Situation of Accidental Injuries, and a Proposal for ElderCare - A Falls Prevention Intervention in Older Adults 60+ in Rural Nigeria

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By

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Presented to:

The Coordinating Minister, Federal Ministry of Health & Social Welfare
and
His Excellency, the President of the Federal Republic of Nigeria.

Presentation Outline

- Definition, burden, risk factors, and consequences
- Justification of problem focus
- Related Global policies, guidelines, and past interventions
- Nigeria: Political and Health System Landscape
- Intervention Options
- ElderCare Program Theoretical Framework
- Program Location, Site, and Implementing Organization
- Timeline
- Evaluation
- Budget
- Key Requests and Conclusion

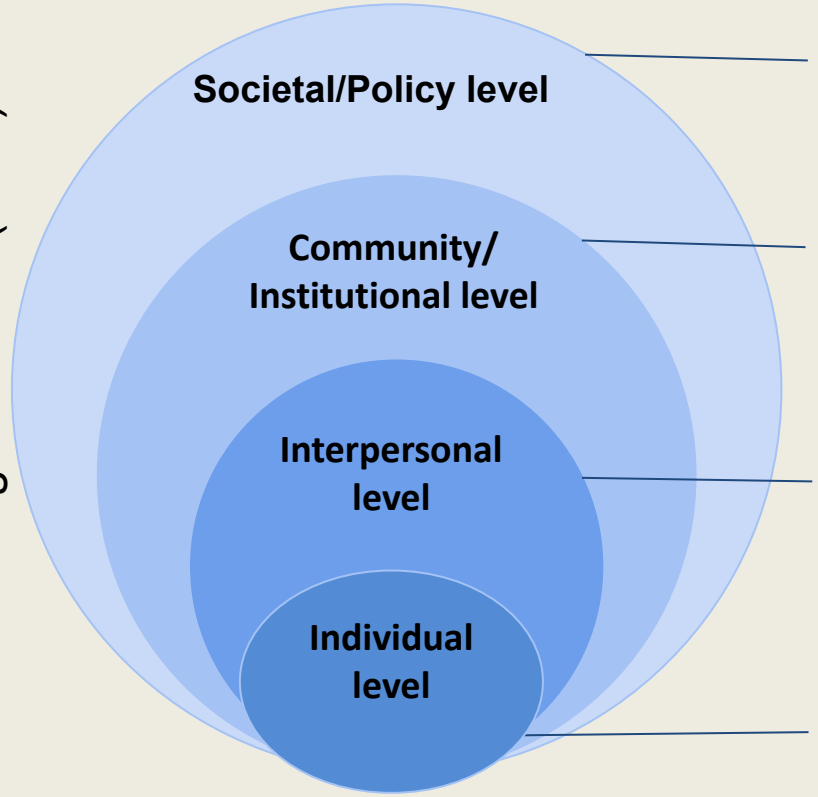
Accidental Injuries

Accidental injuries, or **unintentional injuries**, are a major global health concern due to their health and economic costs.

They are defined as harm resulting from unforeseen events, such as **road traffic crashes**, **falls**, **burns**, **drowning**, **and unintentional poisoning.**

Risk Factors

Socioecological Model (SEM)



Lack of or non-enforcement of toxic agent, safety, and traffic laws', and discrimination of older adults.

Poor access to healthcare facilities; hospitals, unsafe infrastructure.

Lack of caregiver supervision and their delay in seeking care; unsafe home environment and practices.

Age, Habits and behavior

Consequences

Economic costs: Productivity loss; Financial burden on individuals and families

Healthcare costs: Hospitalization, emergency and disability care costs, mortality

Burden

Global

3.16 million deaths annually.

Leading causes: Road traffic crashes and falls.

LMICs and Regional

Disproportionately affects LMICs, including Sub-Saharan Africa.

Nigeria

Leading cause, road traffic crashes cause 21 deaths per 10,000 population.

Among older adults:
Fall rate - 21.4%
Fall-injury - 25%

Road Traffic Crashes, while important, is being handled by multiple other sectors, but the falls among the aging population is grossly neglected!

AllAfrica

Nigeria: FG Approves Road Safety in Schools Syllabus

DAILY TRUST

5 MARCH 2012

By Misbahu Bashir

FRSC Official Website
https://frsc.gov.ng › 2021/05 › SOP-ON-YSE PDF

Federal Road Safety Corps

... **Nigerian Educational** Research and Development Council (NERDC) developed a draft curriculum for the **teaching** of **Road safety Education** in Basic **Schools** in **Nigeria** ...
25 pages

FRSC Official Website
https://frsc.gov.ng › what-we-do

What We Do – FRSC Official Website

... Federal Road Safety Commission (establishment) Act 2007. The Corps Vision. **To eradicate road traffic crashes and create safe motoring environment in Nigeria**.

