Providence Mission Hospital

Item# 7: Providence Mission Hospital

Beyond Race and Ethnicity: Advancing Health Equity Through Addressing Average Length of Stay and Readmission O/E in Sepsis Population with Limited English Proficiency

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Director, Care Experience &
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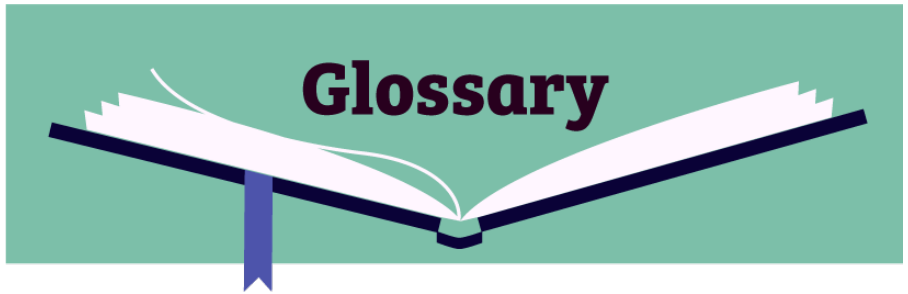
Providence Health Equity Fellowship

In 2020, Providence made a 6-year, $50 million commitment to reduce health disparities for communities who have historically been underserved or marginalized.

As part of this commitment, Providence launched its Health Equity Fellowship in March 2023. The program aims to build caregivers' capacity and expertise through mentorship, comprehensive training, and the real-time application of health equity principles.

Twenty fellows from across the Providence system joined the program's inaugural year. Each fellow designed, implemented, and managed a process improvement health equity project addressing the needs of marginalized patient populations in their local communities.



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- **Sepsis:** Sepsis is the body's toxic response to an infection, and it occurs when your body starts to attack itself rather than the infection. Sepsis is the leading cause of death in hospitals. Each year at least 1.7 million adults in the U.S. develop sepsis, and nearly 270,000 die as a result.
- **LEP Person:** A person with limited English proficiency (LEP) is someone who does not speak English as their primary language and has a limited ability to read, speak, write, or understand English.
- **Length of Stay (LOS):** The duration of a single episode of hospitalization. Length of stay is calculated by subtracting day of admission from day of discharge.
- **30-Day Readmission:** Unplanned readmissions to the hospital within the 30 days after being discharged. Unplanned hospital readmission is not always related to the previous visit.
- **Readmission Observed to Expected (O/E) ratio:** Observed readmission is the actual number of readmissions. Expected readmission is a predicted number based on the patient's readmission risk. The ratio is calculated by dividing the observed by the expected.

