Does the use of an artificial intelligence-based scribe decrease surgeon workload and burnout

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INTRODUCTION: Artificial intelligence (AI) scribe applications have entered the healthcare sector and are continuously being adopted by practices around the world. AI scribes typically use language learning models (LLM) in application programs to record and interpret physician-patient encounters and create a medical note for the encounter. This study aimed to determine the impact of an AI scribe on overall surgeon workload and satisfaction.

METHODS: In this prospective blinded cohort study, 13 orthopedic providers in the same orthopedic private practice used the same AI scribe program during their clinical patient encounters over a course of 90 days. Orthopedic provers were instructed to complete a survey prior to using the program as well as after using the program for the 90-day period. Overall time to complete office notes was recorded and a variation of the Maslach Burnout Inventory were recorded in this survey, as well as provider satisfaction with the program. Paired t-tests were performed to compare cohorts with 95% confidence intervals.

RESULTS: Of the 13 orthopedic providers involved in the study, 1 did not use the AI scribe and 3 did not complete both the pre-participation and post-participation surveys. The time to write notes outside of work hours significantly decreased by over 1.5 hours per week with the use of the AI scribe program ($p < 0.01$). No significant changes in Malach Burnout Inventory section scores were observed, however improved in all sections (Exhaustion: $p=0.322$; Depersonalization: $p=0.352$; Accomplishment: $p=0.325$)

DISCUSSION AND CONCLUSION: The use of an AI scribe program to generate medical notes for clinical encounters is effective in decreasing surgeon workload. Although not significant, the AI scribe program used for this study improved perceived surgeon burnout and satisfaction. Future cost-benefit analyses should be completed for the use of AI scribe programs in the clinical setting.