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SCHOOL OF ARTS AND SOCIAL SCIENCES

COURSE CODE: CSS 443

COURSE TITLE: TRAFFIC/ROAD SAFETY AND EQUIPMENT

5:38

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THIRD TERM: E-LEARNING NOTES

SUBJECT: CIVIC EDUCATION **CLASS: SS2**

SCHEME OF WORK

WEEK	TOPIC
	THEME 8: TRAFFIC REGULATIONS
1.	**Revision of work done in the second term.**
2.	**Traffic Regulations:** (a) Meaning of traffic regulations. (b) Traffic regulations e.g. obeying traffic officials and signs, avoiding over speed.
3.	**Traffic Regulations :**(c) Roles of individuals and government in maintaining traffic regulations e.g. FRSC, enactment of laws, NGO's obeying and assisting traffic officials.
	THEME 9: RELATIONSHIPS
4.	**Interpersonal Relationships:** (a) Meaning of Interpersonal Relationships (b) Types of Interpersonal relationships e.g. relationship between men and women; relationship between individuals and government; relationship among peers.
5.	**Interpersonal Relationships:** (c) Skills that promote interpersonal relationships, e.g. honesty, tolerance, kindness, caring, patience, etc.
6.	**Inter-Communal Relationship:** (a) Meaning of inter-communal relationships. (b) Importance of Inter-Communal Relationships e.g. promotes development enhances security and business etc.
7.	**Inter-Communal Relationship:** (c) Communal conflicts and skills for resolving inter-communal conflicts e.g. dialogue, mediation, etc.
8-10	**Revision of work done in the term.**
11	**Revision cont'd.**
12	**Examination.**

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Justification: Problem Focus

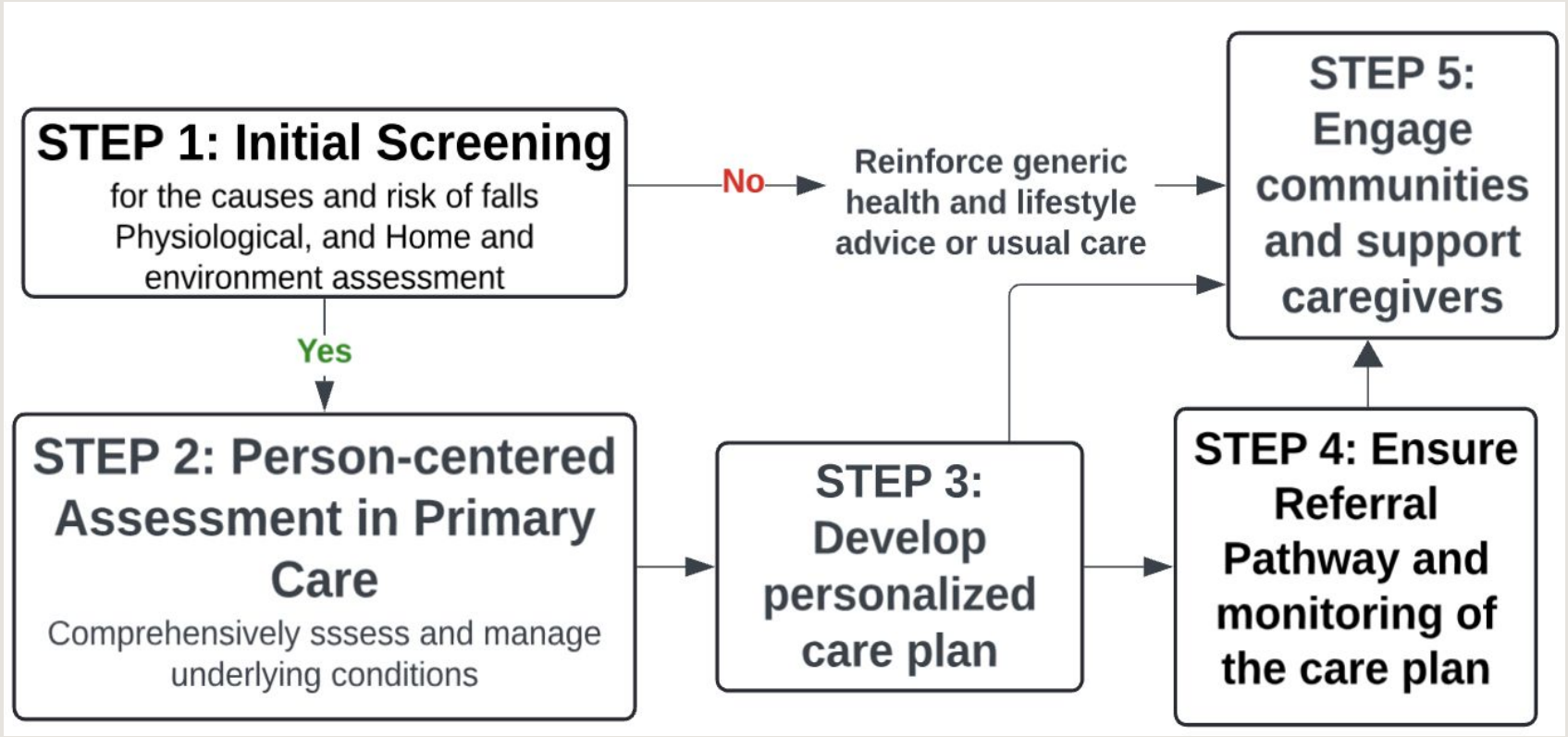
Road traffic Injury?

