

COMPREHENSIVE GERIATRIC DIABETIC AND HYPERTENSIVES SCREENING FOR EARLY DETECTION & PREVENTION OF COMPLICATIONS

PRESENTED BY

Dr KUMAR AMAN

SPECIALIST GERIATRIC MEDICINE & DIABETES

MBBS D.Diab PGDGM, MTB

McDM [Apollo Delhi], F.I.D.M [Broadgreen University U.K]

Consultant and Specialist in Diabetes HTN & Geriatric Medicine Ranchi, Jharkhand

OBJECTIVE

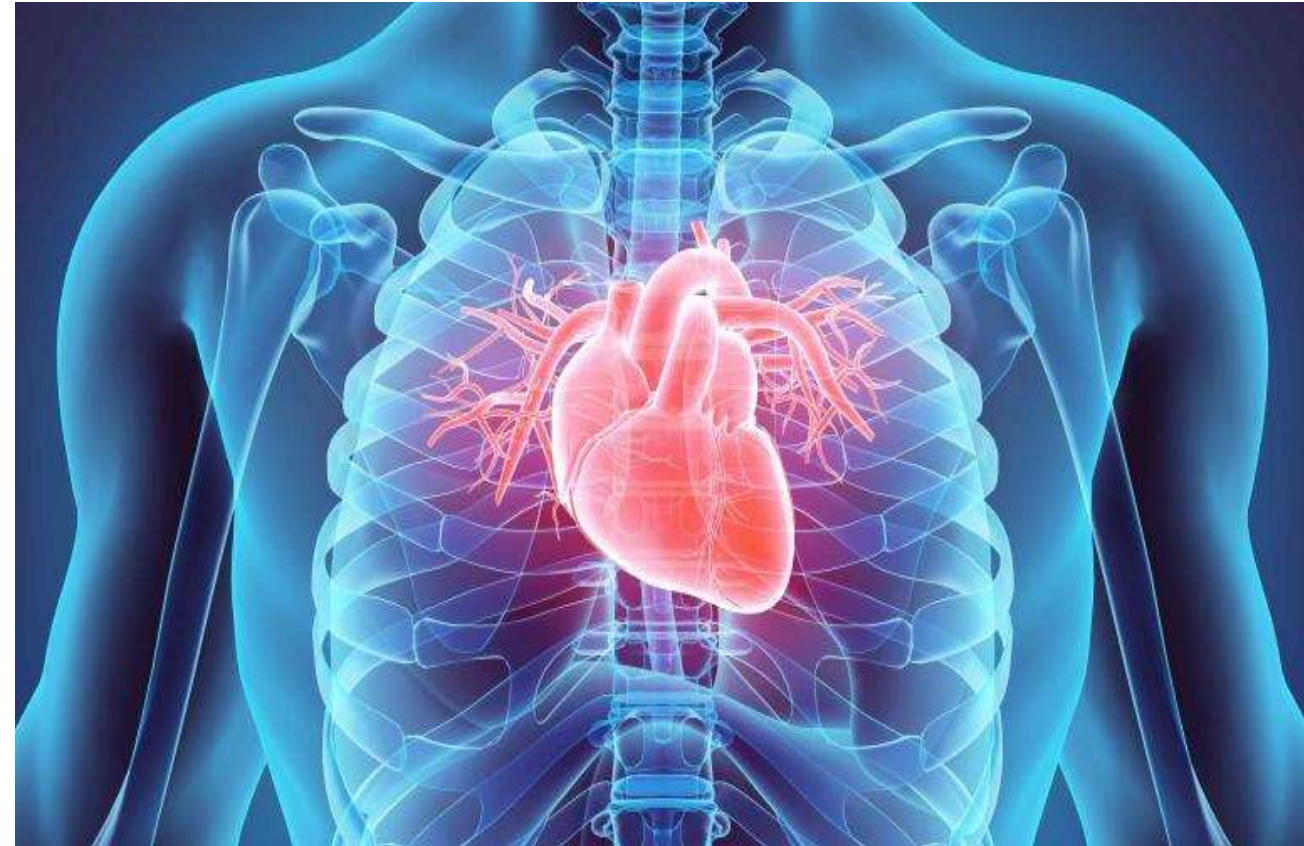
- TO DECREASE THE HOSPITAL LOAD BY EARLY DETECTION AND PREVENTION OF COMPLICATIONS BY REGULAR SCREENING OF GERIATRIC , DIABETIC AND HYPERTENSIVE PATIENTS
- TRAINING THEM TO MANAGE THEIR DISEASES EFFECTIVELY AND EFFICIENTLY
- TEACH THEM HOW TO USE MODERN AI TOOLS TO SIMPLIFY THEIR DAILY LIFE



Cardiovascular Diseases

TOTAL DISEASE BURDEN

- Nearly 100 to 120 million people in 2025
- 80 MILLION patients are **DIABETIC**
- 45 to 60 MILLION patients are **GERIATRIC**
- 100 TO 110 MILLION patients are
- **HYPERTENSIVE**
- - Total Deaths - Nearly 3.2 Million Deaths in 2025



LOAD On Health System – E.C.G , ANGIOGRAPHY , ANGIOPLASTY, 2D ECHO

SOURCE - ICMR CENSUS (ICMR-INDIAB) Estimated 2025

Kidney Diseases (Nephropathy)

