Medical Knowledge Integration

Knowledge Source Integration Process

Knowledge Sources

- 📋 **Clinical Guidelines** (AHA, WHO, CDC)
- 📘 **Medical Literature** (PubMed, Trials)
- 💊 **Drug Databases** (Interactions, Dosing)
- 🦠 **Disease Knowledge** (Pathophysiology)

Processing Steps

1. **Extract** Relevant Info
2. **Validate** Evidence Level
3. **Reconcile** Conflicts
4. **Synthesize** Knowledge

Knowledge Integration Hub

Clinical Applications

- 🎯 **Diagnosis** Generation
- 💉 **Treatment** Planning
- ⚠️ **Risk** Assessment
- 🤝 **Decision** Support

Quality

- ✅ Verified
- ✅ Current
- ✅ Evidence
- ✅ Relevant
- ✅ Guideline
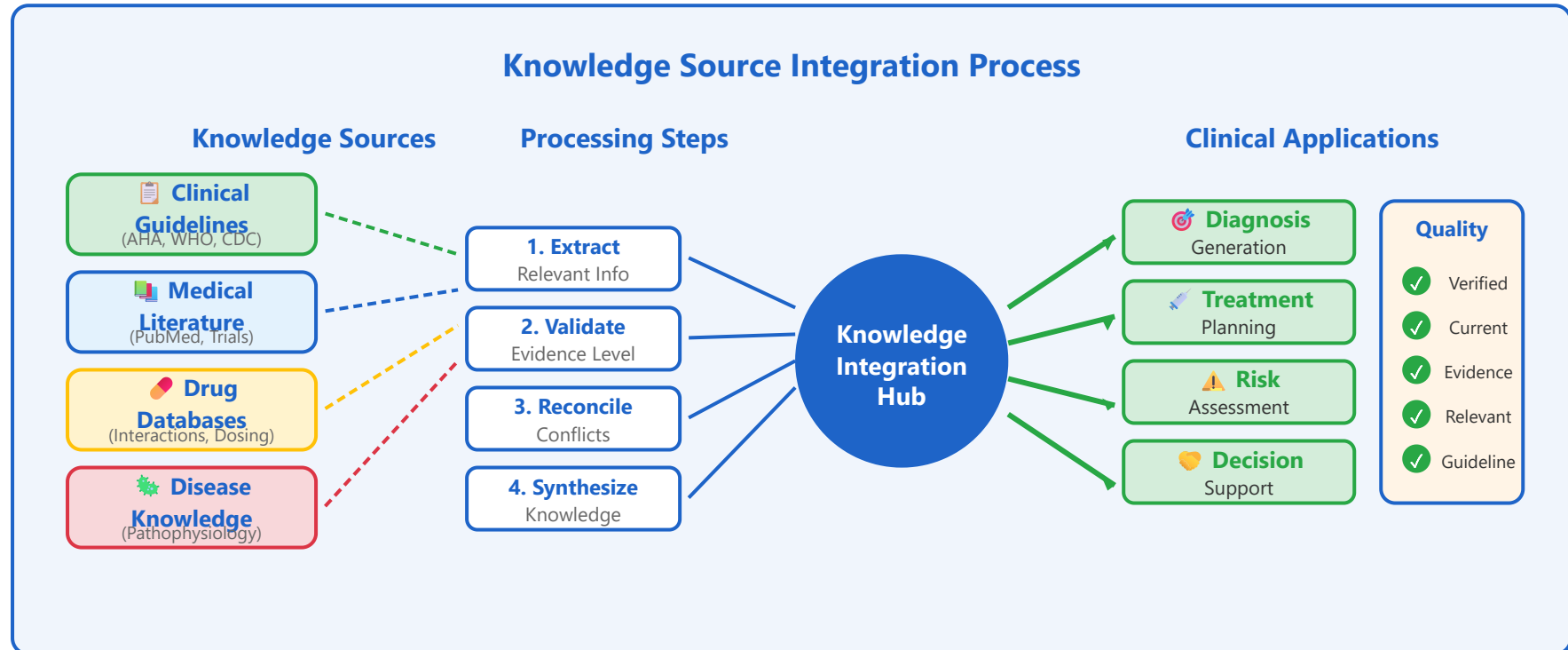
Integration Example: Hypertensive Emergency

Patient Case: BP 220/120, chest pain, confusion

Guideline Integration: JNC-8 → Target BP reduction 25% in first hour

Evidence Integration: Recent meta-analysis → IV labetalol preferred

Drug Database: Check contraindications, adjust for CrCl

Output: Evidence-based treatment protocol with monitoring plan

Critical: Always reference authoritative medical sources