





# NDERA

## NEUROPSYCHIATRIC TEACHING HOSPITAL



## ANNUAL REPORT 2023-2024

  
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## **EXECUTIVE SUMMARY**

Ndera Neuropsychiatric Teaching Hospital provides specialized healthcare in psychiatry and neurology in accordance with the professional ethics and policy of Rwanda National Health Sector. The hospital is located in Ndera Sector, Gasabo District, City of Kigali, and has two branches; CARAES Butare in Huye District, Southern Province and Icyizere Psychotherapeutic Centre, in Kicukiro District, City of Kigali. The hospital provides the following services; Psychiatry, Neurology, Hospitalization, Addiction treatment, General laboratory, Medical imagery (EEG, EMG, ECG), Physiotherapy, PIT care and treatment, Clinical psychology and Occupational therapy.

In the fiscal year 2023-2024, the hospital recorded 101,811 consultations, of which 59% were in psychiatry and 41% in Neurology. It is important to note that the consultations have increased 6.3% from the previous year; up from 95,773 in 2022-2023. The most prevalent pathologies in psychiatry were schizophrenia and acute psychotic disorders, while the predominant pathology in neurology was epilepsy. The number of hospitalized patients increased to 5,691, up from 5,646 of the previous year. Other activities carried out during this fiscal year include community outreach programmes, which involved the hospital staff's contribution in capacity building for healthcare professionals at district hospitals level to boost mental health care.

The most notable achievements was that in August 2023, the hospital started the implementation of the new organizational structure, which was gazetted in the Prime Minister's Instructions N<sup>o</sup> 001/03 of 10/08/2022. The performance of the hospital's operation plan of the fiscal year 2023-2024 was successfully implemented as the budget consumption reached at 99% of the allocated budget. There was no stock out of psychotropic drugs and other pharmaceutical products, and the medicines availability rate was increased, and this is justified by the fact that most of the reported medicines that were out of stock in the previous year, were received at hospital pharmacy during the year 2023 – 2024.

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# **CHAPTER I. DESCRIPTION OF INSTITUTION STATUS**

## **1.0. Introduction**

Ndera Neuropsychiatric Teaching Hospital is a university teaching hospital specialized in psychiatry and neurology in accordance with the professional ethics and policy of Rwanda National Health Sector. Founded in 1968, the hospital is owned by the Congregation of the Brothers of Charity, a religious institution, in partnership with the Government Rwanda, with the Government setting health policies and providing human resources, and the Brothers of Charity assuring administrative matters and the daily management of the hospital. Following its inauguration at Ndera, Gasabo District, City of Kigali, the hospital saw a remarkable growth in all aspects, mainly the creation of two branches; CARAES Butare in Huye District, Southern Province in 1976 and Icyizere Psychotherapeutic Centre, in Kicukiro District, City of Kigali in 2003. Other notable achievements include the establishment of new services, strengthening of existing ones, and most recently, the Hospital's upgrading to Teaching Hospital Level (Prime Minister's Instructions N° 001/03 of 10/08/2022), which comes with a responsibility of bringing together medical education, research, and patient care in a unique environment where the next generation of medical doctors, nurses, and other health professionals are trained.

## **1.1. Mission Statement**

The mission of the Hospital is to provide accessible specialized healthcare, to facilitate training, research and mentorship in mental health and neurology with reference to the National Health Policy.

## **1.2. Vision**

We strive to be a regional leader in the field of neurology and mental health through provision of excellent healthcare services accessible to all, as well as a modern medical training.

## **1.3. Values**

As a teaching Hospital, the values of the hospital are inspired by the Christian vision of human beings: human dignity, justice, compassion and respect to all, especially the most vulnerable.

## **1.4. Human Resource Service**

During the financial year 2023/2024, the human resource service coordinated personnel activities of 429 full time staff, 12 part time staff and 45 professional interns.

The human resource service contributed to the hospital success through:

- Staff benefits, compensation and statutory deduction declarations,
- Staff performance evaluation through annual evaluation Imihigo in RBM system and individual monthly evaluation,
- Staff recruitment, selection and hiring process,
- Staff capacity building,
- Staff labour laws and regulations, and
- Staff safety and risk compliance, among others.

In order to ensure that the service responsibilities are well carried out, the human resource service:

- Recognizes the uniqueness needs of staff,
- Acts in the best interests of the hospital and staff,
- Devotes to quality, excellence and continuous improvement,
- Adheres to high professional standards of quality, competency and conduct,
- Balances requests to share information clearly and openly while respecting confidentiality of staff information.

### **1.4.1. Achievements**

1. The hospital organizational structure which officially gazette in the Prime Minister's Instructions N° 001/03 of 10/08/2022 determining the organizational structure of Ndera Neuropsychiatric Teaching Hospital and level two Teaching Hospitals started to be implemented in August 2023.
2. All hospital staff both under statute and under contract have done their annual evaluation Imihigo in RBM system.

### **1.4.2. Staff recognition**

- The implementation of the new organizational structure has seen the hospital staff paid salaries and other fringe benefits according to the new index and index value.
- Hospital staff received annual performance bonus for the year 2022/2023

- 56 staff have been horizontally promoted in their respective positions
- The hospital recognized the retirement of 1 staff
- The hospital recognized and awarded the best employee of the year 2024

#### **1.4.3. Performance evaluation**

In order to promote staff working capacity, skills and experience, human resource service ensures that staff performance evaluations are done completely on a monthly basis through performance evaluation and hospital self-assessment; this helps in identifying staff needs for capacity building through different workshops, trainings, coaching, online short courses and other means which result in improving staff performance and promoting teamwork at all levels, to achieve hospital's objectives.

Staff monthly performance evaluation is where each staff together with immediate supervisor set goals to achieve within a month and at the end of the month, they assess the accomplishment of what has been set for results. Staff performance assessment is carried out to appreciate their work, plan and prioritize training needs.

The hospital has also a multidisciplinary team which conducts a quarterly evaluation in hospital units, services and its branches, to evaluate the quality of service delivery, implementation of recommendations and advice for quality improvement.

Through Result Based Performance Management System (RBM) the hospital staff are being assessed on an annual basis, where each and every staff is given annual targets (Imihigo) to achieve at the end of financial year, and reported on a quarterly basis. The best performers are rewarded with annual performance bonus and horizontally promoted if they have been *Indashyikirwa* (excellent) for three consecutive years.

#### **1.4.4. Career development**

Ndera Neuropsychiatric Teaching Hospital is working closely with Rwanda Development Board in offering professional internship in order equip Rwandan young and fresh graduates with professional experience for their career path. During this year, the hospital received 45 professional interns where 15 have completed their internship and have been employed in different institutions, and 24 professionals interns are still in their professional internship.

### 1.4.5. Staff statistics

Ndera Neuropsychiatric Teaching Hospital, at the end of the financial year as of June 30, 2024, had 429 staff in which 229 (54%) were under statute staff, 194 (45%) were under contract staff and 6 (1%) under contract staff in CDC-COAG Project.

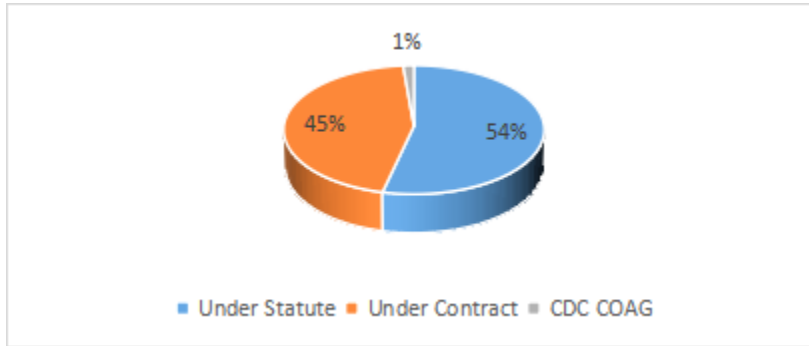


Figure 1: Hospital staff

#### 1.4.5.1. Staff by Gender

As the financial year 2023/2024 ended, Ndera Neuropsychiatric Teaching Hospital had 429 staff, among them 206 staff were female and 223 staff were male.

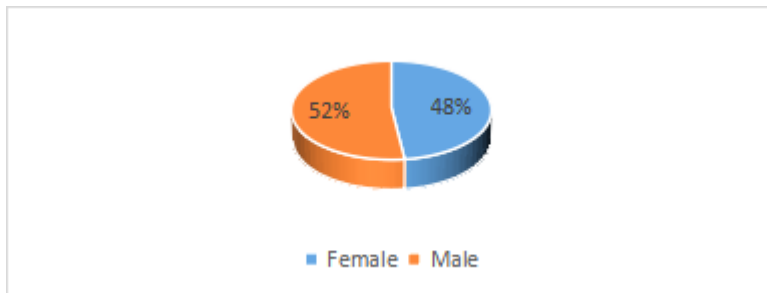


Figure 2: Staff by Gender

### 1.4.6. Staff recruitment

As per this financial year, Ndera Neuropsychiatric Teaching Hospital recruited 58 staff, among them, 25 were for Mental Health and Nursing Unit, 2 for Neuropsychiatric Unit, 9 for Allied Health Sciences Unit and 22 for Corporate Services Division.

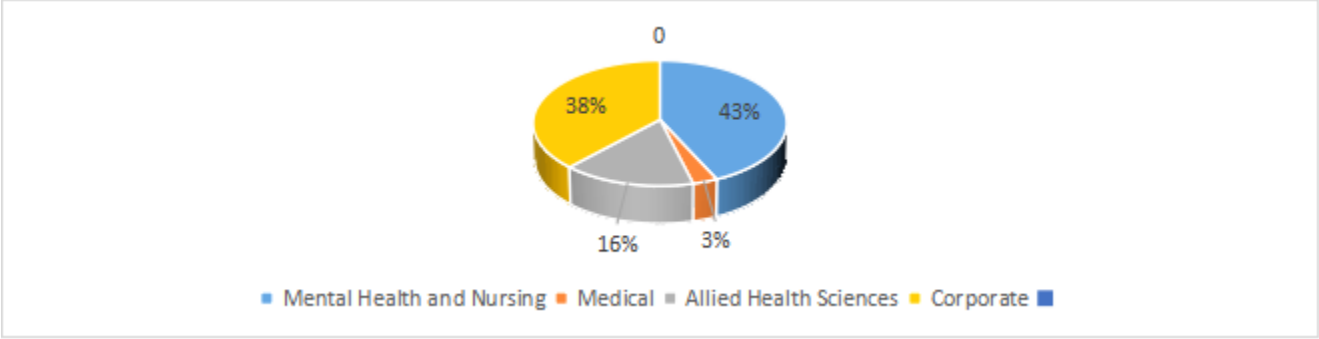


Figure 3: Staff recruitment

**1.4.7. Staff turnover**

During the course of this financial year 2023/2024, 21 staff left Ndera Neuropsychiatric Teaching Hospital due to contract termination, retreat, voluntary dismissal and vocation mission.

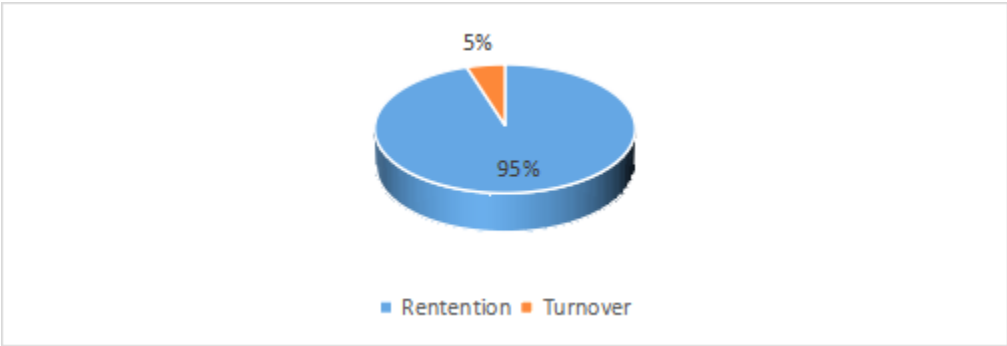


Figure 4: Employee turnover

**1.4.8. 2024/2025 Human Resource Service project**

The Human Resource Service will focus its efforts in:

1. Implementation of the new organizational structure;
2. Strengthening employee development through capacity building and coaching.

# CHAPTER II: DETAILED DESCRIPTION OF THE INSTITUTION'S PERFORMANCE

## 2.1. Medical Department

### 2.1.1. Consultations

Place of care	NC OC	NDERA						BUTARE						ICYIZERE						TOTAL
		0-19		20-39		40+		0-19		20-39		40+		0-19		20-39		40+		
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Jul-23	NC	63	20	45	48	58	58	13	2	15	12	11	7	4	4	13	12	12	10	407
	OC	787	406	907	664	770	812	112	87	331	281	308	425	51	28	279	184	178	294	6,904
Aug. 2023	NC	71	39	58	43	49	58	9	12	20	15	7	13	6	1	15	17	10	2	445
	OC	862	461	1017	813	883	1001	133	85	346	315	320	427	64	32	268	187	179	299	7,692
Sep. 2023	NC	46	42	46	33	44	49	4	10	19	15	13	12	7	4	12	14	6	11	387
	OC	904	458	1,014	779	896	1021	121	83	355	312	318	449	48	29	253	160	186	283	7,669
Oct. 2022	NC	94	68	81	70	67	51	4	3	19	10	8	10	6	0	18	15	4	19	547
	OC	979	546	1,130	803	931	1133	141	95	414	351	327	457	57	31	316	182	203	287	8,383
Nov. 2023	NC	76	66	74	64	31	55	8	12	20	14	7	11	6	4	11	11	6	6	482
	OC	1040	541	1,136	812	994	1141	146	73	367	299	331	557	44	28	278	180	198	278	8,443
Dec. 2023	NC	63	33	51	38	36	43	5	7	24	8	3	4	6	1	12	7	4	8	353
	OC	903	422	1,025	729	872	1027	138	82	374	316	317	474	47	28	311	179	203	301	7,748
Jan. 2024	NC	57	46	47	50	33	53	5	5	21	18	7	8	3	1	17	13	7	12	403
	OC	1040	497	1,118	836	1087	1195	130	75	388	297	331	491	43	38	326	204	216	301	8,613
Feb. 2024	NC	67	55	37	44	38	46	15	1	14	11	2	9	20	3	14	8	10	5	399
	OC	1118	540	1122	848	1085	1185	142	74	352	284	305	449	50	28	295	165	202	283	8,527
Mar-24	NC	42	45	45	58	29	56	10	7	16	6	3	9	2	1	11	6	7	5	358
	OC	1046	546	1,118	796	1066	1132	133	78	425	304	325	498	38	19	205	93	153	190	8,165
Apr-24	NC	57	42	44	44	41	47	15	6	16	17	6	9	6	1	25	16	8	14	414
	OC	1020	562	1,119	817	982	1103	140	67	355	286	315	490	53	31	310	178	210	307	8,345
May-24	NC	54	38	44	27	33	51	11	7	15	15	7	8	8	0	16	3	7	6	350
	OC	1134	610	1,170	866	1043	1,156	147	75	365	313	337	485	45	23	199	89	168	203	8,428
Jun-24	NC	35	24	36	35	30	48	9	6	20	16	16	12	5	1	23	13	15	4	348
	OC	945	537	1,043	750	964	1,073	128	73	341	324	262	532	39	21	315	171	208	275	8,001
<b>TOT</b>		<b>12,503</b>	<b>6,644</b>	<b>13,527</b>	<b>10,067</b>	<b>12,062</b>	<b>13,594</b>	<b>1,719</b>	<b>1,025</b>	<b>4,632</b>	<b>3,839</b>	<b>3,886</b>	<b>5,846</b>	<b>658</b>	<b>357</b>	<b>3,542</b>	<b>2,107</b>	<b>2,400</b>	<b>3,403</b>	<b>101,811</b>

Table 1: Consultations done at Ndera Neuropsychiatric teaching Hospital and its branches FY 2023-2024

As indicated in the table, during the year 2024-2025, the hospital received 101,811 patients in consultation.

### 2.1.1.1. Monthly Consultation Distribution

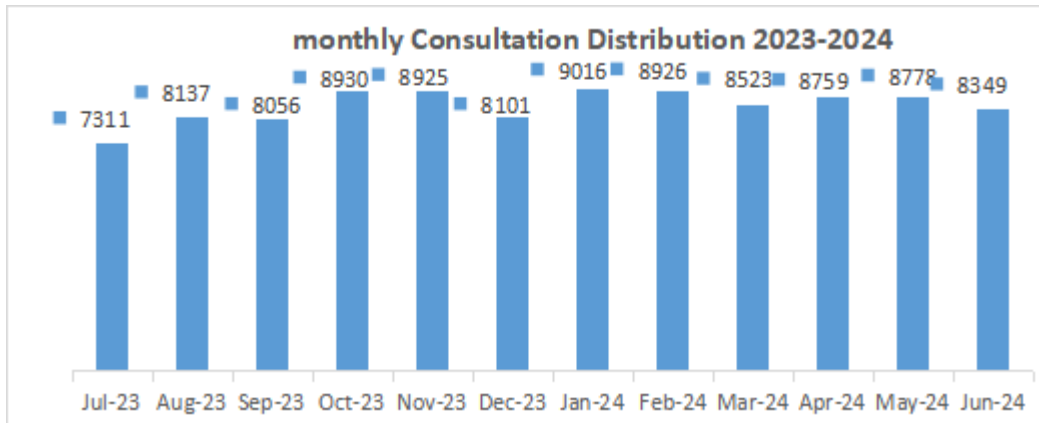


Figure 5: Monthly Consultation Distribution

The lowest consultation is in **July 2023**, while the highest is in **January 2024**. In a monthly consultation may be low or high due to many reasons: Patients may have fear to consult due to inactivated health insurance. Patients may be at high number due to poor Appointment planning or many new cases received in the month.

### 2.1.1.2. Consultations per branch 2023-2024

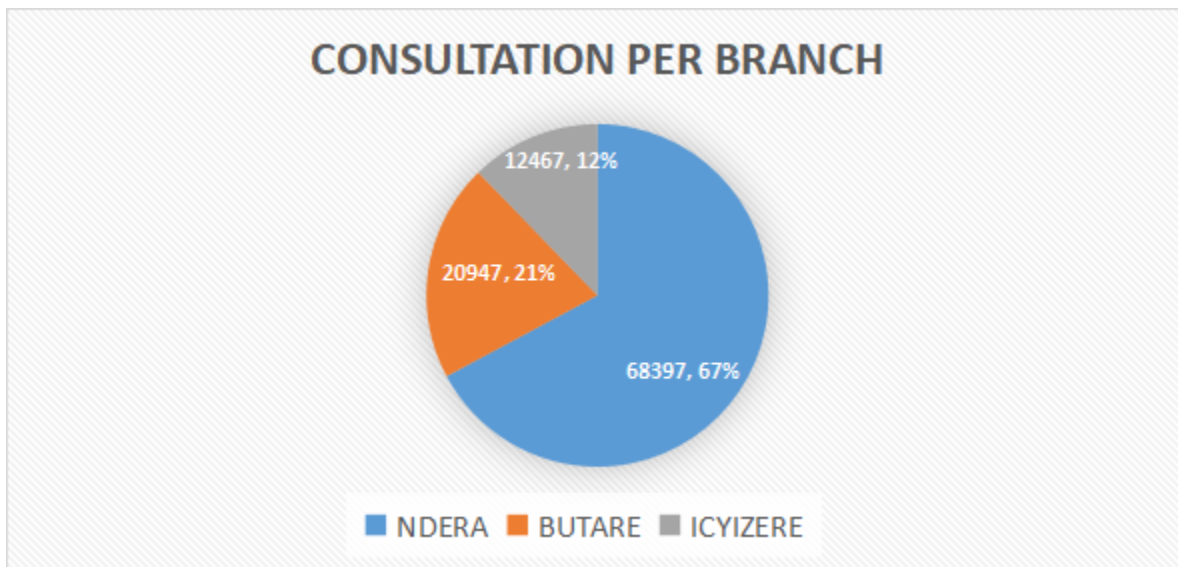


Figure 6: Consultations per branch 2023-2024

The figure above shows that the main center (Ndera)r had many consultations: 68,397 (67%) than its branches, where CARAES Butare was 20,947 (21%) while icyizere center consulted 12,467 (12%).