TOTAL DISEASE BURDEN

- **Nearly 117 TO 144 MILLION**
- 42 TO 48 MILLION patients are **DIABETIC**
- 30 to 48 MILLION patients are **GERIATRIC**
- 136 TO 142 MILLION patients are **HYPERTENSIVE**
- **TOTAL DEATHS- Nearly 0.40 MILLION in 2025**



LOAD ON – DIALYSIS , KIDNEY TRANSPLANT AND DIAGNOSTICS

SOURCE - ICMR CENSUS (ICMR-INDIAB) Estimated 2025

Eye diseases (Retinopathy)

TOTAL DISEASE BURDEN

- Nearly 62 MILLION people have vision impairment
- 12.6 MILLION patients are **DIABETIC**
- 20 to 30 MILLION patients are **GERIATRIC**
- 40 MILLION patients are **HYPERTENSIVE**
- Approximately 8 MILLION people are BLIND in 2025



LOAD ON – CATARACT SURGERY , LASER TREATMENT ,FLOROSENCE ANGIOGRAPHY etc.

SOURCE - ICMR CENSUS (ICMR-INDIAB) Estimated 2025

Neurological disorders

TOTAL DISEASE BURDEN

- Nearly 30 MILLION
- STROKE , BRAIN HAEMORAGE
- TO 20 MILLION patients are **DIABETIC**
- 5 TO 7 MILLION patients are **GERIATRIC**
- 25 TO 28 MILLION patients are **HYPERTENSIVE**

TOTAL DEATHS- Nearly .50 MILLION IN 2025



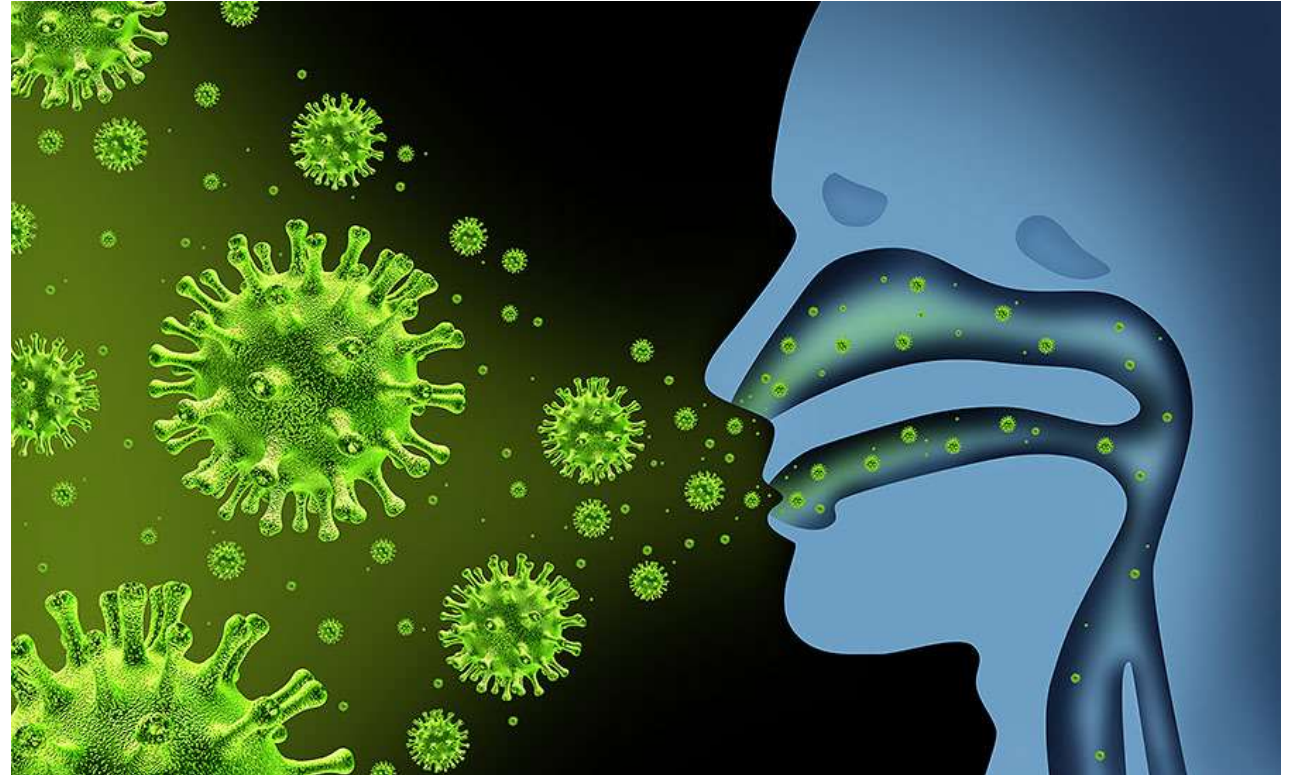
LOAD ON – MRI , CT SCAN , ANGIOGRAPHY BRAIN

