



BENEFITS OF FLUOROSCOPY IN HAND CLINICS

Evidence-based improvements in efficiency, patient experience, and cost savings

Introduction

Imaging is central to the practice of orthopedic and hand surgery. From confirming reductions and hardware placement to guiding injections and procedures, timely and accurate imaging directly impacts outcomes.

Traditionally, post-operative patients must travel to radiology suites for 2–3 sets of radiographs at set intervals. While effective, this process adds significant time, cost, and inefficiency to clinic visits.

Mini C-arm fluoroscopy has emerged as a game-changer by moving imaging into the clinic itself, where it can be performed by the treating provider in real-time.

Detailed Research Findings: Kesler & Buckwalter (2022)

Kesler and Buckwalter conducted a prospective cohort study at the University of Iowa to directly compare traditional radiographs with mini-fluoroscopy during post-operative hand clinic visits.

Patients included those undergoing percutaneous pinning of phalanges/metacarpals, ORIF of phalanges/metacarpals, or ORIF of distal radius fractures.

Over six months, two cohorts were compared: a three-month period using traditional radiographs (n=13) and a subsequent three-month period using mini-fluoroscopy (n=11).

Patients and providers also observed that in-room fluoroscopy allowed for real-time visualization of bone healing and hardware placement, enhancing communication and smoothing the clinical workflow.

REDEFINING HAND CLINIC WORKFLOWS



SHORTER APPOINTMENTS

Average appointment length
reduced by 24 minutes



FASTER CHECK-IN

Check-in to provider ready time
reduced by 10 minutes



LESS WAITING

Average exam room wait time
decreased by 3 minutes



COST SAVINGS

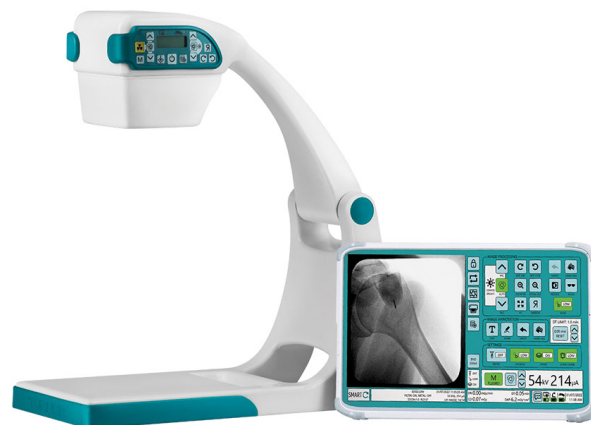
Avoiding 13 sets of radiographs
equated to **\$9,542 in savings**

SMART 
BY TURNER

The SMART-C® Advantage

SMART-C® builds on these findings with unmatched portability and performance. At only 16 lbs, SMART-C® is fully wireless, battery-operated, and features a 15 x 15 cm detector — equal to or larger than competing systems. With output power up to 80 kV and 0.37 mA, **SMART-C® is the most powerful device in its category.**

These features allow providers to bring imaging directly to the patient, whether in the exam or procedure room, to perform stress views, reductions, pin placement, or guided injections — all without leaving the clinic space.



CASE STUDY:

Baltimore Sinai Pediatric Fracture Clinic

The Rubin Institute for Advanced Orthopedics at Sinai Hospital of Baltimore, led by Dr. Philip McClure and Dr. John Herzenberg, previously faced recurring challenges in their pediatric fracture clinic. Complex anatomy required repeated radiographs from outside technicians, often delaying care or resulting in suboptimal images.

By integrating SMART-C®, the clinic transformed workflow and care quality:

- Expansion of in-clinic capabilities such as stress views and injections.
- Reduced delays and rescheduling, improving scheduling efficiency.
- Consistent, high-quality imaging for accurate diagnoses.
- Strengthened physician-patient relationships with real-time image review.

Dr. Herzenberg: "If you're really interested in quality, then you need absolute control of the x-ray imaging. That is what you have with SMART-C®."

CASE STUDY:

Oklahoma Sports Science & Orthopedics

Dr. Robert Unsell, co-owner of Oklahoma Sports Science & Orthopedics, faced inefficiencies with traditional X-ray workflows — patients endured multiple waits, off-site referrals, and higher costs, which also cut into clinic revenue.

After adopting SMART-C®, Dr. Unsell was able to perform imaging and procedures in-house instead of sending patients elsewhere, resulting in:

- Increased revenue: reimbursed for diagnostics and billable image-guided procedures.
- Reduced costs: eliminating ~\$6,000 in monthly expenses for external imaging.
- Additional net profit: \$6,000–\$10,000 per month
- Streamlined workflow: no more 45-minute waits for imaging results.
- Enhanced quality of care: superior imaging helped correct misdiagnoses and improve injections.

Dr. Unsell: "SMART-C® has made the imaging process light years better. It's a win-win that I recommend without hesitation."

Conclusion

The University of Iowa study provides evidence of significant efficiency and cost benefits from mini C-arm fluoroscopy. The Baltimore Sinai and Oklahoma case studies demonstrate how SMART-C® turns this potential into practice — transforming workflows, improving revenue, and enhancing patient care. With unmatched portability, detector size, and power, SMART-C® is the premier solution for modern in-clinic imaging.

Reference

Kesler K, Buckwalter JA. Efficiency Benefits of Live Fluoroscopy in Hand Clinics. Iowa Orthopedic Journal. 2022;42(2):118-121.

Follow federal, local, and institutional regulations for X-ray imaging use and radiation safety protection.