Bafna Healthcare Durg

The Metabolic Command Center:

A Hybrid Digital Ecosystem for Deterministic Clinical Governance

Overcoming Clinical Inertia and Bridging the Health Literacy Gap in Tier-2 India via Localized Informatics and ABDM Integration.

Architect
Dr. Chander Bafna, MBBS, MD
Founder & Lead Consultant, Bafna Health Care
Metabolic Health Center, Durg
Associate Professor of Internal Medicine

Event
NABH Digital Health Excellence Awards 2026
Submission Category: Disease/Care Management
June 30, 2026

Foundations of Digital Health

Health Data Portability

Allows health records to be accessed across different hospitals.

ABHA ID Enrollment

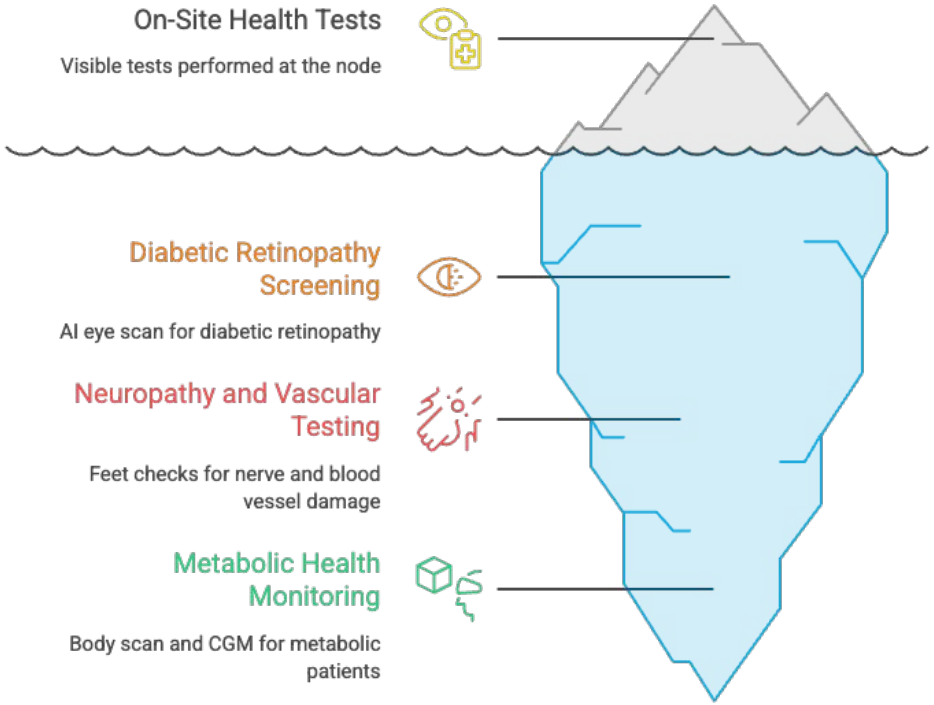
Ensures every patient receives a national health ID upon registration.

Data Privacy

Protects patient data according to India's digital data protection law.

Govt Health ID

Early Detection of Health Issues Through On-Site Tests.

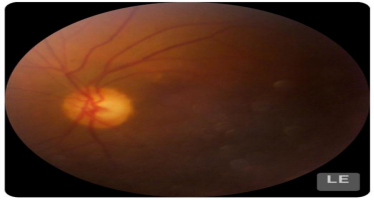


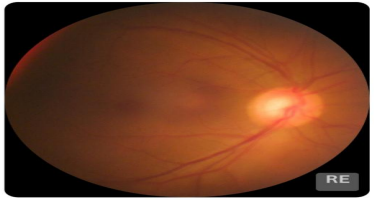
Bafna Health Care
BHC-durg

Retinopathy Report

Patient MRN: 878
Patient Name: [redacted]
Gende[redacted]
Doctor: Dr. Chander Bafna
Age: [redacted]
Date: 25 -June - 2026

Result: Signs of retinopathy seen right eye.
Advised detailed ophthalmologic examination





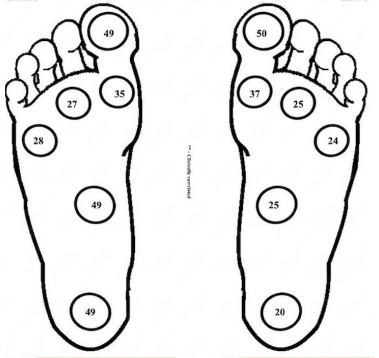
Comment: Consult Opthalmologist for detailed examination.

