**Orthopaedic Surgery I-PASS Intervention Leads to Sustained Improvement in Quality of Patient Handoffs**

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**Purpose:** Interventions to improve patient handoff communication have been shown to reduce medical errors. The I-PASS tool (Illness severity, Patient summary, Action list, Situational awareness, Synthesis by receiver) is a structured handoff tool that reduces errors and preventable adverse events. Adoption of I-PASS on surgical services has been inconsistent. We evaluated the quality of handoffs and sustainability of a multicenter I-PASS protocol intervention for orthopaedic surgery.

**Methods:** This was a prospective, interventional study of a multicenter handoff improvement program conducted at two Level I trauma centers. A preintervention handoff needs assessment survey was administered to orthopaedic providers, followed by electronic handoff and communication training to introduce a standardized handoff template that adapted the I-PASS tool specifically for orthopaedic surgery patients. Handoff quality was evaluated preintervention and at 1, 6, and 9 months postintervention; handoffs were analyzed for the key data elements defined by I-PASS. A postintervention survey was administered to providers at 6 months postintervention.

**Results:** 605 electronic patient handoffs were analyzed. 56 orthopaedic providers (nurse practioners, physician assistants, residents) completed the handoff needs assessment survey. 56% of respondents reported they were "sometimes" or "often" uncertain about making a clinical decision as they lacked patient information from a handoff; 91% of respondents stated they would support a standardized electronic handoff template. Adherence to the standardized handoff format increased substantially over the study period (72% at 1 month, 89% at 6 months, and 93% at 9 months). From preintervention to the 9-month time point, significant improvement was noted in 8 of 9 targeted quality elements (two identifiers, illness severity, past medical history, action list, situational awareness, contingencies, anticoagulation plan, and antibiotic plan, $P = 0.006$ for two identifiers, $P<0.001$ for all others). 54 providers (73% response rate) completed the postintervention survey. 70% felt that the intervention improved communication and patient safety; 60% felt it reduced patient errors and near-misses. 87% stated they would support implementation as a requirement for new trainees moving forward.

**Conclusion:** This prospective study analyzed the impact of a handoff improvement program on the quality of handoff communication for orthopaedic inpatients. The implementation of the handoff protocol produced a high, sustained compliance rate from a group of over 50 orthopaedic providers. Objective quality of handoffs improved significantly as defined by the I-PASS gold standard. Nearly 90% of providers supported its ongoing use, with a 70% stating that communication and patient safety improved. This intervention is the first example of I-PASS for orthopaedic surgery and has the potential to prevent adverse events and reduce medical errors by standardizing care.