CARE COORDINATION + TRANSITIONS

Closed-Loop Referral Following Pediatric Urgent Care Clinic (UCC) Visit

Promoting Interoperability (PI) Playbook

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March 16, 2026

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Executive Snapshot

SCENARIO: An 8-year-old presents to pediatric urgent care center (UCC) with wrist pain after a fall. X-rays reveal findings consistent with a possible Salter-Harris fracture. The RN splints the wrist and the provider verbally tells the family to see orthopedics within 48 hours. **No referral order is placed and no follow-up confirmation is sent.** Five days later the child returns with a displaced, malunited fracture requiring surgical correction.

INTEROPERABILITY GOAL: Ensure that 100% of orthopedic specialist referrals initiated at pediatric urgent care are transmitted electronically, acknowledged by the receiving provider, and confirmed as completed.

WHO IS IMPACTED

- Pediatric patients & families
- Urgent care RNs & providers
- Orthopedic specialists
- Referral coordinators
- Healthcare system leadership

WHAT SUCCESS LOOKS LIKE

- 100% referral orders placed electronically before discharge
- ≥95% orthopedic appointment confirmation within 48 hrs
- 100% referral loops closed & documented in EHR

TOP THREE RISKS

- Fracture displacement
- Surgical intervention
- Increased cost
- Avoidable patient harm

Reliable health information exchange improves coordination and reduces breakdowns in cross-organizational referrals (Savoy et al., 2023).

What We're Exchanging

Structured referral data enables reliable transmission between systems (Vorisek et al., 2022).

What is being exchanged?

- Continuity of Care Document (CCD)
- FHIR-structured referral order
- Radiology results/images
- Follow-up timeframe & urgency (48 hours)

Why exchange it?

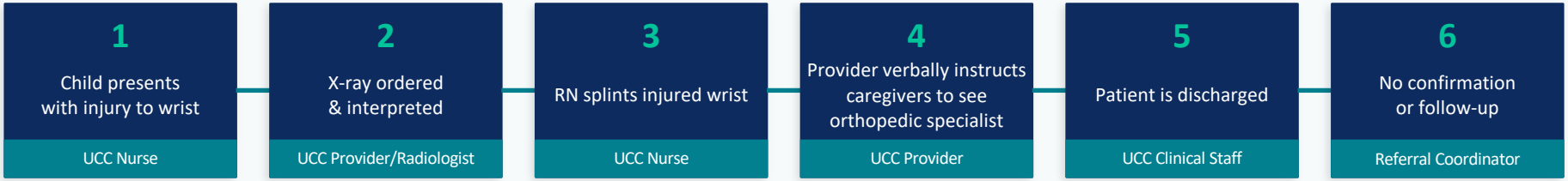
- Continuity
- Safety
- Timeliness
- Accountability
- Quality reporting

Must-Have Data Elements

- Patient demographics/MRN
- Insurance information
- Caregiver contact information
- Diagnosis
- Radiology report/images
- Imaging access link
- Billable Diagnosis (ICD-10)
- Fracture type
- Treatment performed at UCC
- Urgency level (48-hour window)
- Referring provider

Workflow + Data Flow Map

Referral communication failures commonly occur when responsibility for scheduling and follow-up is unclear (Savoy et al., 2023).



Timeline Step	Who Creates the Data?	Where Documented?	How It Moves?	Who Should Receive It?	Handoff Breakdown
1	UCC Nurse	UCC EHR – Nursing module	Internal EHR	UCC Provider	UCC ► Ortho (CCD not transmitted)
2	Provider + Radiology	Provider orders module + PACS	Internal EHR storage	UCC Provider	UCC ► Ortho (CCD not transmitted)
3	UCC Nurse	Nursing module	Internal EHR	Care team	UCC ► Ortho (CCD not transmitted)
4	UCC Provider	✗ No referral order entered	✗ No FHIR ServiceRequest created	Orthopedic scheduling	Provider ► Referral system failure (No electronic order)
5	UCC Clinical Staff	Discharge documentation	✗ No CCDA generated or transmitted	Orthopedic clinic	EHR ► External system failure (CCD not transmitted)
6	Intended: Referral system	✗ No tracking dashboard entry	✗ No status monitoring	Quality/Referral Coordinator	No scheduling ownership; No confirmation tracking

Standards + Governance

FHIR-based referral exchange enables standardized data sharing between systems (Vorisek et al., 2022).