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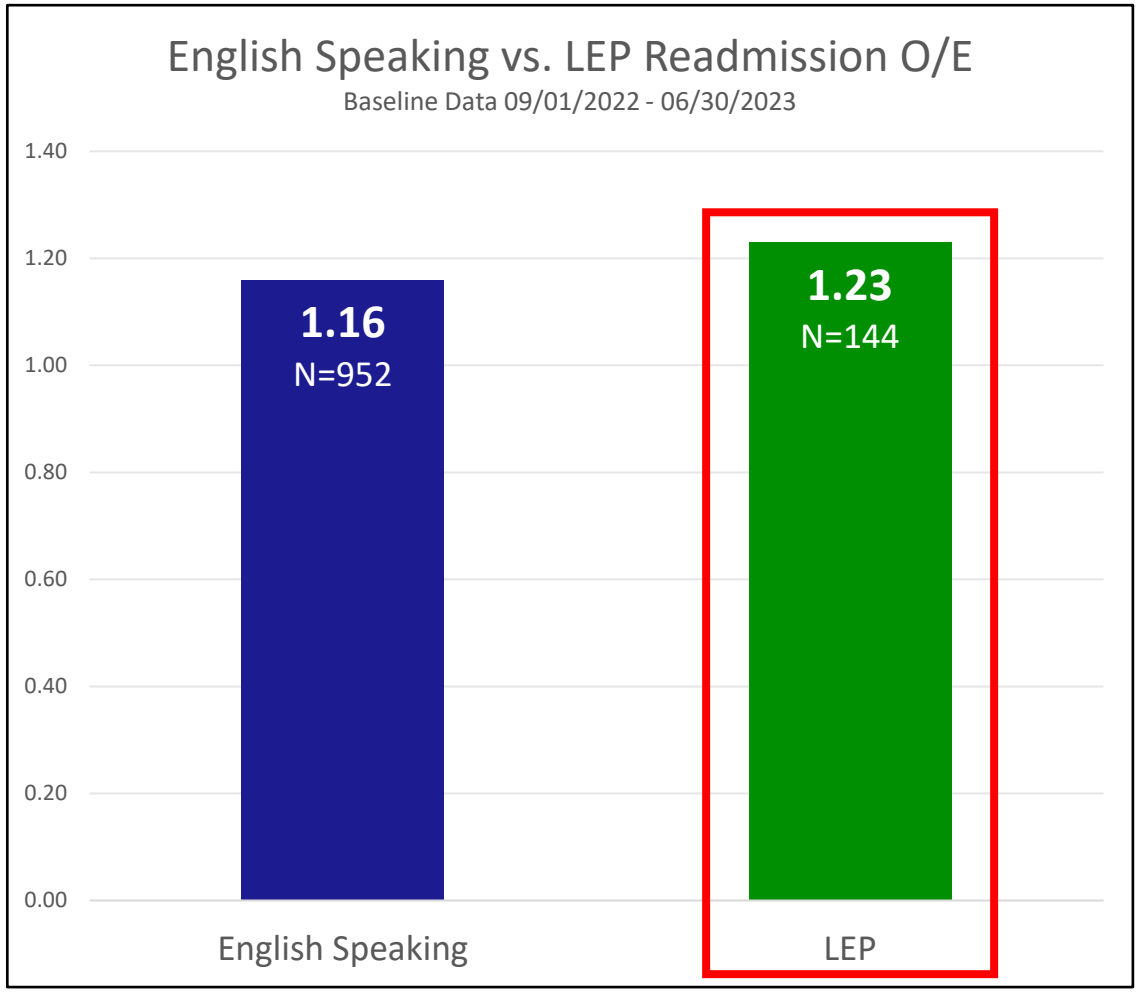
Average Length of Stay and Readmission O/E Baseline Data