### 2.1.1.3. Consultation per gender

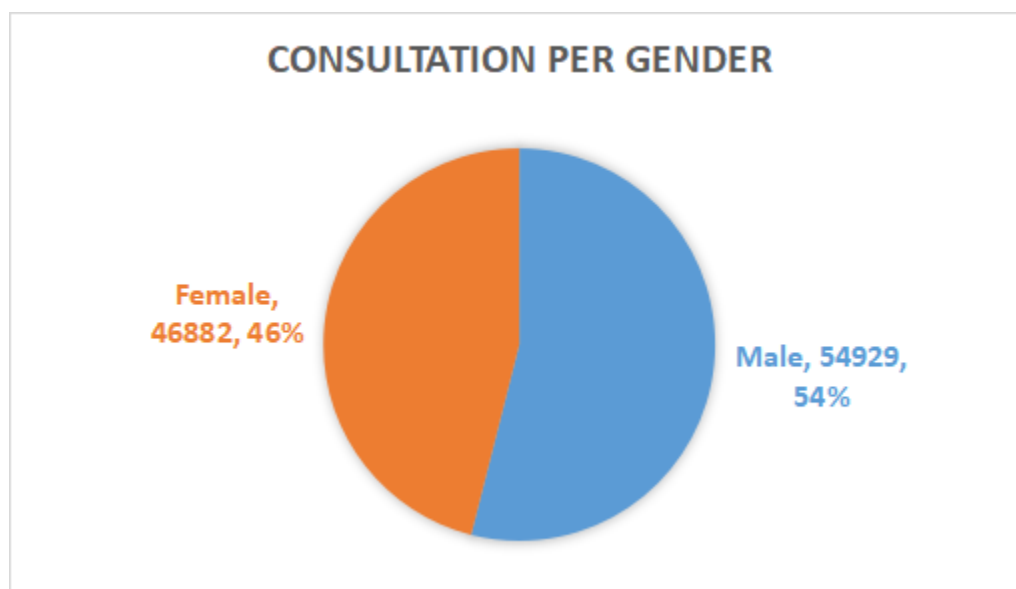


Figure 7: Consultation per gender

The majority of the patients in Ndera Neuropsychiatric Teaching Hospital's consultation were males, taking 54% of total number.

### 2.1.1.4. Consultation per provenance

PROVENANCE	NDERA	CARAES BUTARE	ICYIZERE CENTER	TOTAL	%
City of Kigali	36001	181	9985	46167	<b>45</b>
Northern province	4460	70	312	4842	<b>5</b>
Western Province	4752	463	399	5614	<b>6</b>
Eastern province	14353	53	1175	15581	<b>15</b>
Southern Province	8173	20180	596	28949	<b>28</b>
Foreigners	5	0	0	5	<b>0</b>
Non Specified	653	0	0	653	<b>1</b>
<b>Total</b>	<b>68,397</b>	<b>20,947</b>	<b>12,467</b>	<b>101,811</b>	<b>100</b>

Table 2: Consultation per provenance

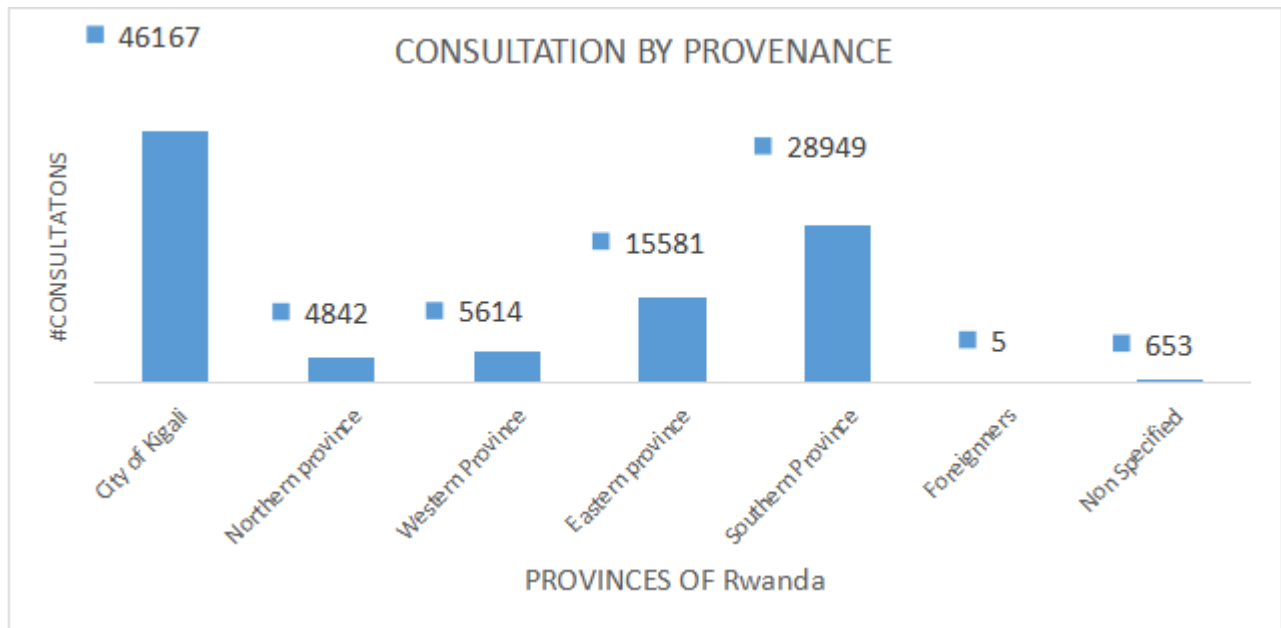


Figure 8: Consultation per provenance

The figure shows that City of Kigali with 46,167 consultations (45%) takes the first place for consultation in Ndera Neuropsychiatric Teaching Hospital. Evidently, main center is located in the City of Kigali where many consultations occurred. It is followed by Southern Province with 28,949 consultations (28%), in which CARAES Butare branch is located.

## 2.1.2. Hospitalization

### 2.1.2.1. Bed capacity

From the table below, the hospital has different inpatients services. Some of them have many hospital beds, others have few beds. All inpatient services admit patient except the emergency with 4 beds where the patient cannot exceed 24 hours.

	<b>WARDS</b>	<b>Bed in Crisis Ward</b>	<b>Bed in Recovery Wards</b>	<b>Total</b>
<b>1</b>	Men (A and B)	78	45	123
<b>2</b>	Women (C and D)	74	41	115
<b>3</b>	Private Hospitalization (Ituze center) at Ndera	0	10	10
<b>4</b>	Children and Adolescent (Kundwa center)	0	17	17
<b>5</b>	Emergency	0	4	4
<b>5</b>	Neurology	0	18	18
<b>6</b>	Transitional home care (Ward E)	0	58	58
<b>7</b>	BUTARE Branch	59	58	117
<b>8</b>	Private Hospitalization for BUTARE Branch	0	2	2
<b>9</b>	Icyizere Branch	0	29	29
<b>TOTAL</b>		<b>211</b>	<b>282</b>	<b>493</b>

Table 3: Bed repartition in the Ward according to capacity

### 2.1.2.2. Inpatient admissions

As presented in the table below, the total number of patients admitted during the year 2023-2024 was 5,691, with the majority having been admitted at the main center CARAES Ndera (4,443).

PLACE OF CARE	CARAES NDERA							NEUROLOGY	CARAES BUTARE		ICYIZERE CENTER		TOTAL	
	WARDS		CHILDREN		HSJ	ITUZE CENTER			M	F	M	F		
MONTH	M	F	M	F	0	M	F	M	F	M	F	M	F	
<b>Jul-23</b>	152	64	4	7	0	6	5	9	9	50	31	13	5	<b>355</b>
<b>Aug-23</b>	181	142	5	7	0	5	3	16	8	45	40	13	11	<b>476</b>
<b>Sep-23</b>	200	132	6	4	0	4	8	12	9	44	38	16	9	<b>482</b>
<b>Oct-23</b>	225	135	11	9	0	5	4	8	15	45	33	15	10	<b>515</b>
<b>Nov-23</b>	226	152	9	11	0	7	2	12	11	42	44	8	11	<b>535</b>
<b>Dec-23</b>	185	118	2	7	0	8	6	13	10	54	26	17	4	<b>450</b>
<b>Jan-24</b>	230	193	7	9	0	3	7	21	5	38	53	16	10	<b>592</b>
<b>Feb-24</b>	279	153	4	4	0	6	1	14	9	26	41	13	8	<b>558</b>
<b>Mar-24</b>	122	69	6	7	0	10	9	12	8	40	43	18	4	<b>348</b>
<b>Apr-24</b>	274	114	7	10	0	7	6	9	6	54	48	10	6	<b>551</b>
<b>May-24</b>	159	142	5	13	0	11	7	7	10	36	31	14	7	<b>442</b>
<b>Jun-24</b>	148	79	3	5	0	7	5	17	15	49	41	11	7	<b>387</b>
<b>TOTAL</b>	<b>2,381</b>	<b>1,493</b>	<b>69</b>	<b>93</b>	<b>0</b>	<b>79</b>	<b>63</b>	<b>150</b>	<b>115</b>	<b>523</b>	<b>469</b>	<b>164</b>	<b>92</b>	<b>5,691</b>

Table 4: Inpatient Admission in the year 2023-2024

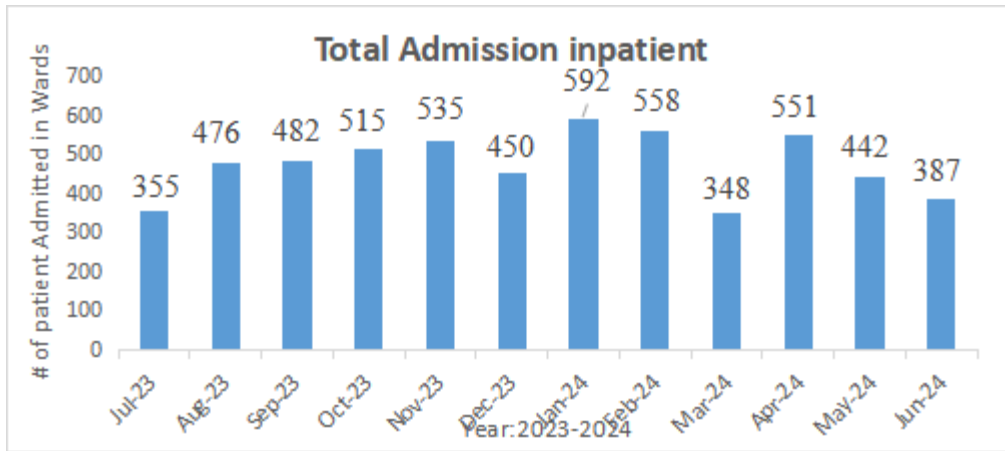


Figure 9: Monthly Hospitalization distribution

This above graphic shows that we admitted many patients in month of Jan 2024 with 592 cases.

### 2.1.2.3. Hospitalization per Branch

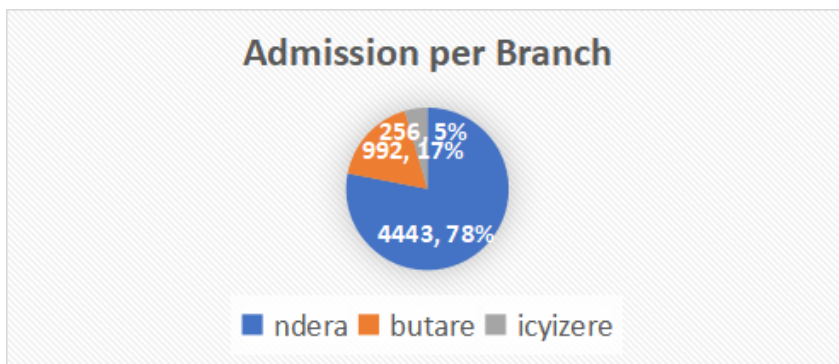


Figure 10: Hospitalization per branch

### 2.1.2.4. Hospitalization per Gender

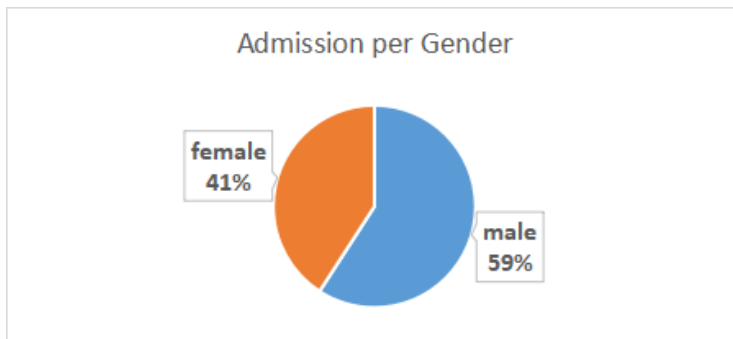


Figure 11: Hospitalization per gender

Based on pie chart, males were more prevalent (59%) in the hospitalization than females (41%).

### 2.1.2.5. Bed occupancy

PLACE OF CARE	CARAES NDERA				CARAES BUTARE	WARD E	Centre ITUZE	ICYIZERE CENTER	TOTAL
	WARDS		CHILDREN	Neurology					
MOIS	M	F	M+F	M+F	M+F	M+F	M+F	M+F	
<b>Jul-23</b>	2,815	3,161	1,988	1,275	3,622	0	3,766	3,069	<b>19,696</b>
<b>Aug-23</b>	4,806	3,238	2,223	1,766	3,627	0	4,033	2,462	<b>22,155</b>
<b>Sep-23</b>	4,690	3,089	1,835	1,835	3,510	0	3,067	2,583	<b>20,609</b>
<b>Oct-23</b>	4,033	3,239	1,168	1,411	3,658	0	3,400	2,649	<b>19,558</b>
<b>Nov-23</b>	3,438	3,151	2,195	1,611	3,658	0	2,917	2,790	<b>19,760</b>
<b>Dec-23</b>	3,254	2,803	3,041	1,983	3,540	0	3,850	2,869	<b>21,340</b>
<b>Jan-24</b>	3,260	3,255	2,600	1,717	3,627	0	3,117	2,248	<b>19,824</b>
<b>Feb-24</b>	3,698	3,433	2,782	2,639	3,393	0	2,375	2,731	<b>21,051</b>
<b>Mar-24</b>	3,938	3,375	2,968	2,922	3,627	0	2,824	2,824	<b>22,478</b>
<b>Apr-24</b>	4,208	3,060	2,118	2,239	3,510	0	2,570	2,759	<b>20,464</b>
<b>May-24</b>	4,472	2,907	4,847	1,428	3,627	0	3230	2,928	<b>23,439</b>
<b>Jun-24</b>	4,298	3,251	2,571	1,167	3,510	0	3,700	2,903	<b>21,400</b>
<b>TOTAL</b>	<b>46,910</b>	<b>37,962</b>	<b>30,336</b>	<b>21,993</b>	<b>42,909</b>	<b>0</b>	<b>38,849</b>	<b>32,815</b>	<b>251,774</b>

Table 5: Bed occupancy

### 2.1.2.6. Length of stay

Length of stay (LoS) is the duration of a single episode of hospitalization. Inpatient days are calculated by subtracting day of admission from day of discharge. In the FY2023-2024, the average length of stay for admitted patients was 44 days by applying the formula Bed occupancy over number of admissions. Thus  $251774/5691 = 44$  Days

The LoS were associated to clinical and Sociodemographic factors such as: Age, gender, address, occupation/unemployment, diagnosis, comorbidity and readmissions due to Psychiatric relapses.

### 2.1.2.7. Abandoned of care /Non-official discharge

The abandoned of care (Patient escape) is situation where a patient leaves the hospital without a medical authorization nor informing staff from the ward. This case of abandoned care is a serious issue and requires informing the family and the community to help identifying where the escape is located. From the table below the incidence of Escaping can be calculated as number of escape x 100 divide by all number admitted. So,  $ESCAPE = 222 \times 100 / 5691 = 4\%$ . The rate of Patient escape in the FY 2023-2024 was 4% and this will require deep investigation to see factors associated with this issue.

PLACE SOIN	CARAES NDERA					CARAES BUTA	ICYIZERE CENTER	TOTAL
	WARDS		CHILDREN	HSJ	Neurology			
MOIS	M	F	M+F	M+F	M+F	M+F	M+F	
<b>Jul-23</b>	13	0	0	0	0	4	0	<b>17</b>
<b>Aug-23</b>	10	2	0	0	0	2	0	<b>14</b>
<b>Sep-23</b>	19	2	0	0	0	1	0	<b>22</b>
<b>Oct-23</b>	17	1	0	0	0	1	0	<b>19</b>
<b>Nov-23</b>	17	2	0	0	0	1	0	<b>20</b>
<b>Dec-23</b>	20	2	0	0	0	1	0	<b>23</b>
<b>Jan-24</b>	22	0	0	0	0	1	0	<b>23</b>
<b>Feb-24</b>	12	3	0	0	0	0	0	<b>15</b>
<b>Mar-24</b>	14	4	0	0	0	0	0	<b>18</b>
<b>Apr-24</b>	9	1	1	0	0	3	1	<b>15</b>
<b>May-24</b>	15	0	1	0	0	2	2	<b>20</b>
<b>Jun-24</b>	12	1	0	1	0	2	0	<b>16</b>
<b>TOTAL</b>	<b>180</b>	<b>18</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>18</b>	<b>3</b>	<b>222</b>

Table 6: Abandoned care

### 2.1.2.9. Transfer

The table below shows that Transfer can be either referred by other health facilities such as District hospitals, clinic, polyclinics or another referral hospital.

For non-referral cases, patient can come accompanied with families, friends, community volunteer, police or all other types without any other consignee of the health facility.

In the FY 2023-2024 the hospital has admitted 1259 cases (40%) from other health facility and 1877 non-referred case which account 60% of all admitted patients.

<b>AREA OF CARE</b>			
<b>MONTH</b>	<b>CASE REFERRED BY DH &amp;TH</b>	<b>CASE NON REFERRED</b>	<b>TOTAL</b>
<b>Jul-23</b>	107	202	<b>309</b>
<b>Aug-23</b>	100	218	<b>318</b>
<b>Sep-23</b>	134	201	<b>335</b>
<b>Oct-23</b>	148	198	<b>346</b>
<b>Nov-23</b>	151	214	<b>365</b>
<b>Dec-23</b>	121	198	<b>319</b>
<b>Jan-24</b>	138	260	<b>398</b>
<b>Feb-24</b>	67	77	<b>144</b>
<b>Mar-24</b>	75	69	<b>144</b>
<b>Apr-24</b>	77	75	<b>152</b>
<b>May-24</b>	72	90	<b>162</b>
<b>Jun-24</b>	69	75	<b>144</b>
<b>Total</b>	<b>1,259</b>	<b>1,877</b>	<b>3,136</b>
<b>Percentage</b>	<b>40%</b>	<b>60%</b>	<b>100%</b>

**Table: Cases referred and non-referred from other hospital**

### 2.1.2.10. Transfer and counter transfer to other hospitals

The table below shows the patients were discharged with:

<b>MONTH</b>	<b>TRANSFER AND COUNTER TRANSFER</b>	<b>PERCENTAGES</b>
Jul-23	19	3%
Aug-23	25	4%
Sep-23	16	3%
Oct-23	22	4%
Nov-23	71	12%
Dec-23	35	6%
Jan-24	40	7%
Feb-24	79	14%
Mar-24	79	14%
Apr-24	69	12%
May-24	81	14%
Jun-24	43	7%
<b>TOTAL</b>	<b>579</b>	<b>100%</b>

Table 7: Transfer and counter transfer to other hospitals

### 2.1.2.11. Death

<b>PLACE OF CARE</b>	<b>CARAES NDERA</b>					<b>CARAES BUTARE</b>	<b>ICYIZERE CENTER</b>	<b>TOTAL</b>
	<b>WARDS</b>		<b>CHILDREN</b>	<b>HSJ</b>	<b>Neurology</b>			
<b>MOIS</b>	<b>M</b>	<b>F</b>	<b>M+F</b>	<b>M+F</b>	<b>M+F</b>	<b>M+F</b>	<b>M+F</b>	
<b>Jul-23</b>	0	0	0	0	0	0	0	0
<b>Aug-23</b>	0	0	0	0	0	0	0	0
<b>Sep-23</b>	0	1	0	0	1	0	0	2
<b>Oct-23</b>	0	0	0	0	0	0	0	0
<b>Nov-23</b>	2	0	0	0	0	0	0	2
<b>Dec-23</b>	0	0	0	0	0	0	0	0
<b>Jan-24</b>	0	0	0	0	0	0	0	0
<b>Feb-24</b>	0	0	0	0	0	0	0	0
<b>Mar-24</b>	2	0	0	0	1	0	0	3

<b>Apr-24</b>	0	0	0	0	0	0	0	0
<b>May-24</b>	0	0	0	0	1	0	0	1
<b>Jun-24</b>	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>8</b>

Table 8: Death

### 2.1.2.12. Comparison of activities for 5 years

The Table below shows that in the FY2023-2024 the consultations, hospitalization cases were increased than other years.