SOURCE - ICMR CENSUS (ICMR-INDIAB) Estimated 2025

Infections

TOTAL DISEASE BURDEN

- Nearly 80 TO 100 MILLION
- 40 TO 80 MILLION patients are **DIABETIC**
- 20 to 40 MILLION patients are **GERIATRIC**
- 55 TO 85 MILLION patients are **HYPERTENSIVE**



**TOTAL DEATHS- Nearly 1.6 MILLION DEATHS
2025**

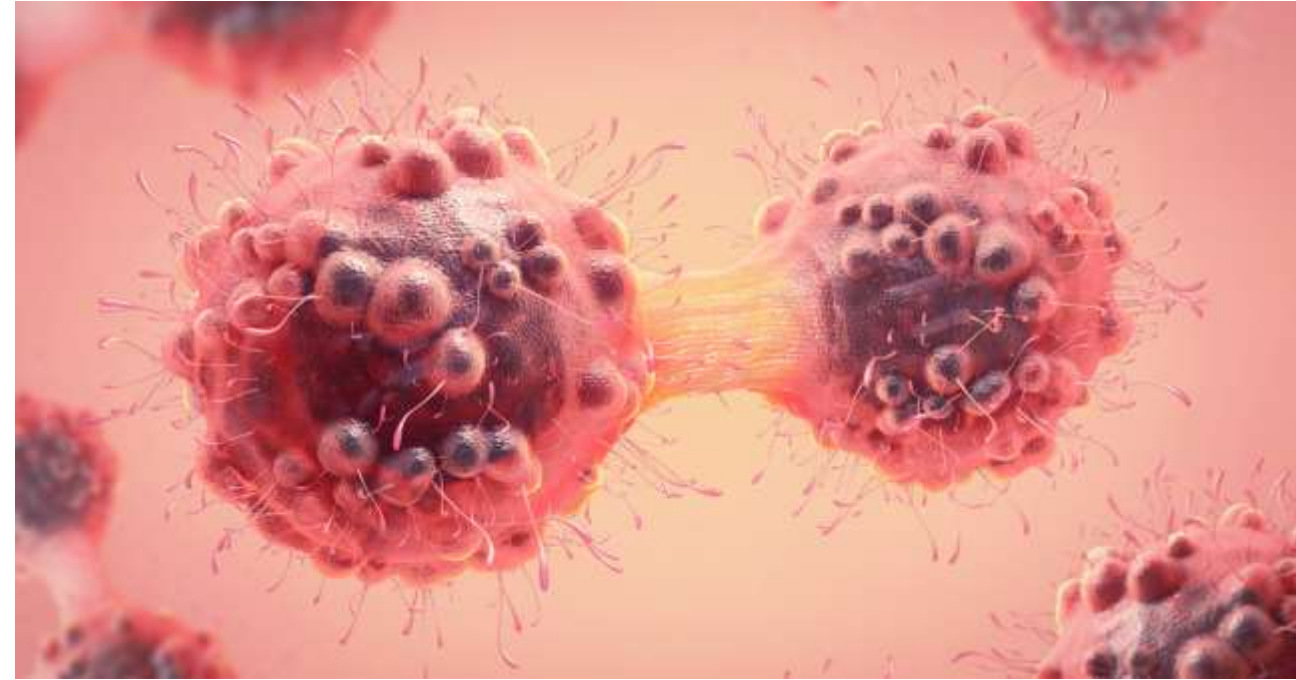
LOAD ON – ICU ADMISSION , ANTIBIOTIC RESISTENCE , MUTATION

SOURCE - ICMR CENSUS (ICMR-INDIAB) Estimated 2025

cancer

TOTAL DISEASE BURDEN

- Nearly 2.5 TO 3 MILLION
- 1.9 TO 2.3 LAKHS patients are **DIABETIC**
- 10 TO 14 LAKH patients are **GERIATRIC**
- APROXIMATLY 9 LAKH patients are **HYPERTENSIVE**
- TOTAL DEATHS- Nearly 9 LAKH IN 2025



LOAD ON – MRI , CT SCAN , CHEMO , RADIO, IMMUNOTHERAPY , ONCOLOGY

SOURCE - ICMR CENSUS (ICMR-INDIAB) Estimated 2025

Musculoskeletal diseases

TOTAL DISEASE BURDEN

- Nearly 900 TO 1300 MILLION ~ 1.3 BILLION
- DALYs LOST - 135 MILLION
(DISABILITY ADJUSTED LIFE YEARS LOST)
- 90 to 105 MILLION patients are GERIATRIC
- 92 TO 100 MILLION patients are DIABETIC
- 121 TO 162 MILLION patients are HYPERTENSIVE
- TOTAL DEATHS- 50,000 DEATHS in 2025