Doctor's Signature

Gender
Date
Referral

BIOTHESIOMETRY STUDY

RIGHT LEFT



iE : 40 Severe Loss of Vibratory Perception** 30 Severe Loss of Vibratory Perception**

5 Volts is 7 times more prone to ulceration in a diabetic foot than a normal foot. It is increasing to 23 times gher the threshold, higher the risk).

CS : NR - No

.TANT : Dr.Dr. Chander Bafna
.ISATION :MBBS, MD-Internal Medicine

Gender : MALE
Date : 27-Feb-2025
Referral : Dr.Chander Bafna

Ankle Brachial Index Doppler Report

t Brachial
Left Brachial
t Posterior Tibial
Left Posterior Tibial
t Dorsalis Pedis
Left Dorsalis Pedis

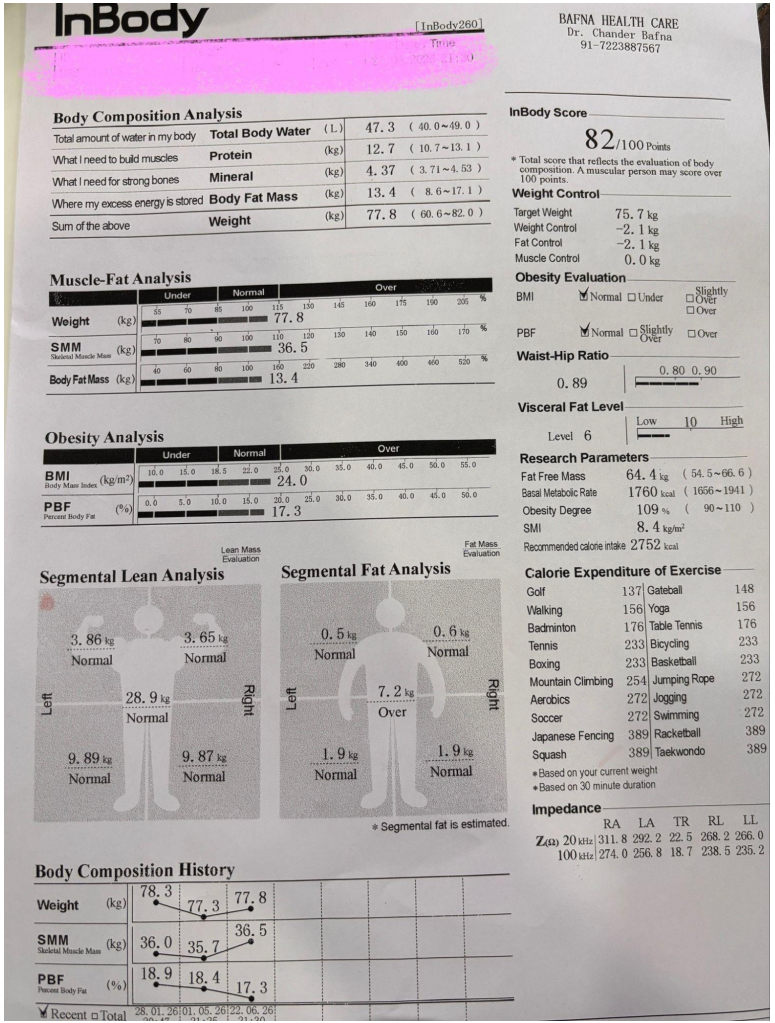
ition	Brachial	PT	DP	ABI
ht	120	100	90	0.83
	110	100	90	0.83

TASC II Guideline for ABI

0.91 to 1.40 - NORMAL 0.71 to 0.90 - MILD PA
0.41 to 0.70 - MODERATE PAD < 0.40 - SEVERE PA
> 1.40 - INCOMPRESSIBLE (CALCIFIED) ARTERY

terpretations :
lateral PAD. Mild right PAD. Mild left PAD.
marks:

nsultant: Dr.Dr. Chander Bafna
ecialisation: MBBS, MD-Internal Medicine



InBody

[InBody260]

BAFNA HEALTH CARE
Dr. Chander Bafna
91-7223887567

Body Composition Analysis

Total amount of water in my body	Total Body Water	(L)	47.3	(40.0~49.0)
What I need to build muscles	Protein	(kg)	12.7	(10.7~13.1)
What I need for strong bones	Mineral	(kg)	4.37	(3.71~4.53)
Where my excess energy is stored	Body Fat Mass	(kg)	13.4	(8.6~17.1)
Sum of the above	Weight	(kg)	77.8	(60.6~82.0)

Muscle-Fat Analysis

	Under	Normal	Over
Weight (kg)		77.8	
SMM Skeletal Muscle Mass (kg)		36.5	
Body Fat Mass (kg)		13.4	

Obesity Analysis

	Under	Normal	Over
BMI Body Mass Index (kg/m²)		24.0	
PBF Percent Body Fat (%)		17.3	

Segmental Lean Analysis (Lean Mass Evaluation)

3.86 kg Normal		3.65 kg Normal
Left	28.9 kg Normal	Right
9.89 kg Normal		9.87 kg Normal

Segmental Fat Analysis (Fat Mass Evaluation)

0.5 kg Normal		0.6 kg Normal
Left	7.2 kg Over	Right
1.9 kg Normal		1.9 kg Normal

* Segmental fat is estimated.

