This study aimed to compare success rates and time to placement for Manual IO versus EZ-IO needles in PED patients ≤8 and >8 kg. Pifko et al (2017).

Abstract:
AIM: Intraosseous (IO) access is a life-saving option during resuscitations in the pediatric emergency department (PED). This study aimed to compare success rates and time to placement for Manual IO versus EZ-IO needles in PED patients ≤8 and >8 kg.

METHODS: This was a retrospective cross-sectional descriptive study of IO use in a single-centre tertiary PED from 2006 to 2014. Cases were identified through diagnosis codes for IO infusion, cardiopulmonary resuscitation and cardiac arrest and admissions to the intensive care unit. Categorical measures were compared with Z-test for comparison of two proportions and continuous with Student’s t-tests.

RESULTS: Of 1748 charts screened, 50 had an IO attempted. In patients ≤8 kg, Manual IO had success rate of 55% (17/31) versus 47% (8/17) for EZ-IO (P = 0.61). In patients >8 kg, Manual had success rate of 100% (2/2) versus 93% (14/15) for EZ-IO (P = 0.71). Manual performance was no different for ≤8 kg than >8 kg (P = 0.21), but EZ-IO was less successful for ≤8 kg than >8 kg (P = 0.005). In patients ≤8 kg, Manual IO had a shorter time to placement at 4.5 min versus 12.8 for EZ-IO (P = 0.02).

CONCLUSION: We observed no difference in performance between Manual and EZ-IO devices in children ≤8 kg, but the Manual IO were placed more quickly. We observed lower success rates with EZ-IO devices in children ≤8 kg compared to >8 kg. Future investigations should focus specifically on training for IO placement in children ≤8 kg.

Reference:

Thank you to our partners for supporting IVTEAM