

## **Prevalence of AI-Assisted Personal Statement Writing in Adult Reconstruction Fellowship Applications**

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### **INTRODUCTION:**

Artificial intelligence (AI), particularly large language models (LLMs) such as ChatGPT, has expanded across various fields, including medical education and professional applications. However, the extent to which AI is utilized in writing personal statements (PSs) for adult reconstruction fellowship applications remains unclear. As the PS plays a critical role in candidate evaluation, the growing accessibility of AI tools raises questions about authorship integrity, equity, and transparency. This study aims to analyze the prevalence of AI-generated text in PSs submitted to our institution before and after the release of ChatGPT.

### **METHODS:**

We retrospectively reviewed PSs submitted to our institution's adult reconstruction fellowship from 2021 to 2025. PSs were divided into two cohorts: Pre-PS (2021–2022) and Post-PS (2024–2025). Additional control groups included AI-generated PSs (AI-PS) and hybrid PSs (H-PS), which combined AI-generated and human-edited text. All PSs were analyzed using GPTZero, an AI detection software, to determine the proportion of AI-generated versus human-generated text. Descriptive statistics and comparative analyses were conducted.

### **RESULTS:**

A total of 421 PSs were analyzed. The Pre-PS cohort had an average GPTZero score of 99.5% human, 0.4% AI, and 0.1% mixed, while the Post-PS cohort had scores of 83.8% human, 15.1% AI, and 1.1% mixed ( $P < 0.001$ ). AI-generated text was significantly more prevalent in the Post-PS group. Additionally, international medical graduates (IMGs) and applicants from non-U.S. residencies showed higher AI content compared to U.S. applicants ( $P < 0.001$ ).

**DISCUSSION AND CONCLUSION:** The use of AI in PS writing has increased substantially since the release of ChatGPT. These findings raise important considerations for fairness, transparency, and the future role of PS in the selection process. Institutions should consider creating standardized guideline around AI-assisted writing and evaluation. Further research should expand to other subspecialties and institutions to assess the broader implications of AI in postgraduate medical education.