

MediSure360 Health Insurance System - Complete Process Flow

System Overview

MediSure360 is a comprehensive health insurance management system built with PHP, utilizing FPDF for document generation, PHPOffice for spreadsheet processing, and PHPMailer for email communications.

Authentication & Access Control

User Roles & Permissions

- **Administrator (role_id: 1):** Full system access
- **General Manager (role_id: 2):** Corporate oversight and reporting
- **Operations (role_id: 3):** Member management and operations
- **Finance (role_id: 4):** Claims and financial operations
- **Claims Analyst (role_id: 5):** Claims processing and analytics
- **Data Entry Clerk (role_id: 6):** Data entry and basic operations
- **Care Manager (role_id: 7):** Patient care coordination

Authentication Process

1. User Access → login.php
 2. Session Validation → `$_SESSION['user_id'] & $_SESSION['role_id']`
 3. Permission Check → Role-based menu access
 4. Admin Protection → `if (!isset($_SESSION['user_id']) || $_SESSION['role_id'] !== 1)`
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1. System Onboarding & Setup

A. User Management (Admin Only)

Process Flow:

Admin Login → User Management → Create User Account → Assign Role → Set Permissions

Key Components:

- User creation with role assignment
- Password policies and security
- Failed login attempt tracking
- Password reset functionality via email
- Activity logging for all user actions

B. System Configuration

Process Flow:

General Settings → System Configuration → Email Settings → Tax Settings → Bank Settings

Configuration Areas:

- System name and branding
 - Email server configuration (SMTP)
 - Tax rates (PHCF: 0.25%, Training Levy: 0.20%, Stamp Duty: 40 KES)
 - Currency settings (Default: KES)
 - DKIM email authentication
 - Backup and restore settings
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2. Corporate Management Workflow

A. Corporate Onboarding

Process Flow:

Corporate Management → Add New Corporate → Configure Benefits → Set Premium Rates → Create Policy

Steps:

1. Corporate Registration

- Auto-generate corp_id (incremental)
- Basic company information
- Contact details and addresses
- Tax identification (PIN)
- Agent assignment

2. Scheme Configuration

- Select insurer
- Define scheme code
- Set thresholds (inpatient/outpatient)
- Configure waiting periods

3. Benefit Structure Setup

- Create benefit categories
- Set coverage limits
- Define copayment rules
- Provider restrictions

4. Premium Calculation

- Rate sheet configuration
- PHCF and levy calculations
- Stamp duty application
- Discount/loading adjustments

B. Policy Management

Process Flow:

Policy Creation → Premium Invoice Generation → Payment Processing → Policy Activation

Key Features:

- Quotation generation and management
 - Policy document generation (PDF)
 - Annual renewal processing
 - Policy amendments and endorsements
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3. Member Management Workflow

A. Member Enrollment

Process Flow:

Member Management → Add New Member → Family Setup → Document Upload → Card Generation

Enrollment Steps:

1. Principal Applicant Registration

- Personal information capture
- Medical history (if required)
- Employment details
- Emergency contacts

2. Dependent Addition

- Relationship verification
- Age validation
- Document requirements
- Benefit eligibility

3. Member Card Generation

- PDF card creation using FPDF
- QR code generation
- Digital wallet integration
- Physical card printing options

B. Member Services

Process Flow:

Member Query → Benefit Verification → Limit Checking → Service Authorization

Services:

- Member benefit inquiries
 - Coverage limit tracking
 - Risk profile assessment
 - Member portal access
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4. Claims Management Workflow

A. Pre-Authorization Process

Process Flow:

Provider Request → Medical Review → Limit Verification → Authorization → Notification

Steps:

1. Request Submission

- Provider submits pre-auth request
- Member eligibility verification
- Diagnosis validation (ICD-10)
- Treatment plan review

2. Medical Assessment

- Clinical review
- Necessity determination
- Alternative treatment options
- Cost estimation

3. Authorization Decision

- Reserve amount allocation
- Approval/denial notification
- Letter of undertaking (LOU)
- Provider notification

B. Claims Processing

Process Flow:

Claim Submission → Validation → Medical Review → Payment Processing → Reporting

Processing Steps:

1. Claim Receipt

- Manual entry or electronic submission
- Document verification
- Member eligibility check
- Provider validation

2. Claims Validation

- Benefit coverage verification
- Limit checking
- Diagnosis code validation
- Treatment appropriateness