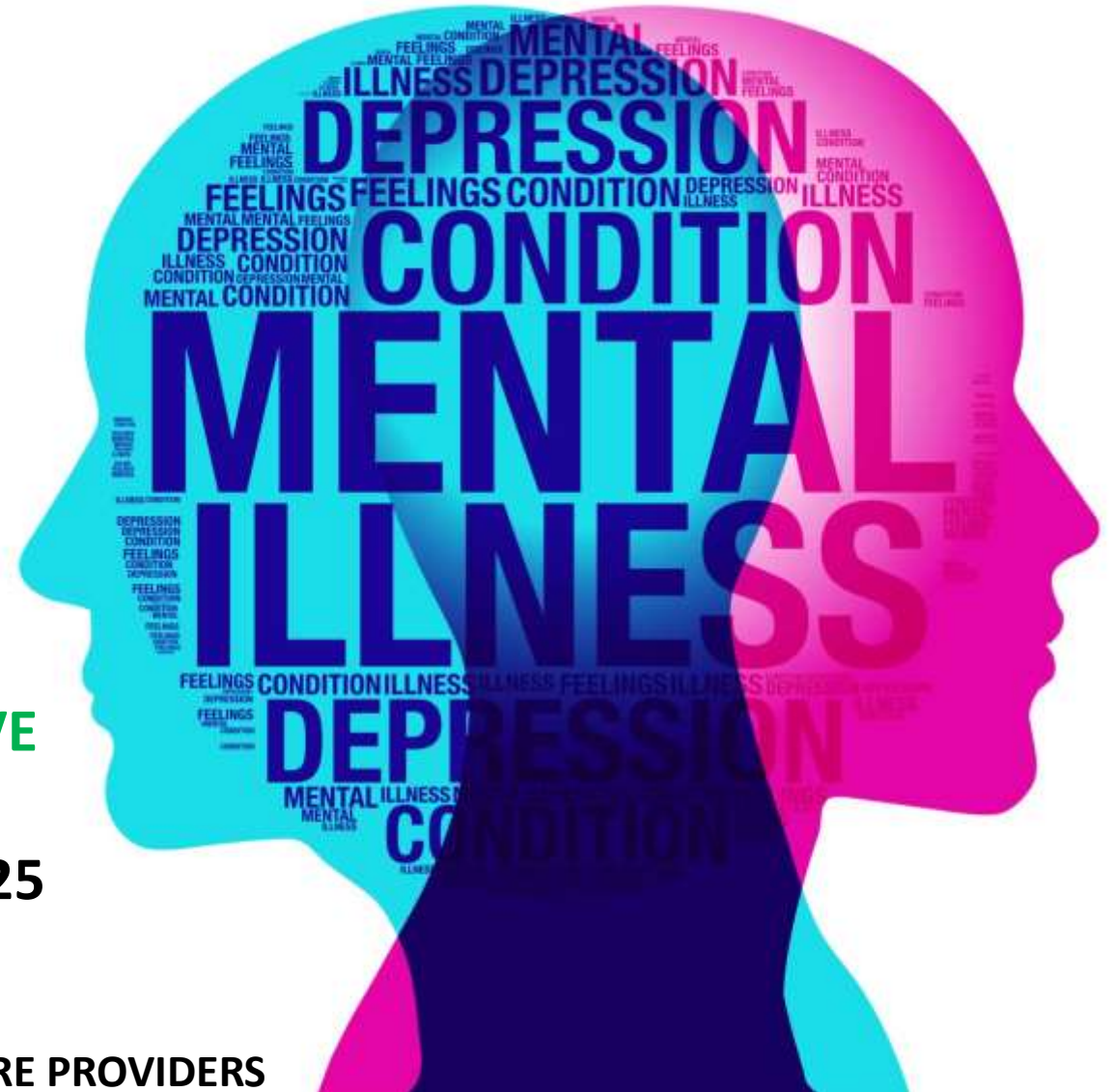
SOURCE - ICMR CENSUS (ICMR-INDIAB) Estimated 2025

LOAD ON –ORTHOPEDICS , PHYSIOTHERAPY, KNEE AND HIP ARTHROPLASTY

Mental Health diseases

TOTAL DISEASE BURDEN

- Nearly 150 TO 200 MILLION
- 35 to 44 MILLION patients are GERIATRIC
- 40 TO 60 MILLION patients are DIABETIC
- 30 TO 50 MILLION patients are HYPERTENSIVE
- TOTAL DEATHS- Nearly 12 LAKHS DEATHS 2025



Load on – PSYCHITARISTS , COUNCELLERS, HEALTH CARE PROVIDERS

SOURCE - ICMR CENSUS (ICMR-INDIAB) Estimated 2025

Disease Burden of the Health System & Correlation with Diabetes , Old Age & HTN

SPECIALIZATION	DISEASE	TOTAL%	DIABETES %	HYPERTENTION %	GERIATRICS %
CARDIOLOGY	Ischemic Heart Disease (IHD)	18%	35%	80%	55%
ORTHOPEDICS	Osteoarthritis	12%	18%	40%	65%
OPHTHALMOLOGY	Cataract	7%	25%	45%	75%
UROLOGY	Benign Prostatic Hyperplasia	5%	15%	35%	60%
PULMONOLOGY	COPD / Tuberculosis*	10%	12%	30%	50%
NEUROLOGY	Stroke (CVA)	12%	22%	70%	58%
PATHOLOGY	Iron Deficiency Anaemia	22%	10%	20%	30%
E.N.T	Chronic Suppurative Otitis Media	4%	7%	15%	25%
PSYCHITARY	Major Depressive Disorder	15%	12%	25%	20%
NEPHROLOGY	Chronic Kidney Disease (CKD)	6%	55%	90%	60%
GASTROENTEROLOGY	Fatty Liver Disease (MAFLD)	9%	40%	35%	40%
MEDICINE	Essential Hypertension	25%	20%	100%	45%
SURGERY	Cholelithiasis (Gallstones)	11%	15%	35%	30%
ONCOLOGY	Oral / Breast Cancer	9%	12%	40%	55%
CRITICAL-CARE	Septic Shock	4%	35%	65%	50%