Body Composition History

	28. 01. 26	01. 05. 26	22. 06. 26
Weight (kg)	78.3	77.3	77.8
SMM Skeletal Muscle Mass (kg)	36.0	35.7	36.5
PBF Percent Body Fat (%)	18.9	18.4	17.3

Recent Total

InBody Score

82/100 Points

* Total score that reflects the evaluation of body composition. A muscular person may score over 100 points.

Weight Control

Target Weight	75.7 kg
Weight Control	−2.1 kg
Fat Control	−2.1 kg
Muscle Control	0.0 kg

Obesity Evaluation

BMI: Normal | Under | Slightly Over | Over

PBF: Normal | Slightly Over | Over

Waist-Hip Ratio

0.89 (0.80 – 0.90)

Visceral Fat Level

Level 6 (Low – 10 – High)

Research Parameters

Fat Free Mass	64.4 kg	(54.5~66.6)
Basal Metabolic Rate	1760 kcal	(1656~1941)
Obesity Degree	109 %	(90~110)
SMI	8.4 kg/m²	
Recommended calorie intake	2752 kcal	

Calorie Expenditure of Exercise

Golf	137	Gateball	148
Walking	156	Yoga	156
Badminton	176	Table Tennis	176
Tennis	233	Bicycling	233
Boxing	233	Basketball	233
Mountain Climbing	254	Jumping Rope	272
Aerobics	272	Jogging	272
Soccer	272	Swimming	272
Japanese Fencing	389	Racketball	389
Squash	389	Taekwondo	389

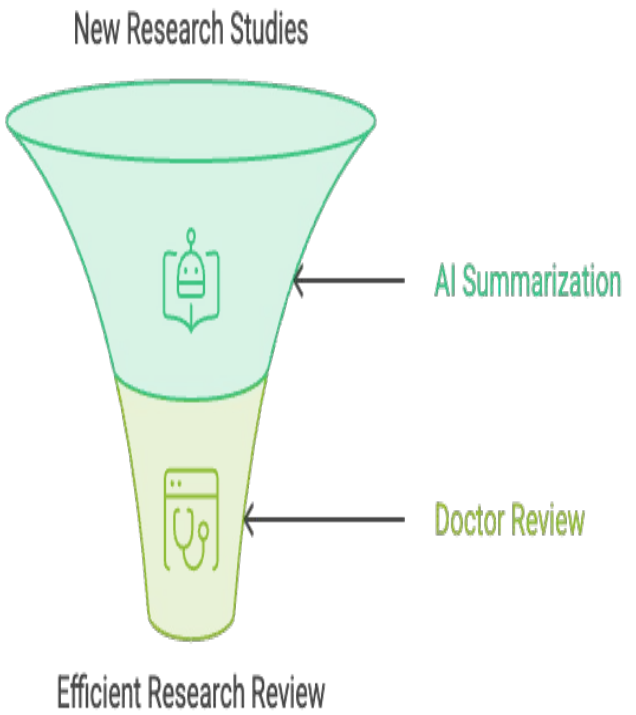
*Based on your current weight
*Based on 30 minute duration

Impedance

	RA	LA	TR	RL	LL
Z(Ω) 20 kHz	311.8	292.2	22.5	268.2	266.0
100 kHz	274.0	256.8	18.7	238.5	235.2

- ACCURATE AND QUALITY CONTROLLED TECHNICAL OBESITY/BODY COMPOSITION ASSESSMENT
- MONITORED OVER TIME ON SUBSEQUENT VISITS
- FED INTO THE PRESCRIPTION ALGORITHM FOR ACCURATE DOSE SELECTION