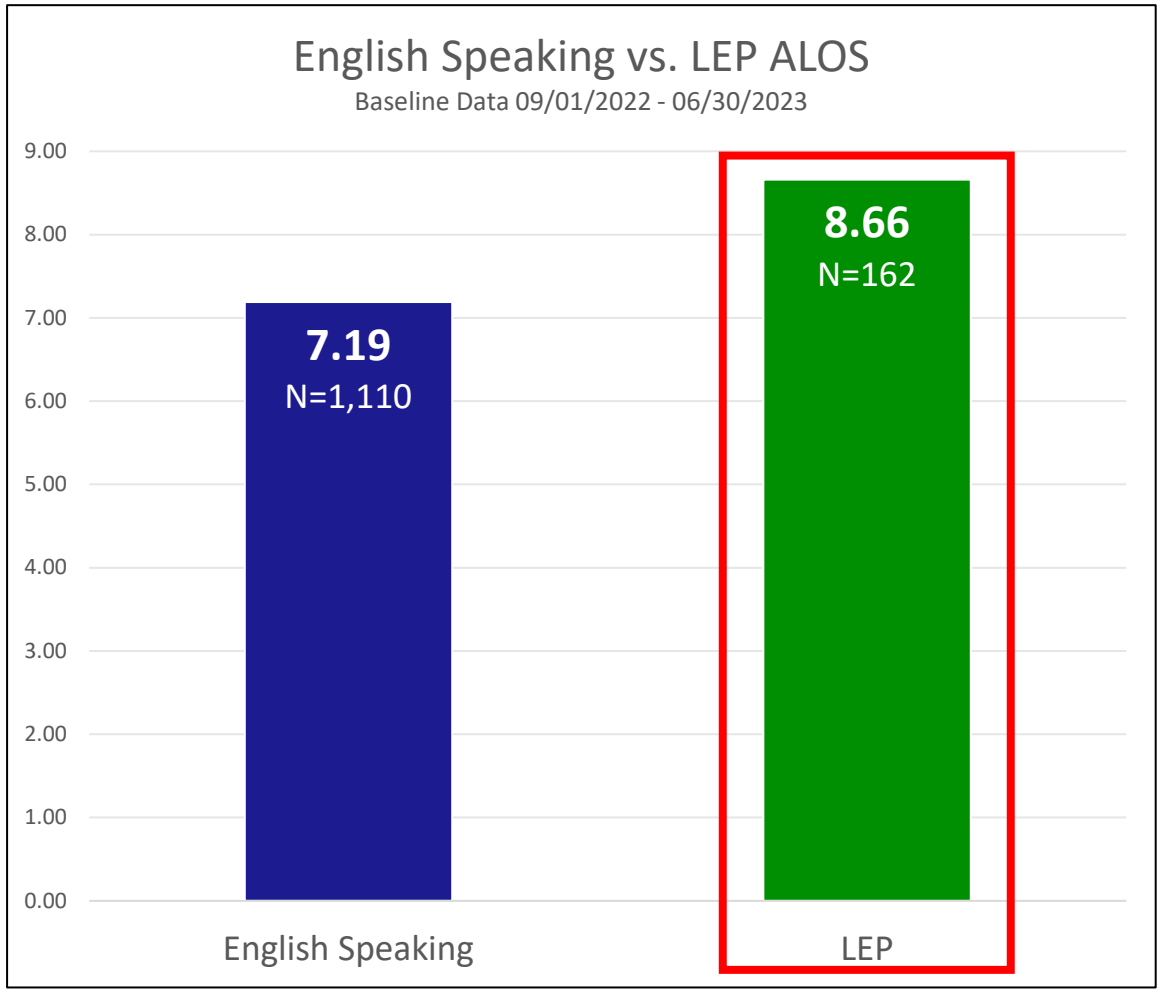


Tableau Dashboard - Sepsis Metric Explorer

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Measure Selections:

Metric 1
Average LOS (Days)

Metric 2
Mortality Rate (%)

Metric 2 On/Off
Off

Level of Detail
System

Filter Level of Detail
System

Stratify by:

Strata 1
Demographic - Language: English/Non-Engli...

Filter Strata 1
(All)

Strata 2
Entity - Division

Filter Strata 2
(All)

- Mortality (O:E)
- Mortality Rate (%)
- Mortality Volume (Count)
- Average LOS (Days)
- Median LOS (Days)
- 30D (Hospital Wide) Readmission (%)
- 30D (Hospital Wide) Readmission (O:E)
- Volume (Count)
- ---------- Epic Only Metrics Below ----------
- Sepsis Order Set Utilized (%)
- Triage not documented (%)
- Abx given w/in 3 hrs of Triage (%)
- Abx given w/in 1 hr of Triage (%)
- Abx given 24hrs prior or w/in 1 hour of initial hypotension(%)
- Median Time Triage to Order (Min.)
- Median Time order to Administration (Min.)
- Median Time Initial Hypotension & Abx Order (Min.)
- Median Time Initial Hypotension & Abx Admin (Min.)
- Sepsis Patients w/ Hypotension (%)
- Initial Hypotension Resolved within 3 Hours (%)
- Median Time of Initial Hypotensive Episode (Hr.)
- Median # of Hypotensive Episodes (Count)
- Median Total Time Hypotensive Episodes (Hr.)