SOURCE - ICMBR CENSUS (ICMBR, INDIAB) Estimated 2025

WHAT WE MEAN

- **NCDs ~60% of India's total disease burden**
- **Diabetes contributes directly or indirectly to 35–50% of workload**
in Medicine, Cardiology, Nephrology, Neurology ,Ophthalmology
- **Hypertension** is one of **the most common** disease **covering 60-75 % of the workload**
- **Geriatric population drives $\geq 50-70\%$ of demand** in Cardiology, Neurology, Orthopedics, Oncology , Psychiatry and other Specializations.

Dedicated Geriatric , Diabetes & HTN-centric services can reduce hospital admissions by 20–30% through early detection & management

Prevention is Better than Cure

Preventive Measures:

- Regular IEC -Information ,Education & Communication
- Disease Self Management Education
- Disease Self Management Support - Glucometer , Spectacles , Hearing Aids, Digital BP Instruments, Calipers , Walking Sticks etc...
- Periodic Health Checkups - Quartrly
- Investigations as per the guidelines - E.C.G , Fundoscopy , Refractometer , X-Ray Chest / Joints, Audiometry Digital , Dopler/Vibrotherm , Blood Examination(CBC, KFT , LFT , Lipid Profile , Electrolysis , Hormones etc...)
- Referral Services- Support to arrange appointment with the Respective Specialist as per the need

Ultimately if we successfully prevent complications by early detection, the burden in our health system, especially the Secondary and Tertiary level Hospitals will be drastically Reduced

Preventive tests & its frequency to detect complications at early

Disease	Preventive tests	Frequency
Diabetes	Blood Sugar HbA1c	As and when needed Quarterly
Cardiovascular Disease Myocardial Infarction	ECG Lipid Profile	Yearly Yearly/Every six months
Kidney Diseases	e-GFR ,ACR ,KFT	Yearly/Every six months
Stroke	BP Lipid Profile	Every month Yearly
Eye Diseases	Ophthalmic examination	Yearly
Neurological diseases	Nerve Conduction Test Vascular Doppler	Yearly Yearly
Infections	Culture and Sensitivity, IgG , IgM , NS1Ag, CBC Visual and palpatory	As required , Every three Months
Cancer	Regular Screening, VIA FNAC, BIOPSY , CT	Yearly/as and when required
Musculoskeletal Diseases	Inflammatory Markers	Yearly

Instruments Required

- Laptop and Desktop for Tele-consultation
- ECG Machine - 12 channel Digital
- Digital Stethoscope
- Digital Fundoscope with camera
- Digital Refractometer / Tri-set
- Audiometer
- Dental/Oral Camera
- Hand held portable x-ray
- Periwinkle Cervical Screening Instrument.
- Vibrotherm
- vascular Dopple
- Vascular Doppler
- Lab Instruments - Microscope, Cell Counter, Biochemistry Analyzer, Urine Analyzer.
- All instruments fitted in Mobile Medical Unit for outreach services on rotational basis.
- Vehicle for Consultant visit to different Health Centers on Rotational basis.
- Vehicle for patient transport to specialist clinic on need etc.

Our Team

Chief Advisor cum Project Convener	Dr Ranjit Prasad MBBS MD MTB
Geriatric and Diabetes Specialist/ Consultant cum Project Director	Dr Kumar Aman M.B.B.S , D.Diab , PG DGM ,MTB , McDM (Delhi) , FIDM (BROADGREEN UNIVERSITY U.K)
Program coordinator	B.Tech(Electronics & Tele-com),MBA , Experience in Public Health
Data Analyst	B.Tech(Computer Science)
Staff Nurse	B.S.C Nursing
ECG Technician	Diploma / Tech , ECG
Ophthalmic Assistant	Diploma in Ophthalmic Assistant
Laboratory Technician	DMLT
ENT Assistant	Diploma in ENT Assistant/ Audiometry
Dental Assistant	Certificate Course in Dental Assistant
Physiotherapist	Diploma /Certificate course in Physiotherapy
Psychiatric Counsellor	MA /MSc Psychology
Geriatric Caregiver	Geriatric Care Assistant



Screening Tools for Comprehensive Geriatric Assessment

CGA Protocol • MoCA (Cognition) • GDS (Mood) — Purpose, Domains, Scoring & Use

CGA

Comprehensive Geriatric Assessment

MoCA

Montreal Cognitive Assessment

GDS

Geriatric Depression Scale

Parameter	CGA	MoCA	GDS
Full Form	Comprehensive Geriatric Assessment	Montreal Cognitive Assessment	Geriatric Depression Scale (GDS-15)
Purpose	Multidimensional evaluation of elderly health status	Screens for mild cognitive impairment & early dementia	Screens for depression in older adults
Domains / Items	Medical, functional, cognitive, psychological, social, nutritional, environmental	Visuo-spatial, memory, attention, language, abstraction, orientation (8 domains)	15 yes/no questions on mood, interest & outlook
Scoring	Domain-wise, qualitative + validated sub-tools	/30 points (+1 if ≤12 yrs education)	/15 points
Cutoff / Interpretation	Guides an individualized, multidisciplinary care plan	≥26 Normal; <26 suggests cognitive impairment	0–4 Normal • 5–8 Mild • 9–11 Moderate • 12–15 Severe
Time Required	20–30 min (multi-professional)	~10 minutes	5–7 minutes
Best Used For	Frail / complex elderly, pre-discharge planning	Early detection of MCI / dementia	Routine mood / depression screening