Streamlining Medical Research for Doctors



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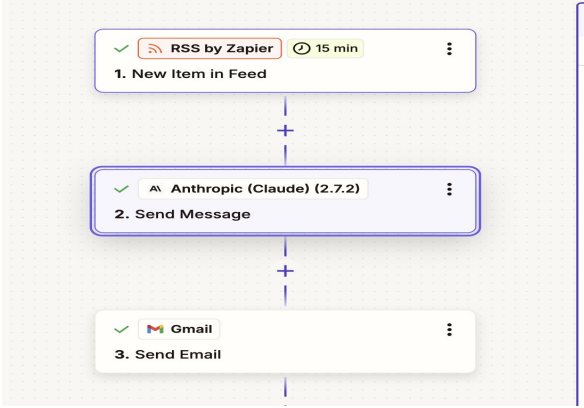
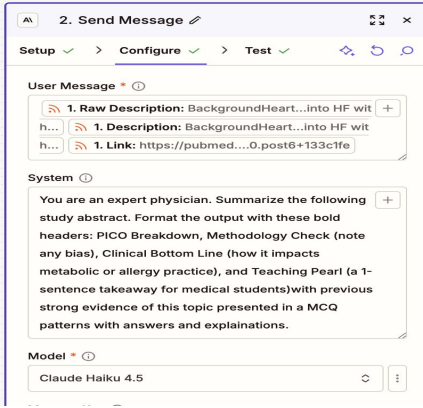
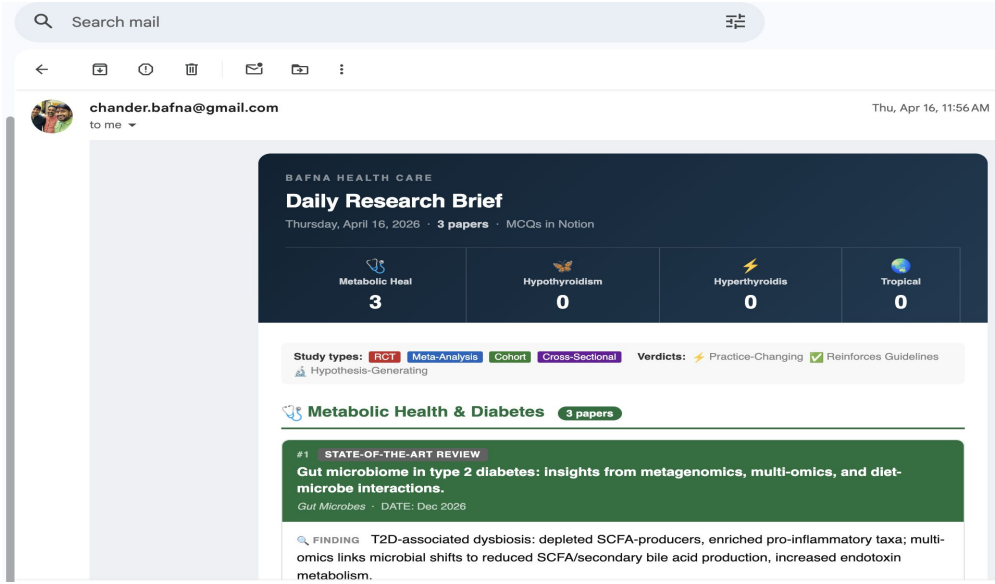
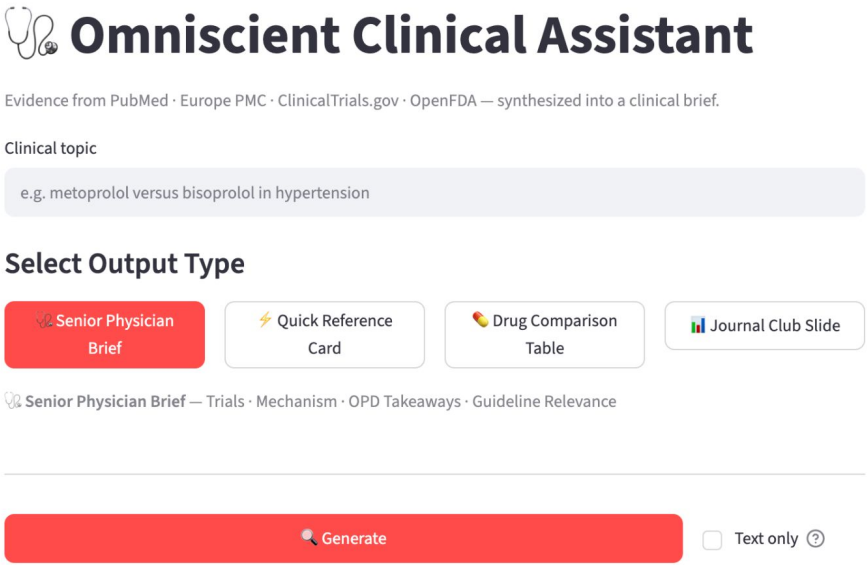