- Demographic - Admit Age Group
- Demographic - Gender
- Demographic - Marital Status
- Demographic - Race/Ethnicity
- Demographic - Occupation
- Demographic - Language
- Demographic - Language: English/Non-English
- Demographic - Religion
- Demographic - Gender identity
- Demographic - Sex assigned at birth
- Demographic - Orientation
- Demographic - Payor
- Clinical - MS-DRG
- Clinical - APR-DRG
- Clinical - Sepsis Diagnosis
- Clinical - POA
- Clinical - Discharge Disposition
- Clinical - Severity of Illness
- Clinical - Risk of Mortality
- Clinical - Survivorship
- Clinical - Initial SOFA (Grouped)
- Clinical - Last SOFA (Grouped)
- Clinical - Max SOFA (Grouped)
- Clinical - Min SOFA (Grouped)
- Clinical - Hypotension - Y/N
- Clinical - Initial Hypotension Dept Name
- Clinical - Initial Hypotension Resolved Time Bucket
- Clinical - Initial Lactate Bucket
- Clinical - First Vasopressor Given During Hypo.
- Clinical - Abx Given w/in 3 Hrs. of Triage - Y/N
- Clinical - Abx Given w/in 1 Hr. of Triage - Y/N

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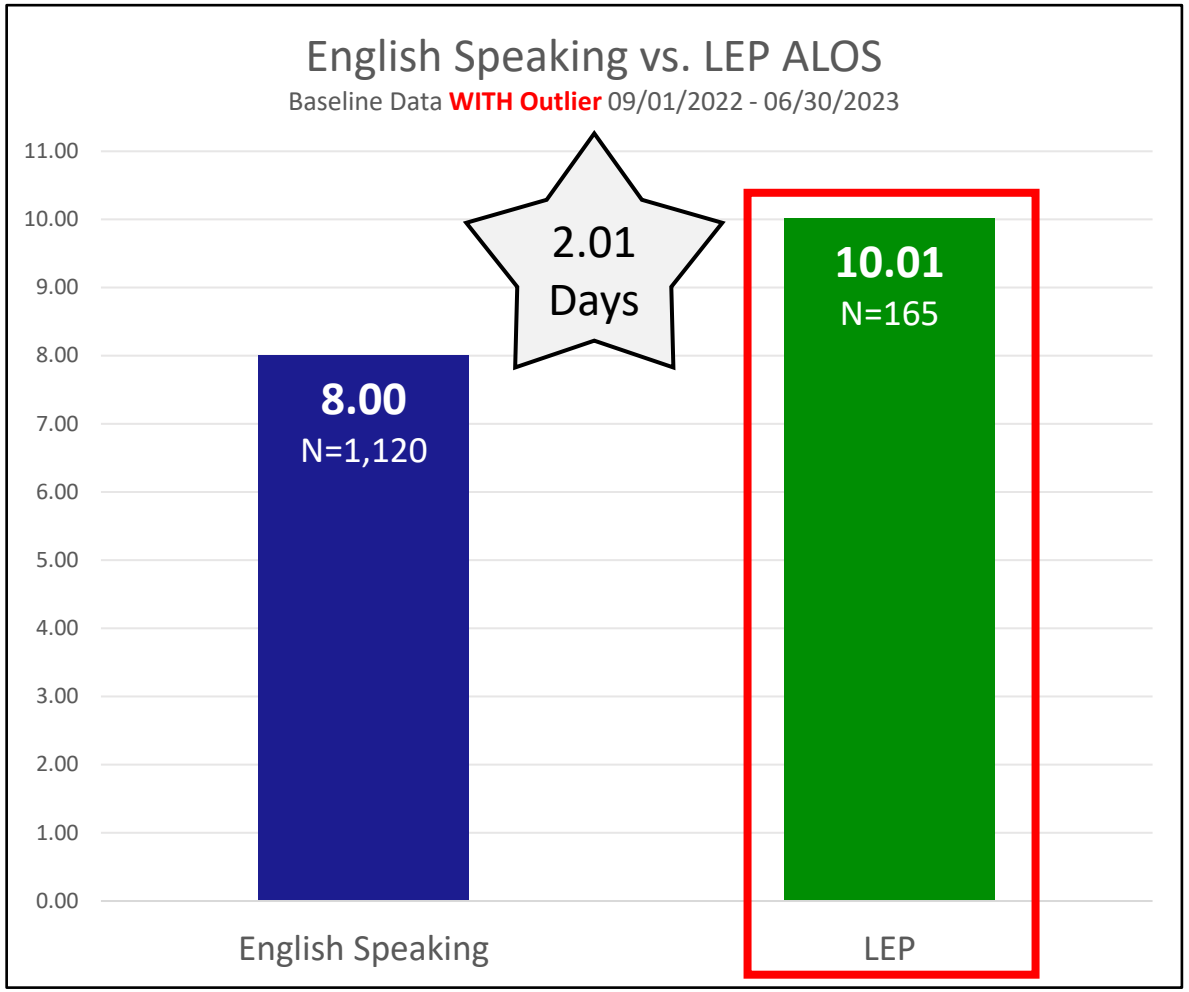
Data Collection and Integrity