This caused impact on the bed occupancy which became high and the number of discharged was increased.

<b>ACTIVITIES</b>	<b>2019-2020</b>	<b>2020-2021</b>	<b>2021-2022</b>	<b>2022-2023</b>	<b>2023-2024</b>
Consultations	73,675	74,363	96357	95,773	<b>101,811</b>
Hospitalization	5,364	4,736	5271	5,646	<b>5,691</b>
Bed occupancy	206,599	269,045	189,896	233,409	<b>251,774</b>

Table 9: Comparison of activities for 5 years

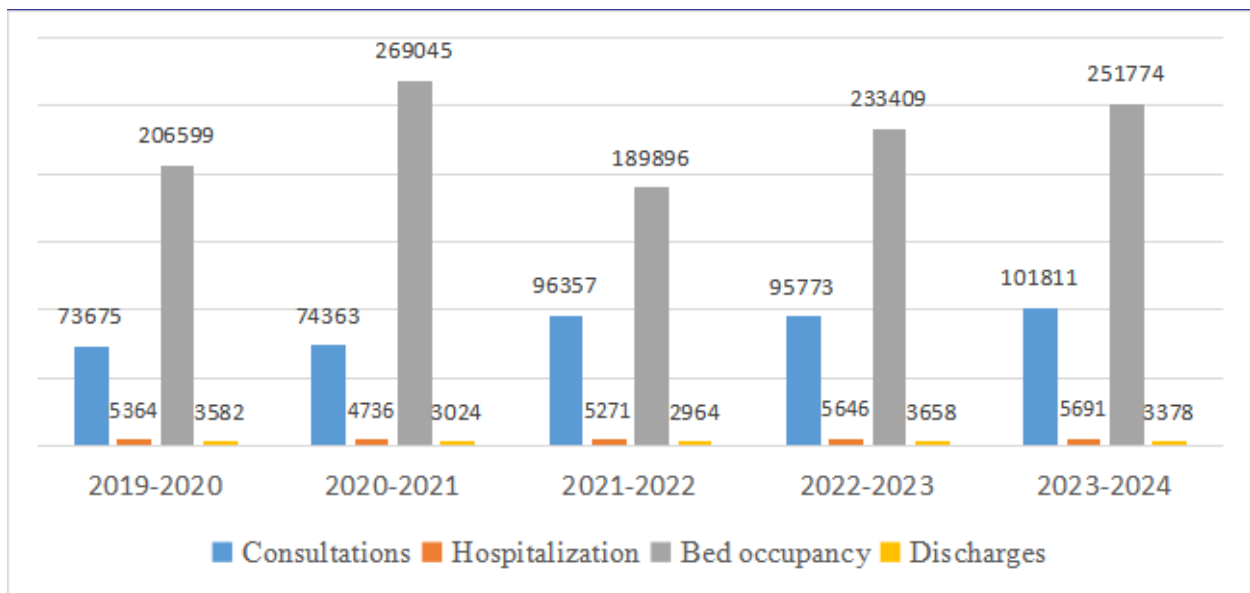


Figure 12: comparison of activities for 5 years

## 2.1.3. Diagnoses

### 2.1.3.1. Diagnoses for psychiatric cases in OPD

N0	IC10	Pathology/AGE	0-18	20-39	40+	TOTAL	%
1	F23	Acute and transient psychotic disorders	1017	6145	4230	11392	20%
2	F20	Schizophrenia	93	3284	8738	12115	21%
3	F32	Depression	102	2548	1976	4626	8%
4	X84	Suicide attempt	0	0	8	8	0%
5	F30	Mania	19	194	581	794	2%
6	F31	Bipolar disorders	255	3065	1962	5282	9%
7	F30- F39	Other mood disorders	33	539	707	1279	2%
8	F40- F48	Anxiety disorders	175	733	1634	2542	4%
9	F45	Somatoform disorders	268	599	535	1402	2%
10	F43.1	Post-Traumatic Stress Disease (PTSD)	15	23	382	420	1%
11	F00- F09	Organic, including symptomatic, mental disorders	9	17	429	455	1%
12	F60- F69	Disorders of adult personality and behavior	1	17	4	22	0%
13	F70- F79	Mental retardation	730	131	7	868	2%
14	F80- F89	Disorders of psychological development	297	34	9	340	1%
15	F90- F98	Behavioral and emotional disorders with onset usually occurring in childhood and adolescence	391	240	3073	3704	7%
16	F20- F28	Other psychotic disorders (Other Psychological problems)	33	539	707	1279	2%
17		NCDS	30	625	1247	1902	3%
18		Other commorbidities	114	1245	541	1900	3%
19		case with no Diagnosis	20	550	223	793	2%
20		Others	110	1214	512	1836	3%
<b>TOTAL</b>			<b>4513</b>	<b>23724</b>	<b>28497</b>	<b>56744</b>	<b>100%</b>

Table 10: Diagnoses for psychiatric cases in OPD

### 2.1.3.2. Toxicomania cases in OPD

The table below shows that common substance abuse used is Cannabis, Alcohol, Tobacco and Opioids.

N°	ICD10	Pathology / AGE	0-18	20-39	40+	TOTAL	%
1	F10	Mental and behavioral disorders due to use of alcohol	69	774	120	963	29%
2	F11	Mental and behavioral disorders due to use of opioids	9	79	17	105	3%
3	F12	Mental and behavioral disorders due to use of cannabinoids	128	959	314	1401	43%
4	F14	Mental and behavioral disorders due to use of cocaine	0	0	0	0	0%
5	F17	Mental and behavioral disorders due to use of tobacco	40	476	306	822	24%
6	F63	Pathological gambling	0	0	0	0	0%
7	F10- F19	Mental and behavioral disorders due other psychoactive substances	2	6	2	10	1%
<b>TOTAL</b>			<b>248</b>	<b>2,294</b>	<b>759</b>	<b>3,301</b>	<b>100%</b>

Table 11: Toxicomania cases in outpatient department

### 2.1.3.3. Diagnoses for neurological cases in OPD

N°	IC10	Pathology/AGE	0-18	20-39	40+	TOTAL	%
1	G 1 0- G 1 4	Systemic atrophies primarily affecting the central nervous system	18	23	59	100	0%
2	G30- G32	Other degenerative diseases of the nervous system	0	5	61	66	0%
3	G20	Parkinson disease	1	10	1,945	1,956	5%
4	G20-	Other Extrapyrimalal and	65	73	182	320	1%

	G26	movement disorders						
<b>5</b>	G35-G37	Demyelinating diseases of the central nervous system	0	7	7	14	0%	
<b>6</b>	G40	Epilepsy	17,120	12,500	5,450	35,070	84%	
<b>7</b>	G41	Status epilepticus	50	54	14	118	0%	
<b>8</b>	G43	Migraine	28	98	142	268	1%	
<b>9</b>	G44	Other headache syndromes	5	18	27	50	0%	
<b>10</b>	G45	Transient cerebral ischemic attacks and related syndromes	0	0	4	4	0%	
<b>11</b>	G46	Vascular syndromes of brain in cerebrovascular diseases	1	0	18	19	0%	
<b>12</b>	G47	Sleep disorders	7	13	14	34	0%	
<b>13</b>	G50-G59	Nerve, nerve root and plexus disorders	44	244	625	913	3%	
<b>14</b>	G60-G64	Polyneuropathies and other disorders of the peripheral nervous system	6	35	205	246	1%	
<b>15</b>	G70-G73	Diseases of myoneural junction and muscle	24	38	11	73	0%	
<b>16</b>	G80-G83	Cerebral palsy and other paralytic syndromes	50	41	71	162	0%	
<b>17</b>	F40-F48	Other Neurotic disorders (Neurological problems)	20	175	103	11,681	1%	
<b>18</b>	G90-G99	Other disorders of the nervous system	407	198	210	815	2%	
<b>19</b>		NCDS	2	498	294	794	2%	
<b>20</b>		Other commorbidities	38	52	12	102	0%	
<b>21</b>		case with no Diagnosis	90	64	54	208	0%	
<b>22</b>		Others	42	75	19	136	0%	

<b>TOTAL</b>	<b>18,018</b>	<b>14,221</b>	<b>9,527</b>	<b>41,766</b>	<b>100%</b>
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Table 12: Diagnoses for neurological cases in OPD

### Top pathologies frequent in OPD-Neurology

1. Epilepsy with 84%
2. Parkinson disease with 5%
3. Nerve, nerve root and plexus disorders with 3%

### Overall top 5 pathologies

#### Overall top five pathologies (Toxicomania, Psychiatry and Neurology combined)

No	PATHOLOGY	Field of Treatment	Total	%
1	Epilepsy	Neurology	35,070	51.2
2	Schizophrenia	Psychiatry	12,115	17.69
3	Acute and transient psychotic disorders	Psychiatry	11,392	16.6
4	Bipolar disorder	Psychiatry	5,282	7.7
5	Depression	Psychiatry	4,626	6.75

Table 13: Overall top 5 pathologies

#### 2.1.3.4. Psychiatric cases in hospitalisation

N0	IC10	Pathology/AGE	0-18 Y	20-39Y	40+++Y	TOTAL	%
1	F23	Acute and transient psychotic disorders	79	757	271	1,107	26%
2	F20	Schizophrenia	37	899	595	1,531	34%
3	F32	Depression	22	312	145	479	11%
4	X84	Suicide attempt	0	0	0	0	0%
5	F30	Mania	3	9	9	21	0%
6	F31	Bipolar disorders	20	348	124	492	11%
7	F30- F39	Other mood disorders	54	395	142	591	13%

8	F40- F48	Anxiety disorders	25	4	5	34	1%
9	F45	Somatoform disorders	52	7	3	62	1%
10	F43.1	Post-Traumatic Stress Disease (PTSD)	1	3	7	11	0%
11	F00-F09	Organic, including symptomatic, mental disorders	2	6	10	18	0%
12	F60- F69	Disorders of adult personality and behavior	0	2	0	2	0%
13	F70- F79	Mental retardation	11	10	5	26	1%
14	F80- F89	Disorders of psychological development	4	6	1	11	0%
15	F90-F98	Behavioral and emotional disorders with onset usually occurring in childhood and adolescence	47	11	1	59	1%
16	F20- F28	Other psychotic disorders (Other Psychological problems)	1	25	16	42	1%
TOTAL			358	2,794	1,334	4,486	100%

Table 14: Psychiatric cases in hospitalisation

### 2.1.3.5. Toxicomania cases in hospitalisation

Nº	ICD10	Pathology/AGE	0-18 Y	20-39Y	40+++Y	TOTAL	%
1	F10	Mental and behavioral disorders due to use of alcohol	5	119	80	204	24%
2	F11	Mental and behavioral disorders due to use of opioids	1	12	0	13	2%
3	F12	Mental and behavioral disorders due to use of cannabinoids	26	146	21	193	23%
4	F14	Mental and behavioral disorders due to use of cocaine	0	0	0	0	0%
5	F17	Mental and behavioral disorders due to use of tobacco	4	1	0	5	0%
6	F63	Pathological gambling	0	0	0	0	0%
7	F10- F19	Mental and behavioral disorders due other psychoactive substances	33	289	111	433	51%
TOTAL			<b>69</b>	<b>567</b>	<b>212</b>	<b>848</b>	<b>100%</b>

Table 15: Toxicomania cases in hospitalisation

### 2.1.3.5. Neurological cases in hospitalization

<b>N0</b>	<b>IC10</b>	<b>Pathology/AGE</b>	<b>0-18 Y</b>	<b>20-39Y</b>	<b>40++++Y</b>	<b>TOTAL</b>	<b>%</b>
<b>1</b>	G10- G14	Systemic atrophies primarily affecting the central nervous system	2	2	0	4	<b>1%</b>
<b>2</b>	G30- G32	Other degenerative diseases of the nervous system	0	0	1	1	<b>0%</b>
<b>3</b>	G20	Parkinson disease	0	0	5	5	<b>1%</b>
<b>4</b>	G20- G26	Other Extrapiramidal and movement disorders	0	0	2	2	<b>1%</b>
<b>5</b>	G35- G37	Demyelinating diseases of the central nervous system	2	1	1	4	<b>1%</b>
<b>6</b>	G40	Epilepsy	42	87	27	156	<b>44%</b>
<b>7</b>	G41	Status epilepticus	1	2	1	4	<b>1%</b>
<b>8</b>	G43	Migraine	0	0	2	2	<b>1%</b>
<b>9</b>	G44	Other headache syndromes	0	0	0	0	<b>0%</b>
<b>10</b>	G45	Transient cerebral ischemic attacks and related syndromes	0	0	2	2	<b>1%</b>
<b>11</b>	G46	Vascular syndromes of brain in cerebrovascular diseases	0	0	0	0	<b>0%</b>
<b>12</b>	G47	Sleep disorders	0	1	0	1	<b>0%</b>
<b>13</b>	G50- G59	Nerve, nerve root and plexus disorders	0	0	0	0	<b>0%</b>
<b>14</b>	G60- G64	Polyneuropathies and other disorders of the peripheral nervous system	2	2	6	10	<b>3%</b>
<b>15</b>	G70- G73	Diseases of myoneural junction and muscle	1	1	0	2	<b>1%</b>
<b>16</b>	G80- G83	Cerebral palsy and other paralytic syndromes	0	1	4	5	<b>1%</b>

<b>17</b>	G40- G48	Other Neurotic disorders (Neurological problems)	58	65	32	155	<b>43%</b>
<b>18</b>	G90- G99	Other disorders of the nervous system	1	0	3	4	<b>1%</b>
<b>TOTAL</b>			<b>109</b>	<b>162</b>	<b>86</b>	357	<b>100%</b>

**Table 16: Neurological cases in hospitalization**

## **2.2. NURSING DEPARTMENT**

The Mental Health and Nursing unit is comprised by: Emergency service, OPD service, men's crisis ward (Ward A), men's recovery ward (Ward B), women's crisis ward (Ward D), women's recovery ward (Ward C), Private hospitalization service (Ituze Center), Neurology service, Pedopsychiatry Service (Kundwa center), Transitional Home Care (Ward E), Icyizere Psychotherapeutic Center and Caraes Butare.

In the fiscal year 2023-2024, the Mental Health and Nursing unit accomplished various activities, in terms of both therapeutic and external cooperation, some of the accomplishments demonstrate the exceptional nursing care provision and commitment to provide accessible specialized health care, facilitating training, research and mentorship in mental health and neurology with reference to the National health policy and guidelines.

Nurses have participated in different activities that enhance cooperation with other NGOs and associations, such as organizing and participating in the International Association of Psychiatric Nurses (IAPN) conference in June 2024, and different meeting where the hospital was represented.

Nursing department in particular plays a big role in development of the hospital and quality mental health and nursing care provision through clinical case review, coaching of nurses, patient group, interviews, psychoeducation, relapse prevention, Alcohol Anonymous and nursing care for the promotion of quality psychiatric and neurology care delivery.

### **2.2.1. Clinical case review (Colloquium)**

Clinical case review is a multidisciplinary team in which doctors, psychologists, physiotherapist, social workers, nurses, and occupational therapists meet for a common understanding and review of the management of the patients as a whole, using multi-disciplinary approach to provide health care services. All hospital inpatient services perform this activity in the chosen days due to the availability of the multidisciplinary team where by the discussion is done using SBAR approach to maximize the number of patients to be discussed.

### **2.2.2. Medical round for hospitalized patients**

Medical rounds are a way of sharing information about the patient's medical condition with the members of the healthcare team to enhance the patient's quality health care delivery. During

which the patient's medical problems are identified and treated, and decided for discharge or transfer.

### **2.2.3. Coaching of nurse**

Coaching is a process aimed at improving the behaviour and performance of the health care providers to provide quality specialised health service. Ndera Neuropsychiatric Teaching Hospital initiated the coaching system for nurses from 2014; every ward in the hospital and its branches has nominated assistant coaches who work collaboratively with coaching coordinator in a supportive manner for nurses and students in the internships.

### **2.2.4. Patient group**

Patient group is an organized gathering of patients with psychiatric and other conditions with multidisciplinary team. It helps on evaluation of mental state, evolution of illness and health education through a chosen topic, timeline, rules, and moderator. Every participant has right to give his or her opinion related to the topic. It is scheduled from Monday to Friday from 9h00 to 9h45, except Thursday due to particular activities of transfers of patients in some services.

### **2.2.5. Interviews**

The psychiatric interview refers to the set of tools that a mental health provider uses in order to know the information of the patient's illness (background, chief complaint, mental status, disease and personal history) and providing psycho education.

This is done during admission, hospitalization, at family member visit and before discharge and involves patients, health care providers, family members or both. Every patient/family member in psychiatric settings underwent interview (data collection, psycho-education, family/group therapies) during the hospitalization period.

### **2.2.6. Nursing Care**

Frontline nurses continue to play role at any level, all nursing interventions involves meeting and safe guarding the patients' needs, such as vital signs monitoring, wound dressing, drug administration, patient hygiene, mental health care and awareness campaign, catheterization, etc.

### **2.2.7. Psychoeducation**

Over the last year, 134 psychoeducation sessions were conducted for patients suffering from substance use disorders. These sessions aimed to educate patients about their conditions, promote understanding, and support recovery at Icyizere Psychotherapeutic Center.

### 2.2.8. Relapse Prevention

A total of 96 relapse prevention group therapy sessions were led by clinicians at Icyizere Psychotherapeutic Center. These sessions focused on helping patients develop strategies to avoid relapse and maintain long-term recovery.

### 2.2.9. AA Group Support

Alcoholics Anonymous (AA) meetings were led in Icyizere Psychotherapeutic Center for encouraging patients struggling with alcohol addiction to maintain sobriety and reduce the time between relapses. Over the last year, 20 AA group meetings were held at the center.

The table below shows the aforementioned summarized activities frequency in the hospital:

Service	Medical rounds	Patient group	AA group support	Psychoeducation	Relapse Prevention	Colloquium
WA	267	135	0	0	0	36
WB	113	217	0	0	0	57
WC	146	218	0	0	0	42
Butare	211	232	0	0	0	211
Icyizere			20	134	96	103
WD	210	173	0	0	0	39
CK	116	90	0	0	0	53
Ituze	205	123	0	0		49
Neurology	117	0	0	0	0	48
Total	1,385	1,188	20	134	96	638

Table 17: Summarized nursing activities

### 2.2.10. Transitional Home Care / Ward E

The current service Ward E was officially launched in October 2023, by combining patients from the former Home Saint Jules with other patients chosen from various services, such as wards A, B, C, and D, as well as CARAES Butare, and the service was renamed TRANSITIONAL HOME CARE. With the goal of rehabilitating patients with severe mental illnesses in order to improve self-care, increase socioeconomic empowerment and social reintegration, and achieve autonomy and general well-being for patients with chronic mental illnesses. This will be accomplished by a joint effort among a multidisciplinary team, patient families, local authorities, and immigration for unknown and foreign patients.

The service is subdivided into 2 parts, one for male patients with 31 beds and another for female patients with 29 beds, currently the service is occupied by 39 patients in total, 25 of them are males and 14 females, admitted by a multidisciplinary decision from different services of the hospital including its branches. As a rehabilitation service, most of the patients admitted are the homeless, mostly brought by the national policy and local authorities, particularly foreigners, which explain their long stay as the discharge decision depends on the process of social reintegration with collaboration of local authorities, to identify the families and working with immigration for reintegration of foreign patients.

In light of this collaboration, during this fiscal year we have discharged 9 patients, including 3 Rwandans whose families we have found, 2 Burundians, 1 Tanzanians, and 3 Ugandan nationals. However, there are other patients who could not manage to stay in the service, who were counter-referred back to their respective service and there are others 4 patients who escaped from the hospital due to their mental status, and the social worker has informed their families. And during the same year 1 female patient died from a biological disease.

#### **2.2.10.1. The process of psychiatric rehabilitation in Ward E**

Psychiatric rehabilitation has a mission of helping an individual to achieve the highest level of functioning, independence and improved quality of life for persons living with chronic mental health conditions. This is achieved through different activities that minimize the disabling effect of a chronic mental illness, restore lost function and memory, enhance empowerment, promote autonomy and lead to a successful community integration.

