**HealthSync Data Migration Plan**

**1. Pre-Migration Phase**

**Assessment**

* Inventory of data sources
* Data volume analysis
* Legacy system documentation review
* Identification of data quality issues

**Planning**

* Migration timeline: March 21-25, 2024
* Resource allocation
* Downtime window: March 24 (Sunday) 00:00-04:00 EST
* Rollback procedures

**Data Mapping**

* Source-to-target field mapping
* Data transformation rules
* Validation criteria

**2. Development Phase**

**ETL Development**

sql

*-- Sample transformation query*

SELECT

p.patient\_id AS id,

p.first\_name,

p.last\_name,

p.dob,

CASE p.gender

WHEN 'M' THEN 'male'

WHEN 'F' THEN 'female'

ELSE 'other'

END AS gender

FROM legacy\_patients p

WHERE p.status = 'active'

**Validation Rules**

* Demographic data completeness
* Medical record consistency
* Appointment history integrity
* Billing record accuracy

**3. Testing Phase**

**Test Migrations**

1. Sample dataset migration
2. Performance testing
3. Data quality verification
4. Integration testing

**Validation Procedures**

python

def validate\_patient\_record(patient):

required\_fields = ['id', 'firstName', 'lastName', 'dob']

for field in required\_fields:

if not patient.get(field):

raise ValidationError(f"Missing required field: {field}")

**4. Execution Phase**

**Pre-Migration Tasks**

1. Backup of source systems
2. Verification of system readiness
3. Communication to stakeholders
4. Freeze period for data updates

**Migration Sequence**

1. Patient demographics (Priority 1)
2. Medical records (Priority 1)
3. Appointment history (Priority 2)
4. Billing records (Priority 2)
5. Document attachments (Priority 3)

**Validation Steps**

* Record count reconciliation
* Data quality checks
* Sample record validation
* System integration verification

**5. Post-Migration Phase**

**Verification**

* Data completeness audit
* System functionality testing
* User acceptance validation
* Performance monitoring

**Documentation**

* Migration completion report
* Issue resolution log
* Lessons learned
* System configuration updates

**6. Contingency Plan**

**Rollback Triggers**

* Data integrity issues
* System performance problems
* Critical functionality failures
* Integration errors

**Rollback Procedure**

1. Stop all system access
2. Restore from pre-migration backup
3. Verify system stability
4. Resume operations on legacy system

**7. Support Plan**

**Post-Migration Support**

* 24/7 support team availability
* Issue escalation procedures
* Performance monitoring
* User training sessions

**Success Criteria**

* 100% critical data migration
* Zero data loss
* System performance within SLA
* User acceptance sign-off