Falls in older adults

Older adults are people who are aged 60 or over
Focus on rural áreas due to limited healthcare access

Related Global Policies and Guidelines

- The UN Decade of Healthy Ageing and Health (2021–2030)
- WHO Global Strategy and Action Plan on Aging and Health (2016-2030)
- Madrid International Plan of Action on Ageing (2002)
- Integrated Care for Older People (ICOPE) Guidelines

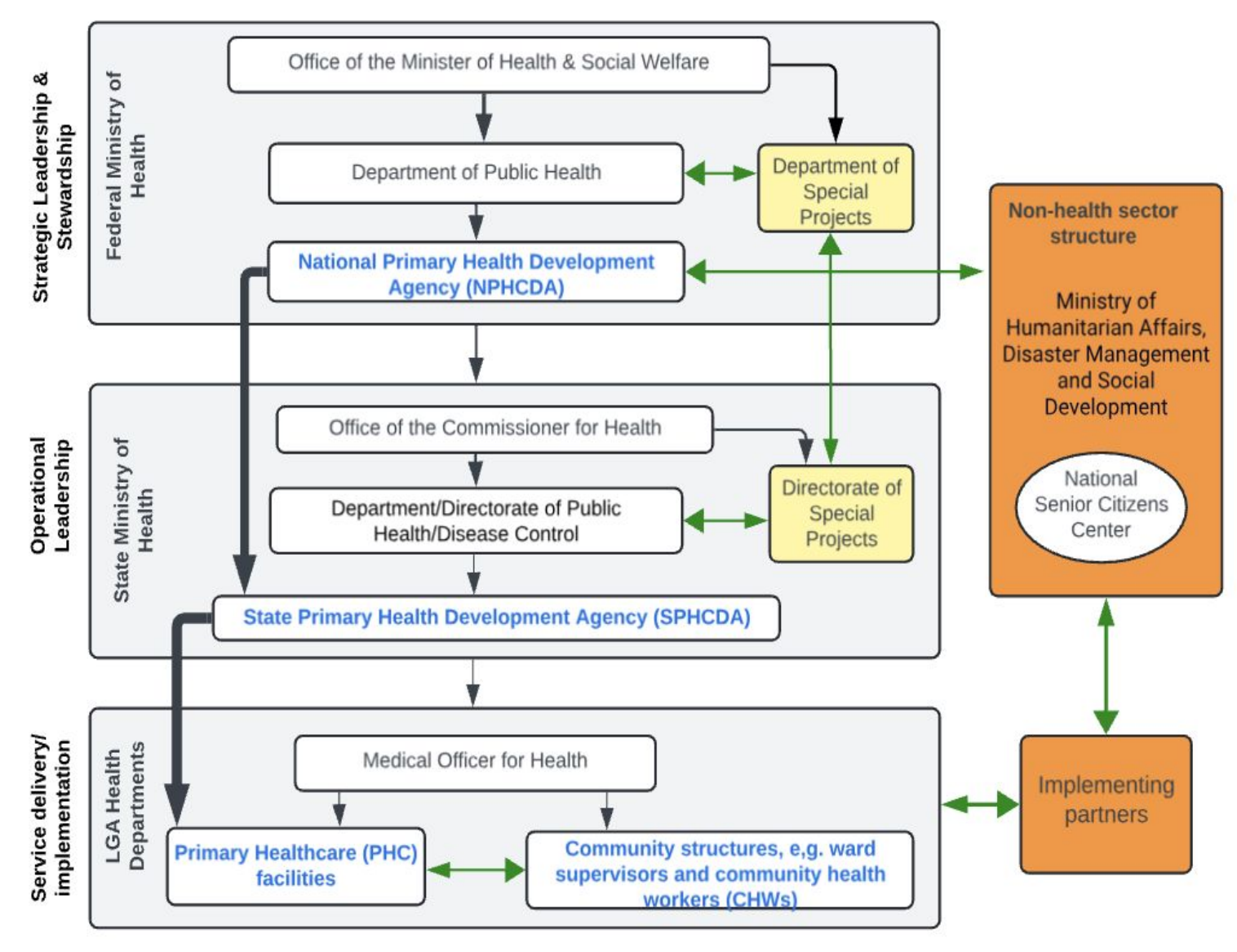


ICOPE Care Pathway for Falls

Past Interventions for Addressing Falls among Older Adults

ICOPE-Based	Non-ICOPE-Based
Akekhina et al, 2021 - Russia (high income) - Facility-focused, by primary care physicians - Used the ICOPE app for screening - No community components	MacKenzie, 2021 Australia (high-income) Integrated (Community + Facility) Focused on implementation outcomes such as feasibility, penetration and adoption. No clinical outcomes
Mathur et al, 2021 - Jodphur, India (lower-middle income) - Community focused, by Community Health Workers and reached low literacy populations. - Screening for Intrinsic capacity (IC) - No care provided, and was hindered by COVID	Gholamzadeh, 2021 Iran (upper-middle income) Integrated (Facility + Community), by clinicians, trainers, and CHWs Cultural and linguistic tailoring Short duration, limited follow-up, and lack of sustainability

Nigeria: Political and Health System



Politics:

- New political administration, and leadership of the health sector.

Health System Structures

- Federal, State, and Local government
- Strategic and operational leadership, and service delivery
- Policies and strategic plans
- Government and non-government, Health and non-health sector key stakeholders

Health System Gaps

- No geriatric care services in primary healthcare settings

Prioritization, using the People-Sheps et al (2006) Model