Administration Time (minutes)

GDS

6

MoCA

10

CGA

20

MoCA Quick Guide

≥26 Normal • 18–25 Mild
10–17 Moderate • <10 Severe

GDS-15 Quick Guide

0–4 Normal • 5–8 Mild
9–11 Moderate • 12–15 Severe

We follow complete CGA protocol for our every patient

WORKING PROTOCOL

- - Training of Doctors and health staff for proper understanding of Screening and follow ups.
- - Training of patients and their relatives for better self care and using of self care instruments.
- - Electronic Health Record generation in ABHA and using the e-Sanjeevani portal in Hub and Spoke Model.
- - Updating the EHR in ABHA after each consultation and prescription generation.
- - Physical and virtual consultation on need with empanelled Specialists.
- - Physical consultation by transportation of the patients on need by project vehicle to Polyclinic/Empanelled specialist's clinic e.g. Geriatric Specialist
- - Daily two hours dedicated Tele-consultation by geriatrician using e-Sanjeevani portal in Hub and Spoke Model for attached UPHCs/UAAM/Mahalla Clinics or other geriatric patient having ABHA EHR.
- - Weekly Rotational 4 hours Physical OPD in six selected pilot UPHCs.
- - 24x7 support through , 104 trained tele-callers.
- - Support for hospitalization in Ayushman empanelled hospitals in case of need by 108



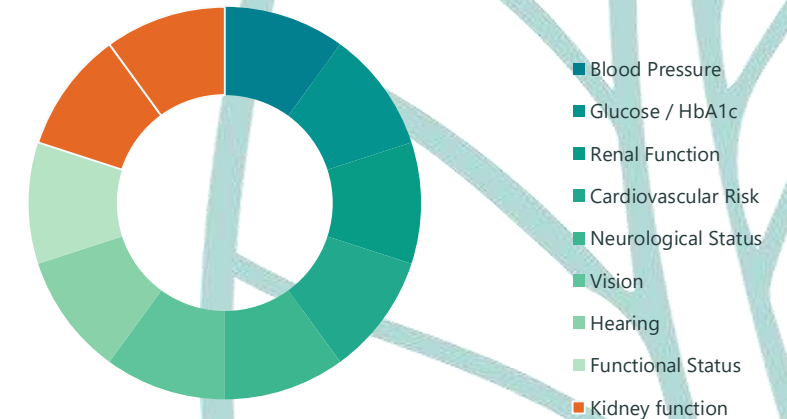
Jharkhand Comprehensive Geriatric, Diabetic & Hypertensive Screening Programme

A Best-Practice Model for Integrated Non-Communicable Disease & Elder Care



#	Best Practice	Jharkhand Model Experience	Key Learning
1	One-Stop Screening at UPHC	Integrated screening of elderly, diabetic & hypertensive patients together	<i>One-stop screening improves detection of multiple co-morbidities</i>
2	Risk-Based Clinical Assessment	BP, glucose/HbA1c, renal, cardiovascular, neuro, vision, hearing, function	<i>Identifies high-risk patients before complications advance</i>
3	Dedicated Geriatric Clinic	Specialist-led evaluation integrated with primary care	<i>Comprehensive, not just symptom-based, management</i>
4	Early Complication Detection	Flags suspected cardiac, renal, neuro & ophthalmic conditions	<i>Early referral prevents disability & hospitalization</i>
5	Specialist & e-Sanjeevani Referral, Tele - Consultation	Higher-care patients linked to specialist consult/referral	<i>Strengthens the primary–specialist continuum</i>
6	Individualized Treatment Review	Regular review of medications, glycaemic & BP control	<i>Avoids therapeutic inertia & inappropriate polypharmacy</i>
7	Preventive Geriatric Approach	Screens functional, sensory & age-related problems	<i>Geriatric care = function + quality of life, not just disease</i>
8	Patient & Caregiver Education	Counselling on adherence, diet, activity & warning symptoms Signs	<i>Empowered patients/caregivers improve long-term outcomes</i>
9	Data-Driven Regular Follow-Up	Patient records & tracking identify high-risk patients and having regular telephonic follow up and Consultation Reminder	<i>Screening is meaningful only when linked to follow-up</i>
10	UPHC–District Convergence	Primary screening linked with specialist & higher centres through physical ,e- & Tele Consultation	<i>Creates a scalable, district-level integrated care model</i>

10 Core Screening Domains



10

Integrated Best Practices from screening to continuity of care

UPHC ↔ District

Primary care linked to specialists via Physical Consultation, e-Sanjeevani & Tele - Consultation for a scalable geriatric / NCD model

