
# Uganda's referral Levels, Pathways, Protocol, and Call & Dispatch processes

*Presented to EMS ECHO Session*

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# Outline

## What We Will Cover

1. Introduction
2. Strategic alignment of referral system
3. Purpose and types of referral
4. Referral Levels
5. Referral Pathways – From Scene to Definitive Care
6. Referral Protocols & Standard Operating Procedures
7. Call & Dispatch Linkage (912 System)
8. Next Steps & Commitments

# Introduction- Concept of referral system

- **Referral system** is the organizational structure for coordinating, linking and transferring responsibilities of care from one level to another
  - Primary level to secondary
  - Generalist to specialist
  - Specialist to specialist
  - A hospital to another
- **Referrals** is a process of directing a client to another source of service/assistance/information
- **Emergency referrals:**
  1. A referral process used for emergency conditions that threaten life, limb, or pose a serious risk to health
  2. A referral process for conditions that may not threaten life, limb, or eyesight (pose a serious risk to health) but require urgent attention to prevent them from becoming a serious risk to health.
- **Routine referral:** A referral process used to seek a second opinion, a higherlevel investigation, or for routine admissions and client management.

# Strategic Alignment of Referral system

- Captured in the NDPIV Strategic directions issued by Cabinet 75 (VII)
- NDPIV - PIAP
- MOH Strategic Plan 2025/26 – 2029/30 (pg 82)
- Ministerial Policy Statement 2026/27
- Emergency medical services Policy and Implementation plan 2021

# Purpose of Referral

- To provide need based comprehensive care within the technical competencies & resources at each level
- To help people receive specialized services available at higher level institution which is beyond their reach
- To streamline the appropriate use of PHC infrastructure and specialized services in order to prevent overloading of specialised institution by direct uses

# Types/classification

- Traditional
  - External – horizontal or vertical
  - Internal
  - International
- Modern - ICSS
- Others  - Intra-disciplinary and Inter disciplinary

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# A) Traditional

- External –
  - Vertical – patient referral from lower to higher level facility and vice versa
  - Horizontal – patient referral from one facility to the other facility and vice versa
  - International referrals or referrals abroad are a special type of referral located outside the borders of Uganda.
- Internal – patient referral within one health facility, from one health personnel to another
- International referral – Standard guideline on international referrals exists.

# B) Modern

- Interval referral – patient referred to complete care for a limited period
- Collateral referral – the referring MD retains the overall responsibility, but refers patient for care of some specific problems
- Cross referral – patient is referred to another MD, once accepted the referring MD has no more responsibility in patient care
- Split referral – the responsibility is divided between two or more MDs
- Self-referral – patient choses the MD to go to

# C) Other types

- Intra disciplinary referral system – when a patient cannot be treated, neither properly diagnosed, nor satisfied with a particular treatment or therapy, then he can be referred to another therapy of same discipline for needful
- Inter-disciplinary referral system – the patient shifts from one system to another

# Referral levels 1- Referral arrangement


- Referral can be **vertical** as in the hierarchical arrangement of the health services from the lower end of the health tier system to the higher ones.
- It can also be **horizontal** between similar levels of facilities in the interest of patients for cost, location and other reasons.
- Referrals can also be **diagonal** when a lower-level health facility directly refers patients to a tertiary facility without necessarily passing through the hierarchical system.

# Referral Levels & Ownership FY 2024/25 (MOH,2025)

| Facility level | GOV | PNFP | PHP | Total |
|---|---|---|---|---|
| | Number | Number | Number | Number |
| NRH/SH | **8** | 0 | 0 | 8 |
| RRH | **16** | 0 | 0 | 16 |
| General Hospital | **57** | 80 | 66 | 203 |
| HCIV | **206** | 42 | 34 | 282 |
| HCIII | **1,464** | 361 | 259 | 2084 |
| HCII | **1,737** | 448 | 1,459 | 3644 |
| Clinic | **0** | 51 | 374 | 426 |
| Overall | 3,488 | 982 | 2192 | 6663 |

# Referral Levels – classified

- **Primary:**
  - Community health teams (CHEWs, VHTs),
  - HCII, HCIII
- **Secondary:**
  - HCIV,
  - General Hospital
- **Tertiary:**
  - Regional Ref Hospitals,
  - National Referral Hospital &
  - Specialised Referral hospital