Psychiatric rehabilitation process is grouped into three main approaches including treatment, activities and family intervention as detailed below.

##### **a. Treatment**

Patients admitted in Ward E, have different psychiatric diagnoses where some of them may have others comorbidities requiring closer monitoring. The multidisciplinary team ensures that hospitalized patients adhere to prescribe medications and assist them for self-care, providing psycho-education about mental illness, medication management, social skills and facility patients to participate in other rehabilitation activities.

##### **b. Activities**

Activities are tailored to respond to individual needs, and start from personal hygiene until the person is engaged in productive activities. The service has different activities including the activities of daily living (hygiene), gardening, farming (animal husbandry), Kitchen activities, Arts and craft and leisure activities.

Based on the fact that most of Rwandans live depend on agriculture, without doubt, agriculture and farming are meaningful activities for most of the patients admitted in Ward E. Patients are involved in gardening, and farming activities. For gardening, patients are involved in all steps from preparing the plantation area to harvesting. Mostly, they grow maize, tomatoes, carrots, green beans, pepper and other vegetables with assistance of staff member who help them get all required skills regarding gardening. For farming, the patients are involved in feeding, and taking care of cattle and poultry, with assistance of a veterinarian who works with them on a daily basis. The products from gardening and farming activities are consumed by patients in order to improve a balanced diet, with particular attention to those who are physically weak. The rest of the produce is sold in order to support homeless patients who stay for a long time in Ward E to meet their basic needs.

Patients are also involved in kitchen activities, where they learn to cook multiple kinds of recipes and all related tasks with assistance of staff with culinary art certificate who works closely with them on a daily basis. In addition, patients are involved in art and handcraft activities such as basket making and tailoring, and access to leisure activities such as table games, sports, and walk that help the patients to interact with outside environment and fight against non-communicable diseases.

### **c. Family intervention**

At this stage Psychiatric Rehabilitation, it is an important option for the families to help patient get back to life. Therefore, family involvement plays an important role in the rehabilitation and reintegration of a person with disability back into the family and community, by providing a sense of stability, safety, and encouragement, which can help individuals facing mental health issues in their recovery journey.

In light of this, Ward E organizes regular family intervention groups for identified families in order to give a space for shared experiences, learn coping strategies, and strengthen their

understanding of mental health challenges and allow interaction with their loved ones. The first family intervention group took place on 8<sup>th</sup> June 2024 involving 11 persons from 7 family members out of 14 identified families.

Current Hospitalization status	Male	Female	Total
Foreigners (Ugandan, Tanzania, Burundi, Malawi...)	1	8	9
Patients with identified families	8	4	12
Patients without known families	16	2	18
Total number of patients	25	14	39

**Table 18: Current hospitalization status in Ward E**

### 2.2.11. HIV-Mental Health Service

In Rwanda, a pilot program was initiated at Ndera Neuropsychiatric Teaching Hospital where, integration of mental health and HIV service has been highlighted as a strategy to improve and ensure prevention, treatment, care and support of people with both HIV and mental problems. The HIV-MH service is concerned with the patients with co-morbidities HIV and mental disorders that are followed at the hospital on a daily basis. In this service, there are a social worker and 2 mental health nurses, psychologist and medical doctor who are working with the patient on a regular basis, providing holistic care to our clients suffering from co-morbidity of HIV and Psychiatric conditions, according to protocol and National guidelines 2018, 2020 and 2022.

#### 2.2.11.1. Main activities

N <sup>o</sup>	Activity	Total
1	Client counseled and tested for HIV through HTC	938
2	Number of home visits conducted	34

**Table 19: Activities in HIV-MH service**

### 2.2.11.2. HIV cases

N°	Cases	Total
1	Client who tested HIV positive ( new cases in year)	14
2	HIV positive client linked to care and treatment	14
3	Total number of clients on ART	161
4	Patients Transferred in	2
5	Patients transferred out	8
6	Deceased patients	2
7	Clients at risk of HIV infection as a result of occupational exposure who received PEP	10
8	Number of clients initiated on TB preventative therapy	4

Table 20: Number of HIV cases

### 2.2.11.3. Total number of patients on ART regimens line

N°	Highlight	Total
1	Patients on 1 <sup>st</sup> line regimen	154 patients
2	Patients on 2 <sup>nd</sup> line regimen	7 patients
3	Patients on 3 <sup>rd</sup> line regimen	0

Table 21: Total number of patients on ART regimens line

### 2.2.11.4. Sexually Transmitted Infection (STI)

N°	Highlight	Total
1	Clients who received screening and counseling on STI	161×12=1,932 frequencies
2	Clients confirmed positive for STIs	0
3	Clients confirmed positive for STIs who are HIV positive	3
4	STIs cases treated	3

Table 22: Sexually Transmitted Infection (STI)

### 2.2.11.5. Case sharing on HIV/MH Integration

In case sharing is where the HCPs from HIV and Mental health service at 33 hospitals, come and sit together by sharing the way for managing and supporting patient with the co morbidities such HIV/AIDS and Mental issues. From 1st July 2023 up end June 2024.

From July 2023 up to June 2024, participants from 33 hospitals supported by CDC-COAG in 1 sessions at **Musanze** locations.

Figure 13: Some pictures for case sharing sessions in Musanze



### 2.2.11.6. Mentorship on HIV/MH integration program

The mentorship activities are done by Staff from Ndera Neuropsychiatric Teaching Hospital, the team is made of 1 Doctor, 1 Mental Health Nurse from HIV/MH service and 1 Mental Health Nurse from any other service in Hospital, where they provide technical support and clinical intervention on patients with comorbidities (HIV/MH) management to visited hospitals supported by CDC-COAG. The mentorship has special objectives to strengthen HIV/MH integration program at 33 hospitals in the way of promoting health of the population.

From 1<sup>st</sup> July 2023 up to 30<sup>th</sup> June 2024, the mentorship were carried out in 33 district hospitals, and it was done in 2 sessions.



Figure 14: Pictures of Ndera Hospital team in mentorship activities

### 2.2.11.7. Intensive mentorship and training on HIV/MH integrated care

Intensive mentorship was structured to strengthen HIV/MH integrated service at 5 district hospitals with high burden of stable and new mental ill patients and creation of stable mental ill association in its catchment area. It is done in 3 days for hospital and 2 days at its health centers quarterly, 4 sessions have done at 5 district hospitals and training of HCPs at HCs on HIV/MH

	<b>Activity</b>	<b>Total frequency</b>
1	Intensive mentorship on HIV /MH integrated care in 4 sessions	<b>20 visits</b>
2	Created new stable mental ill association in HCs , its catchments area	<b>10 new patients groups were created at health centers supported by CDC</b>
3	HCPs trained on intensive mentorship and creation of associations from Health centers and DHs	<b>132 health care providers from health centers at Hospitals supported by CDC.</b>

Table 23: Intensive mentorship and training on HIV/MH integrated care

### 2.2.11.8. Challenges to activities of HIV/MH service

- Apart from mentorship, the HCPs providers are not yet aware of the HIV/MH integration program due to some of them are new and turnover of staff.
- Some of the patients do not adhere to ARVs appointment and psychosocial group due to relapse of mental disorders.
- HCPs (some Doctors and Nurses) in different Wards are not aware of HIV/MH integrated program due to the fact that they are new staff.
- There are increasing of patients with these comorbidities in different wards and some of them have poor adherence on ARVs /psychotropic medication.
- As for the intensive mentorship on HIV/MH integrated care, 2 days are limited and no HCPs trained on HIV/MH integrated care at HCs in catchment area at district level.

### 2.2.11.9. Recommendations and suggestions

- Empowering in mentorship and training to health care providers who are working in district hospitals and health center in order to improve, share their skills and knowledge

for ensuring the prevention, care and treatments to all people living with HIV and mental problems.

- Improving PIT to all branches in order to improve number of patients screened.
- Training is needed to the Drs and Nurses who are working in different ward, on care and management of patients with co-morbidities.
- Training and case sharing should be extended to the HCPs who are working in both services and working in the 33 district hospitals, by improving their knowledge on care and management of patient with comorbidities HIV/MH.

### **2.3. Allied Health Sciences Unit**

Allied Health Sciences is a broad field encompassing various professions dedicated to supporting and improving healthcare delivery. Professionals in this area often work alongside physicians, nurses, and other healthcare providers to offer specialized services and support patient care.

Some key disciplines within Allied Health Sciences at Ndera Neuropsychiatric Teaching Hospital are; General Laboratory, Medical Imagery, Occupational Therapy, Clinical Psychology, Physiotherapy, Social service, Environmental Health, Nutrition service and Pharmacy. Each of these disciplines plays a crucial role in delivering comprehensive care and supporting the overall healthcare to our patients.

#### **2.3.1. General Laboratory**

Ndera Neuropsychiatric Teaching Hospital has a General Laboratory Service performing various laboratory tests contributing to the effectiveness of patient monitoring. This service has five (12) Laboratory Technicians, (7) at Ndera Laboratory, three (3) at CARAES Butare and two (2) at Icyizere Psychotherapeutic Centre), and provides health diagnostic in the following tests: Biochemistry, Hematology, Bacteriology, immunoserology, serology, parasitology, dosage of drugs and Toxicology.

In general, **145,502** tests were done; at NDERA 97,317 tests were performed, Psychotherapeutic Centre ICYIZERE **13,417** tests were performed, while 34,768 tests were done at CARAES

Butare. Generally, there is a decrease of 13,564 tests (8.5%) in tests statistics due to RSSB insurance unable to cover some of tests types compared to last year

Below are the details on the tests carried out throughout the year 1<sup>st</sup> July 2023 to 30<sup>th</sup> June 2024;

### 2.3.1.1. Ndera headquarters laboratory tests

N <sup>o</sup>	Services	Laboratory Tests	Positive	Negative	Total
1	PARASITOLOGY	Thick smear	20	595	615
		Stool analysis			276
2	BACTERIOLOGY AND MYCOBACTERIOLOGY(TB)	Urine Direct examination			276
		Urine Gram staining			171
		Vaginal swab Direct examination			40
		Vaginal swab Gram stain			33
		Uretral swab			5
		Uretral gram			2
		CSF& Body fluids			10
3	BIOCHEMISTRY&IONOGRAM	Glucose			4814
		Urea			5414
		Creatinine			5883
		Alanine aminotransferase (ALAT/SGPT)			5800
		Aspartate Aminotransferase (ASAT/SGOT)			5773
		Gamma-Glutamyltransferase (GGT)			3785
		Glycosuria			60
		Total Protein			1546
		Proteinuria(Urine Protein)			101

Alkaline Phosphatase (ALP)			2115
Total Bilirubin (Bil-T)			1561
Direct Bilirubin (Bil-D)			1755
Uric Acid			2178
Low Density Lipoprotein (LDL-Cholesterol)			1871
High Density Lipoprotein (HDL-Cholesterol)			2097
Cholesterol			2195
Triglycerides			1888
dehydrogenase Lactate (LDH)			1447
Creatine Kinase(CKL)			219
Creatine kinase-MB (CK-MB)			105
Albumin			1628
Glycated Hb			1022
Vitamine B12 Blood concentration			221
Folic Acid(B9 Vitamin)			178
Ferritin			105
IRON			133
Sodium (Na+)			4526
Potassium (K+)			4510
Lithium ( Li+ )			706
Magnesium ( Mg++ )			1159
Calcium			801

	SEROLOGY&IMMUNOLOGY	Chloride(Cl <sup>-</sup> )			4324
		C-Reactive proteine (CRP)			2822
		VDRL/RPR	7	318	325
		Pregnancy test	16	167	183
		HCV test(Hepatitis C test)	39	1677	1716
		AgHBs(Hepatitis B test)	50	2266	2316
		Arthri-Test/RF			271
		ASLO			143
		PSA			79
5	HEMATOLOGY	Erythrocyte Sedimentation rate			631
		Full Blood Count			6382
		ABO Rhesus/Cross Matching			131
6	DRUG MONITORING/TOXICOLOGY	PHNY2(Phenytoin)			105
		PHNO2(Phenobarbital)			145
		VALP2(Valproic Acid)			650
		CARB2(Carbamazepine)			196
		CANNABINOIDS			272
7		ENDOCRINOLOGY	T3(Triiodothyronin)		
	T4(Thyroxin)				2538
	TSH(Thyroid Stimulating Hormon)				1852
	PROLACTIN				392
	CORTISOL				479
	HCG BETA(Beta human chorionic gonadotrophin) Quantitative				228
	Other Tests				877
	<b>Total</b>			<b>97,317</b>	

Table 24: Ndera headquarters laboratory tests

### 2.3.1.2. Icyizere Psychotherapeutic Centre Laboratory tests

N0	Services	Laboratory Tests	Positive	Negative	Total
1	PARASITOLOGY	Thick smear	4	27	31
		Stool analysis			20
2	BACTERIOLOGY AND MYCOBACTERIOLOGY(TB)	Urine Direct examination			35
		Vaginal swab examination/Gram			2
		Uretral swab/ gram			0
		CSF& Body fluids			0
3	BIOCHEMISTRY&IONOGRAM	Glucose			635
		Urea			600
		Creatinine			615
		Alanine aminotransferase (ALAT/SGPT)			611
		Aspartate Aminotransferase (ASAT/SGOT)			610
		Gamma-Glutamyltransferase (GGT)			562
		Glycosuria			27
		Total Protein			261
		Proteinuria/albiminuria			11
		Alkaline Phosphatase (ALP)			261
		Total Bilirubin (Bil-T)			313
		Direct Bilirubin (Bil-D)			280
		Uric Acid			349
		Low Density Lipoprotein( LDL-Cholesterol)			399
High Density Lipoprotein (			403		

SEROLOGY&IMMUNOLOGY

HDL-Cholesterol)			
Cholesterol			399
Triglycerides			384
dehydrogenase Lactate (LDH)			308
Creatine Kinase (CKL)			11
Creatine kinase-MB (CK- MB)			10
Albumin			252
Glycated Hb			81
Vitamine B12 Blood concentration			10
Folic Acid(B9 Vitamin)			6
Ferritin			9
IRON			9
Sodium (Na+)			496
Potassium (K+)			487
Lithium ( Li+ )			82
Magnesium ( Mg++ )			40
Calcium			15
Chloride(Cl <sup>-</sup> )			466
C-Reactive proteine (CRP)			280
VDRL/RPR	0	18	18
Pregnancy test	4	38	43
HCV test(Hepatitis C test)	4	219	224
AgHBs(Hepatitis B test)	6	419	425
Arthri-Test/RF			108
ASLO			104
PSA			0

5	HEMATOLOGY	Erythrocyte Sedimentation rate			943		
		Full Blood Count			6,178		
		ABO Rhesus/Cross Matching			161		
6	DRUG MONITORING/TOXICOLOGY	PHNY2(Phenytoin)			1		
		PHNO2(Phenobarbital)			2		
		VALP2(Valproic Acid)			6		
		CARB2(Carbamazepine)			2		
		CANNABINOIDS			365		
		OPIATES			371		
		AMPHETAMINES			303		
		BENZODIAZEPINES			109		
		COCAINE			300		
		Other Drug of abuse			471		
		7	ENDOCRINOLOGY	T3(Triiodothyronin)			196
				T4(Thyroxin)			196
				TSH(Thyroid Stimulating Hormon)			140
	<b>Total</b>				<b>13,417</b>		

Table 25: Icyizere Psychotherapeutic Centre Laboratory tests

### 2.3.1.3. CARAES Butare Laboratory tests

SERVICE	TESTS PERFORMED	POSITIVE	NEGATIVE	TOTAL
<b>Hematology</b>	Full Blood Count (FBC)	NA	NA	2,086
	Erythrocyte Sedimentation rate (ESR/VS)	NA	NA	766
<b>Parasitology</b>	Thick blood smear	0	75	75
	Stool examination	70	79	149
<b>Microbiology</b>	Direct urine wet amount	21	40	61
	Gram staining	17	31	48
	Vaginal swab wet amount	20	4	24
	vaginal swab gram staining	12	16	28
	Urethra swab wet amount	3	3	6
	urethra swab gram staining	4	0	4
	<b>BLOOD</b>			
<b>Biochemistry</b>				
Renal function	Urea			2,098
	Creatinine			2,105
	uric acid			781
ionogramm	Sodium			887
	Potassium			895
	Chloride			829
	Calcium			173
Liver function	Alanine aminotransferas/ALT			2,097
	aspartate aminotansferas/AST			2,094
	Gamma GT			1,917
	Alcaline phosphatase			651
	Albumine			708
	Total protein			637
	Bilirubin total			740

	Bilirubin direct			180
	LDH			414
Carbohydrates	Blood sugar			2,140
Lipid profile	LDL- Cholesterol			1,132
	HDL- Cholesterol			1,166
	Total Cholesterol			770
	Triglycerides			1,192
Toxicology	Lithium			67
	Phenobarbital			19
	Phenytoin			24
	Carbamazepine			65
	Valproic acid			66
	Ethanol			53
	<b>URINE</b>			
	Cannabinoids			146
	Benzodiazepines			133
	Opiates			127
<b>Serology</b>				
	CRP	53	1071	1,124
	Arthri test/RF	8	933	941
	ASLO	10	952	962
	RPR	7	1304	1,311
	HCV	20	1215	1,235
	AgHBs	12	1257	1,269
	Pregnancy test	8	213	221
	Helicobacter pyroli	27	125	152
<b>Total</b>				<b>34,768</b>

Table 26: CARAES Butare Laboratory tests

#### **2.3.1.4. Achievements**

- Laboratory extended tests package to each branch by providing new lab automated machines for improving diagnosis and follow up of patients
- The laboratory is participating in research by carrying out and following-up the tests of patients.
- The laboratory staff were increased in order to operate about 24/7, as tests demand increased

#### **2.3.1.5. Suggestions**

- ✓ To strengthen the 24/7 days working Laboratory, there is a need for increase of Lab staff at the main center as well as the branches.
- ✓ For strengthening the diagnosis in immunoserology testing, the equipment is needed at Caraes Butare Laboratory.

#### **2.3.1.6. Future projects**

- ✓ For the Laboratory of NNPTH continuity in different researches participation, there is a need to be registered and monitored in external accreditation bodies alongside the trainings
- ✓ Rehabilitation of Laboratory at the headquarters and Branches and their materials in use to attend request of accreditation bodies
- ✓ Advocate in insurance companies to cover all lab tests types necessary for their continuity care of the patients

### **2.3.2. Occupational Therapy**

Occupational therapy is one of the most beneficial packages in psychiatry, as it aims at addressing the consequences of a mental illness on individual functioning and restores normal function. When people experience a mental illness, they often lose those essential parts of themselves. Occupational therapists help patients find ways of regaining them so they can participate in and benefit from a return to normal, daily life. Occupational therapy service conducts the activities of daily living, productivity, games based therapeutic activities, and IADL (Instrumental activities of daily living) include peeling potatoes, cooking, dressing, cleaning and

toilet and tooth brushing. Cooking session take place either in the main kitchen or therapeutic kitchen and it is an enjoyable activity for most of the patients.

SPORT includes but not limited to walking, dancing, gymnastics, volleyball, basketball and football. Leisure-based activities which not only deal with the impact of a mental illness on individual functioning, but also to deal with side effects of medications. These activities are carried out in groups and individually, based on the client’s condition in order to achieve the optimum level of autonomy and independence.

Individual based activities are recorded in OpenClinic system, a web-based form that must be filled by the therapist showing the progress, and other relevant observation, while group-based activities are recorded in the register/book as mentioned below.

**2.3.2.1. Ndera Headquarter Occupational Therapy Activities**

Here below are the data on participation in different occupational activities for the year 2023-2024 for both crisis and recovery.

Month	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Tot
<b>N° in Crisis</b>	341	303	290	217	341	332	329	378	349	321	352	304	<b>3,857</b>
<b>N° in Recovery</b>	1,180	765	786	746	815	830	796	906	879	805	703	757	<b>9,968</b>

Table 27: Ndera Headquarter Occupational Therapy Activities

**2.3.2.2. Therapeutic activities with regular monitoring and evaluation (July 2023- June 2024)**

Month	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
<b>Participants</b>	17	9	10	16	9	12	8	14	6	5	3	4	93

Table 28: Therapeutic activities with regular monitoring and evaluation

The diagram above summarizes the number of patients followed in occupational therapy on a regular basis. The follow-up is either individual or individualized in the group, and the follow-up

is based on the diagnosis of each client and expected outcome. The number of individual follow up has a slight decrease due to shortage of staff and movement of staff from referral to teaching hospital, it has brought a huge positive impact, but it was challenging at the beginning because of the low number of staff. We appreciate that we are now under the Allied Health Unit and our service as occupational therapist professionals will contribute to better service delivery to the patients and students during clinical placements.