Framework: Early Detection → Early Intervention → Prevention of Complications → Continuity of Care

Key Learnings & Recommended Model for Scale-Up

Jharkhand Geriatric – Diabetic – Hypertensive Screening Programme

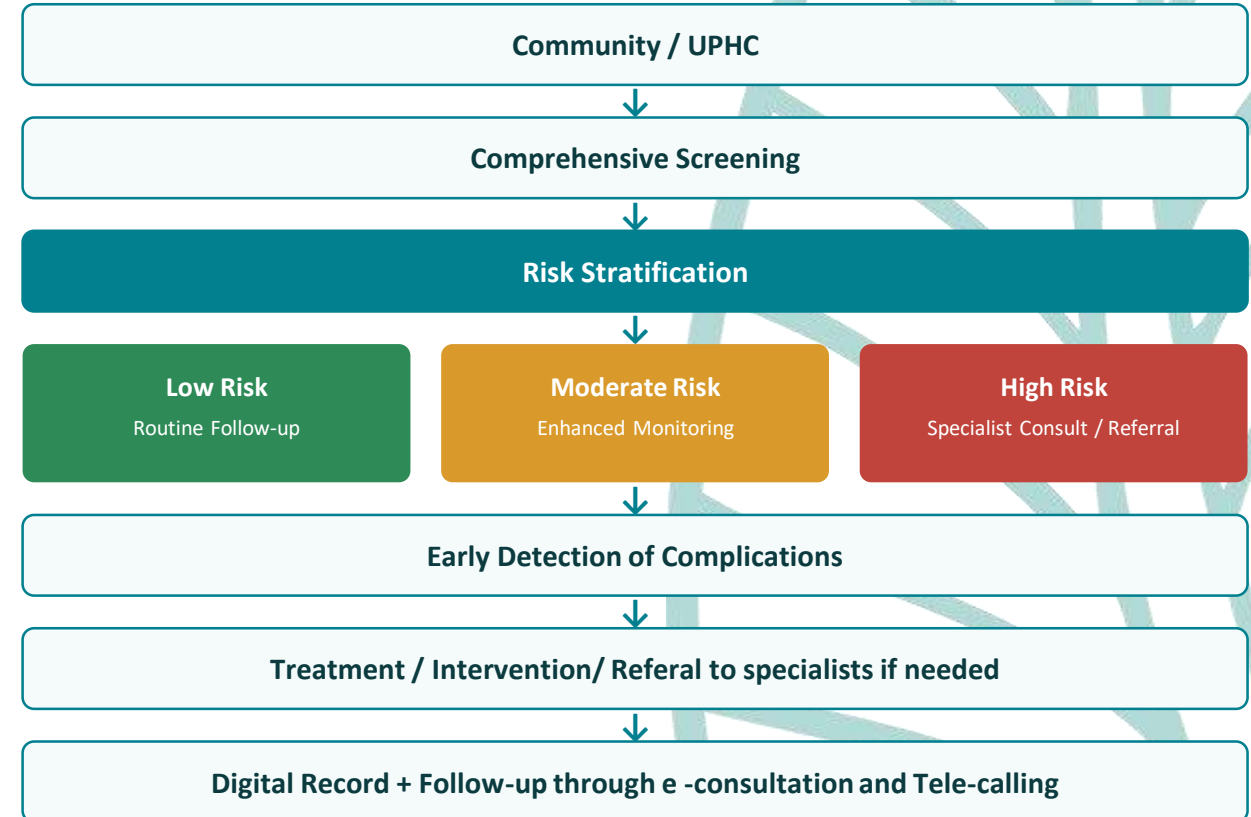
What Worked Well

- ✓ Integrated rather than fragmented screening
- ✓ Specialist involvement at the primary-care level
- ✓ Early identification of silent / high-risk complications
- ✓ Linkage of physical exam, diagnostics & specialist consult
- ✓ Digital / e-Sanjeevani support for specialist access
- ✓ Patient-centred counselling & caregiver involvement
- ✓ Referral and Regular follow-up rather than one-time screening

KEY OUTCOME MESSAGE

Screening alone is not sufficient. A successful geriatric–diabetic–hypertensive programme must connect screening with risk stratification, specialist assessment, early diagnosis, treatment modification, referral and continuous follow-up.

Recommended Model for Scale-Up



PREVENTION OF DISABILITY, HOSPITALIZATION & COMPLICATIONS

Preventing avoidable harm • Improving quality • Ensuring continuity of care

01

Correct Patient Identification

Verify patient identity, age, records and ABHA/ID before every clinical intervention.

02

Medication Safety

Right drug, dose and timing • interaction checks • renal-dose adjustment
• medication re-conciliation.

03

Diagnostic Safety

Appropriate investigations, accurate interpretation, timely reporting and follow-up of abnormal results.

04

Infection Prevention

Hand hygiene • safe injections • sterilization • biomedical-waste management

05

Fall & Geriatric Risk Prevention

Assess gait, balance, vision, orthostatic BP, frailty and environmental hazards.

06

Early Detection & Monitoring

Identify red flags and complications early:
MI, stroke, CKD, diabetic foot, retinopathy and cancer.

07

Referral & Emergency Response

Clear escalation criteria, rapid referral and documented handover to higher facilities.