# Community (VHTs,CHEWs)

- Covers the village 1000 people and parish – 5000 people
- Community based preventive  and promotive health services
- Surveillance/screening for diseases,
- Referral and treatment support

# Health centre II

- Situated in difficult to reach or under served areas
- Covers a population of 5000 in a parish
- Services
  - Preventive and promotive health services
  - Outpatient care
  - Curative
  - Emergency delivery

# Health Centre III

- Serves a population of 20,000 above in a subcounty or for urban areas a Division
- Has 14 beds (4 maternity, 4 children, 4 female , 2 male)
- Has standard infrastructure (revisions are being made)
- Human resource revised 2024 provides for … Staff including a medical Doctor
- Services
  - Preventive and promotive
  - OPD
  - Curative
  - Maternity
  - In patient
  - Laboratory

# Health Centre IV

- Covers a population of 100,000 people – constituency/county level
- 24 beds (8 maternity, 6 children, 6 female, 4 male)
- Human resources: Senior general medical practitioners, Nurses, pharmacists and Allied staff. Total 108
- Services
  - As for HC3 plus
  - Obstetric ultrasound
  - Emergency caesarean sections
  - Life saving surgical operations
  - Blood transfusion services
  - Mortuary
- Planned to select some and upgrade to Community hospital 80 bed capacity

# General Hospital

- Covers a population of 500,000 people. Managed at District level. The catchment area is beyond district geographical boundaries
- Beds 100-250 (25 ObGy, 25 Paediatrics, 25 Medical, 25 surgery)
- Human resource
- Services
  - In addition to HCIV provides
  - General medical  surgical conditions
  - Specialist services in medicine, Surgery, Paediatrics, community medicine, obstetrics & Gynaecology, Laboratory, radiology, and public health
  - In service training and basic research

# Regional Referral Hospitals

- Covers 2 million people in a region, centrally managed
- Number of Beds = 500
- Human resources: Total 1208 includes Specialiasits,
- Infrastructure – Huge
- Services
  - As above for General Hospital, including
  - Psychiatry, ENT,Ophthalmology, dentistry, intensive care, radiology, pathology, higher level medical and surgical services
  - In service training, pre-service training and internship
  - Regional Medical Dispatch system
  - Infectious disease management
  - Central sterile supply
  - Maintenance workshop

# National Referral Hospital

- Covers 10 million people, specialized hospitals have no defined catchment population
- Human resource positions – to be filled in 10 years time
- **Services**
  - Provides all package at regional referral hospitals, including super specialist services
  - Neurology, Endocrinology & metabolic diseases
  - Gastroenterology, Respiratory medicine
  - Neonatal care, Intensive care
  - Nuclear medicine, Neurosurgery
  - Cardiovascular surgery, Diagnostic services including MRI
  - Advanced clinical laboratory (microbiology, haemotology)
  - Postgraduate and undergraduate training

# Specialised Referral Hospitals

- Population coverage not essential, the important issue is the advanced care provided
- Examples: UHI, UCI, Mulago Women & Neonatal hospital, Emergency Surgery hospital, CURE hospital,
- Human resources is per hospital
- Services – Specific to a speciality or sub-speciality
  - Cardiac care
  - Cancer care
  - Neurosurgery
  - Women & Neonatal care

# Referral pathways

- Referral pathways are the routes patients follow when they need care beyond what a facility can provide.
- Referral Pathways are local agreements on best practice whereby hospital doctors, specialists, nurses and allied health professionals have designed patient pathways and treatment plans in cohesion.
- **Purpose:**
- improve the flow of patients and information within the urgent and emergency care system by supporting an enhanced and consistent approach to the referral of patients between healthcare professionals and providers.