STANDARDS USED

FHIR R4 ReferralRequest
Per ONC Requirements

Consolidated Clinical Document Architecture (C-CDA)
Continuity of Care Summary

DICOM
Radiographic Images

ICD-10
Billing Diagnosis

SNOMED CT
Provider Documentation (body site, fracture type, etc)

GOVERNANCE & ACCOUNTABILITY

Referral Workflow Build
Clinical Informatics

Order Set Requirements
Medical Director

Data Definitions
Clinical Informatics

Staff Education
Nurse Manager & Nurse Educator

Privacy Compliance
Compliance Officer

Closed-Loop Referral Metrics
Quality Improvement

Failure Points + Mitigation Strategies

Failure Point	What It Looks Like	Root Cause	Mitigation	Owner
No referral order in EHR	Verbal 'see ortho' only; nothing documented	Workflow gap; culture of verbal handoffs	Mandatory EHR referral order required before discharge: **hard stop**	Provider & UCC Administrator
Unauthorized referral transmission method	Unencrypted faxing or emailing of referral documentation	Fax or unsecured messaging used	Direct secure messaging or secure electronic transmission	Compliance Officer
Burden on Family	Parents told to “call ortho”	Assumes family has time, resources, English fluency to navigate system	UCC staff places referral, provides patient summary and contact info for ortho to reach out to family	Referral Coordinator; Ortho Scheduler

Closed-loop referral management is a recommended safety strategy to prevent delays in specialty follow-up (Institute for Healthcare Improvement, 2017).

Implementation Action Plan

PHASE 1: QUICK WINS · 0–30 Days

Action	Owner	Timeline	Resources	Metric
Map current pediatric fracture referral workflow and identify failure points	Nurse Informaticist & Quality Improvement (QI) Team	14 days	Workflow mapping tools; stakeholder meetings; EHR analyst time	% of pediatric fracture visits with an electronic referral order documented
Create referral hard stop at discharge	Nurse Informaticist + EHR Analyst	21 days	EHR build time	% of fracture discharges with referral order completed before discharge
Train all UCC providers & nurses on new workflow	Nurse Educator & Nurse Manager	30 days	Education hours	Training completion rate

PHASE 2: STABILIZE · 30–90 Days

Action	Owner	Timeline	Resources	Metric
Configure FHIR routing to ortho practices	Nurse Informaticist & EHR Analyst	Days 30–45	IT staff; vendor hours	% successful referral transmissions to orthopedic practices
Launch referral tracking dashboard	Nurse Informaticist & QI	Days 45–60	Dashboard build	% referrals with status tracked in dashboard
Implement 24/48-hr follow-up alerts (EHR)	Nurse Informaticist & EHR Analyst	Days 60–90	EHR configuration	% alerts resulting in scheduled follow-up appointment

PHASE 3: SUSTAIN · 3–12 Months

Action	Owner	Timeline	Resources	Metric
Review referral completion dashboard and address missed orthopedic follow-ups	Referral Coordinator & QI	Ongoing	Referral tracking dashboard; staff meeting time	Closed-loop referral completion rate ≥ 95%
Monitor orthopedic follow-up completion for pediatric fracture patients and implement outreach workflow for missed appointments	QI & Nurse Informaticist	Months 3-12	Referral tracking dashboard; EHR reporting tools; care coordination staff time	% pediatric fracture patients receiving orthopedic follow-up within 7 days

Nursing + Informatics Role

Safe pediatric care coordination requires EHR workflows that support reliable communication across care settings (Dufendach et al., 2024).