Option/ Criteria	Impact on fall prevention outcomes(3)	Resource/ costs requirements (3)	Alignment with global & national priorities (3)	Sustainability & Scalability Potential (3)	Total
SafeSteps	2x3=6	3X3=9	3x3=9	2x3=6	**30**
ElderCare	3x3=9	2x3=6	3x3=9	3x3=9	**33**

Description of Criterion Scores and Weights Breakdown		
Impact on Fall Prevention Outcomes: 1 – Low**;** 2 – Medium**;** 3 - High	**Alignment with global & national priorities:** 0 = Does not align; 1 = Somewhat aligns**;** 2 = Greatly aligns; 3 = significantly aligns	**Feasibility:** 0 - Not feasible; 1 - Somewhat feasible**;** 2 – Feasible; 3 - Very feasible
Sustainability & Scalability potential: 1-Low; 2 -Medium; 3 -High	**Weights Breakdown** 1 - Important; 2 - More Important; 3 - Most Important	

Intervention Options: SafeSteps vs ElderCare

30

33

- Community-centric
- CHWs used for service delivery
- Grouped care
- Hugely health education sessions in community centers on falls risks and causes

Major Gap

- PHCs not strengthened for the potential demand.

Strengths

- Lesser costs, and logistics
- Higher reach potential
- Promotes social wellbeing and reinforcements through peer interactions.

- Integrated (facility + community)
- Individual patient focused
- Delivered by CHWs with follow-up care at PHCs
- One-way specialist referral (though not emphasized)

Major Gaps

- Relatively more costly and lesser reach

Strengths:

- Relatively more holistic
- More attention per patient
- PHC system strengthened in the process

Impact on fall prevention outcomes (3)	**Resource/costs requirements (3)**	Alignment with global & national priorities (3)	**Sustainability & Scalability Potential (3)**

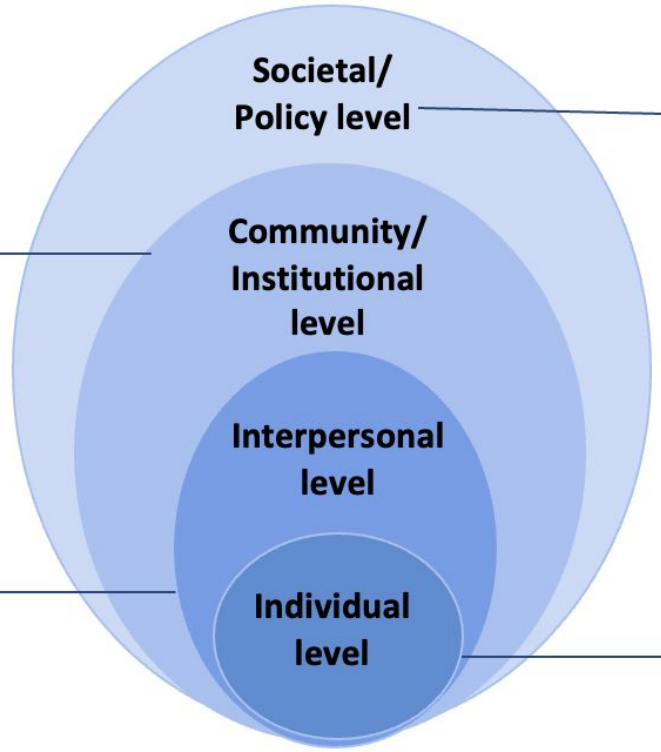
ElderCare Program Theoretical Framework

Socioecological Model (SEM) + Social Cognitive Theory (SCT)

Sociostructural Factors
Engage community leaders to promote and adopt the intervention.

