

# Patient Follow-up Reminder System Setup

## Overview

The reminder system has been integrated into your Smart Patient Follow-up System. It provides automated email/SMS reminders to patients one day before their scheduled follow-up appointments.

## New Features Added

### 1. Database Tables

Run the following SQL file to create the necessary tables:

```
bash
mysql -u your_username -p smart_patient_followup < reminders.sql
```

### 2. Backend API Endpoints

New reminder routes have been added to your backend:

- `[GET /api/reminders/dashboard]` - Get reminder dashboard data
- `[GET /api/reminders/upcoming]` - Get patients needing reminders (for n8n)
- `[POST /api/reminders/create]` - Create a reminder record
- `[PUT /api/reminders/update-status/:id]` - Update reminder status
- `[GET /api/reminders/logs/:reminderId]` - Get reminder logs
- `[POST /api/reminders/send-manual]` - Trigger manual reminder

### 3. Frontend - Reminder Status Dashboard

The reminders.html page now shows:

- **Status Overview:** Total reminders sent, pending, failed
- **Three Categories:**
  - Overdue follow-ups (past due date)
  - Today's follow-ups
  - Upcoming follow-ups (next 7 days)
- **For Each Patient:**
  - Patient details and condition
  - Follow-up date

- Reminder status (Sent, Pending, Failed, No Reminder Set)
- Contact options (Call/Email buttons)
- Manual reminder send button

## 4. n8n Workflow Setup

### Import the Workflow

1. Open your n8n instance
2. Go to Workflows > Import
3. Import the `patient_reminder_workflow.json` file

### Configure Credentials

You'll need to set up the following credentials in n8n:

#### 1. MySQL Database

- Host: localhost (or your DB host)
- Port: 3306
- Database: smart\_patient\_followup
- User: your\_db\_user
- Password: your\_db\_password

#### 2. SMTP Email (for email reminders)

- Host: your\_smtp\_host
- Port: 587
- User: your\_email
- Password: your\_email\_password
- SSL/TLS: Usually enabled

#### 3. Twilio (for SMS reminders - optional)

- Account SID: your\_twilio\_account\_sid
- Auth Token: your\_twilio\_auth\_token
- From Number: your\_twilio\_phone\_number

### Workflow Features

- **Automatic Daily Run:** Scheduled to run at 9 AM daily

- **Manual Trigger:** Can be triggered from the web app
- **Email/SMS Support:** Sends based on patient preference
- **Status Tracking:** Updates reminder status in database
- **Error Handling:** Logs failed attempts

## How It Works

### 1. Daily Automation:

- n8n checks for patients with follow-ups tomorrow
- Creates reminder records
- Sends email/SMS based on patient preferences
- Updates status to "sent" or "failed"

### 2. Manual Reminders:

- Click "Send Reminder" button on any patient
- Triggers n8n webhook to send immediate reminder
- Updates status in real-time

### 3. Status Tracking:

- All reminders are logged in the database
- Dashboard shows current status for each reminder
- Failed reminders can be retried manually

## Configuration

### Email Templates

The email template is included in the n8n workflow and can be customized in the "Send Email Reminder" node.

### SMS Templates

The SMS template is in the "Send SMS Reminder" node. Keep it concise due to SMS character limits.

### Reminder Preferences

Each patient can have reminder preferences:

- [email] - Email only
- [sms] - SMS only
- [both] - Both email and SMS

- - No reminders

## Testing

### 1. Test Database Connection:

```
bash
```

```
node -e "require('./database.js')"
```

### 2. Test Reminder API:

```
bash
```

```
# Get reminder dashboard (need auth token)
```

```
curl -H "Authorization: Bearer YOUR_TOKEN" http://localhost:5000/api/reminders/dashboard
```

### 3. Test n8n Workflow:

- Use the "Execute Workflow" button in n8n
- Check if reminders are created and sent

## Troubleshooting

### Common Issues

#### 1. "Failed to fetch reminders" error:

- Check if backend server is running
- Verify reminder routes are loaded in server.js
- Check database connection

#### 2. Reminders not sending:

- Verify n8n workflow is active
- Check SMTP/Twilio credentials
- Look for errors in n8n execution history

#### 3. Wrong timezone:

- Adjust the schedule trigger time in n8n
- Modify scheduled\_time in reminder creation

## Logs

- Backend logs: Check console output

- n8n logs: View execution history in n8n UI
- Database logs: Check reminder\_logs table

## Future Enhancements

- Add WhatsApp reminder support
- Implement reminder templates
- Add bulk reminder management
- Create reminder analytics dashboard
- Add patient confirmation tracking

## Support

For issues or questions, please check:

- Backend logs for API errors
- n8n execution logs for workflow errors
- Browser console for frontend errors
- Database reminder\_logs table for reminder-specific issues