Bedside/Urgent Care RN

- Ensure key clinical data are documented in structured fields (diagnosis, injury details, discharge instructions)
- Verify referral orders are present before discharge
- Provide patient education about follow-up care and timing
- Communicate urgent follow-up needs to care coordination teams
- Identify workflow breakdowns and report them to leadership or informatics

Nurse Informaticist

- Partner with clinical leaders to translate workflow requirements into EHR functionality
- Configure and test referral orders, documentation fields, and data exchange workflows
- Coordinate with IT, vendors, and external partners to ensure referral data transmits correctly
- Monitor interoperability metrics and referral loop-closure rates
- Support data quality and standardized terminology use

Change Management

- Develop staff education and training for new workflows
- Identify workarounds that create data gaps
- Gather clinician feedback to improve workflow usability
- Partner with quality and operations leaders to monitor outcomes
- Support continuous improvement of interoperability processes

Safety, Equity, Privacy + Security Guardrails

GUARDRAILS CHECKLIST

- ❑ Verify patient identity before sending referrals
- ❑ Share only minimum necessary data (HIPAA)
- ❑ Use role-based access control for sensitive records
- ❑ Monitor message delivery and acknowledgments
- ❑ Use downtime backup workflows if systems fail
- ❑ Provide language-accessible patient instructions
- ❑ Offer non-portal follow-up options for patients without digital access

Future State: 3–5 Year Vision

01 AI-Assisted Fracture Triage

- Computer vision flags Salter-Harris patterns on patient X-ray
- Auto-populates urgency field in referral order

02 Sustainability

- Quarterly interoperability review through Clinical Informatics or Quality Committee
- Monitor referral loop-closure metrics and address workflow breakdowns

03 Patient/Guardian Portal Tracking

- Family receives push notification when ortho accepts referral
- Can confirm or reschedule directly
- UCC notified of status

04 Predictive Risk Stratification

- EHR flags high-risk fracture types and vulnerable families
- Proactive social work and resource assistance

Technology-supported referral management systems can significantly improve orthopedic follow-up pathways (Menyah et al., 2023).

Reflection

Interoperability in referral management is a critical issue for nurses, as we are often the last clinical staff to interact with patients before they leave the facility. In my experience working in urgent care settings, I have seen situations where follow-up instructions are given verbally, but there is no reliable process to verify that the next provider receives all the necessary information. When referral communication breaks down, it could cause delays in treatment, preventable complications, and harm that could have been avoided. Nurses are in a position to identify these gaps, make sure that clinical information is documented accurately, and confirm that patients and families understand what needs to happen after discharge.

Nurse informaticists play an important role in converting these observations into practical workflow corrections that support safe patient care. By working with clinical leaders, IT staff, and quality teams, nurse informaticists help ensure that referral workflows are built into the EHR, that key data are structured and can be shared, and that referral outcomes are tracked. Interoperability is not only a technical concern; it directly affects patient safety and care coordination.

Go-To Tool: Pediatric UC Referral Closure Checklist

1. ☐ **EHR referral order placed**
   ServiceRequest/referral order documented in chart

2. ☐ **Urgency level documented**
   Specify: Urgent (24 hrs), Semi-urgent (48 hrs), or Routine (1 week)

3. ☐ **C-CDA/visit summary transmitted**
   Imaging results, clinical findings, splint details included in referral packet

4. ☐ **Specialty practice contact confirmed**
   Correct specialty practice identified; preferred provider documented

5. ☐ **Family confirmed understanding**
   Teach-back: family can state who they are calling, when, and why (translator used if needed)

6. ☐ **Referral tracking activated**
   EHR tracker shows referral 'pending'; 48-hr alert set for confirmation check

Use at every discharge when a specialist referral is ordered.

Generative AI Attestation

I attest that I used a generative AI tool in accordance with course guidelines and assignment-specific permissions. I used Claude (Anthropic, 2026) on March 1, 2026, to generate an interesting and attractive PowerPoint template for informatics presentations. The prompt(s) used included: “Can you create me a blank power point template to use for an informatics presentation? Use Lorum Ipsum as place fillers, and I need some slides for a table, a three-column list comparison, etc.”

Additionally, on March 12, 2026, I asked ChatGPT (OpenAI, 2026) to generate ideas for some of my slides and to help me compare my presentation to the assignment rubric. The prompt(s) used included: “Please give me some potential ideas for the Future State, Safety, Equity, Privacy + Security Guardrails and Optional Go-To Tool (Interoperability Quick Check checklist) slides.”

All AI-generated content was critically reviewed, edited, and appropriately integrated with my own academic and clinical reasoning.

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