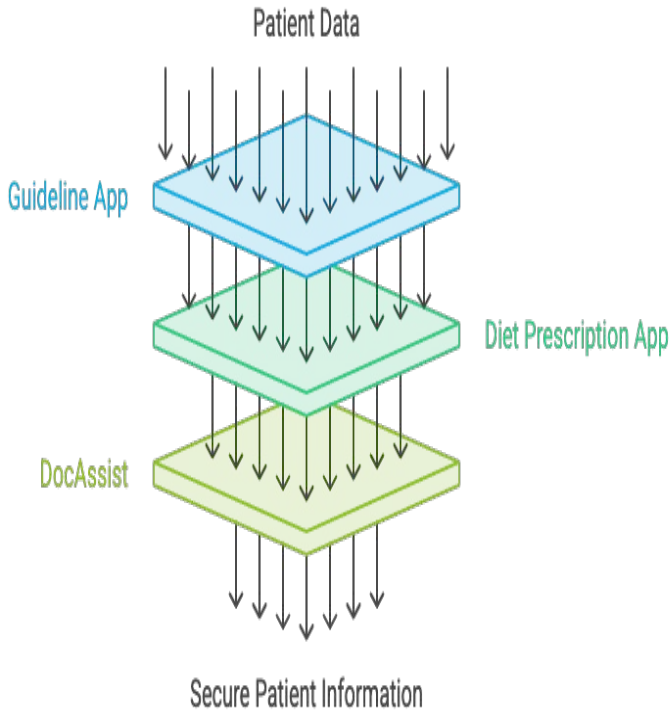
LOCALLY RUN STREAMLIT CLINICAL ASSISTANT APP INTERFACE



EVIDENCE BASED OUTPUT OF A PYTHON RUN STREAMLIT APP WORKING AS AN AI CLINICAL ASSISTANT

Quick Reference Card — Glp 1 Ra In Sarcopenia

📥 Download PNG | 📄 Download HTML | 📱 Send to Telegram | 🧠 Save to Obsidian



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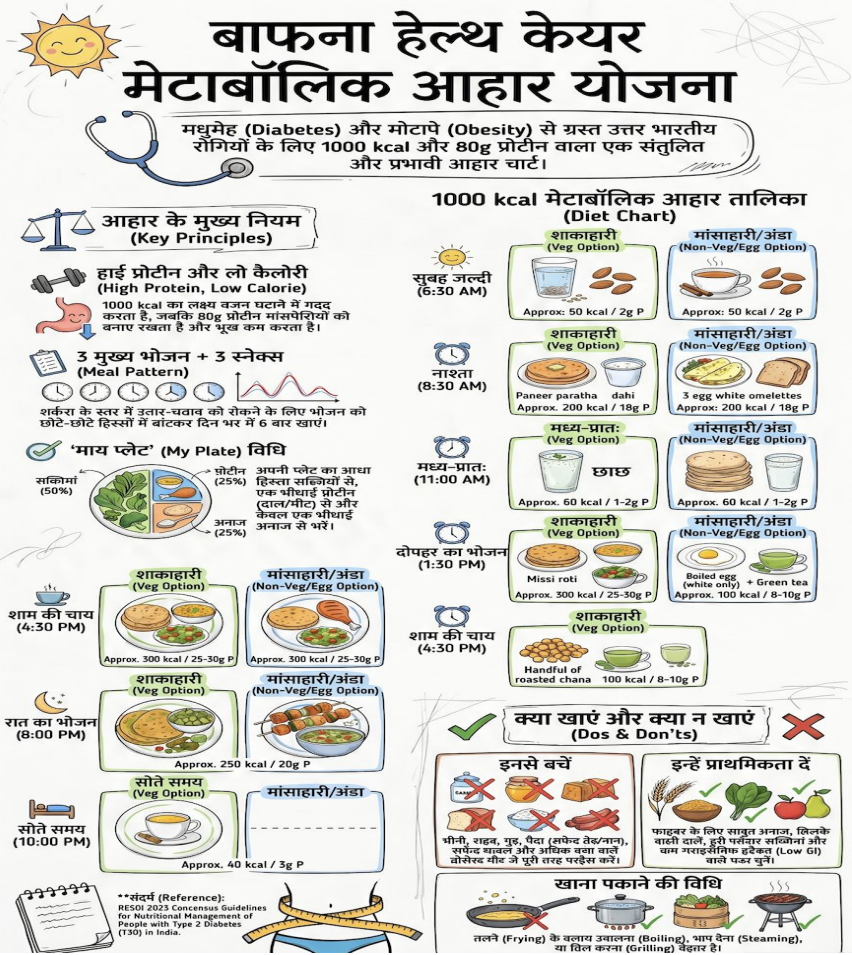