As one of notable achievements, during this year, in order to help the patients with chronic illnesses, the Occupational Therapy Service successfully trained a male patient residing in the Transitional Home Care (Ward E) on modern basketry, and now the patient can make some baskets himself with minimum assistance. In addition, he has been initiated for basic tailoring skills. The therapeutic kitchen has been fully exploited and the patients gained sense of life through meal preparation.

### 2.3.2.3. Participation in Occupational Therapy at Caraes Butare and Icyizere Center

CARAES Butare has got a separate and appropriate occupational therapy service with appropriate equipment, which are playing a big role in helping as many patients as possible with improved quality of service.

The table below shows number of patients referred in occupational therapy service with regular follow-up from July 2023 to June 2024 at CARAES Butare.

Month	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Tot
N <sup>o</sup>	12	18	21	15	23	18	20	23	10	16	18	13	207

- **Group activities conducted at CARAES Butare**

Month	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Tot
N <sup>o</sup> in Crisis	353	561	615	624	607	615	659	602	443	385	593	820	6,877

<b>N° in Recovery</b>	310	700	600	653	590	580	661	703	442	413	556	612	<b>6,820</b>
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Table 29: Group activities conducted at CARAES Butare

▪ **Patients who participated in occupational therapy at Icyizere Center**

The table below shows the number of patients who participated in Occupational therapy at ICYIZERE Center based on their respective hospitalization units (Mental health unit and Addiction unit)

<b>Month</b>	Jul	Aug	Sep	Oct	Nov	De c	Jan	Feb	Mar	Apr	May	Ju n	<b>Tot</b>
<b>N° in Mental health unit</b>	13	14	12	7	10	12	11	11	9	14	12	14	<b>129</b>
<b>N° in Addiction unit</b>	24	14	10	11	9	10	13	10	11	12	10	11	<b>145</b>

Table 30: Patients who participated in Occupational therapy at ICYIZERE Center

For the group activities, there is increase in number of patients participated in occupational therapy activities in NNPTH and in their branches.

**2.3.2.4. Suggestions and Recommendations**

Recently, the Hospital has invested a lot in improving the quality of the Occupational Therapy Service; by providing improved and equipped facilities and qualified occupational therapists in all its branches. However, with increase in number of demands and technology the service faces some challenges that should be addressed in the future.

1. There is a need of continuous professional development through trainings for occupational therapy staff in order to improve the quality of care.
2. As the hospital is becoming bigger, with increase in number of patients, we suggest that the number of staff be increased in all branches with a great emphasis on CARAES

Butare and Icyizere Center, which still only have one occupational therapist each. This will prevent disruption of activity in absence of one staff, especially during annual leave.

3. Icyizere Center is in need of adequate infrastructure for occupational therapy service because it is currently operating in a small room.
4. CARAES Butare is in need of volleyball and basketball play grounds
5. As a new profession, occupational therapy services payment is not yet approved; and advocacy is ongoing but in the meantime, we suggest that a small amount should be paid privately for those holding Community Based Health Insurance (Mutuelle de santé), as for those holding commercial insurances, we suggest that they should pay the bill.
6. There is a need of creation of small and equipped library in order to help students and other literate patients, including those of Ituze Center and Icyizere Center, among others.
7. There is a need of materials to perform therapeutic activities for both occupational therapy at NNPTH and its Branches.

### **2.3.3. Medical Imagery and Electrophysiology Laboratory Service**

Electromyography, ECG, Evoked Potential (EP) and X-Ray are imageries used by Ndera Neuropsychiatric Teaching Hospital to complete medical assumptions.

**Electroencephalography (EEG)** is a method of cerebral exploration that measures the electrical activity of the brain by electrodes placed on the scalp, often represented in the form of a tracing called an electroencephalogram.

**Electromyography (EMG)** measures muscle response or electrical activity in response to a nerve's stimulation of the muscle. It is a diagnostic procedure to assess the health of muscles and the nerve cells that control them (motor neurons). EMG results can reveal nerve dysfunction, muscle dysfunction or problems with nerve-to-muscle signal transmission.

**Electroneuromyography (ENMG)** is a method of measuring changes in a peripheral nerve by combining electromyography of a muscle with electrical stimulation of the nerve trunk carrying fibers to and from the muscle.

**X-ray** is a type of medical imaging (radiology) that creates pictures of your bones and soft tissues, such as organs. X-rays use safe amounts of radiation to make these pictures. The images help your provider to diagnose conditions and plan treatments.

**The following table shows the EEG exams that were done during the year 2023-2024**

<b>Pathologies / Month</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Tot</b>	<b>%</b>
Epilepsy and seizures disorders	266	347	329	388	396	284	421	380	405	430	398	406	4,451	64.5
Headaches	60	118	98	127	107	82	102	91	98	90	94	71	1138	16.5
Psychotic disorders	30	32	70	65	56	49	54	70	50	56	57	41	630	9.1
Behavior disorders	25	51	27	28	18	20	32	45	28	33	16	37	360	5.2
others	30	21	32	10	24	23	27	52	38	17	22	31	327	4.7
<b>Total</b>	<b>412</b>	<b>569</b>	<b>556</b>	<b>618</b>	<b>601</b>	<b>458</b>	<b>636</b>	<b>638</b>	<b>619</b>	<b>626</b>	<b>587</b>	<b>586</b>	<b>6,906</b>	<b>100</b>

Table 31: EEG exams that were done during the year 2023-2024

**Table below shows EMG and X-RAY exams that were done during the year 2023-2024**

<b>ENMG/EMG</b>	8	17	19	24	0	18	19	35	17	11	0	0	157	81.7
<b>X-RAY</b>	0	0	6	6	11	11	17	8	0	23	14	15	111	100

Table 32: EMG and X-RAY exams that were done during the year 2023-2024

- ✓ As the statistics show, the major causes of EEG requests are Epilepsy and seizure disorders;

- ✓ Etiological assessment of psychological disorders and behavioral disorders showed an important place, because often the organic and biological causes of these disorders were ignored;
- ✓ The requests come mainly from hospitals and other health institutions covering the entire region of our country;
- ✓ The average number of examinations performed is 563 patients per month for EEG;
- ✓ The request for an electroneuromyography (ENM / EMG) examination came second on the frequency list, because 157 (81.7%) of ENMG/EMG examinations were done during the year 2023-2024;
- ✓ The average number of examinations performed is 13 patients per month for ENM/EMG;
- ✓ All requested X-ray (111) examination was performed 100%
- ✓ The average number of examinations performed is 9 patients per month for X-ray.

### **2.3.4. Clinical Psychology**

The Clinical Psychology Service at Ndera Neuropsychiatric Teaching Hospital plays a key role in diagnosing and treating mental health disorders, and helping patients improve their mental health and well-being. Clinical psychologists use a variety of treatment approaches, which include psychotherapy, educate patients and their families about mental health illnesses, and teach coping skills, but most importantly, they participate in multidisciplinary team and help understand the psychological aspects of treatment. The team is made of 12 clinical psychologists working the hospital; 5 at Ndera, 3 at CARAES Butare and 4 at Icyizere Psychotherapeutic Center.

#### **2.3.4.1. Activities**

Psychotherapy services were delivered effectively based on universal policies and guidelines referring on DSM-5 and ICD-11, standardized psychometric tools, and relevant therapeutic approaches. The following are the key activities:

- Inpatient assessment and follow-up: Participated in session of a multidisciplinary team in various assigned wards; outreached to the families of the concerned patients;
- Outpatient assessment and follow-up (individual, couple, family therapy, and group therapy);
- Supervised and mentored students on training and internship

- Conducted group counseling for drug abusers;
- Participated in case presentations and supervision as well as policy and procedures presentation;
- Psycho education for both inpatient and outpatient clients
- Attended workshops and seminars
- Participated in Annual World Mental Health Day and Institutional mental health exhibition week.

### Number of patients who were consulted in the service

The consulted patients were either referred by the medical doctors, nurses or self-referred. For those who were admitted in the various wards were assigned a psychologist working in that ward. The most pathology received are:

- Depressive disorders
- Psychotic disorders
- Somatoform disorders
- Drug abuse

Location	Caraes Ndera		Caraes Butare		Icyizere Center		Total
Type Activity	New Cases	Old Cases	New Cases	Old Cases	New cases	Old cases	
Individual & Family therapies	2,891	1,861	260	1,038	347	659	
<b>Total</b>	<b>4,752</b>		<b>1,298</b>		<b>1,006</b>		<b>7,056</b>
Groups for drug abusers	170	550	27	97			
<b>Total</b>	<b>720</b>		<b>124</b>				<b>844</b>

Table 33: Patients consulted in Clinical Psychology Service in all branches

#### 2.3.4.2. Challenges encountered

- Insufficient number of Clinical Psychologists in comparison with existing high demand
- Low level of patients' understanding on the treatment approaches

#### **2.3.4.3. Recommendations**

- Increase the number of staff;
- Increase of ongoing training to empower practitioners;
- Develop a psychotherapy laboratory for effective psychological diagnosis;
- Access to tools necessary for proper service delivery;
- Improve the methods for raising the awareness on mental health treatment approaches.
- Encouraging carrying out local and regional professional outreach activities;
- Hosting international experts in the psychology services to benefit from their expertise;
- - Encouraging inter-personal supervision among therapists;
  
- Training of psychologists about Administrative psychological documents, psychometric tools, and children management.
  
- Improve collaboration between psychology services and other services such as quality improvement, Research & Development department, team of nurses, etc. in different affairs to improve the quality of the service provision;

#### **2.3.5. Physiotherapy**

Physical therapy, also known as physiotherapy is a healthcare profession, as well as the care provided by physical therapists who promote, maintain, or restore health through patient education, physical intervention, disease prevention, and health promotion. It helps to restore movement and function when someone is affected by injury, illness or disability through movement and exercises, manual therapy, education and advice. We maintain health for people of all ages helping patients to manage pain and prevent disease. Basically, in our service we treat different conditions including musculoskeletal conditions like back and cervical pain, rheumatic diseases traumatic, neurological conditions like stroke, traumatic brain injury, spinal cord injury, facial palsy, autoimmune diseases and cerebral palsy.

### 2.3.5.1. Number of patient received in Physiotherapy Service

Number of Medical imagery	JUL 23		AUG 23		SEP 23		OCT 23		NOV 23		DEC 23		JAN 24		FEB 24		MAR 24		APR 24		MAY 24		JUN 24		TOTAL	%
	Outpatient	Hospitalization	Outpatient	Hospitalization	Outpatient	Hospitalization	Outpatient	Hospitalization	Outpatient	Hospitalization	Outpatient	Hospitalization	Outpatient	Hospitalization	Outpatient	Hospitalization	Outpatient	Hospitalization	Outpatient	Hospitalization	Outpatient	Hospitalization	Outpatient	Hospitalization		
Neurology	353	34	250	44	349	34	228	28	339	34	259	82	320	28	411	61	100	20	360	44	365	26	365	32	<b>4,166</b>	<b>81</b>
Orthopedic	26	0	25	5	10	0	29	0	10	0	21	0	10	0	6	0	37	0	0	5	18	0	23	0	<b>225</b>	<b>4</b>
Traumatic	13	0	25	0	4	0	24	0	5	0	54	0	17	0	6	0	21	0	8	0	8	0	18	12	<b>215</b>	<b>4</b>
Psychiatric	0	19	0	42	0	40	4	0	0	28	0	52	0	18	0	9	0	9	0	9	0	24	0	31	<b>285</b>	<b>6</b>
Rheumatology	16	0	30	0	7	10	4	20	5	0	40	0	25	0	16	0	22	0	5	0	29	0	15	0	<b>244</b>	<b>5</b>
<b>Total</b>	<b>408</b>	<b>53</b>	<b>330</b>	<b>91</b>	<b>329</b>	<b>84</b>	<b>289</b>	<b>48</b>	<b>359</b>	<b>62</b>	<b>374</b>	<b>134</b>	<b>372</b>	<b>46</b>	<b>439</b>	<b>70</b>	<b>180</b>	<b>29</b>	<b>373</b>	<b>58</b>	<b>420</b>	<b>50</b>	<b>421</b>	<b>75</b>	<b>5,135</b>	<b>100</b>

Table 34: Number of patient received in Physiotherapy Service

The above table indicates that 81% of the cases treated in physiotherapy are neurological, others respectively are psychiatric 6%; rheumatology 5%, then orthopedic, 4% and traumatic are 4% each.

The table below indicates that 84% of treated cases are out patients where 16% are in patients.

In/out	Numbers	Percentage
Outpatient	4,294	84%
Hospitalization	841	16%
<b>Total</b>	<b>5,135</b>	<b>100%</b>

### **2.3.5.2. Challenges faced in the service**

There are some identified factors hindering the acceleration of service delivered to our clients, such as; shortage of equipment to use for office and medical purposes, inadequate number of physiotherapists, and training. We therefore look forward to more solutions in the upcoming year 2024-2025.

### **2.3.6. Social Service**

Hospital social services play a crucial role in healthcare by addressing the social, emotional, and practical needs of patients and their families. These services are typically provided by licensed social workers who are part of the hospital staff.

To better respond to the needs or requests of patients requiring social service interventions, agents of this service conducted individual interviews with patients, particularly social cases, to identify their social problems in order to subsequently intervene. During interviews, we try to work with patients in order to see together how to cope or adapt to their social situation, which could be the origin of their mental crisis.

We conducted family interviews with patients' family members, to supplement the information we had, and we discussed the importance of their involvement in their patient's care. Preparing patients for discharge was one of the activities that took up a lot of social workers' time.

We also made telephone calls to families, local authorities, other institutions with which we collaborate, accompanied patients transferred to other specialized hospitals, field visits (social reintegration and home visits). For death cases, we collaborated with the institutions that had brought the social cases of deceased patients for their burial.

In addition to these social activities, we participated in other multidisciplinary team activities (colloquium, medical rounds, clinical supervision, patient groups, etc.)

#### **2.3.6.1. Social service activities**

**The following Table lists the various activities carried out during the year 2023-2024**

ACTIVITIES	MONTHS FROM JULY TO DECEMBER 2023						MONTHS FROM JANUARY TO JUNE 2024						TOTAL
	7	8	9	10	11	12	1	2	3	4	5	6	
Number of individual interviews Contacts and collaboration with other services	78	69	59	54	77	63	75	72	70	69	69	81	<b>836</b>
Number of interviews with families	22	28	35	36	29	23	30	34	32	28	39	35	<b>371</b>
Number of communications launched on the radio	4	2	1	2	4	4	0	0	3	0	0	2	<b>35</b>
Number of phone calls	378	287	287	311	217	308	341	338	370	341	338	516	<b>4304</b>
Number of outputs	229	263	229	270	287	259	258	295	249	288	266	244	<b>3,138</b>
Number of transfers	1	1	0	0	2	2							<b>14</b>
Number of escapes	10	8	6	17	12	11	16	10	10	28	13	17	<b>161</b>
Number of deaths	1	0	0	0	1	0	0	0	1	0	0	0	<b>3</b>
Number of social cases identified	32	17	50	43	50	46	42	67	44	42	67	44	<b>496</b>
Number of descents on terrain:													
Home visits	1	1	1	0	0	0	1	1	0	1	0	1	<b>7</b>
Social reintegration	5	1	3	1	0	1	2	4	1	1	0	1	<b>20</b>
Contacts and collaboration with other services	29	33	41	29	22	37	32	49	44	23	31	30	<b>400</b>

Table 35: Social activities carried out during the year 2023-2024

### 2.3.6.2. Community activities

The role of social services is crucial, and social workers are aware of the resources available in the community to enable the social reintegration of the mentally ill. Community activities also

aim to help people lead meaningful, satisfying, productive and independent lives in their home community.

With the aim of strengthening the social reintegration of mentally ill people in the community, in collaboration with OPROMAMER, we carried out 26 follow-up visits to the different associations of mentally ill people. The main objectives are the social reintegration of patients by preventing relapses, strengthening their social rehabilitation as well as raising awareness about mental illness.

To help patients continue to lead a good life and prevent relapses, we provided health education. Different topics were covered such as mental illness in general, its management, warning signs, relapses, how to prevent relapses, the fight against stigma and discrimination of people suffering from mental illnesses, HIV, the role of socio-family involvement in the care of the mentally ill. We also worked with local authorities in certain sectors to inform them of the existence and importance of these associations and their role in the overall care of these patients. For members who had specific questions, we had time to speak with them to see how we could help resolve them or provide advice or advocate for other institutions if necessary.

Furthermore, we addressed the subject of development in order to strengthen their income and savings generating activities. Currently, the associations' activities are agriculture, livestock and small commerce. We cannot ignore the fact that the fruits of these associations have begun to manifest. Relapses among patients have decreased, among other things, no crises following compliance with medical prescriptions, socio-family involvement, self-esteem and solidarity between patients.

The Patients who do not follow the treatment have been treated thanks to the testimonies and awareness of members and health education. Members have no shortage of community-based health insurance thanks to the savings they make with the help of the associations. The others have improved their economic situation. Furthermore, we addressed the subject of development in order to strengthen their income and savings generating activities. Currently, the associations' activities are agriculture, livestock and small commerce.

In addition to strengthening the creation of associations of mental patients, during mentoring in mental health and HIV integration in district hospitals, we asked health professionals to motivate

mental patients treated in their hospitals to create associations for improving their lifestyle (social and economic health). Currently we are starting this activity and seeking technical support from the hospital and OPROMAMER.

**The table below shows the list of Association of mental patients that has been followed**

<b>Date</b>	<b>Location</b>	<b>Name of Association</b>
12/7/2023	SANGAZA/NGOMA	DUHARANIREKUBAHO/SANGAZA
9/8/2023	MBUYE/RUHANGO	ABAHUJE
10/8/2023	HIGIRO/GISAGARA	EJOHEZA/TUZAMURANE
24/8/2023	MURARA/RUBAVU	DUKURANEMUBWIGUNGE
25/8/2023	NYUNDO/RUBAVU	DUHARANIRUBUZIMA
13/9/2023	KABGAYI/MUHANGA	TUVEMUBWIGUNGE
28/9/2023	MUSHISHIRO/MUHANGA	UBUZIMABWACU
29/9/2023	NYUNDO/RUBAVU	DUHARANIRUBUZIMA
10/10/2023	RUSHAKI/GICUMBI	DUTABARANE
26/10/2023	RUHANGO/RUHANGO	UBUZIMABWACU
27/10/2023	SOVU/HUYE	DUSNGIRUBUZIMA
30/11/2023	NYABIKENKE/MUKANGA	TWIGIRE
1/12/2023	KIVUMU/KIVUMU	ABAHUJUMUGAMBI
21/12/2023	NYANGE/NGOMA	UMUNTUNKUNDI
25/1/2024	MUSHISHIRO/MUHANGA	UBUZIMA BWACU
1/3/2023	NYUNDO/RUBAVU	DUHARANIRUBUZIMA

29/3/2024	NYABIKENKE/MUHANGA	TWIGIRE
2/5/2024	NYANGE/NGOMA	UMUNTUNKUNDI
14/5/2024	MBUYE/RUHANGO	ABAHUJE
15/5/2024	KIZIBERE/RUHANGO	ABISUNGANYE
23/5/2024	KIRAMBI/NYANZA	DUHARANIREKUBAHO
20/6/2024	MUYANZA/RULINDO	UBUZIMABWIZA/UBWISUNGANE MU BUZIMA

**Table 36: List of Association of mental patients that has been followed**

### **2.3.6.3. Networking with other institutions**

Social work is done in teams, which is why we collaborate with different institutions that could help us in one way or another to solve the social problems of our patients.

The institutions with which we have worked are the following, RIB, various hospitals, prisons, NGOs, orphanages, police stations, different local authorities (districts, sectors, cells and villages), the different hospitals, the refugee camps, the demobilization commission and reintegration of military personnel, among others.

### **2.3.6.4. Field trips for the socio-family reintegration of mentally ill people who required it**

This activity was carried out for patients with exit problems. These included social cases brought by the police or other people and people abandoned by their families in hospital. This activity was facilitated by the local authorities where these patients lived. They are the ones who guided and supported us in the families. They also promised follow-up of the patient in an extra-hospital environment, taking into account the problem presented by each patient.

