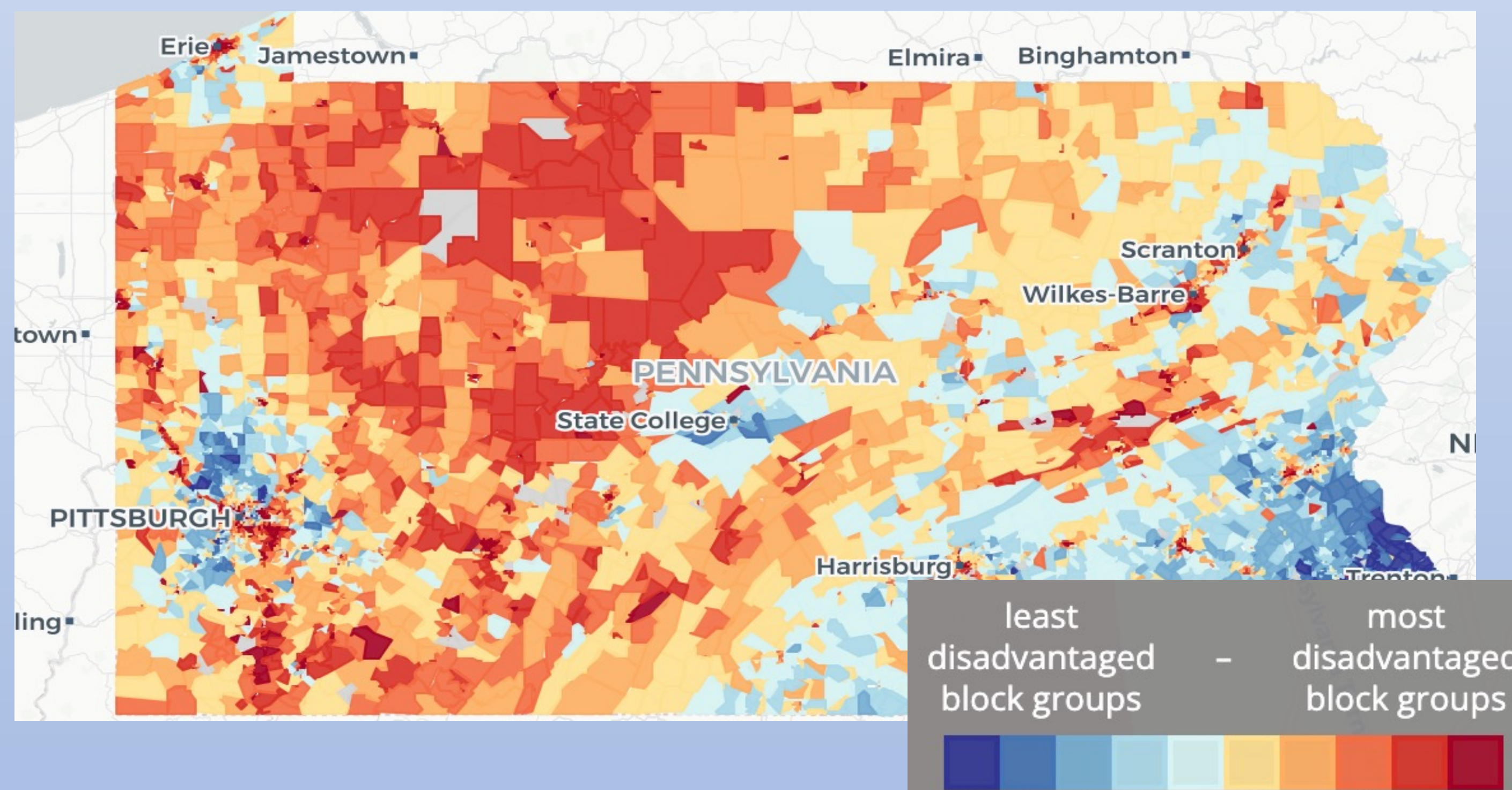
## Results

### Demographics

- 360 patients with FTT for head and neck reconstruction
- Average Age: 62.3 years
- Gender: 72.6% of patients were male
- 75% smokers