DIETARY APP OUTPUT

Bafna Metabolic Centre

EMPATHY-DRIVEN CLINICAL NUTRITION & METABOLIC MANAGEMENT

Patient & Vitals | Lifestyle & Chrono | Meal Timing | Glycemic Profile | Labs & Report

Patient Demographics

Patient Name *: abc

Weight (kg): 75.00

Primary Goal: Blood Sugar Control

Age (years): 45

Height (cm): 165.00

Activity Level: Sedentary (desk job, no ex...

Gender: Male

Waist Circumference (cm): 90.00

Dietary Pattern: Vegetarian

Comorbidities

Select all active comorbidities

Choose options

Output Preferences

Report Language: English

Plan Duration: 1-Day Snapshot / 7-Day Matrix

Report Tone: Clinical & Formal

Clinical Math Engine

27.5	61.4 kg	1561	1874	730	38.6 g	19.5 g
BMI kg/m²	IBW Devine formula	BMR kcal/day	TDEE kcal/day	EST. INTAKE +1144 kcal gap	PROTEIN GAP Target 68g	FIBER GAP Target 30g

Generate Personalised Diet Plan

Bafna Metabolic Centre

EMPATHY-DRIVEN CLINICAL NUTRITION & METABOLIC MANAGEMENT

...yle & Chrono | Meal Timing | Glycemic Profile | Labs & Reports | Pharmacology

When Can This Patient Actually Eat?

Fill in only the slots that are possible for this patient. Leave others blank. The plan will be built strictly within these windows — critical for shift workers and fasting patients.

Morning / Pre-Shift Slots

Wake-up / Shift-start time: 06:00

Early morning snack (optional): — Not possible —

Breakfast window: 07:00

Mid-Day / Mid-Shift Slots

Mid-morning snack: — Not possible —

Lunch window: 12:00

Post-lunch snack (optional): — Not possible —

Evening / Post-Shift Slots

Evening snack: — Not possible —

Dinner window: 17:00

Bedtime snack (optional): — Not possible —

How the AI apps work — step by step

Two locally-hosted Streamlit apps · Claude API · Patient data never leaves the clinic

Privacy guarantee: Both apps run on the clinic computer only. Patient data is processed locally and is never sent to any external server or cloud platform. Only anonymised calculation inputs reach the Claude API.

G guideline-app

Deterministic calculator · no AI guesswork

1. **Doctor enters patient data**
   Age, weight, height, kidney function, activity level, diagnosis
2. **Fixed equations run**
   BMR, calorie needs, protein targets calculated using validated formulas — same answer every time

   `Mifflin-St Jeor · ADA 2024 · ICMR-NIN`
3. **Safety flags generated**
   Kidney and liver dose-adjustment warnings appear automatically

   `Zero missed warnings post-implementation`
4. **Output logged**
   Every calculation saved with inputs and outputs — full audit trail

D Diet Prescription App

Claude API · personalised 7-day meal plan

1. **Receives calculation output**
   Calorie target, macros, comorbidity flags passed in from guideline-app
2. **Patient context added**
   Food preferences, InBody body scan data, CGM sugar pattern, cultural food habits

   `Localised · Chhattisgarh food items`
3. **Claude API called**
   Structured prompt sent · Claude generates personalised 7-day chronobiological meal plan

   `claude-sonnet-4-6 · structured output`
4. **Plan ready in seconds**
   Meal timing, portions, medication windows — printed and sent on WhatsApp

↓ both apps connect to ↓

C

Claude API — Anthropic

Used only for diet prescription generation · receives anonymised calculation parameters only · no patient name, ID, or contact data transmitted · response used to build meal plan and returned to local app