Field trips were carried out in the following districts and sectors:

- Rwamagana District: Munyiginya, Muyumbu and Karengye Sectors
- Kicukiro District: Kicukiro, Gatenga, Gikondo, Kanombe and Masaka Sectors
- Nyarugenge District: Nyamirambo and Muhima Sectors
- Gasabo District : Karuruma, jabana and Kimironko Sectors
- Bugesera District: Nyamata Sector

- Ngoma District: Sake Sector
- Rulindo District: Shyorongi Sector
- Ruhango District: Ruhango Sector
- Nyamagabe District: Musebeya Sector
- Nyaruguru District: Rusenge Sector
- Nyarugenge District: Nyamirambo Sector
- Nyanza District: Busoro and Busasamana Sectors
- Nyamagabe District: Mbazi Sector

In order to strengthen the quality of care provided to our patients, social workers are appointed to other services. This is the HIV service and the transitional care service.

#### **2.3.6.5. Social service presence in the HIV/MH integration program**

Psychosocial care is a part of the package of HIV prevention, care and treatment which aims to improve the quality of life of people living with HIV (PLHIV). The activities mainly include Counselling and HIV testing, as well as Psychosocial Support groups.

#### **2.3.6.6. Challenges**

- ✓ During this time, we have had so large number of social case patients that at the end of June 2024 we had 91 social case patients, among them there are those with no known identity. This poses a problem to their social reintegration, which is why there are patients who remain hospitalized despite doctors approving their discharge.
- ✓ Socio-economic problems may force some patients not to adhere to medical guidance, i.e taking medicine.
- ✓ When mental patients relapse, most of them tend to leave their medicines at home and take a long time wandering and without taking them.

#### **2.3.7. Environmental Health Service**

Hospital environmental health plays a pivotal role in infection prevention and control, making it a cornerstone of patient care. A clean and sanitized hospital environment is imperative for reducing the risk of healthcare-associated infections (HAIs), which can lead to severe complications and extended hospital stays.

According to the World Health Organization (WHO), Hospital hygiene refers to the practices and procedures that are adopted in hospitals and other healthcare facilities to prevent the spread of infections and ensure a safe and clean environment for patients, healthcare workers and visitors. Its target activities are the management of health care waste, the decontamination and sterilization of clinical care equipments and linens, and behavior change practices in order to make the work environment healthier.

### **2.3.7.1. Achievements**

#### **1. Healthcare waste management**

Healthcare wastes, if not properly managed, may pose biological, chemical and physical hazards to patients, health care workers, visitors, environment and general public. Healthcare waste management is one of the main activities of this service whereby the hospital contracted a professional and well-equipped company for waste transportation to the designated and certified areas. This is also done in all hospital branches (CARAES Butare and Centre Icyizere). The hospital makes these contracts because we do not have an incinerator.

The staff make an effort in the good management of waste by becoming familiar with the management steps, especially the segregation (an important step) for which they are responsible. Since we do not have incinerator, temporal storages are necessary. For this purpose, a hangar has been constructed at Centre Icyizere and will be as well constructed at Ndera and Butare. These contracts cost the hospital around fifteen millions a year.

#### **2.3.7.2. Hospital cleanliness**

A cleaning Company is contracted in the hospital and its branches for hospital hygiene and it is supervised regularly by Environmental Health Officers, who also conduct regular assessments in order to ensure continued hospital hygiene. In general, our hospital is clean and the work environment is pleasant.



Figure 15: Green and clean hospital

### 2.3.7.3. Infection prevention and control precautions

The standards for infection prevention and control are set and infrastructures to facilitate the implementation are in place, namely the hand washing facilities, hand disinfection facilities, materials for patients care, linen management and all supplies for that issue are availed by hospital management.

Health care providers are equipped with personal protective equipments (PPEs) and are sensitized to use them in appropriate conditions.



Figure 16: Hand washing facilities

#### 2.3.7.4. Environmental health and safety

To maintain the safety of our environment, infrastructures and healthy environment, the painting activity is regularly done and renovations of buildings especially by making easy the access by disabled people.

Health infrastructures and facilities are regularly monitored to assess the environmental risks and plan for improvement. In general, what is not safe in our environment has a plan for improvement in technical maintenance services.

In order to prevent potential accidents by fire eruptions, we do monitoring of all our electrical and fire hazards infrastructures and materials for firefighting are installed in all areas.



Figure 17: Firefighting materials and fire indication signals

#### 2.3.7.5. Gardening

Gardening and tree planting, are observed and this oftenly in community work ‘Umuganda’, whereby hospital staff attend the organized monthly umuganda. This year, over 3,000 plants have been planted in Ndera and Butare. And we have collaborated with the Ministry of Health in “Hospital greening and beautification program” and with Turkish Embassy in their “Breath for the future” program. Both stakeholders provided tree seedlings.



Figure 18: Umuganda with Turkish Ambassador and his delegation on January 27, 2024

### 2.3.7.6. Health education

Health education is a key element in behavioral change which is important in hospital hygiene and infection control practices. It has been provided to personnel as well as to clients, it has been enhanced specially to maintain a culture of personal hygiene and prevention of communicable diseases. Hospital staff and companies' personnel are trained to safe handling of healthcare waste, linen and laundry management, hand hygiene, infection prevention and control (IPC) precautions and the use of personal protective equipments (PPEs). The management of the hospital ensures the availability of materials and equipment necessary in every activity.

To enhance the awareness of patients and general public visiting the hospital, such health education is also given to patients in waiting and hospitalization rooms.

### 2.3.7.7. Policy and procedures in accreditation process

In the hospital accreditation process, the development and implementation of policies and procedures is regularly followed-up and it will continue, for us to achieve our goal in quality improvement process.

Our service is mainly implicated in the implementation of the policies and procedures of Risk area #3 of the Accreditation standards. Some of these policies and procedures as well as other related documents have been reviewed.

#### **2.3.7.8. Future projects**

- ✓ To construct standardized hangars (Ndera and CARAES Butare) for waste storage;
- ✓ Renovation of infrastructures and premises in CARAES Butare as some of them are the challenge to the standardization of hospital hygiene and cleanliness; and do not facilitate the implementation of infection prevention and control precautions;
- ✓ Increase the capacities of laundry infrastructures and machines in CARAES Butare and Centre Icyizere;
- ✓ To fix the mosquito nets in windows in CARAES Butare to limit the insects invasions in the hospitalization rooms;
- ✓ Increase hospitalization capacity (Ndera and Butare) to reduce the promiscuity; the promiscuity is a nuisance to healthy conditions;
- ✓ To continue the buildings rehabilitation in the fight against humidity;
- ✓ To continue current efforts in search for increasing water quantity.

#### **2.3.8. Nutrition Service**

Nutrition service plays a role in the overall care for patients. We aim at reducing the incidence of hospital- acquired malnutrition through nutritional care plans that suits individual patient needs and optimize their healing. The service includes assessment of patient's nutritional status and develop personalized meal plans and working closely with other medical team to manage conditions such as NCDs, underweight and weight loss. Moreover, the service provides individualized education sessions to improve optimal nutrition and eating habits.

##### **2.3.8.1. Activities carried out**

We have conducted nutritional assessments in June 2024; we measured all patients in all wards and kept on reassessing the patients with nutrition related problems.

**- The key findings were:**

- Underweight: 20
- Overweight: 9
- Diabetes: 14
- Hypertension: 6
- Hepatitis: 2
- Anaemia: 1
- Other conditions: 20

**The dietary plans developed were:**

- Low sodium diet plans: 7
- Diabetic diet plans: 13
- Anaemic diet plans: 1
- Diets to stimulate appetite: 21
- Diets for other conditions: 24
- RUTF prescriptions: 1

We provided nutrition counselling and education to patients with NCDs and overweight issues. The sessions were individual. Afterwards, we worked together with patients and developed a meal plan which was convenient to them.

Every Wednesday, we work with MIH service where we measure the BMI's of their outpatients' groups and give them the necessary nutrition support.

We visited the Transitional Home Care with the purpose of evaluating the nutritional status and nutritional care process of its residents. The main challenge is poor adherence of residents to their dietary recommendations and we recommended their care givers to continuously educate them about the importance of nutrition and proper eating habits as well as using portion sizes to manage overweight and NCDs, since they are the main recurring nutrition related conditions.

**2.3.8.2. Achievements**

- ✓ Since the start of our service we have greatly participated in the overall care of our patients. Five patients had low appetite and refused to eat, which made them relapse. After taking the diet, they became healthy and went home.
- ✓ A patient was severely malnourished and weighed 39 kg, she took RUTF together with a diet meant to improve her weight for one month and now she has 42.7 kg.
- ✓ A patient had oedema on feet and many wounds. After taking a diet for one month, he has no more oedema and the wounds are healing.

### **2.3.9. Pharmacy Service**

Pharmacy is one of the units of Ndera Neuropsychiatric Teaching Hospital, offering pharmacy related services for 24hrs/day to Out & In patients. Being an institution offering specialized services of Psychiatry and Neurology, the hospital's essential medicines are psychotropics and medicines for neurological cases. However, somatic medicines for the most common co-morbidities found in psychiatric and neurological patients are also present at hospital pharmacy.

#### **2.3.9. 1. Mission of the Hospital Pharmacy**

The main mission of Ndera Neuropsychiatric Teaching Hospital Pharmacy is to manage the use of psychotropic and other medicines, and health commodities of the hospital. Its goals include the selection, procurement, delivery, administration and review of medication to optimize patient outcomes. The hospital pharmacy strives to continuously maintain and improve the medication management and pharmaceutical care of patients.

#### **2.3.9. 2. Medicines acquisition and availability in the Hospital**

The acquisition of health commodities managed at the hospital is done through purchase and donation. For products that can be found locally, the purchase is done from the three main suppliers namely Rwanda Medical Supply (RMS) Ltd, BUFMAR and MEDIASOL. There are other essential products that are not present on local market, mostly the Neuroleptics, and the hospital took the initiative of procuring them from Europe through the help of Fracarita Belgium. Donations of some antiepileptic medicines were received from UCB Belgium.

In the year 2023 – 2024, the medicines availability rate was increased and this is justified by the fact that most of the reported medicines that were out of stock in the previous year were received at hospital pharmacy during the year 2023 – 2024, of which a new medicine LAMOTRIGINE 25mg/50mg Tab was among. However medicines like Diazepam Inj, Phenobarbital 50mg Tab, Disulfiram 400mg Tab, Pimozide 4mg Tab, Pipamperon oral solution 40mg/ml and Valproate sodium 200mg Tab had some days of stock out, representing 6 out of 63 of the managed medicines . This stock out was due to non-availability of the concerned medicines from the local and outside suppliers. Therefore the stock out rate in the year 2023 – 2024 improved from 22.58% to 9.52%.

- ❖ Medicines availability rate (2023 – 2024) = 90.48%
- ❖ Medicines stock out rate (2023 – 2024) = 9.52%
- ❖ Psychotropic available stock value at the end of the year (2023-2024) = 364,710,498 Rwf

### 2.3.9. 3. Consumption analysis

Top 10 consumed medicines:

- 2023 – 2024 top ten consumed medicines are: Valproate Sodium 200mg Tab, Carbamazepine 200mg Tab, Amitriptyline Sodium 25mg Tab, Levetiracetam 500mg Tab, Haloperidol 5mg Tab, Valproate Sodium Retard 500mg Tab, Chlorpromazine Hydrochloride 100mg Tab, Risperidal 2mg Tab, Phenytoin Sodium 100mg Tab, and Pipamperon 40mg Tab.

- Whereas the top ten consumed medicines in the year 2022 – 2023 were Valproate sodium 200mg Tab, Carbamazepine 200mg Tab, Levetiracetam 250mg Tab, Amitriptyline 25mg Tab, Haloperidol 5mg Tab, Phenytoin 100mg Tab, Pipamperon 40mg Tab, Chlorpromazine Hydrochloride 100mg Tab, Levetiracetam 500mg Tab, and Valproate Sodium Retard 500mg Tab.

The comparison between the top ten consumed medicines in these two years shows that:

- 90% of the medicines are the same in both years, with Valproate Sodium 200mg Tab and Carbamazepine 200mg Tab maintaining number one and two respectively in all the years.

- 10% which represent medicines not appearing in all the years are Risperidal 2mg Tab in 2023 - 2024, and Levetiracetam 250mg Tab in 2022 – 2023.

- Among the top ten used medicines in 2023 - 2024, three therapeutic classes were represented as follows:

1. Antiepileptics = 5/10: (Valproate Sodium 200mg Tab, Carbamazepine 200mg Tab, Levetiracetam 500mg Tab, Valproate Retard 500mg Tab, Phenytoin Sodium 100mg Tab)
2. Neuroleptics = 4/10: (Haloperidol 5mg Tab, Chlorpromazine 100mg Tab, Risperidal 2mg Tab, Pipamperon 40mg Tab)
3. Antidepressants = 1/10: (Amitriptyline Sodium 25mg Tab)

Compared to the consumption of 2022 – 2023, the consumption of the ten most used medicines during the year 2023 – 2024 increase consumption was for three medicines whereas reduced consumption was for seven medicines:

Increased consumption:

- Carbamazepine 200mg Tab, - Levetiracetam 500mg Tab, - Valproate Retard 500mg Tab

Decreased consumption:

- Valproate Sodium 200mg Tab,- Amitriptyline Sodium 25mg Tab, - Haloperidol 5mg Tab, - Chlorpromazine 100mg Tab, - Risperidal 2mg Tab, - Phenytoin Sodium 100mg Tab, - Pipamperon 40mg Tab

Generally, taking into account of all the 63 managed Psychotropic and Anti-epileptic medicines, their consumption from highly to less consumed was as follows: Neuroleptics, Anti-epileptics, Antidepressants, Anti-parkinsonism, Mood stabilizers, Benzodiazepines and Hypnotics, and Antimigraine respectively.

**Consumption comparison table of the ten most consumed medicines in all years (2022-2023 and 2023-2024)**

YEAR 2023 -2024			YEAR 2022 - 2023		
N°	Medicine description	Consumed quantity	N°	Medicine description	Consumed quantity
1	Valproate Sodium 200mg Tab	1,607,600	1	Valproate Sodium 200mg Tab	1,757,450
2	Carbamazepine 200mg Tab	1,191,001	2	Carbamazepine 200mg Tab	1,054,221
3	Amitriptyline Sodium 25mg Tab	624,032	3	Levetiracetam 250mg Tab	721,500
4	Levetiracetam 500mg Tab	551,900	4	Amitriptyline Sodium 25mg Tab	522,000
5	Haloperidol 5mg Tab	514,000	5	Haloperidol 5mg Tab	519,760
6	Valproate Retard 500mg Tab	487,600	6	Phenytoin Sodium 100mg Tab	464,500
7	Chlorpromazine 100mg Tab	392,000	7	Pipamperon 40mg Tab	454,980
8	Risperidal 2mg Tab	387,010	8	Chlorpromazine 100mg Tab	436,000
9	Phenytoin Sodium 100mg Tab	362,000	9	Levetiracetam 500mg Tab	431,400
10	Pipamperon 40mg Tab	356,980	10	Valproate Retard 500mg Tab	404,400

Table 37: Consumption comparison of the 10 most consumed medicines in years 2022-2023 and 2023-2024

**Consumption comparison chart of the ten most consumed medicines in all years (2022-2023 and 2023-2024)**

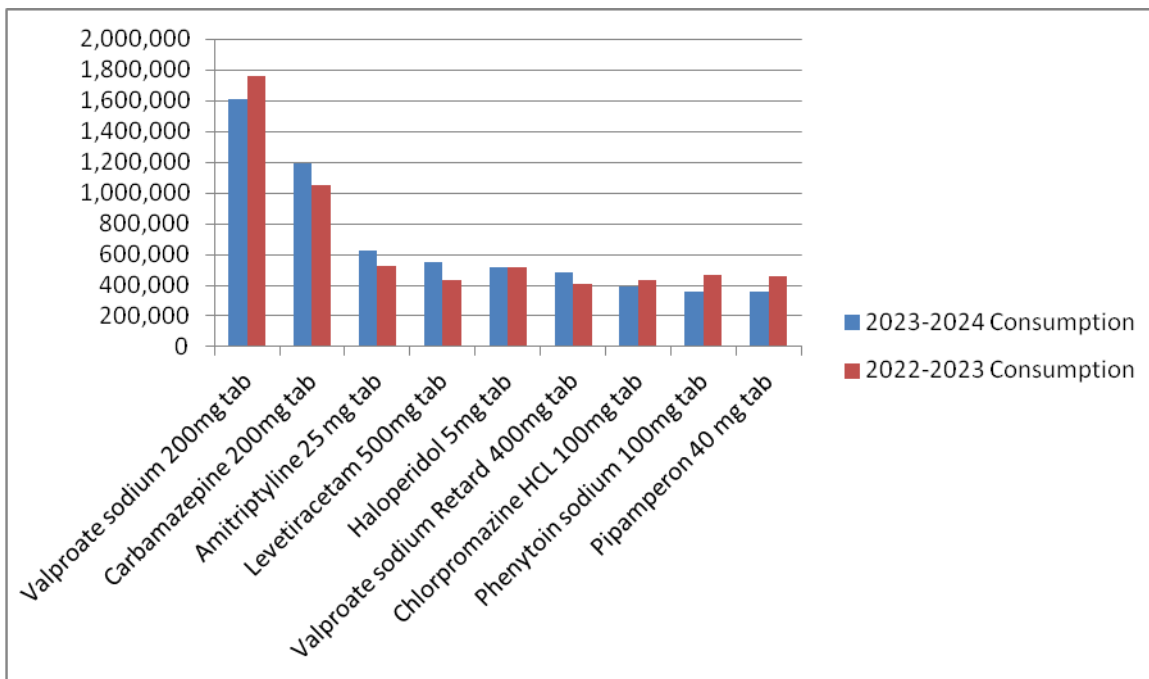


Figure 19: Consumption comparison of the 10 most consumed medicines in years 2022-2023 and 2023-2024

**2.3.9. 4. Somatic drugs, Lab reagents, consumables, and medical equipment**

As directed by the Ministry of Health, in the year 2023 – 2024 three central suppliers namely RMS, BUFMAR and MEDIASOL have been at the heart of the supply chain of the somatic medicines, lab reagents, consumables and medical equipments. The Hospital acquired these products through purchase and donation especially from RMS, where HAART medicines and HIV related consumables were given freely. For the cases of non-availability, other suppliers like MEDISELL for Lab reagents, KIPHARMA for somatic medicines and others were contacted following guidelines of the Internal Tender Committee. Somatic medicines are mostly used for neurological conditions.

Below is the summary of the stock movement of these products:

- ❖ Somatic medicines, consumables and medical equipment available stock value at the end of the year (2023 – 2024) = **38,609,485 Rwf**

- ❖ Lab reagents available stock value at the end of the year (2023–2024) = **12,515,655 Rwf**

### **2.3.9. 5. Challenges**

- Stock out: Though the availability of Psychotropic and Antiepileptic medicines has been improved compared to the year 2022 – 2023, the availability of these medicines remain a big challenge on local market. The RMS which has most of these medicines in its scope does not reach 50% of our order fill rate. Some medicines like Benzodiazepines were nowhere to be found even on the European market.
- Inflation: The rate of increase of prices has been very high during the year 2023 – 2024. This has not only affected the facility, but also the end users in covering hospital bills especially the cost of medicines.

### **2.3.9. 6. Recommendations**

- To the custodians of the supply chain in the country, RMS, BUFMAR, MEDIASOL: to attain and sustain medicines availability at all times, especially Psychotropic and Antiepileptic medicines as they are often out of stock, to increase order fill rate to 100%.
- To the management of Ndera Neuropsychiatric Teaching Hospital: to provide enough budget for procurement of medicines and other health commodities, taking into consideration the inflation and the increase of clients that seek the facility' services.

## **CHAP III: Administration: IMPLEMENTATION OF THE ANNUAL ACTION PLAN**

To carry out the mission of the Hospital, the hospital set a strategic plan of five years as a cornerstone to achieve its goals to provide quality care service to psychiatric and neurologic patients and to strengthen administrative and support services for the hospital operations, as stipulated in the following objectives of the strategic plan of the hospital:

1. Enhance health service delivery and customer experience.
2. Essential pharmaceutical products, drugs access and medical equipment
3. Expand specialized services
4. Enhance financial performance and management
5. Enhance human resource management and capacity building
6. Promote research, performance management and quality improvement
7. Improve infrastructure, environment, safety and equipment
8. Strengthen health information system

At Ndera Neuropsychiatric Teaching hospital, planning is a management process, concerned with defining goals for a future direction and determining on the mission and resources to achieve those targets. Planning may be understood as “thinking in advance what is to be done, when it is to be done, how it is to be done and by whom it should be done”. In simple words we can say, planning is setting up of objectives and targets and formulating an action plan to achieve them within a fixed period of time.