Organizational Support and Infrastructure: Train PHC staff and CHWs, and equip PHC facilities.

Social Support: Involve family in CHWs' home visits for support and adherence.



Sociostructural Factors
Develop State and LGA action plans.
Use ICOPE tool data at PHC centers and integrate with existing M&E systems.

Perceived Self-Efficacy and Knowledge/Behavioral Capacity: Build patient confidence through guided practice and demonstrations.

Goals: Set specific, achievable goals for fall prevention.

Outcome Expectations: Educate on the benefits of fall prevention to motivate patients. Positive results and **reinforcements** will motivate continued patient engagement.

Program Logic Model

Input

- Funding
- Human resources
- M&E, Communications, and training tools
- Technology
- Commodities/supplies
- Equipment
- Infrastructure: e.g. office space, vehicle.
- Partnerships
- Logistics support
- The media
- Government oversight
- Policies and guidelines

Activities

Output

- CHW, PHC staff, LGA facilitators trained
- Commodities, equipment, and materials procured and distributed.
- Community mobilization events done
- Home visits by CHW for home and environmental assessment, patient enrolment, screening, and follow-up
- Patient in-depth assessment, and personalized care services provided.
- Coordination and data validation meetings held
- Quarterly ISS, DQA, and monitoring visits done

Outcome

-Increased human resource capacity (CHWs, PHCs, PHC staff).

-Increased fall prevention awareness

- Increased adherence to fall prevention activities by 60+ patients
- Improved home and environmental safety against fall for older adults
- Better medication and underlying conditions management by patients
- Reduced incidence of falls and quality of life and health outcomes among 60+ in intervention sites.

Impact

- Sustainable reduction in fall-related injuries and fatalities among older adults
- Enhanced overall wellbeing and independence of older adults
- A replicable model for fall prevention in Nigeria.

