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**Introduction of Safety Technologies to Physician-Performed Procedures in Rheumatology**

**Courtney R. Johnson, Kye S. Park, Gautam R. Moorjani, Adrian A. Michael, Wilmer L. Sibbitt, Jr., Arthur D. Bankhurst. University of New Mexico Health Sciences Center, Albuquerque, NM, USA**

**PURPOSE:** Identification, evaluation, and introduction of new safety technologies into physician-performed procedures in rheumatology and orthopedics is challenging for an institution, but is important for continuous quality improvement as defined by the Joint Commission.

**METHODS:** Identification of new safety technologies was accomplished using national centers of excellence for patient safety. The candidate safety technology, the reciprocating procedure device (RPD), was introduced in a trial fashion into two departments and quality outcomes were measured. The setting was hospital-based musculoskeletal disease departments. The intervention for quality improvement included: (1) use of a new safety technology in suction needle biopsy, local lidocaine anesthesia, and deep needle aspiration procedures of joints; (2) identification of relevant quality measures including cytopathology and fluid quality, patient pain, and procedure outcome; and (3) summary report and analysis to determine whether the safety technology met institutional quality needs.

**RESULTS:** The safety technology provided high quality cytopathology specimens while reducing procedure duration by 49% ( $p < 0.001$ ), reducing anesthesia pain by 27% ( $p < 0.001$ ), improving the outcomes of joint procedures by 74% ( $p < 0.001$ ), and increasing physician satisfaction by 62% ( $p < 0.001$ ).

**CONCLUSIONS;** New safety technologies that improve patient outcomes can be successfully identified, introduced, and integrated into rheumatology and orthopedic departments. Keys to successful introduction of a new safety technology include early identification of candidate technologies, utilization of the educational resources of national centers for patient safety, direct participation of the targeted physicians, identification of relevant quality improvement measures, and analysis and integration into the overall institutional patient safety plan.