### Area-Deprivation Index

- Average ADI:  $67.9 \pm 17.3$



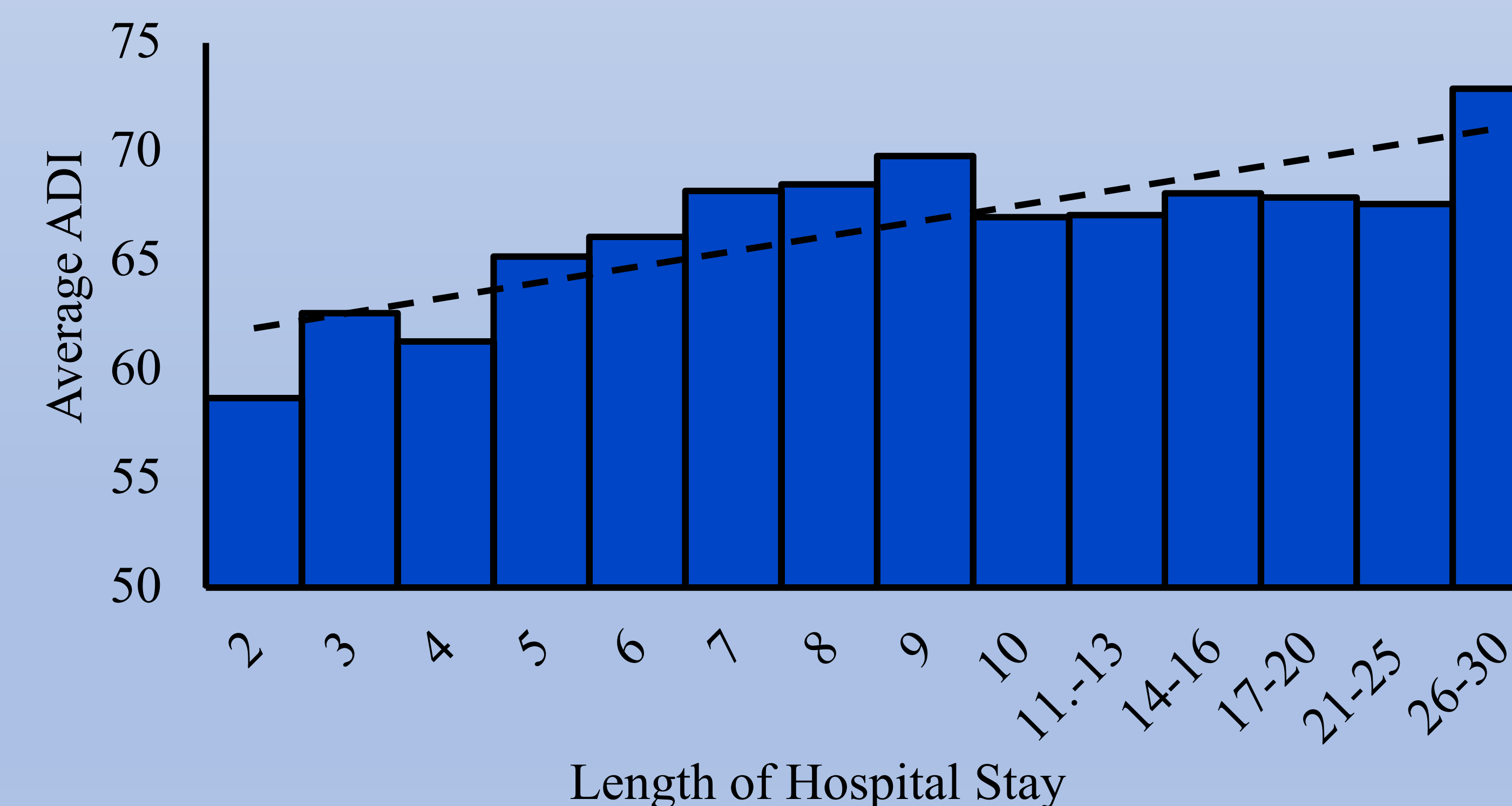
### Post-Operative Complications

- Defined as: thrombosis, flap necrosis, wound dehiscence (donor/recipient site), salivary leak, seroma, hematoma, infection
- 141 patients (37.1%) experienced post-operative complication
- Wound dehiscence was the most common complication at both the donor (41.5%) and recipient (26.9%) sites

### Post-Operative Care

- Average distance from patient's home ZIP code to hospital: 68.1 miles (range 1 – 1142 miles)
- Average Length of Hospital Stay: 10.5 days  $\pm$  6.3 days
- Discharge Location:
  - Home: 93 patients (25.8%)
  - Home with Nursing: 190 patients (52.7%)
  - Skilled Nursing Facility: 75 patients (20.8%)

Patients discharged to SNF had a significantly **higher ADI** than patients discharged to home either with or without nursing ( $p < 0.05$ )



Patients discharged within 4 days had a significantly **lower ADI** than those discharged after 14 days (60.9 vs. 68.7,  $p = 0.03$ )

## Results (continued)

- **Re-admission Rate:** 7.2%
- **Re-intervention Rate:** 5.5%
- **2-Year Mortality Rate:** 13.7%

Re-admitted patients has a **higher ADI** than those with no re-admission history (72.9 vs 66.5,  $p < 0.05$ )

- Re-intervention or 2-year mortality were not significantly associated with ADI or distance from hospital

## Conclusions

**Area Deprivation Index** can be a helpful tool to identify higher risk individuals and better allocate resources to mitigate risk of mortality and complications, particularly in smaller centers with less developed preoperative and postoperative support capabilities.

## Contact

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