To digitalize planning process, the hospital has adopted the Integrated Financial Management Information System (IFMIS), which is integrated software that can support government to effectively planning, budgeting, accounting and reporting. The IFMIS played a highly considerable importance to produce many advantages to the hospital as:

Linkage between Planning and Budget to avoid deviation of budget which does not represent Strategic Plans;

Strengthening fiscal planning and reporting;

Enhancing the correlation of program to activities and outcomes;

Improving hospital's capacity for aggregate fiscal management;  
Enabling more efficient resource allocation mechanisms  
Improving information for decision making  
Increasing the hospital accountability and transparency

In the ended financial year of 2023-2024 the hospital outlined many activities to deliver required outputs under two main programs namely:

1. Administrative and supporting staff
2. Specialized health service delivery

To ensure that the action plan is being implemented, the hospital's Planning Officer conducts monitoring and evaluation of the implementation progress of action plan through regular reports conducted on Quarterly and annual basis.

### **3.1. Performance of the action plan 2023-2024**

#### **3.1.1. General performance**

In this report we are going to present the performance of outputs indicators evaluated through the implementation of planned activities whereby the unity value of measures is split in quarterly and annually targets.

All activities planned to deliver expected results for the financial year are financed by the Government of Rwanda (Ordinary Budget) and Hospital's internally generated revenues. The total budget allocated to the action plan of the fiscal year 2023-2024 was 6,747,303,443 Frw, the year end on the 30th June 2024 with the expenditures of 6,698,223,157 Frw and the balance of 49,082,518 Frw. The allocated budget was consumed on the percentage of 99%.

#### **Program I: Administrative and Support Services strengthened**

##### **Output 1: Human resources management is strengthened**

The Human Resource Service is considered as the most influential component of the hospital, as it spends the significant part of the hospital budget through employees salary payment, employees capacity building, employees motivation activities and other employees needed for development. Ndera Neuropsychiatric Teaching Hospital plays a big role in ensuring the hospital's human resource to provide the best effective, sufficient and accessible customer care

service to meet its vision and mission. In order to attain the mission, vision, planned goals and objectives, Ndera hospital believes that all employees must be suitable with regards to the right quantity, quality and skills mix to perform entirely their assigned duties and responsibilities.

The human resource management as output has three indicators to manage the employees (Rate of staff rights are met as per Rwandan law, Number of staff to be recruited and employee turnover). Rate of staff rights are met as per Rwandan law, this indicator was assessed via a survey conducted by the internal quality service delivery assessment team which used a questionnaire for staff satisfaction where by 89% of all staff are satisfied.

The Human resources budget expenditure known as compensation of employees is extended to the three main categories which are excellently performed as it is mentioned in the following summarized table:

<b>N°</b>	<b>Category</b>	<b>Activities</b>	<b>Performance Level</b>
1	Remuneration of salaries in cash to health staffs (under statutes and under contracts)	Payment of basic salary	Excellent
		Payment of transport and housing allowance	Excellent
		Payment other allowances and benefits in cash	Excellent
		Payment of performance bonus	Excellent
2	Remuneration of salaries in cash to Project staff and	Payment of basic salary for project staff	Excellent
		Payment of transport and housing allowance for project staff	Excellent
		Payment other allowances and benefits in cash for project staff	Excellent
		Payment of performance bonus for project staff	Excellent
3	Social contribution for health staff (Under statutes and under contracts) and project staff	payment of contribution to Social security	Excellent
		payment of contribution to Health insurance	Excellent
		payment of contribution to Maternity leave	Excellent

Table 38: Human resources management

**Challenge:**

1. The output of human resources management is ensured didn't consume fully the budget allocated to human resources function due to delay placement of all staff on current organization structure as was expected, the hospital is waiting for appointment of the following nominees:
  - i. Deputy Director General of clinical services and medical education,
  - ii. Director of quality assurance management unit,
  - iii. Director of CARAES BUTARE,
  - iv. Director of Finance and Logistics,
  - v. Staff to cover acting directors
  - vi. and other staff on organization structure who are not placed accordingly

The non-placement of these fore mentioned staff is negatively affecting the budget allocated to the human resources expenditures and the full implementation of the planned activities whether operationally or strategically.

**Output 2: Transport and maintenance of vehicles is ensured**

Transport service is very important for the proper functioning of the hospital. It provides various transport related to patients such as patient transfers to other hospitals, to sensitize the population on mental illness, home visits, to monitor outpatients near their living environment and strengthen their reintegration in the community, transport of purchased or requisitioned drugs or medical equipment, transport of staff in different administrative activities, and etc.....

The indicator used to measure the implementation of the transport and vehicle maintenance is transport and maintenance activities realized at the percentage of 93%, and the performance of this output with its activities is presented in the table below.

N <sup>o</sup>	Category	Activities	Performance Level
1	Transport And Travel	Provide fuel and lubricants	Excellent
		International Airfares	Good
		Domestic per diems	Excellent
		Transport to and from Work	Excellent
		Payment of meals costs related to transport and travel	Excellent
		Payment of Accommodation costs related to transport and travel	Excellent
		Payment of other transport related costs	Excellent

Table 39: Transport and maintenance of vehicles

### Output 3: Strong, reliable and efficient IT system improved

A health information system (HIS) refers to a system designed to manage healthcare data. Information systems play an important role in the production, sharing, storage and transmission of information in various fields. Hospital information management systems used in the health service actively meet the needs of physicians, administrators, and patients in institutional processes for instance the Open clinic. Ndera neuropsychiatric teaching hospital information management ensures that data are collected in a correct, complete and interdependent manner.

The indicator used to measure the implementation of the Strong, reliable and efficient IT system is Information technology activities realized at the percentage of **96%**.

#### Challenge:

1. Increase of the budget allocated to laptops, desktops and other equipment on the percentage above **250%**.

N <sup>o</sup>	Category	Activities	Performance Level
1	Computer accessories	Desk top and Laptop Computers	Excellent
		Purchase data storage devices	Good
		Purchase power storage devices	Good
		Purchase of saver sets	Good
		Purchase of Other ICT equipment	Excellent

<b>2</b>	Electronics	Designing, Printing and Filming	Excellent
		Purchase Printers, scanners and photocopiers	Excellent
		Purchase Phone handsets and mobile phones	Very Good
		Purchase of Radios and Television sets	Very Good
		Purchase of Photograph and Music Equipment	Good
<b>3</b>	Internet network	Provide internet connection	Excellent

Table 40: Strong, reliable and efficient IT system

#### Output 4: Other goods and services for the hospital are ensured

To facilitate the effective implementation and achievement of its mission, the hospital's planned activities to deliver the output of other hospital's goods and services are implemented at the rate of 98% which is a good performance than 90% which was the baseline.

<b>Nº</b>	<b>Category</b>	<b>Activities</b>	<b>Performance Level</b>
1	Goods	Office Supplies and Consumables	Excellent
		Small office equipment	Very good
		Veterinary and Agricultural Supplies	Very good
		Other production materials and supplies	Very Good
		Other Use of Goods& Services	Excellent
2	Services	Security and Social Order	Excellent
		Water and Energy	Excellent
		Communication Costs	Good
		Insurances and licenses	Excellent
		Bank charges and commissions and other financial costs	Excellent
		Public Relations and Awareness	Very Good
		Membership and Subscriptions	Good
		Social Assistance Benefits - In Cash	Very Good

Table 41: Other goods and services for the hospital

## **Output 5: Quality care management and Capacity building is ensured**

The hospital has invested in Capacity-building of employees to develop and strengthen their skills, abilities, processes and resources through continuous training to both health staff and supporting staff, that the hospital need to survive, adapt, and thrive in a fast- objective achievement. An essential ingredient in capacity-building is transformation that is generated and sustained over time from within; transformation of this kind goes beyond performing tasks to changing mindsets and attitudes.

Quality of care is based on evidence-based professional knowledge and is critical for achieving universal health coverage. Quality health care can be defined in many ways but there is growing acknowledgement that quality health services should be:

- **Effective** – providing evidence-based healthcare services to those who need them;
- **Safe** – avoiding harm to people for whom the care is intended; and
- **People-centred** – providing care that responds to individual preferences, needs and values.

To realize the benefits of quality health care, health services must be:

- **Timely** – reducing waiting times and sometimes harmful delays;
- **Equitable** – providing care that does not vary in quality on account of gender, ethnicity, geographic location, and socio-economic status;
- **Integrated** – providing care that makes available the full range of health services throughout the life course;
- **Efficient** – maximizing the benefit of available resources and avoiding waste.

To facilitate the effective implementation and achievement of its mission, the hospital's planned activities to deliver the output of quality care management and capacity building are implemented at the rate of **91%** which is a good performance than 80% which was the baseline which led the Ndera neuropsychiatric teaching hospital to the achievement of Level II in hospital accreditation assessment.

The performance of these activities which delivered the quality health care to psychiatric and neurologic patients and increased staff capabilities in health care specialization the hospital

deliver. The following table demonstrates the performance of activities to deliver the output of quality care management and Capacity building is ensured.

Nº	Category	Activities	Performance Level
1	Capacity building (Training and Workshops)	Trainers Fees and, Training Consumables (Materials), Training food related costs.	Excellent
		Training Related Travel Costs	Excellent
		Training Related Per Diems	Excellent
		Training hotel facilities	Excellent
		Training food related costs	Excellent
		Other training related expenses	Excellent

Table 42: Quality care management and Capacity building

### Output 6: Infrastructures and maintenance works are improved

The infrastructure, or physical and economic foundation of an institution, is what keeps the hospital operating smoothly. Infrastructure such as, buildings, roads, Water, power and energy, waste management and recreation facilities are just a few types of infrastructure that people need and use daily. Because of this, there is a demand for infrastructure projects to maintain the existing infrastructure and build new infrastructure.

There two main categories of infrastructure are hard and soft infrastructure. Soft infrastructures are the institutions that make up an economy, like healthcare systems, law enforcement, financial institutions and educational systems. Hard infrastructures are the physical systems that help run a region or nation such as roads, bridges and telecommunications.

The infrastructures and maintenance works are the basic physical and organizational structures and facilities (e.g. buildings, electric power, water... ) the hospital needs for the operation. To deliver the best quality of neuro - psychiatric health care service to in and out patients.

Some planned maintenance activities are accomplished like:

- i. Main conference hall was repainted
- ii. Paths of disabled were put in place,
- iii. Septic tank at the kitchen is elevated from underground,
- iv. Patients isolation in Kundwa center is built,
- v. Stables for livestock are renovated as it is presented on the following photos.

The indicator used to measure the implementation of the infrastructure and hospital maintenance is infrastructure and maintenance activities realized at the percentage of **56%** of achievement while the baseline was **80%**. Decline is caused by major activities planned but didn't executed like construction of second phase of Ndera rehabilitation home care (Ward E), and startup of Caraes Butare renovation.

N <sup>o</sup>	Category	Activities	Performance Level
1	Rehabilitation	Rehabilitation of Refectory and private rooms at Caraes Butare	Nothing done
		Rehabilitation of Administrative offices at Caraes Butare	Nothing done
		Rehabilitation for the office of Responsible of Caraes Butare	Nothing done
2	Construction	Construction of the Second phase of Ndera Rehabilitation Home Care	Nothing done
3	Feasibility studies	Feasibility study and Extension of Icyizere psychotherapeutic Center	Nothing done
		Feasibility study and Extension of Emergency, Pharmacy, invoicing and Laboratory	Nothing done
		Extension of Emergency, Pharmacy, invoicing and Laboratory	Nothing done

Table 43: Infrastructures and maintenance works

### Output 7: Professional and research services are strengthened

Ndera Neuropsychiatric teaching hospital recognizes the importance of research as a scientific basis for clinical practice, to improve patient outcomes from planned activities in psychiatry and

neurology where all research activities in hospital must meet ethical and legal standards as well as Ndera Hospital’s requirements.

The hospital had set an indicator to measure statistical data of research about mental health, neurology health and associated healthcare interventions activities done through the financial year ended on 30<sup>th</sup> June 2024 of professional and research service realized activities which are performed at the percentage of 82%.

<b>N<sup>o</sup></b>	<b>Category</b>	<b>Activities</b>	<b>Performance Level</b>
1	Professional services	Seminar entrance fees	Excellent
		Technical Assistance remuneration	Excellent
		Employee recruitment fees	Good
		Cleaning services	Excellent
		Gardening costs	Excellent
		Other professional services fees	Excellent
2	Research services	Research costs	Excellent
		Other research costs	Excellent

**Table 44: Professional and research services**

### **Output 8: Ndera Neurological Center of Excellence construction**

Nothing is done on this output as consequence of lack of budget allocated for this output. The hospital was expecting funds from the Ministry of Finance and Economic Planning (MINECOFIN), which later expressed budget scarcity to finance this project.

### **Program II: Specialized Health Services**

#### **Output 10: Neuro-psychiatric care is strengthened (in/out patients)**

Care provision to neuro-psychiatric patients is the core service of the hospital, as it is said in the introduction that Ndera neuro-psychiatric hospital is a leading institution and the unique referral and teaching hospital that is specialized in neurology and psychiatry in country wide. The big effort is deployed to achieve a maximum of standard of service care delivery.

The Hospital thrived to ensure that neuro-psychiatric care for in and outpatients is strengthened by Provision of quality care to neuro-psychiatric in/outpatients; provision of substitute

medication to maintain abstinence and relapses prevention; organizing appointments for in and out patients; purchasing appropriate medical equipment and provision of psycho-social intervention to PTSD victims to increase the patients satisfaction rate and to reduce the relapse rate of patients with PTSD on the performance of **98%** as the baseline was **80%**. In this regard the Ndera neuropsychiatric hospital provides the following services:

1. Psychiatry
2. Neurology
3. Hospitalization
4. Addiction service
5. General laboratory
6. Medical imagery (EEG, EMG, ECG)
7. Physiotherapy
8. PIT care and treatment
9. Clinical psychology and
10. Occupational therapy

Neurology and psychiatric care for outpatients is a daily consultation provided through making a diagnosis of the neurology or psychiatry problem for recovering process to patients who are not hospitalized by dedicated and specialized doctors whereby in patients of hospitalized are those with severe problems which cannot be managed outside the hospital. The Ndera neuropsychiatric hospital has different hospitalized wards for different category for patients as here down is subdivided per their location:

**NDERA HOSPITAL:**

1. Ward A (For acute male)
2. Ward B (For recovered male)
3. Ward C (For recovered female)
4. Ward D (For acute female)
5. Ward E (For chronic patients)
6. Kundwa Center (For psychiatric children and adolescents)
7. Ituze Center (For other patients)
8. Neurology wards

**CARAES BUTARE:**

1. Ward for acute male
2. Ward for recovered male
3. Ward for recovered female
4. Ward for acute female

**ICYIZERE PSYCHOTHERAPETIC CENTER:**

1. Mental health ward
2. Toxicomania ward

Apart from these mentioned services, hospitalized and out patients receive medication from within the hospital's pharmacy which is a service mandated to store, handle, prepare, and dispense various medication, specific role of a pharmacist and nurse pharmacist varies depending on where they work (pharmacy stock, OPD dispensation and In patients dispensation), their fundamental duties typically include some mix of the following:

- ❖ Verifying dosage on medications prescribed by health care providers
- ❖ Preparing prescriptions according to prescriber instructions
- ❖ Ensuring whether or not a particular medication will interact with other medications used by the patient
- ❖ Verifying that the patient is not otherwise at risk of adverse reactions caused by a prescription
- ❖ Educating patients about how and when to take or administer the prescription
- ❖ Advising patients about potential side effects of medication and answering any questions they may have
- ❖ Administering various vaccinations, such as flu shots
- ❖ Oversee and manage pharmacy interns and technicians
- ❖ Basic record-keeping and administrative tasks, as required

N <sup>o</sup>	Category	Activities	Performance Level
1	Medical supplies	Medical reagents and drugs	Excellent
		Other laboratory reagents	Excellent
		Human Vaccines	Excellent
		Medical Bills	Excellent
2	Hygiene and environmental supplies	Laundry detergents	Excellent
		Incineration of expired Drugs	Excellent

Table 45: Neuro-psychiatric care

### Output 11: Health, Hygiene and Environmental Services are improved

Ndera hospital considers the green environment to be an essential component of providing excellent mental and neurology health care. Green space has characteristics such as a strategic position in efficient use of resources such as water (rain water harvesting), electricity, and air pollution, and the use of non-infectious materials. It promotes environmentally friendly practices, non-toxic environments, green cleaning, and trash reduction, as well as providing a therapeutic garden, the green environment provides patients and employees with the view to green areas, gardens and trees with the aim of reducing stress and creating an environment that facilitates faster recovery.

Maintaining a high standard of hygiene in Ndera hospital is extremely important. Hygiene refers to behaviors that can improve cleanliness and lead to good health. Patients and staff are more likely to have a vulnerable or compromised immune system, as they are exposed to commonly transmitted infections for this reasons, it is integral to the delivery of effective care that residents, visitors and staff take reasonable steps to ensure the consistent provision of safe, clean and comfortable living conditions. Three key areas for the maintenance of hygiene standards in the hospital are hand hygiene, beddings, food and equipment.

<b>N<sup>o</sup></b>	<b>Category</b>	<b>Activities</b>	<b>Performance Level</b>
1	Clothing	Uniforms	Excellent
		Bed Sheets and Pillow cases	Excellent
		Blankets	Excellent
		Beddings	Excellent
		Curtains	Excellent

Table 46: Health, Hygiene and Environmental Services

### **3.2. Finance**

The management of the hospital's budget is entrusted mainly to the Director General of Ndera Neuropsychiatric Teaching Hospital, in his capacity as Chief Budget Manager (CBM) assisted by the Financial Management Committee of the hospital. This Budget is made of operating subsidies granted by the Government of Rwanda, subsidies from the Brothers of Charity, Caraes Belgium/Fracarita, own revenues and other partners.

The following table shows the different sources of finance as well as the charges:

EXPENDITURES /CHARGES (In Rwfs)			INCOME/PRODUITS (In Rwfs)		
Operating expenses	2023-2024	2022-2023	Operating revenues	2023-2024	2022-2023
Cost of past inventory	1,989,701,936	1,005,074,290	Hospital income	3,233,911,356	2,613,989,251
			* Invoices - customers not paid	- 1,292,249,561	-1,148,018,665
Materials and supplies Consumed	527062913	480,739,563	Other income	37,282,654	7,772,642
Transport consumed	4,295,993	56,729,521	Transfers from MoH- Based Financing Performance (PBF)	240,000,000	240,000,000
Other services consumed	1,856,813,311	1,577,101,861	Transfers from Treasury	3,343,037,885	2,948,038,423
Unforeseen expenditures and indirect expenses	115,441,086	55,029,848	Fracarita Grants	25,998,139	25,425,491
Compensation of employees	1,601,876,597	2,272,310,726	Caraes Belgium		
			UCB Grants	0	18,834,037
			grants From CDC/MOH	148,470,456	116,290,774
Performance Based Financing	1,237,774,144	570,099,108	Grants From Johnson & Johnson Project	109,088,755	206,229,285
			Other Grants Gifts	176,937,361	11,449,664
<b>Result</b>	<b>- 18,239,374</b>	<b>170,944,650</b>			
<b>TOTAL</b>	<b>7,314,726,606</b>	<b>6,188,029,567</b>	<b>TOTAL</b>	<b>7,314,726,606</b>	<b>6,188,029,567</b>

Table 47: Sources of finance as well as the charges

## Financial Challenge

The majority of districts owe a huge amount of money to the Hospital, which affects the hospital's action plan implementation and smooth running of hospital activities. Currently, the districts owe **1,042,290,536** Frw to the hospital. The following table shows a list of the districts and the outstanding debt.