claude-sonnet-4-6

Structured prompt

Local post-processing

No data stored externally

↓ outputs delivered to patient ↓

Printed prescription

A4 diet chart handed to patient at end of consultation

WhatsApp delivery

Prescription + Hindi infographic sent to patient's phone same day

Audit log saved

All calculations and prescription parameters stored locally for review

BUILT WITH

Python 3.11

Streamlit

Claude API

Anthropic claude-sonnet-4-6

Localhost · zero cloud

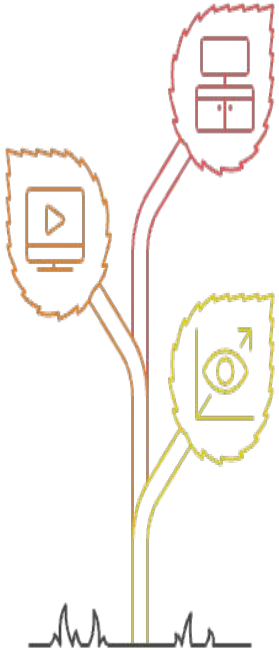
Mifflin-St Jeor equations

ADA 2024 guidelines

ICMR-NIN framework

DRUG INTERACTION SAFETY CHECKER EMBEDDED IN PRESCRIPTION EMR WORKFLOW

Limited Health Education for Hindi Speakers



Health Videos

Short videos explain health topics clearly

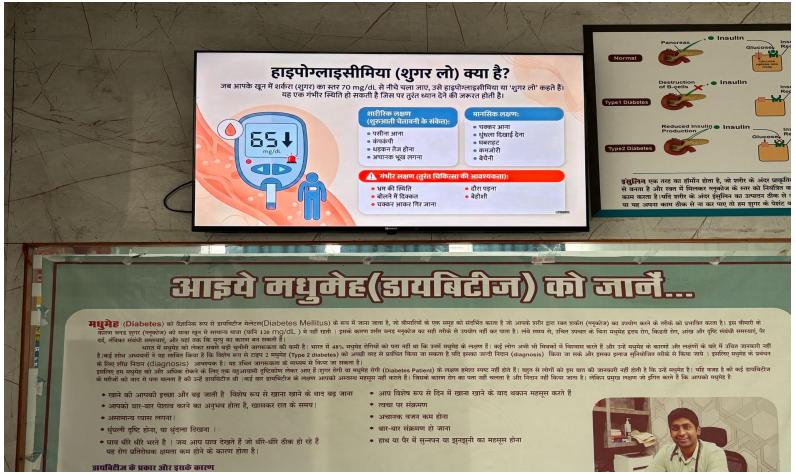
Waiting Room TV

Videos reinforce health messages before appointments

Visual Guides

AI-generated charts simplify complex health information

Made with Napkin



friend link below
1:55 PM

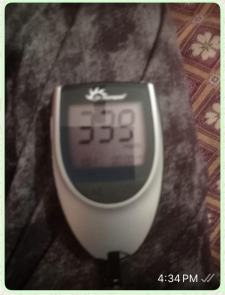
Dr. Bafna's Prescription
27 KB • pdf

Hi [redacted] 👋

Your prescription 💊 from 🤍 Dr. Chander Bafna is attached above for your reference 👆.

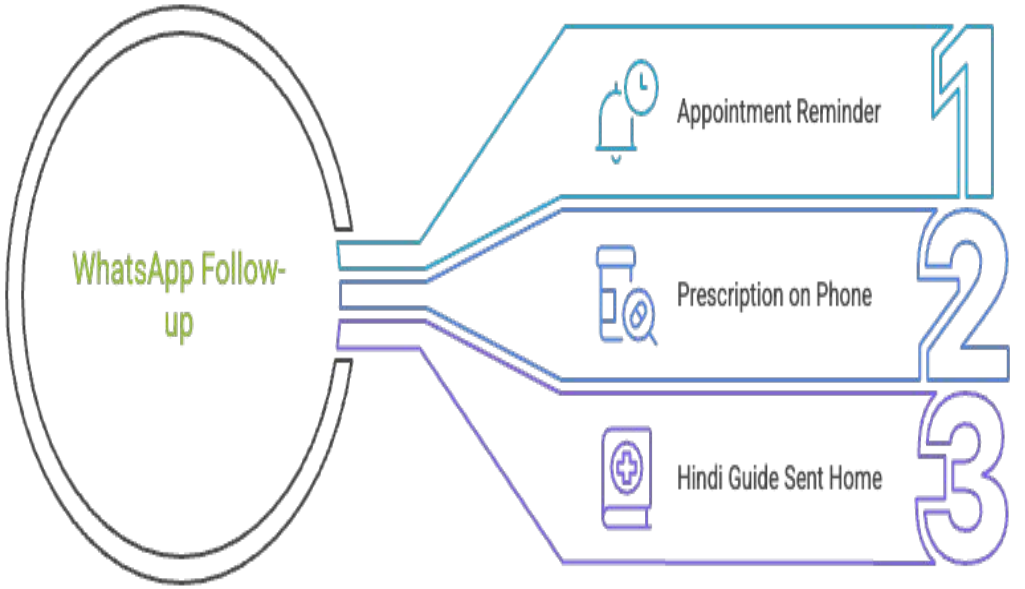
Dr Bafna Clinic
Hi 👋
This is EKA assistant 👩‍⚕️
What can I do for you?