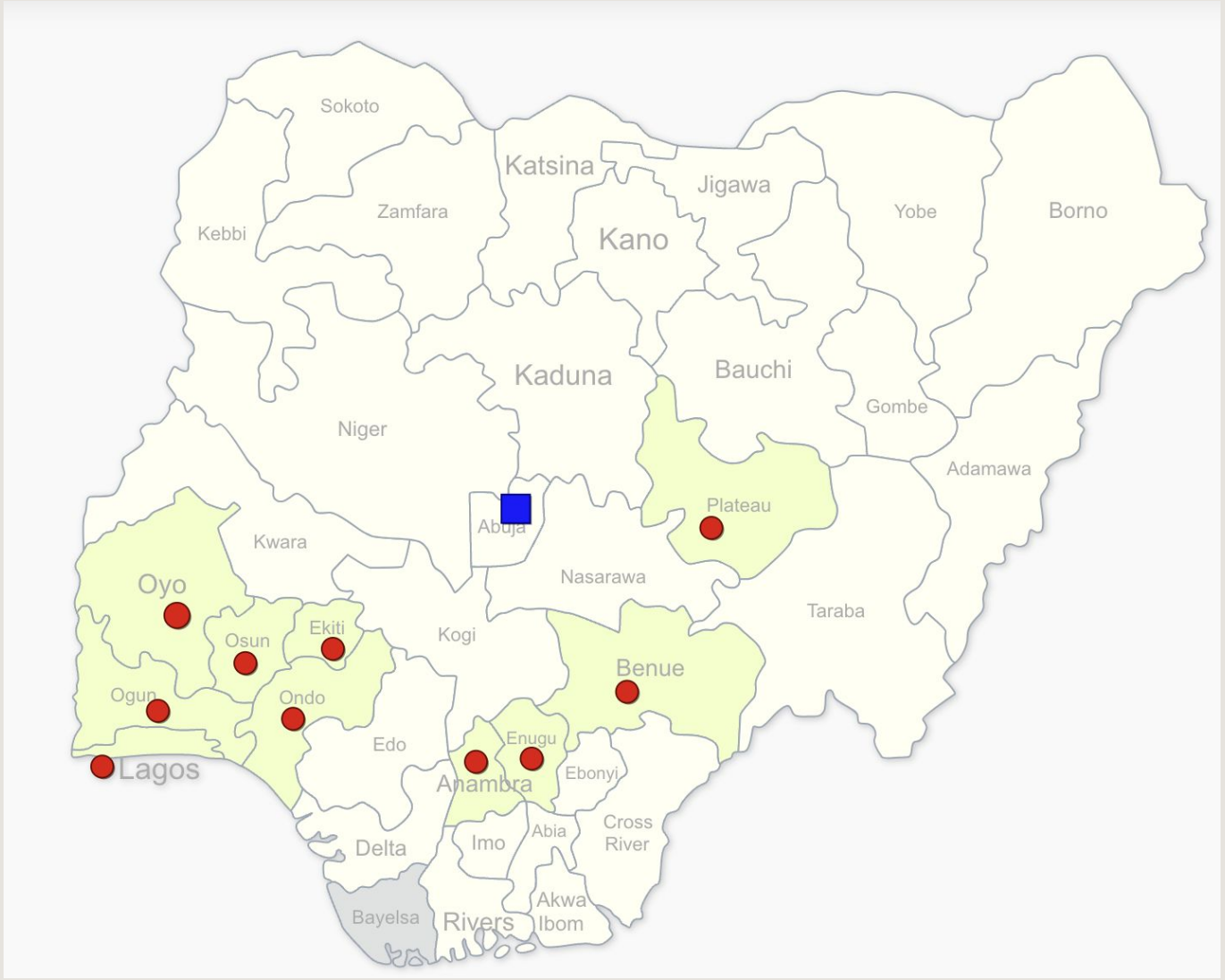
Assumptions

- Adequate and timely funding will be available.
- Stakeholders will support and engage.
- Training and ICOPE integration will be effective
- Resources and infrastructure will be sufficient
- Patients will engage and adhere to intervention.

External Factors

- Shift in government priority e.g. due to change in administration or an emerging epidemic.
- Seasonal disasters
- Socio-political and economic instability e.g. insurgency, inflation, exchange rate fluctuations
- Conflicting cultural beliefs
- Health system capacity to support program e.g. NHIS, BHCPF, Emergency and specialist care

Program Location, Site, and Implementing Organization



Implementing Organization: Apin Public Health Initiatives

States: Lagos (Pilot), with plans to scale up to States with the red dots, and Abuja as central office.

Setting: Rural áreas only.

Sites: Community and PHCs

- Pilot Intervention sites: Badagry and Epe
- Pilot Control sites: Ajara and Ibeju Lekki

ElderCare Program Location and Sites

Lagos is miniature Nigeria - a microcosm of the broader Nigerian society.

PHC and Local Government Area	2024 Population
Intervention site 1: Badagry - Ajara PHC - Ajara, central Badagry	17,940
Intervention site 2: Epe - Epe PHC (located by a major road in Epe).	19,473
Control site 1: Ibeju/Lekki - Ibeju/ekki PHC (located in Ibeju-Agbe, a central community in Ibeju/Lekki LGA) - matched with intervention site 1	26,985
Control site 2:Ikorodu - Ikorodu/Ita Elewa PHC (located on Oriwu Road, a central area in Ikorodu LGA) - matched with intervention site 2	52,811
Total (Intervention sites = 37,413 + Control sites = 79,796)	117,209

**Estimates from 2020 U.S Census Bureau dataset[43] + 2024 growth rate (GR) of 3.7%[42]. A comprehensive dataset is also available for gender (disaggregated).*

CHWs per population & Health Facility Composition

The 2016 revised WHO recommendations state that a minimum of 4.45 skilled healthcare workers is needed per 1,000 population.

Considering this and the population size of 60+ adults in the intervention sites, new and existing CHWs will be engaged (79 CHWs for Badagry; and 87 CHWs for Epe).

