

Our objective was to increase JIL use with IV placements in our ED from 11% at baseline to 50% within 12 months” Jain et al (2017).

Abstract:

BACKGROUND AND OBJECTIVE: Venipuncture is a leading cause of procedural pain for children. Jet injection of lidocaine (JIL; J-Tip) has been demonstrated to be effective in controlling intravenous (IV) placement-related pain and, due to its rapid onset, is particularly suited to emergency department (ED) use. Our objective was to increase JIL use with IV placements in our ED from 11% at baseline to 50% within 12 months.

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METHODS: We initiated the project at our urban, tertiary pediatric ED in July 2014. We surveyed medical and nursing teams to identify barriers to JIL use. We initiated changes at monthly intervals: (1) order set changes, (2) online education, (3) hands-on workshops, (4) improved accessibility, (5) standing order policy revision, and (6) reminders. We collected biweekly data on IV placements for all ED patients, except level 1 (critical) triage patients. We used standard quality improvement methodology and statistical process control for statistical analysis.

RESULTS: JIL use with IV placement increased to 54% over 7 months and has remained >50% for >12 months. For all eligible IV placements (n = 12 791), 76.4% of those where JIL was used were successful on the first attempt compared with 75.8% without JIL (χ^2 1degrees of freedom = 0.33, P = .56), with no significant difference in the success at IV placement.

CONCLUSIONS: We sustainably increased JIL use with IV placement. The use of JIL was not associated with a difference in first-attempt IV placement success rates. We are expanding the project to other parts of the institution.

Reference:

Jain, S., Hegenbarth, M.A., Humiston, S.G., Gunter, E., Anson, L. and Giovanni, J.E. (2017) Increasing ED Use of Jet Injection of Lidocaine for IV-Related Pain Management. Pediatrics. March 9th. .

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