# Emergency Pathways

- The demand for urgent and emergency care has increased significantly over the last decade. Patient attendance at hospital Emergency Departments (EDs) has increased. In 2024/25, a total of 855 emergency cases per 100,000 were registered.
- The road traffic crash cases have increased by three times in the last 10 years (from 56,000 FY 2015/16 to 164,000 FY 2024/25. with motorcycles accounting for 56% of the Road traffic injuries.
- The utilization of ambulance services has increased from less than 2% in 2018 to 21.4% FY 2024/25
- Increasing burden of Non-communicable diseases especially cardiac, cancer and diabetes presenting as emergency conditions
- Paramedics report that an absence of appropriate referral pathways can lead to duplicated and unnecessary activities which consume
- Time and resources,
- Reduce efficiency and
- Almost certainly affects patient survival

# Referral Pathways: From Scene to Definitive Care

## The Integrated Pathway

Scene of Emergency

▼

Community First Aid / Bystander Response

▼

912 Call → Regional Call & Dispatch Centre

▼

Ambulance Response (Medical First Responder / Ambulance Crew)

▼

Triage & Care at Scene → Transport Decision

▼

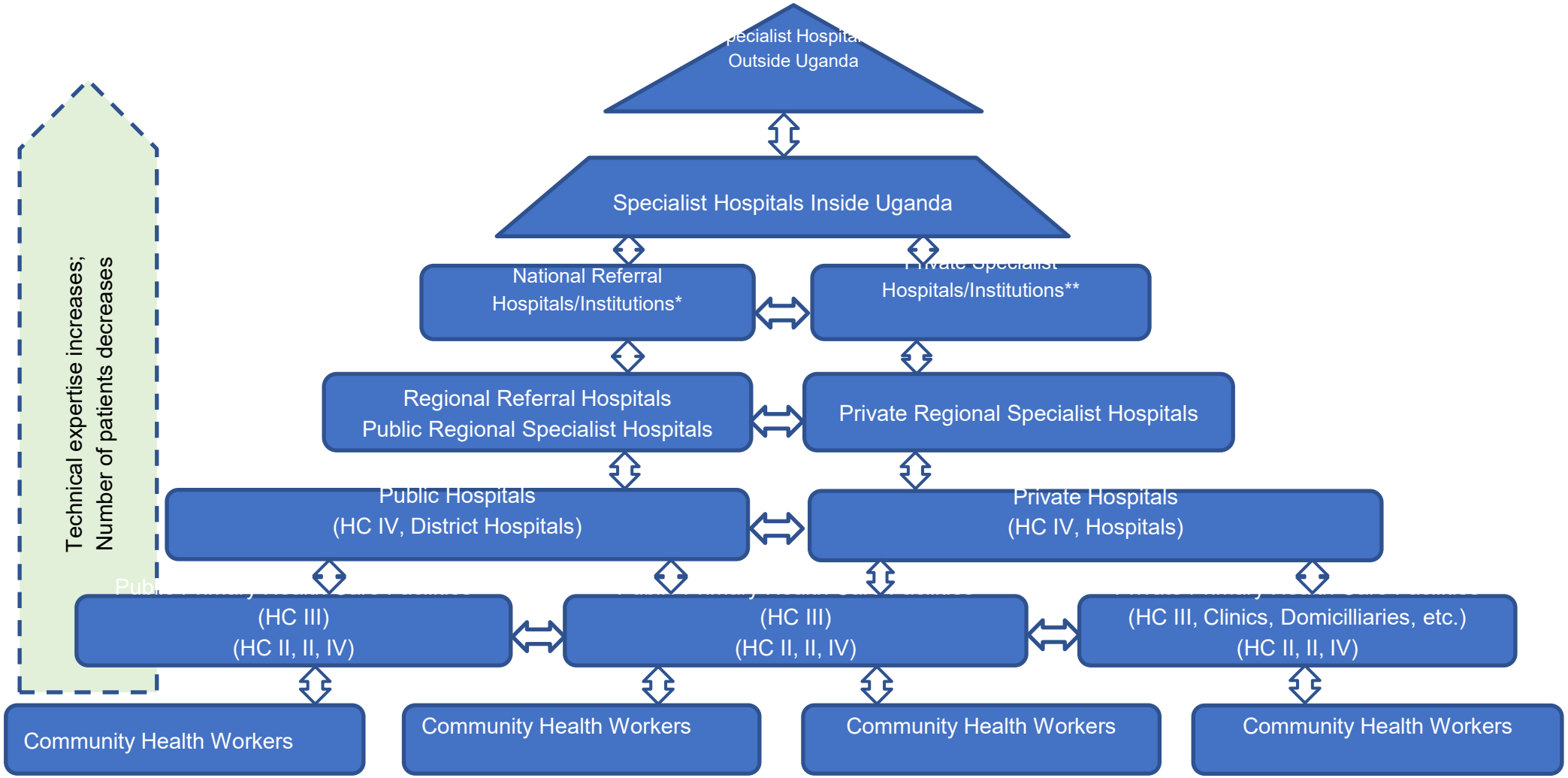
Inter-facility Transfer (if needed)