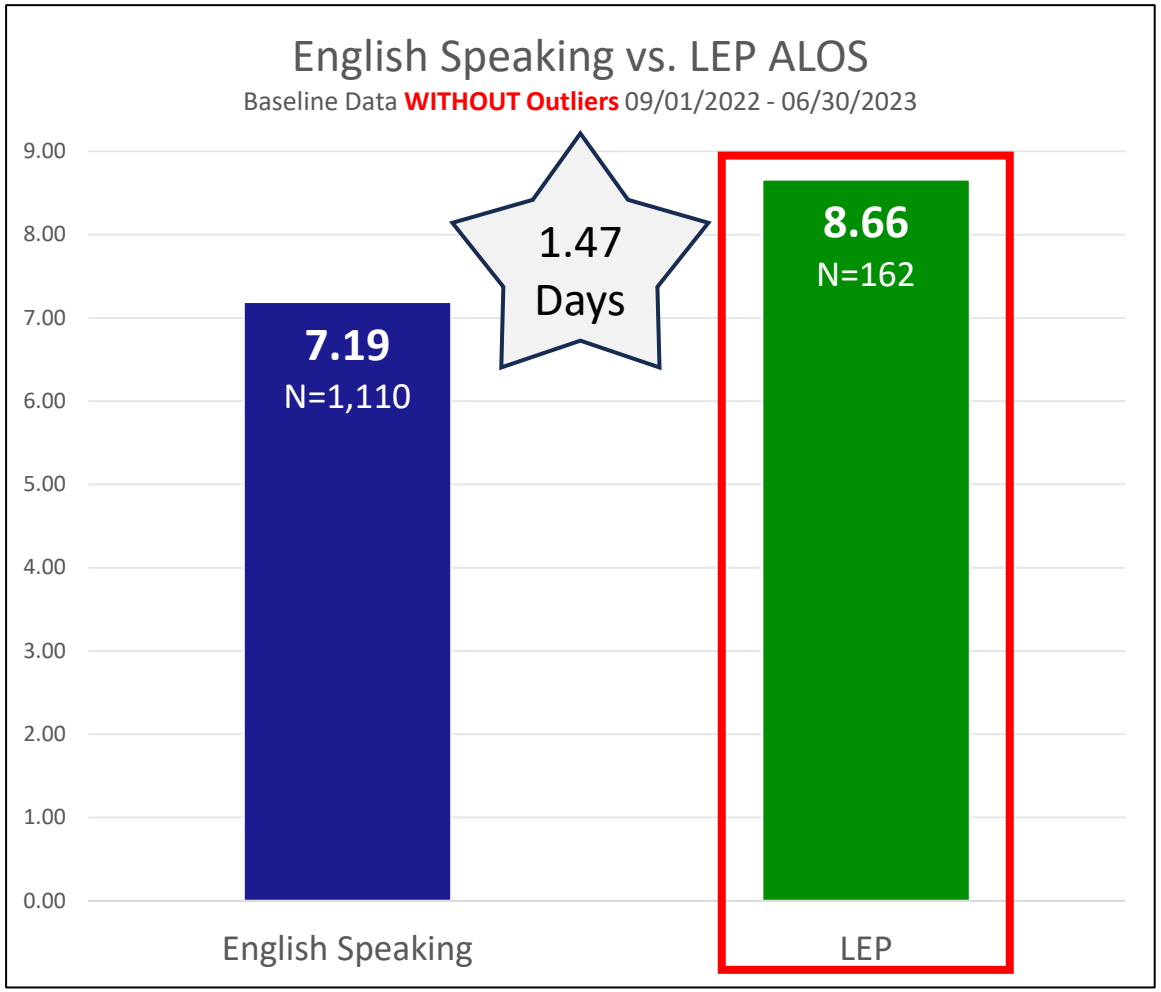
- Clear definitions of each metric.
- Importance of ensuring data completeness and consistency.
- Data audits need to happen regularly to avoid gaps that might hide or mask disparities.
- Missing or inconsistent data (e.g., missing language information) can limit the ability to conduct thorough equity analysis.