3. Medical Review

- Clinical assessment
- Documentation review
- Treatment necessity
- Cost reasonableness

4. Payment Processing

- Amount calculation
- Deduction application
- Payment voucher generation
- Provider payment

C. Reimbursement Claims

Process Flow:

Member Submission → Document Review → Verification → Payment → Member Notification

5. Financial Management Workflow

A. Premium Management

Process Flow:

Premium Calculation → Invoice Generation → Payment Collection → Allocation → Reconciliation

Components:

1. Premium Calculation

- Base premium computation
- Tax additions (PHCF, Training Levy, Stamp Duty)
- Discount/loading applications
- Installment planning

2. Billing & Collection

- Invoice generation (PDF)
- Payment tracking
- Receipt management
- Outstanding follow-up

3. Financial Reconciliation

- Bank reconciliation
- Payment allocation
- Commission calculations
- Financial reporting

B. Claims Financial Management

Process Flow:

Claims Approval → Payment Authorization → Voucher Generation → Bank Processing → Reconciliation

Key Processes:

- Payment voucher creation
 - Bank file generation
 - Provider payment processing
 - Financial controls and approvals
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6. Provider Network Management

A. Provider Onboarding

Process Flow:

Provider Application → Verification → Contract Negotiation → System Setup → Go-Live

Steps:

1. Provider Registration

- License verification
- Accreditation checks
- Service capability assessment
- Geographic coverage

2. Contract Management

- Rate negotiation
- Service level agreements
- Payment terms
- Performance metrics

B. Provider Operations

Process Flow:

Service Delivery → Claim Submission → Payment Processing → Performance Monitoring

Operations:

- Electronic data interchange (EDI)
 - Claims reconciliation
 - Performance reporting
 - Quality monitoring
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7. EDI (Electronic Data Interchange) Management

A. EDI Configuration

Process Flow:

Provider Setup → Benefit Mapping → Rule Configuration → Testing → Production

B. EDI Operations

Process Flow:

Data Transmission → Validation → Processing → Response → Exception Handling

8. Reporting & Analytics

A. Standard Reports

Available Reports:

- Corporate dashboards
- Member analytics
- Claims experience reports
- Financial analytics
- Risk assessment reports

B. Custom Reporting

Process Flow:

Report Request → Template Creation → Data Extraction → Report Generation → Distribution

9. System Administration

A. Data Management

Process Flow:

Data Sources → Migration Tools → Validation → Import → Verification

B. System Maintenance

Key Areas:

- Database backup and restore
 - System updates and patches
 - Performance monitoring
 - Security audits
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10. Document Management

A. Document Generation

Process Flow:

Document Types:

- Policy certificates
- Member cards
- Claim vouchers
- Financial reports
- Correspondence

B. Document Storage

- Digital archiving
 - Version control
 - Access permissions
 - Retention policies
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11. Communication Management

A. Email Communications

Configuration:

- SMTP server: mail.myne.co.ke:587
- Authentication with DKIM
- Template-based messaging
- Delivery tracking

B. Notification System

Types:

- Policy notifications
 - Claim updates
 - Payment confirmations
 - Renewal reminders
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12. Audit & Compliance

A. Activity Logging

Tracked Activities:

- User logins/logouts
- Data modifications
- Document access
- System configurations

B. Compliance Features

- Data protection measures
 - Audit trail maintenance
 - Regulatory reporting
 - Security monitoring
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13. Support & Ticketing

A. Support Ticket Management

Process Flow:

Issue Reporting → Ticket Creation → Assignment → Resolution → Closure

B. Knowledge Management

- FAQ management
 - User documentation
 - Training materials
 - System guides
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Technology Stack Summary

Core Technologies:

- **Backend:** Raw PHP
- **Database:** MySQL
- **PDF Generation:** FPDF (fpdf/fpdf.php)
- **Spreadsheet Processing:** PHPOffice (vendor/phpoffice/vendor/autoload.php)
- **Email:** PHPMailer (vendor/phpmailer/src/PHPMailer.php)
- **Frontend:** HTML, CSS, JavaScript, Bootstrap
- **Authentication:** Session-based with role permissions

Key Features:

- Role-based access control
- Comprehensive audit logging
- Multi-corporate management
- Electronic data interchange
- Real-time reporting and analytics
- Automated premium calculations
- Document generation and management
- Provider network management

This process flow ensures comprehensive coverage of all business operations within the MediSure360 health insurance management system.