▼ Receiving Facility Emergency Department → Definitive Care

# Emergency referral pathway - Unique

- Time is critical
- Bypasses normal levels to get patient to definitive care fast eg a patient with a Traumatic Brain injury can be moved from HCIII to regional referral
- A patient with acute coronary heart disease may be moved directly to UHI for urgent catheterization
  - Use of 912 EMS Uganda (described in detail ahead)
  - Uganda Red Cross model
  - Kampala Mane project

# Uganda National Health Referral Networks and Flow 2



# Upward referral pathway


- There is a standard flow of flow when a patient's condition exceeds capacity of the current facility:
- Referral levels as already outlined
- Community/VHTs refers to HCII
- HCII refers to HCIII
- HCIII refers to HCIV
- HCIV refers to General Hospital
- General Hospital refers to Regional referral
- Regional Referral to National ref and specialized referral hospitals

# Downward or Reverse referral pathway

- Step down for follow up
- Used when a patient is stabilized at a higher level and can be managed closer to home
- For example – post surgery, Complicated TB case discharged back
  - It reduces congestion at tertiary level

# Horizontal referral pathway

- Between facilities at same level
- HCIV refers to another HCIV for a service if they cannot offer it eg imaging services
- Referral from a public HCIII to a PNFP HCIII

# What makes pathways breakdown

- Lack of guiding documents/SOPs
- Distance & transport availability
- Cost: Costs at facility level
- Communication gaps: Feed back may not occur,
- Insecurity: The referral pathway may not be followed
- Provider confusion: where to refer

# Making pathways work

- Clear protocols: who refers, when, and how
- Functional communication: phone lines,
- Transport: ambulances, community transport, fuel funds
- Feed back loop: Receiving facility sends back diagnosis and plan
- Community sensitization: people need to know

# Referral Protocols

- Step-by-step rules for when, how, and who refers a patient
- They make sure referrals are timely, safe, and documented so that the receiving facility knows what to do.
- When to refer – Decision criteria, immediate referral – red flags, routine referral
- Who can initiate a referral – depends on the level
  - Community CHWs, VHTs.
  - HCIII - Nurse, midwife or clinical officer (in the future a MO)
  - Higher levels – Medical Officer, specialist

# Steps of Referral process (Dr Anna Kaguna)

- Stabilize patient – treat what you can before moving a patient: Oxygen therapy, stop bleeding, give loading dose abx/antimalarials. Do not delay for “a perfect patient’
- Establish the need for referral
  - Set objectives for referral
- Facilitate and coordinate - Communicate: Call receiving facility and provide information
- Document: Fill official referral form
- Prepare patient and family
  - Establish a good relationship with patient, explain why referral, where they are going, transport, what to carry
- Arrange transport: Use ambulance if available and appropriate, for non-urgent use public transport Explore the resources availability
- Follow up and feedback: Receiving facility to send feed back

# Referral process tools

- The referral process demand the use of standardized tools for proper documentation of patients' management details as well as clear communication to the referral facility.
- Mandatory tools for effective referral process.
    - Referral form
    - Referral register
    - Referral Directory
    - Call & dispatch form
    - Consultation request form
    - Ambulance Patient care form
    - Patient Handover form
    - Referral form for management of patients abroad

# Referral Protocols: Standard Operating Procedures

## What Must Be in Place

1. Triage protocol – UTAT, Mass Casualty triage scale or similar, used at scene, during transport, and on arrival.
2. Clinical management protocols – for common emergencies (trauma, obstetric, paediatric, medical, mental health) covering both pre-hospital and hospital phases.
3. Destination determination protocol – which facility for which condition, based on capability, not just proximity.
4. Handover protocol – standardized tool (ISBAR or similar) between ambulance crew and emergency department staff.
5. Inter-facility transfer protocol – clinical criteria for referral, stabilization before transport, documentation, and receiving facility acceptance.