Upload Medical Records
Send it securely to Eka Care app
4:33 PM ✓✓



File uploaded successfully!!
All the files you upload/forward in this whatsapp chat window will be uploaded to your vault https://eka.im/hQ1Or8crFtb
4:34 PM

Enhancing Patient Experience with WhatsApp



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Message from Dr. Chander Bafna

Hi [redacted],

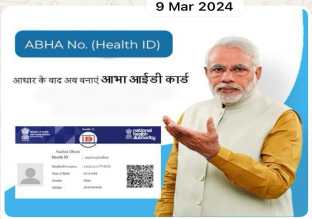
I would like to know if you would be coming for your follow up appointment Tomorrow, 2nd Apr'24.

- Tap 'Yes' to confirm.
- Tap 'No' if you are not coming.

8:34 AM

Yes, I will come
No, I will not be coming
I'll come at a later date

9 Mar 2024



Dear [redacted]

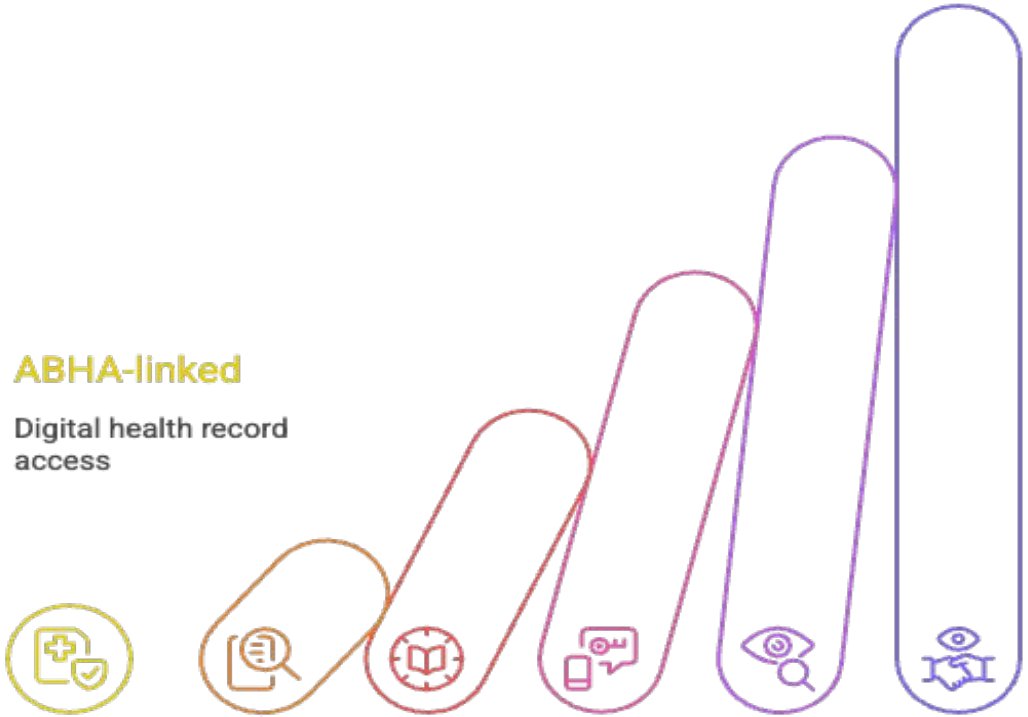
Dr. Chander Bafna invites you to join India's health revolution!

Get Your **ABHA Card** for anytime access to all your health records, an initiative of the Indian government under the **Ayushman Bharat Digital Mission (ABDM).**

12:54 PM

Get Your ABHA Card Now

ABHA-linked Patient Care Improves Outcomes



ABHA-linked

Digital health record access

Reduced Errors

Fewer medical mistakes made

Faster Reading

Less time spent on text

Increased Access

More patients on WhatsApp

More Scans

Higher number of eye exams

ABHA Adoption

Significant ABHA linkage rate

The Future of Tier-2 Digital Health

"The greatest barrier to digital healthcare in India is not technical availability—it is clinical motivation. By merging secure national networks with deterministic local engineering, we can deliver elite, error-free metabolic care to every patient, regardless of geography or health literacy."

Absolute Clinical Safety: Zero-error deterministic computation replacing manual variance.

Frictionless Engagement: Bridging the Hindi literacy gap via visual, automated WhatsApp delivery.

Uncompromising Privacy: A zero-cloud clinical engine paired with ABDM-compliant national architecture.

Thank You.

Dr. Chander Bafna | Founder, Bafna Metabolic Centre, Durg