Statistical Tools for Analyzing Disparities

- Basic statistical tools that can still be used even without a data analytics team.
- Tools like mean or median comparison, standard deviation, and T-tests to identify outliers, if applicable, and determine if differences between groups are statistically significant.
- Welcoming and encouraging the use of simple Excel functions to perform these analyses.

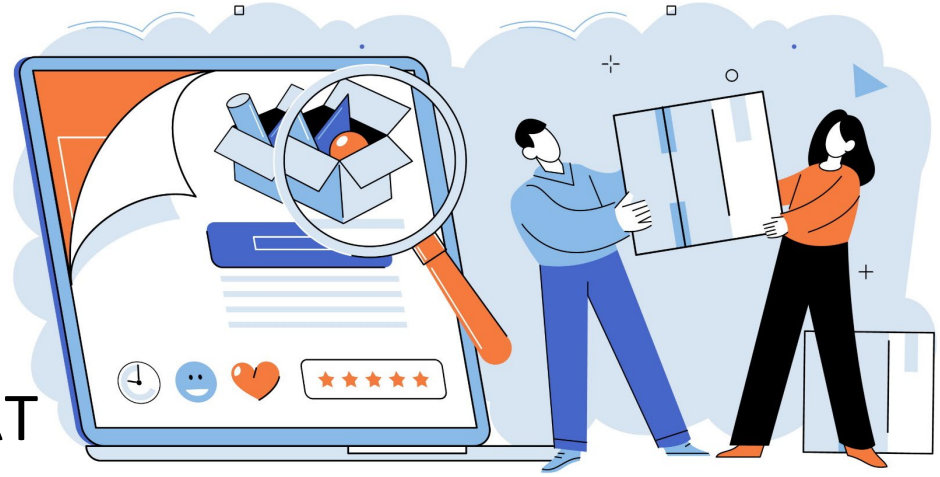
Average Length of Stay Baseline Data WITH and WITHOUT Outliers





Taking Action Based on Data

- Once disparities are identified, create or prioritize interventions based on the most significant disparities.
- Set measurable goals for improvement. Our SMART Aim goal was:
  - To reduce ALOS from 8.66 days to 7.66 days
  - To decrease 30-day Readmission rate from 1.23 to 1.00
- Track progress and adjust interventions as needed, ensuring a continuous cycle of improvement.



