Introduction: In the perianesthesia and other patient care settings, the initiation of an intravenous site is required for most patients. Current literature indicates that this procedure causes pain and anxiety for patients.

Identification of the Problem: Initiation of the intravenous site is associated with pain and contributes to patient dissatisfaction.

Study Purpose: The purpose of this study was to evaluate the effectiveness of Gebauer Pain Ease® in decreasing pain experienced by patients undergoing intravenous catheter cannulation in the perianesthesia and acute care settings.

Methodology: A blinded prospective study of 409 patients from five patient populations was conducted over a period of thirteen months. The patients were randomized into one of two groups: Group 1 indicated the IV site was sprayed with Pain Ease immediately prior to cannulation; Group 2 indicated the site was sprayed with saline. A Visual Analog Scale rating pain intensity 0 to 5 was used to rate the pain experienced immediately after the site was initiated.

Results: The sample consisted of primarily middle aged, female patients, with predominantly 20 gauge cannula for IV access (83.2%). There were statistically significant differences in pain ratings based on the intervention with significantly less average pain in the PainEase group compared to the saline group (1.6 vs. 2.0, \( t = -2.78, p = .006 \)). This difference of 0.4 on a 0 to 5 scale may not have clinical significance. An analysis of covariance (ANCOVA), controlling for sex, cannulation gauge, and first attempt success revealed that the PainEase intervention was no longer statistically significant (\( F = 1.47, p = .154 \)). The only factor that remained statistically significant for pain rating was first attempt success rate (\( F = 2.07, p = .03 \)).

Discussion: Given the multifaceted dimensions of pain with IV cannulation, the finding that first attempt success remains statistically significant when controlling for other potential confounders is not surprising. Patients requiring more than 1 cannulation attempt would undoubtedly experience greater levels of pain from multiple “sticks”.

Conclusion and Implications: The variables in this study may provide new avenues to investigate and identify approaches that promote a more comfortable IV insertion.