

## **2025 AABIP DIU Travel/Education Grant Proposal by Belissa Lopez, MD**

### **Project Title:**

### **Language Matters: Evaluating and Enhancing Access to Pulmonary Education Materials in Spanish for Hospitalized Patients with Lung Disease at San Juan City Hospital**

### **Background**

Health literacy is a cornerstone of equitable and effective medical care. It plays a particularly critical role in the management of chronic respiratory conditions such as asthma, COPD, and lung cancer—diseases that require a clear understanding of diagnosis, treatment options, and procedural risks. Among Spanish-speaking populations, language inaccessibility remains a significant barrier to health equity, leading to decreased comprehension, increased anxiety, and lower adherence to recommended care.

San Juan City Hospital serves a predominantly Latino and Spanish-speaking population. According to the U.S. Census Bureau, over 98% of San Juan residents speak Spanish at home. Despite this, much of the pulmonary and interventional pulmonology patient education available remains English-based, inconsistently translated, or lacking in cultural sensitivity. This disconnect directly undermines shared decision-making, patient satisfaction, and clinical outcomes.

This project aims to systematically assess and improve access to high-quality Spanish-language educational materials related to pulmonary and interventional pulmonology care within our institution. It aligns with the mission of the AABIP DIU Committee by directly addressing healthcare disparities in communication and advocating for language justice and inclusivity in respiratory medicine.

## Objectives/Goals

1. **Assess** the availability, quality, and cultural relevance of Spanish-language educational materials related to pulmonary and interventional pulmonology care at San Juan City Hospital.
2. **Evaluate** patients' understanding, satisfaction, and preferred learning modalities using structured surveys among hospitalized Spanish-speaking patients with lung disease.
3. **Develop or adapt** high-quality, culturally appropriate, and visually engaging Spanish-language materials (pamphlets, videos, or infographics) based on patient feedback.
4. **Collaborate** with the AABIP DIU Committee and institutional stakeholders to implement and pilot these materials, ensuring sustainable integration into clinical workflows.
5. **Disseminate** findings and materials across AABIP-affiliated institutions and professional networks, promoting broader adoption and language equity across pulmonary care settings.

## Inclusion Criteria

- Adult patients ( $\geq 18$  years) admitted to the internal medicine or pulmonary service.
- Diagnosed with or undergoing evaluation for a pulmonary condition (e.g., asthma, COPD, pneumonia, lung cancer).
- Spanish-speaking (self-identified primary language).
- Cognitively able to participate in survey activities with informed consent.

## **Study Design**

### **Phase 1 – Resource Audit & Gap Analysis:**

- Inventory all existing printed and digital patient education materials related to pulmonary and interventional pulmonology care available in the hospital.
- Identify gaps in language availability, readability (assessed using validated readability tools such as Flesch-Kincaid or Fernández-Huerta Index), cultural appropriateness, and visual accessibility.

### **Phase 2 – Patient Survey & Engagement:**

- Recruit a sample of 30–50 Spanish-speaking inpatients with pulmonary diagnoses.
- Administer a structured survey (Spanish-language) assessing comprehension of their condition/procedures, format preferences (pamphlet, video, verbal), satisfaction with current education, and perceived cultural sensitivity.
- Collect both quantitative and qualitative data to understand unmet needs and suggestions for improvement.

### **Phase 3 – Collaborative Material Development & Pilot Testing:**

- In partnership with the AABIP DIU Committee, develop or adapt new Spanish-language education materials with appropriate reading level ( $\leq 6$ th grade), culturally relevant imagery, and inclusive language.
  - Materials may include content related to bronchoscopy, thoracentesis, asthma action plans, inhaler use, and smoking cessation.
  - Pilot the revised materials with a second patient cohort ( $n=10-15$ ) and repeat the survey to assess impact on understanding and satisfaction.
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### **Data Collection Points**

- Type of pulmonary condition/procedure.
- Whether educational materials were provided and in what format.
- Patient-reported understanding and satisfaction.
- Preferred method of education if written, digital, verbal.
- Qualitative feedback and improvement suggestions.

### **Statistical Analysis**

- Descriptive statistics for availability, readability, and patient response data.
- Thematic analysis of qualitative feedback to guide content development.
- Pre- and post-intervention comparisons of patient-reported understanding and satisfaction using paired t-tests or Wilcoxon signed-rank tests.

### **Primary Outcome**

- Proportion of patients receiving Spanish-language education materials who report improved understanding and satisfaction with the educational content provided.

### **Secondary Outcomes**

- Readability and accessibility scores of current vs. new materials.
- Preferred educational formats among Spanish-speaking patients.
- Number and type of newly developed educational tools piloted and implemented.
- Provider feedback on the feasibility of material integration into patient care.

## **Deliverables**

- A library of culturally appropriate, linguistically accessible Spanish-language educational materials for pulmonary patients (to be made available in print and digital form).
- A written toolkit outlining methods for evaluating and improving language equity in educational materials—designed for dissemination through AABIP networks.
- Submission of findings as an abstract or quality improvement report to AABIP 2026 and/or the ATS International Conference.

## **Future Applications**

This project will serve as a replicable model for improving patient education equity in other safety-net hospitals and institutions serving non-English-speaking populations. The materials and toolkit developed will be made publicly available to promote broader adoption and support the mission of the AABIP DIU Committee in reducing health disparities through inclusion and accessibility. Additionally, the project lays the foundation for future research on health outcomes related to language-concordant patient education in interventional pulmonology.