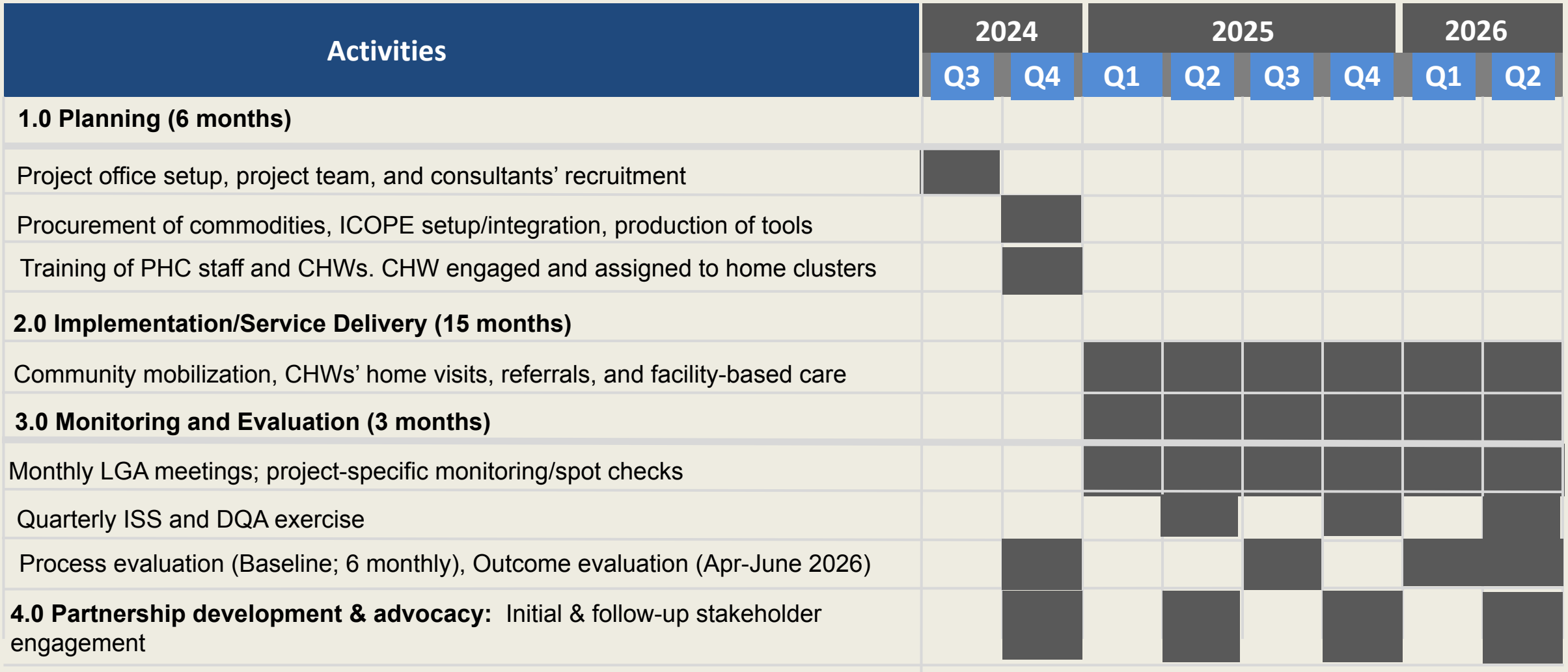
Spoke-and-hub community - facility linkage approach. PHC is central.

The estimated PHC staff number is: 4 staff nurses/midwives + 1 Senior Nurse (matron); 1 visiting doctor; 1 pharmacy technician; 1 lab technician; and 1 facility M&E officer in the 2 intervention facilities

Based on the minimum standards set by the Lagos State Health Facility Monitoring and Accreditation Agency (HEFAMAA)

Pilot Timeline (July 2024-June 2026); 2 Years

Program Goal: To reduce the incidence of falls by 50% among older adults (60 years and above) in rural Lagos State through integrated community and facility-based interventions.



Evaluation

Framework	RE-AIM Framework
Evaluation Design	Type 2 - implementation outcomes (adoption, reach, fidelity), and clinical and cost effectiveness outcomes in a balanced way.
Objectives	Evaluate the: - reach, adoption, and fidelity of ElderCare, and identifying factors that facilitate or hinder successful implementation - clinical and cost-effectiveness of ElderCare Current fall incidence = 21.4%; Target reduction is by 50% (10.7%)
Study Design	Pre-post, quasi-experimental, mixed methods design for process and outcome evaluations.
Sampling technique	Quantitative data: Stratified random sampling Qualitative: Maximum variation (purposive) sampling

Evaluation

Sample Size	Total = 1,329 Intervention sites (PHC Ajara = 204; PHC Epe = 221); and Control sites (Ijebu PHC = 306; Ikorodu/Ita Elewa PHC = 598). Qualitative: 40-60 participants; some for interviews, and others for FGDs.
Ethical Considerations	- Ethical approval from Lagos State Ministry of Health - Informed consent sought from participants. Data is kept secure.
Data Analysis	Quantitative: proportions, means. Indicators such as changes in fall incidence rates, adoption, and resource utilization rates. Statistical testing Qualitative: Abductive/hybrid approach
Dissemination Plan	High level stakeholders - executive summaries and meeting presentation Providers - visual summaries; patients and community members - pamphlets; professional - journal publications.