Baseline Data vs. Project Data

Baseline Data: 09/01/2022 – 06/30/2023
Project Data: 09/17/2023 – 06/30/2024

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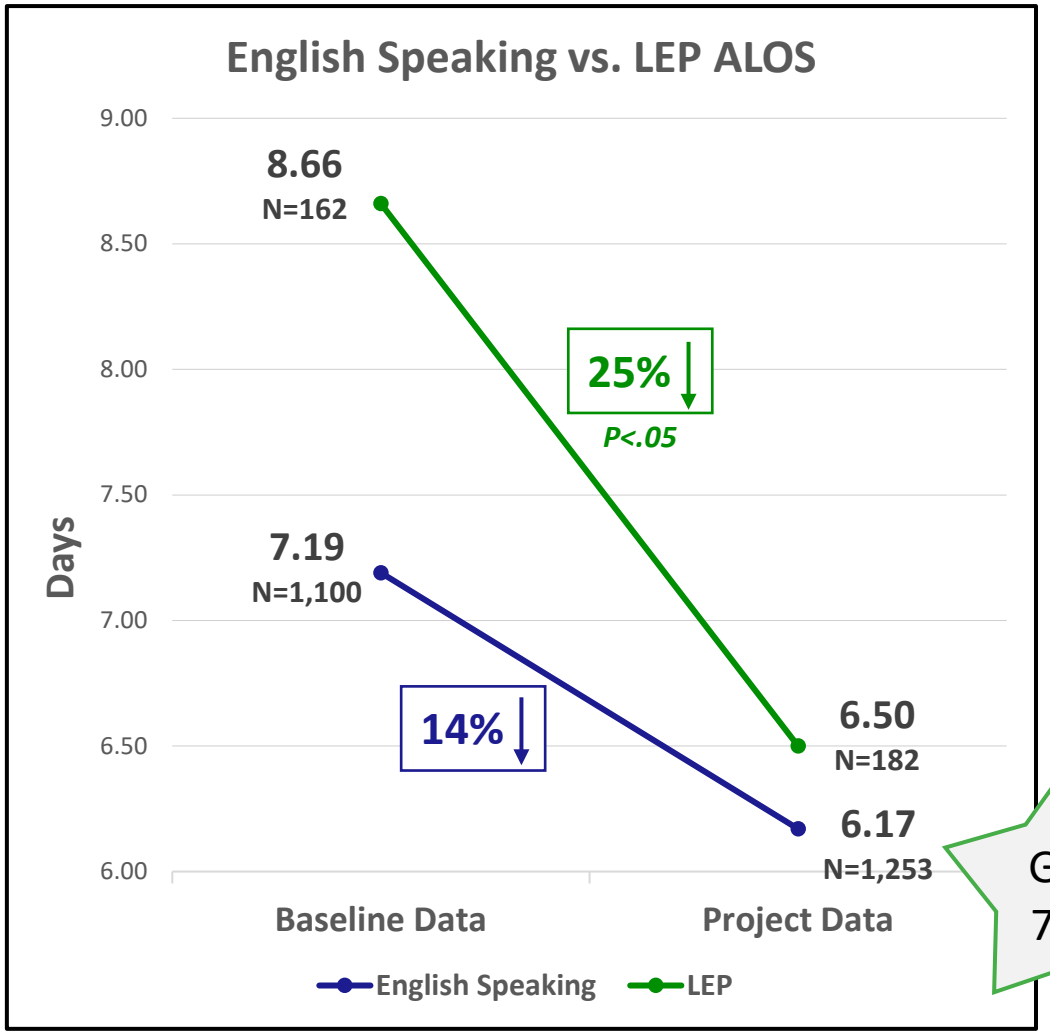

