

GhEHR Enhanced Roadmap (2025-2026)

Phase 1: Foundation (Q1 2024) - COMPLETED ☒

1. Core EHR Features

- Patient registration & clinical records
- Appointment scheduling (basic calendar)
- Billing with Mobile Money integration (MTN/AirtelTigo)
- Offline-first architecture (Hive DB + sync)

2. Ghana-Specific Basics

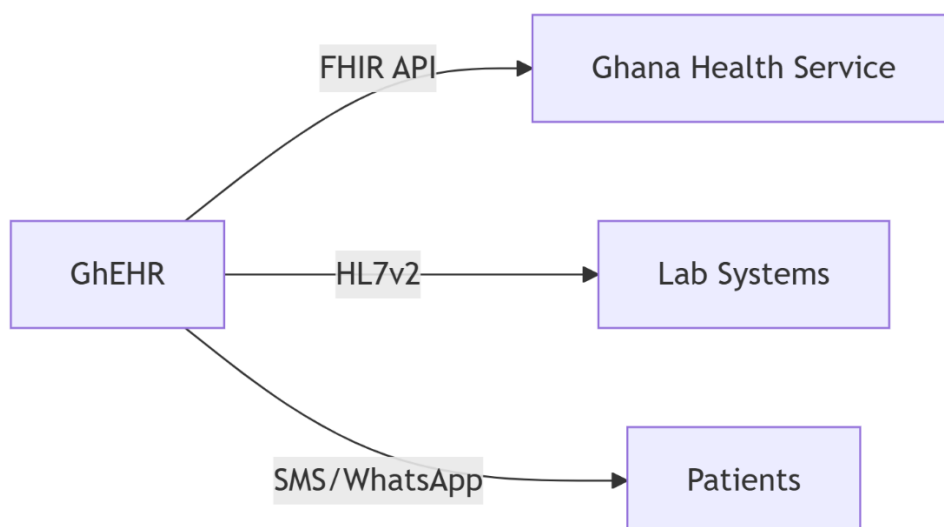
- Low-literacy UI (icon-driven)
 - Malaria/typhoid clinical templates
 - AWS Cape Town region deployment
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Phase 2: Standards & Security (Q2-Q3 2025)

1. Regulatory Compliance

- ISO 13606-1 data export module
- Ghana Data Protection Act audit
- End-to-end encryption for sensitive fields

2. Interoperability



3. Advanced Security

- Biometric login (fingerprint/face ID)
 - Automated PostgreSQL backups to S3
 - Role-based data access logs
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Phase 3: Patient Empowerment (Q4 2024)

1. From Patient Experience Doc:

- **Remote Monitoring:**

typescript

```
// SMS-based vital reporting
router.post('/api/vitals/sms', (req, res) => {
  const { phone, bp, glucose } = req.body;
  // Store in PostgreSQL with is_offline flag
});
```

- **Cost Transparency:**

- MTN Mobile Money price estimator
- Procedure cost breakdowns (English/Twi)

2. Family & Community Tools

- Caregiver access portals
 - WhatsApp appointment reminders
 - Ghanain-language health education videos
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Phase 4: Scale & AI (Q1-Q2 2025)

1. Ghana-Wide Deployment

- Sharded PostgreSQL for 5K+ patients
- Multi-facility support

- District hospital onboarding

2. AI Enhancements

- Ghanaian-language, English NLP for clinical notes
 - Malaria, Tuberculosis, typhoid diagnosis assistant (WHO guidelines)
 - Drug interaction alerts (Ghana Essential Medicines List)
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Phase 5: Ecosystem Integration (Q3 2025+)

1. National Systems

- NHIS (National Health Insurance) claims
- EPI (Expanded Program on Immunization) sync
- Pharmacy stock level APIs

2. Telemedicine

- Africa's Talking voice consultations
- MTN Mobile Money for teleconsult payments