Evaluation

Evaluation Questions	**Reach:** To what extent was the target population reached with the intervention? **Adoption:** To what extent was the intervention adopted by patients, CHWs, and PHC staff? **Implementation:** To what extent - - was Elder Care delivered as planned? *Fidelity - were the planned activities delivered? *Dose delivered - were participants engaged, and satisfied?*Dose received **Effectiveness:** To what extent - - did patients demonstrate changes in knowledge, attitudes,self- efficacy? - did the intervention impact actual clinical outcomes such among 60+? - is the intervention cost-effective in preventing falls among 60+?

Adoption, Scale up, and Sustainability Plans

Adoption plan	-Use local human resource - CHWs and PHC staff; Active stakeholder engagement - e.g. partners' forum; Ensure cultural acceptability and resource allocation concerns
Scale-up plan	-Prioritize control sites for scale-up; Extend to adjacent States; and Use other partners where Apin has no presence.
Sustainability plan	Annual Operational Plan and budget - a sector-wide approach; ISS/DQA integration DHIS2.0 integration; Prioritize in the health sector renewal initiative - NHIS expansion, BHCPF, PHC revamp, pooled procurement and local manufacturing; frontline healthcare workers' training

Budget Overview

USD/N
1,420.50

Inflation rate
33%

Annual salary increment
5%

Fringe
23.8%

Overhead costs
23.8%

Total in USD

655,427

Total in US Dollars

931,033,605

Lesser logistics/more feasible to recruit; specific expertise areas targeted.

Funding Sources:

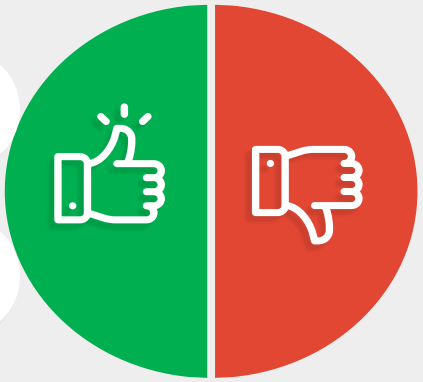
1. Directorate of Disease Control
2. Directorate of Special Projects
3. Basic Healthcare Provision Fund (BHCPF)

Salaries + Fringe	Long-term Consultants	Implementation & Evaluation costs	Other Direct Costs	Overhead Costs
$120,597 (18.4%)	$84,477 (12.9%)	$199,485 (30.4%)	$150,887 (23.0%)	$99,980 (15.3%)
Program Director, Program Specialist, M&E Specialist, Admin & Finance Coordinator, Procurement & Logistics Coordinator, and Driver	-1 Technical, 2 Evaluation, 1 Communications and Partnerships, and 1 Technology Support Consultants	- Meetings, training, stipends and transport reimbursements, tools production, dissemination and report writing Evaluation:10% of overall	- Procurement and maintenance of project vehicle, tablets for ICOPE, furniture and fittings, equipment, medical supplies, hiring costs	- Contribution to Office space and utilities, and more

Program Strengths and Limitations

Strengths

- Robust and evidence-based frameworks
- Addresses equity and access
- Balanced and dual focus on implementation and clinical outcomes
- Value for money
- Aligns with global priorities and national health gaps



Limitations

- Relatively high resource/cost requirements
- Potential logistics challenges with referrals, or tech hitches with the use of ICOPE app
- Potential bias with self-reported data, and patient attrition.
- Certain findings may not be generalizable due to contextual peculiarities.
- Selection bias due to lack of random assignment, and confounding variables influencing outcomes

GAINS FOR SUPPORTING ELDERCARE

Legacy in Healthcare:

- Solidify the president’s legacy as a leader committed to universal health coverage and social equity, and amplify your health sector reform efforts.

Political:

- Strengthen the president’s re-campaigning in 2026
- Endear the president to Nigeria’s top voter groups - Lagos residents, older adults, and rural dwellers.

Conclusion: Key Requests - A-PIE

Create an enabling environment for ElderCare to thrive and scale up seamlessly through the Health Sector Renewal Investment Initiative, in the following ways:

***A**llocate resources from BHCPF* - a third of the funds required for the pilot ($218,475.67) and subsequent scale-up.

***P**rioritize ElderCare pilot PHCs and LGAs* in the ongoing PHC facilities' revamp and frontline health worker training roll-out, and extend the same priority when it is scaled up to other regions.

***I**nclude older adults above 60 in the National Health Insurance Scheme (NHIS) expansion*,

***E**ndorse ElderCare* by making a public statement about it during the month of its launch (July 2024).

Summary

ElderCare is comprehensive, integrated, and person-centered. It brings care to the doorsteps of people, and targets a vulnerable group **(promotes reach and equity).**

It addresses a long-neglected gap area **(geriatric care).** It focuses on prevention, and extends to address underlying health conditions that cause falls. It strengthens local personnel and institutional capacity.

Thank you!