# Medical Call and dispatch process
(MOH, 2026)

# What is Emergency Medical Dispatch?

**Definition**

Emergency Medical Dispatch (EMD) is a system used by Emergency Medical Services to coordinate fast, accurate emergency responses that save lives.

1. Receive emergency calls from the public
2. Assess the situation quickly and accurately
3. Prioritize the call based on severity
4. Dispatch the most appropriate ambulance and medical resources

KEY POINT

EMD uses trained Call Agents and Medical Dispatchers working with standardized protocols.

*Their goal: coordinate fast, accurate emergency responses that save lives.*

# Why is Emergency Medical Dispatch Important?

## Time-Sensitive

Emergencies require rapid response — every second matters for patient outcomes.

## Right Resources

Proper call assessment ensures the right crew and vehicle are sent to the scene.

## Fewer Errors

Standardized dispatch protocols reduce delays, miscommunication, and mistakes.

## Saves Lives

Early guidance to callers (pre-arrival instructions) improves patient survival.

## Community Link

Dispatch connects communities to primary and tertiary emergency care facilities.

# Ambulance Call & Dispatch Centres

## What They Do

1. Receive emergency calls from the public
2. Collect essential patient and scene information
3. Dispatch ambulances to the right location
4. Provide pre-arrival instructions to callers
5. Coordinate patient transport and hospital handover

**1**

**National Centre**

*National coordination hub*

**16**

**Regional Centres**

*Aligned to Uganda's health regions*

# Regional Call & Dispatch Centres (RCDC)

## Coordination and Oversight

- Medical Dispatch system is a centralized system – National & Regional
- Each RCDC is housed at the Regional Referral Hospital, managed by the Regional EMS Coordinator (REC).
- Computer-Aided Dispatch (CAD) with:
  - Automatic Vehicle Locators (AVL)
  - Geographic Information System (GIS) mapping
  - Real-time fleet status (available, enroute, at scene, at hospital)
- Links to:
  - District/urban authority EMS focal persons
  - Police, Fire, Works, Marine, Air (MedVac)
  - Office of the Prime Minister (NECOC) for disasters

# The Universal Access Number — 912

**912**

EMERGENCY NUMBER

## Toll-Free

Calls to 912 are free — callers are not charged regardless of their mobile provider.

## 3-Digit Number

Short and easy to remember in a high-stress emergency situation.

## National Coverage

Works anywhere in Uganda, across all telephone service providers.

## Direct Connection

Rapidly connects callers to the nearest Ambulance Call & Dispatch Centre.

# Call & Dispatch Linkage: The 912 System

## How It Works

- Single universal emergency number: 912
- Linked to the 999 Police system for shared location-based routing (LBR)
- Calls automatically routed to the Regional Call & Dispatch Centre (RCDC)
- Trained dispatchers:
  - Interrogate caller (chief complaint, location)
  - Prioritize (triage)
  - Assign nearest appropriate ambulance (GPS/AVL)
  - Provide pre-arrival instructions
- Ambulance-to-hospital radio communication enables advance notification

# Next steps (Moving Forward)

1. Finalize and disseminate the national referral protocols for emergency conditions, referral pathways to support patients
2. Operationalize the 14 Regional Call & Dispatch Centers with CAD and AVL.
3. Train Paramedics and Call Agents in the Medical Dispatch process
4. Train all ambulance crew, dispatchers, and emergency department staff on standardized referral procedures.
5. Implement the Ambulance Patient Care Form and ISBAR handover.
6. Strengthen inter-agency linkages (Police, Fire, OPM) for coordinated response.
7. Monitor referral indicators: response times, appropriateness of destination, handover compliance.
8. Review the Uganda Referral Guidelines


*"To truly improve the patient referral experience, we must understand the patient's journey from the patient's perspective."*


*Thank you*

*Questions & Discussions*