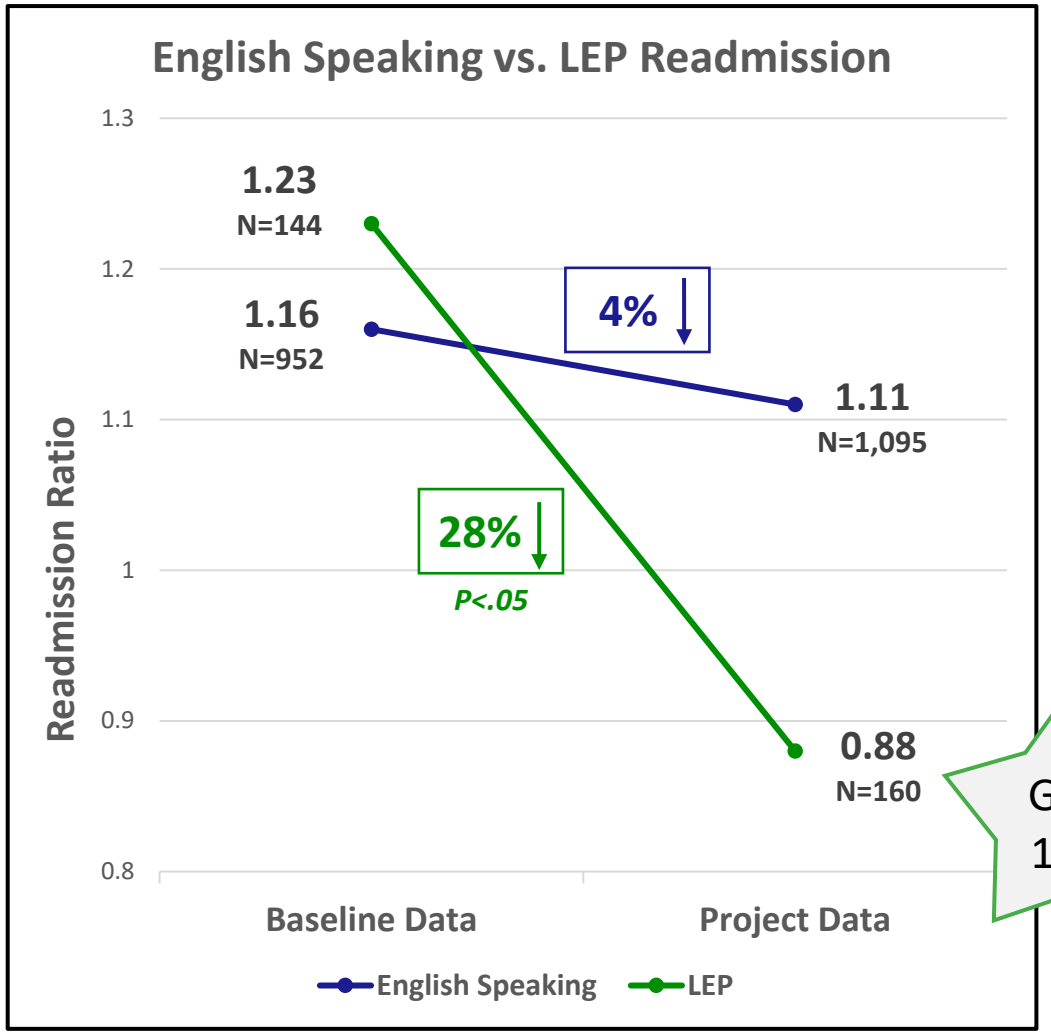

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Stratification Beyond Race and Ethnicity

- Why focusing on race and ethnicity can be limiting in finding health inequities?
- Asian:
  - Chinese
  - Pakistani
  - Vietnamese
  - Indian

Why Language Matters in Health Equity

- Language is a crucial social determinant of health.
- Language barriers affect patient outcomes, patient safety, care delays, and even mortality.

- Language is access.
  - Providers must have information to inform their care plan decisions.
  - Patients and families must understand care so they may inform their decisions.