08

Patient / Caregiver Education

Explain treatment, warning signs, adherence, lifestyle measures and follow-up requirements.

SAFETY CULTURE → IDENTIFY RISK → PREVENT HARM → REPORT INCIDENTS → CONTINUOUS QUALITY IMPROVEMENT

CONSOLIDATED PATIENT SERVICES REPORT

PREVENTION OF COMPLICATIONS BY SCREENING OF DIABETIC, GERIATRIC & HYPERTENSIVE PATIENTS
Urban Primary Health Centre (UPHC) – Polyclinic | Ranchi, Jharkhand | Reporting Period: FEBRUARY–JULY

REFERRALS, FOLLOW-UP & SPECIALIST CONSULTATION

Service continuity, higher-centre linkage and overall clinical workload

REFERRALS TO SADAR & RIMS

UPHC / Area	Referrals
Madhukam	148
Chutia	202
Kantatoli	306
Lambadgai	84
Hatia	23
Hindpidi	12
Jagarnathpur (Previously)	40
GRAND TOTAL	815

FOLLOW-UPS & CONSULTATIONS

UPHC / Area	FU 1	FU 2	FU 3	FU 4	Total
Madhukam	240	240	240	240	960
Chutia	315	313	313	313	1254
Kantatoli	467	467	466	466	1866
Lambadgai	159	158	158	158	633
Hatia	30	New	New	New	30
Hindpidi	25	New	New	New	25
Jagarnathpur(Previously)	51	51	51	51	204
GRAND TOTAL					4972

453 PATIENTS RECEIVED 5 OR MORE CONSULTATIONS

MINIMUM 4 COMPREHENSIVE FOLLOW-UPS COMPLETED FOR ENROLLED PATIENTS

OVERALL SPECIALIST SERVICE OUTPUT

6,568

TOTAL SPECIALIST
CONSULTATIONS

1,143

ONLINE SPECIALIST
CONSULTATIONS

5,425

PHYSICAL SPECIALIST
CONSULTATIONS

SOME OF THE TESTIMONIALS OF BENEFITED AND CURED PATIENTS

Diabetic foot with
Gangrene

Gall-Bladder -
Cholecystectomy

Umbilical Hernia

Leprosy
Regular
Follow
Up

Bradycardia with Pace
maker Implant

Carcinoma
breast

Parkinsonisms

Diabetic foot with
Traumatic Gangrene

SOME OF THE TESTIMONIALS OF THE BENEFITED AND CURED PATIENTS

Pemphigus Vulgaris



Stroke with



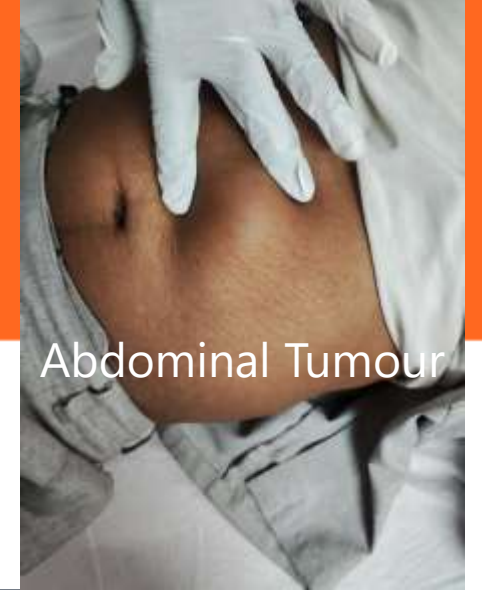
Static Tremmor



Pemphigus Vulgaris



Abdominal Tumour



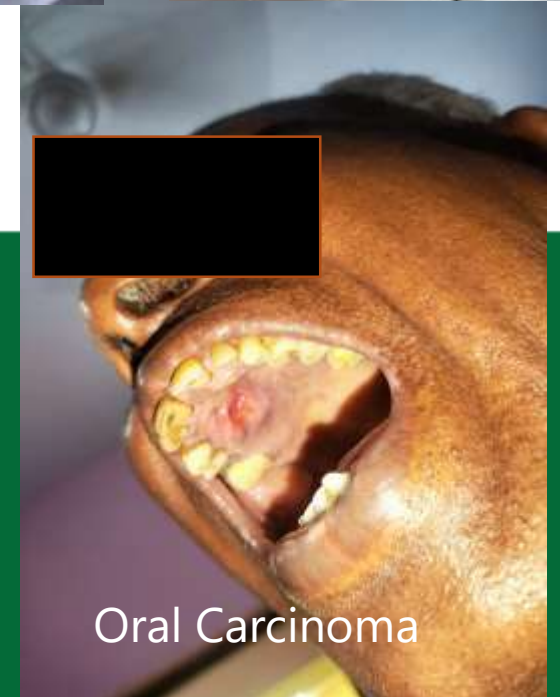
Multiple Abdominal Tumours



Diabetic foot with Gangrene



Oral Carcinoma



This initiative will **greatly strengthen preventive and promotive healthcare and provide much-needed support** to one of the most vulnerable and often neglected sections of society and may be a **Pioneer and first in the country** & will open a new pathway of patient care

Pan INDIA



Thanks With Highest Regards

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