N°	DISTRICT	AMOUNT (FRW)
<b>CITY OF KIGALI</b>		
1	GASABO	433,272,090
2	KICUKIRO	247,079,852
3	NYARUGENGE	152,090,516
<b>Subtotal</b>		<b>832,442,458</b>
<b>EASTERN PROVINCE</b>		
4	BUGESERA	3,266,009
5	GATSIBO	1,293,511
6	KAYONZA	8,063,236
7	KIREHE	1,477,059
8	RWAMAGANA	599,983
<b>Subtotal</b>		<b>14,699,798</b>
<b>WESTERN PROVINCE</b>		
9	KARONGI	1,084,050
10	NYABIHU	44,028,806
11	NYAMASHEKE	7,789,251
12	RUSIZI	1,510,891
13	RUTSIRO	213,623
<b>Subtotal</b>		<b>54,626,621</b>
<b>NORTHERN PROVINCE</b>		
14	GICUMBI	2,750,683
15	MUSANZE	11,707,850
16	RULINDO	787,196
<b>Subtotal</b>		<b>15,245,729</b>
<b>SOUTHERN PROVINCE</b>		
17	GISAGARA	683,682
18	HUYE	41,895,155
19	KAMONYI	3,360,729

20	MUHANGA	252,066
21	NYAMAGABE	22,011,583
22	NYARUGURU	44,193,998
23	RUHANGO	12,878,717
<b>Subtotal</b>		<b>125,275,930</b>
<b>OVERALL TOTAL</b>		<b>1,042,290,536</b>

Table 48: List of debt owed by districts across the country

### 3.1.5. Conclusion

The performance of the hospital's operation plan of the fiscal year 2023-2024 in general is excellently ranked as the budget consumption reached at 99% of the allocated budget. We highlight that new staff has to be recruited in line of the new structure accomplishment even to increase the percentage of consumption at least from the reported 68% in the fiscal year 2023-24 to the percentage above 85% in the years 2024-2025. This will facilitate the hospital to drop the percentage of under contract staff which hospital hired to keep track in delivering adequate health care service.

## **CHAP IV: OTHER OUTSTANDING ACHIEVEMENTS IN LINE WITH THE HOSPITAL MANDATE**

### **4.1. Department of Education, Research, CPD and Quality Improvement**

The Department of Education, Research, Continuing Professional Development (CPD), and Quality Improvement has a mission that aimed to empower hospital staff and to provide quality care services to its customers. Being exceptional, its service preserves to offer required skills and competences to staff through education in health care delivery, continuous professional training and research for a better evidence based practice. This chapter provides an overview of the department's initiatives, achievements, and strategic goals. It serves as a comprehensive document showcasing the department's role in fostering professional growth, driving research, and ensuring high standards of quality within the organization.

#### **4.1.1. Education**

Ndera Neuropsychiatric Teaching Hospital collaborates with academic and clinical institutions to provide advanced training and a supportive learning environment in neuropsychiatry. As a prestigious institution, it is now responsible for training all health professionals in this field, offering knowledge and skills through supervision, mentorship, coaching, and other educational methods.

#### **Partner Institutions in the Education domain (Public, Private & International):**

- University of Rwanda (UR)
- Adventist University of Central Africa (AUCA)
- Kibogora Polytechnics (KP)
- Catholic University of Rwanda(CUR)
- Mount Kenya University (MKU)
- University of Global Health Equity (UGHE)
- Foreign institutions

**Table of different domains attendant and their respective institutions**

	<b>PN(Neuro&amp; Psy)</b>	<b>MPH/ OT/PC</b>	<b>Medical</b>	<b>General Nurse</b>	<b>BPH</b>	<b>MH Nurse</b>	<b>Clin Psy</b>	<b>OT</b>	<b>Technique &amp; supportive</b>	<b>f</b>	<b>%</b>
UR	32	2	46	109	0	19	4	38	6	256	43%
MKU	0	3	0	131	1	0	2	0	0	137	23%
UGHE	0	0	30	0	0	0	0	0	0	30	5%
KP	0	0	0	30	0	0	0	0	0	30	5%
AUCA	0	0	0	40	0	0	0	0	0	40	7%
CUR	0	0	0	0	1	0	0	0	0	1	0%
ABROAD	0	8	0	0	0	0	0	7	0	15	3%
RULI	0	0	0	13	0	0	0	0	0	13	2%
UMST/ SUDAN	0	0	75	0	0	0	0	0	0	75	13%
<b>TOTAL</b>	<b>32</b>	<b>13</b>	<b>151</b>	<b>323</b>	<b>2</b>	<b>19</b>	<b>6</b>	<b>45</b>	<b>6</b>	<b>597</b>	<b>100%</b>

**Table 49: Different domains attendant and their respective institutions**

We have received 597 students, local and international, clinical and non-clinical.

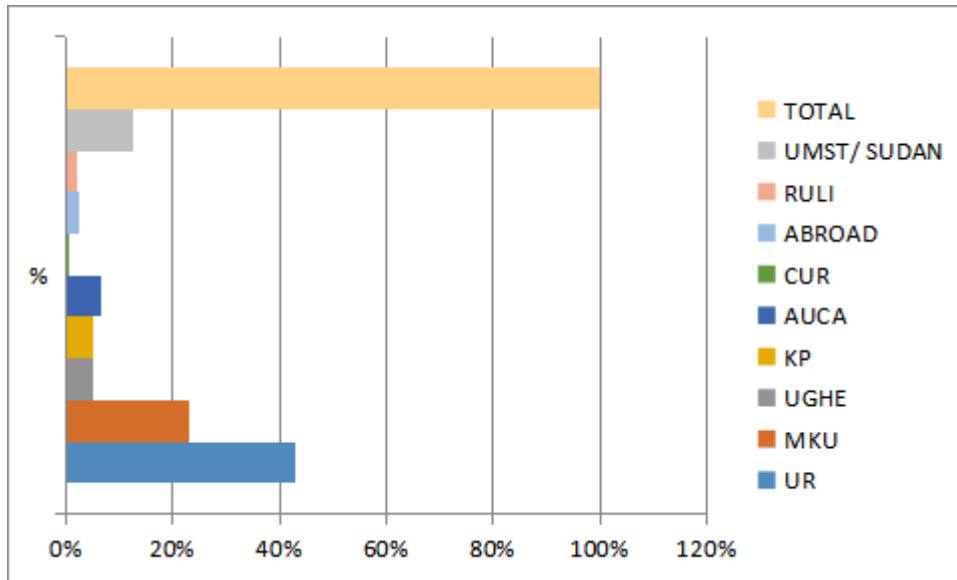


Figure 20: Different domains attendant and their respective institutions

The University of Rwanda is the 1st institution with 43% (256) to send many students for clinical practice, Mount Kigali University (MKU) comes second with 23% and the third is University of Medical Sciences and Technology (UMST), which used to work with the University of Rwanda, but now counted independently, with majority of its students coming from Sudan, with 13%.

#### 4.1.2. CPD: Continuing Professional Development

The activities that consist of transferring skills and knowledge which serve to maintain, develop, or increase professional performance and good relationships with customers. The content of CPD is that body of knowledge and skills generally recognized and accepted by the profession as within the basic medical sciences, the discipline of clinical medicine, and the provision of health care to the public. The hospital has a general plan of training which is supported by hospital budget and also the internal regular formation and clinical supervisions help to increase hospital staff credibility in different medical, allied health sciences and nursing domain.

- Every Wednesday clinical supervisions,
- Different formations
- Accreditation activities
- External formations...

##### 4.1.2.1. External training

The hospital has long term agreement with the Foundation de Nant; a foreign institution that provides a continuous training in psychiatry. This year, they have provided many topics on psychopharmacology (virtual based training) dedicated to all clinical health staff.

DATE	TOPIC
13 septembre 2023	Mme Guibert Sibailly Pharmacienne clinicienne FPH, Unité de Pharmacogénétique et Psychopharmacologie Clinique (UPPC), Centre de Neurosciences Psychiatriques (CNP), Département de Psychiatrie, CHUV Médication psychotrope et spécificité du patient âgé
11 octobre 2023	Mme Séverine Crettol Wavre Pharmacienne clinicienne FPH, Unité de Pharmacogénétique et Psychopharmacologie Clinique (UPPC), Centre de Neurosciences Psychiatriques (CNP), Département de Psychiatrie, CHUV Traitement médicamenteux du PTSD
24 janvier 2024	Mme Séverine Crettol : Traitement pharmacologique du TOC
06 mars 2024	Prof. Daniele Zullino : Psychothérapie assistée par des psychédéliques
17 avril 2024	Mme Céline Dubath : Effets cardiaques et métaboliques des psychotropes : importance clinique et prise en charge
08 mai 2024	Prof. Chin Eap : Place de la pharmacothérapie dans les troubles de la personnalité borderline ?

##### 4.1.2.2. Coaching of nurses

Coaching is a process that offers ongoing, personalized support to employees, helping them to grow, learn, and improve. The purpose of coaching is to equip caregivers to perform more appropriately, independently, safely, and ethically in diverse scenarios. By passing on knowledge and practical skills, coaching boosts caregivers' knowledge, skills, and attitudes, while also addressing and correcting any negative behaviors. Each semester, nurses are assessed on their

knowledge, skills, and attitudes using a tool that measures 10 professional competencies, with the ultimate goal of fostering their independence in their work. This year, the evaluation of nurses' competences has shown the following results:

1. Data Collection on Human Functioning, utilize skills to gather and analyze relevant data to report on these phenomena.
2. Care Planning and Interventions; plan and execute care interventions in partnership with patients is evident and highly proficient.
3. Basic Health Care; comprehensive knowledge of providing basic health care in dialogue with patients.
4. Acting According to Institutional Policies; understands the institutional policies and how to act within these frameworks as prescribed by the doctor.
5. Relationship Building and Communication
6. Coaching and Supporting Patients; especially during critical times such as end-of-life care.
7. Team Coordination and Care Management; coordinating care within a team setting.
8. Quality Improvement and Adaptation; importance of adapting care practices to societal and scientific developments.
9. Patient Advocacy
10. Assistance in Scientific Research; research process and its importance in optimizing health care.

Butare , n=45		Icyizere, n= 20		Ndera HQ, n= 127	
5143	95.24%	2298	96%	14521	95.28%
Global note					95.32%

The global note of 95.32% is indicative of a strong and consistent performance across all competencies.

**a. Coaching activities**

- ✓ Individual and group coaching,
- ✓ Professional advices and counseling,
- ✓ Moral support,

### **4.1.3. Quality improvement**

The Hospital is committed to delivering the highest standards of healthcare, with a primary goal of providing comprehensive, compassionate, and evidence-based care to our patients. We also strive to create an environment of continuous improvement and learning. Our Quality Improvement (QI) approach is integral to achieving this goal, as it systematically enhances the processes and outcomes of patient care.

The main quality improvement activities implemented during the fiscal year 2023/2024 included Quarterly Hospital self-assessments, Quality improvement trainings, patient and staff satisfaction surveys, patient voice program activities, and patients' complaints and suggestions management.

#### **4.1.3.1. Quarterly Hospital self-assessment**

The purpose of quarterly hospital self-assessments is to systematically evaluate and monitor the hospital's performance in various areas, both administrative and clinical. These assessments aim to identify strengths and areas for improvement, ensure compliance with standards and regulations, and enhance the overall quality of care provided to patients. By regularly conducting these assessments, the hospital can implement timely corrective actions, promote continuous improvement, and ensure that its services remain aligned with best practices and the needs of the community it serves.

Based on the findings from the hospital self-assessment, the overall performance of hospital activities, both administrative and clinical, was 92.4%, reflecting a 0.9% increase compared to the previous year.

#### **4.1.3.2. Patient satisfaction**

Patient satisfaction is a crucial component in healthcare, reflecting the patients' perspectives on the quality and effectiveness of the care they receive. Patient satisfaction survey and feedback helped the Hospital healthcare providers understand patients' experiences and identify areas needing improvement. This led to the enhancement in clinical practices, patient safety, and overall care quality.

This year, the average patient satisfaction score was 84%, reflecting a 6% decrease compared to the previous year. By implementing recommendations and patient suggestions, the hospital aims to achieve a target of at least 92% by next year.

#### **4.1.3.3. Staff satisfaction**

The purpose of the staff satisfaction survey is to gather feedback from the Hospital staff to identify areas for improvement, enhance working conditions, boost morale, and create a more positive and productive work environment.

This year, the hospital conducted a staff satisfaction survey to drive evidence-based enhancements in working conditions and the work environment. The average staff satisfaction score was 79%, reflecting a 2% decrease from the previous year. By addressing the issues and opinions raised, the hospital aims to achieve at least 92% staff satisfaction next year.

#### **4.1.3.4. “Ijwi ry’Umurwayi” (Patient’s Voice) program**

The "Ijwi ry’Umurwayi" (Patient’s Voice) program aims to capture and address patients' feedback, concerns, and suggestions to enhance the quality of care. This year, the hospital systematically gathered patient complaints, compliments, and suggestions using suggestion boxes placed throughout all hospital services. This process involves collecting and analyzing feedback, then creating action plans and quality improvement initiatives. Additionally, the hospital carried out awareness campaigns on mental disorders, epilepsy, and stigma through various platforms, including media houses, community outreach, and IEC (Information, Education and Communication) activities. These efforts are integral to the "Ijwi ry’Umurwayi" (Patient’s Voice) program.

#### **4.1.3.5. Quality improvement trainings and workshops**

Quality improvement trainings and workshops enhance knowledge, skills, and professional performance. Thus, during the fiscal year 2023/2024, the hospital organized and conducted both external and internal training/workshops sessions based on the accreditation requirements and staff need to ensure a capable workforce and improvement in healthcare service delivery.

The following table displays the training and workshops carried out:

<b>N°</b>	<b>Topics</b>	<b>Internal / External</b>	<b>Month</b>	<b>Status</b>
1	Patient identification policy in neuropsychiatry	Internal	Jul-23	Completed
2	Management of incident, near miss and sentinel events reporting system(in three sessions)	Internal	Jul-23	Completed
3	Receiving complaints, compliments and suggestions policy and procedure (in three sessions)	Internal	Jul-23	Completed
4	IPC (Hand hygiene policy and procedures, Use of PPEs, Spill and accidents management, proper use of medical waste management, Decontamination and disinfections of medical equipment	Internal	Jul, Aug 2023, March 2024	Completed
5	General customer care program	Internal	Aug-23	Completed
6	Management of triage (Triage performance)	Internal	Aug-23	Completed
7	Management of aggression, violence, abuse and loss or damage to property	Internal	Aug-23	Completed
8	Written care plan process	Internal	Aug-23	Completed
9	Quality Improvement methods, Neuropsychiatry, substance abuse, Ethic and deontology, mission vision of the Hospital and Basic Life support (two session)	External	Sep-23	Completed

10	Fire management and Disaster management	Internal	Sep-23	Completed
11	Risk management processes, principles and established risk register communication	Internal	Sep-23	Completed
12	Management of pain assessment and reassessment.	Internal	Oct-23	Completed
13	Quality management and patient safety	Internal	Nov, Dec .2023	Completed
14	Financial management: Inventories and assets management. Management of equipment	Internal	Dec-23	Completed
15	Health information system (Open Clinic)	Internal	Dec-23	Completed
16	Training on new lab staff on cobas platforms, TDM, Dos, and lab operations	External/Internal	Jan-24	Completed
17	Patient and family rights	Internal	Jan-24	Completed
18	Basic Life Support and ACLS	Internal	Feb-24	Completed
19	Local anaesthesia and sedation	Internal	Feb-24	Completed
20	Quality improvement methods, Neuropsychiatry, psychopharmacology, substance abuse, aggression management, nursing care plan, Ethic and deontology, mission vision of the Hospital and phlebotomy, sign language, quality sample collection and transportation	External	Mar-24	Completed

21	Sign language, Ethic and deontology, mission vision of the Hospital, burnout management, nursing assessment/interventions , and leadership	External	Mar-24	Completed
22	Mental health and HIV integration (Two sessions)	External	Mar-24	Completed
23	IPC(Decontamination and disinfections of medical equipment)	Internal	Mar-24	Completed
24	In service training on quality sample collection and transportation	internal	Apr-24	Completed
25	Workshop on accreditation risk areas	internal	Apr-24	Completed
26	Management of health information	Internal	Apr-24	Completed
27	Workshop on Hospital formulary lists, Therapeutic Guide, and Laboratory protocols	Internal	May-24	Completed
28	Pharmacovigilance	Internal	June	Not Carried out

Figure 21: The training and workshops carried out

Based on the training plan for the Fiscal Year 2023/2024, its implementation was achieved at 96%, as it was shown in the table above.

#### 4.1.4. Hospital Accreditation

Accreditation is regarded as one of the key benchmarks for measuring the quality of an organization and the hospital standards are organized in a framework of 5 risk areas: (1) leadership process and accountability, (2) competent and capable workforce, (3) safe environment for staff and patients, (4) clinical care of patients and (5) quality improvement. During the year 2023-2024, the hospital participated in the Accreditation survey and we look forward to the results of the evaluation.

The used criteria to determine Level I, II and III Recognitions:

Level I Recognition	Level II Recognition	Level III Recognition
Overall average score of 85% at Level I	Level I recognition must be achieved and maintained Overall average score of 75% at Level II	Level I & II recognition must be achieved and maintained overall average score of 70% at Level III
Average score of 75% for each risk area at Level I	Average score of 70% for each risk area at Level II	Average score of 60% for each risk area at Level III
Overall average score of critical standards of 80% at Level I	Level I critical standards are met at 100% Overall average score of critical standards of 80% at Level II*	Overall average score of critical standards of 100% at Level III

Table 50: The used criteria to determine Level I, II and III Recognitions

#### 4.1.5. Conclusion

Education is the foundation for developing skilled professionals, while research drives innovation and evidence-based practices in the field. Continuing Professional Development (CPD) ensures ongoing competency and adaptation to evolving standards, contributing to quality improvement across the profession. Accreditation provides a formal recognition of excellence, reinforcing a commitment to high standards and accountability. The hospital makes effort to ensure that the quality of services is improved in all areas, and the results are showing.

#### 4.2. Medication-Assisted Treatment (MAT) program

On June 04, 2024, Ndera Neuropsychiatric Teaching Hospital, through its branch Icyizere Psychotherapeutic Center, launched a Medication-Assisted Treatment (MAT) program to address the growing problem of opioid use disorders (OUD). This project introduced the use of Methadone initially, followed by Buprenorphine and Naltrexone as alternative treatments, coupled with psychosocial interventions, to provide comprehensive care for individuals suffering from OUD.

From 2020 to 2022, Ndera Neuropsychiatric Teaching Hospital recorded 4,101 cases of substance use disorders, with 5.6% (223 patients) specifically dealing with OUD (Ndera, 2022). Similarly, Huye Isange Rehabilitation Center reported that 34.3% of its 1,744 patients from 2015

to 2022 had OUD (HIRC, 2022). Additionally, a study by Twahirwa Rwema et al. (2021) highlighted that heroin is the primary drug of choice for 99% of people who inject drugs in Kigali, Rwanda.

At the time, Rwanda lacked medically assisted treatment options for opioids, leading to immense suffering for patients and their families. Those with financial means often sought treatment abroad, leaving the majority without access to essential care. As Rwanda's neuropsychiatric referral hospital, Ndera Neuropsychiatric Teaching Hospital is committed to addressing this critical gap.

Researches indicate that combining medication with therapy can effectively treat substance use disorders and support long-term recovery. MAT has been shown to improve patient survival, increase retention in treatment, reduce criminal activities related to substance use, and enhance employment prospects. Statistics reveal that up to 90% of patients who undergo MAT maintain sobriety for at least two years. This project will provide one year of methadone treatment to the patients enrolled in the pilot phase and research will be carried out to measure the outcomes of methadone maintenance then the result will be considered to improve the clinical practice.

The project has three phases to be implemented in three years, it will currently concentrate on Phase One, where patients will receive Methadone at Icyizere Center with regular follow-ups. The treatment will involve:

- (i) Support Services, which will incorporate counseling, support groups, and other psychosocial interventions; and
- (ii) Evaluation of effectiveness of methadone maintenance to provide an evidence-based treatment.

## **CONCLUSION**

The level of achievement of Ndera Neuropsychiatric Teaching Hospital in the year 2023-2024 was outstanding. We are pleased to declare that the hospital activities were implemented as planned. The hospital was able to begin implementation of the new organizational structure, which was looked forward to for many years, and many achievements were and will always be realized, thanks to the opportunities and responsibilities brought by the structure.

The hospital makes effort to ensure that the quality of services is improved in all areas, and the results are showing. We kept working on quality improvement of our services because the patients' satisfaction is our priority. The hospital has invested in capacity-building of employees to develop and strengthen their skills, abilities, processes and resources through continuous training to both health staff and supporting staff, which the hospital needs to survive, adapt, and thrive in a fast- objective achievement. As a teaching hospital, we are also delighted to have given practice opportunities to students from different universities and higher learning institutions in Rwanda and abroad; which does not only contribute to their career development, but also creates more actors in mental healthcare and neurology in Rwanda.

We thank the Government of Rwanda, the Brothers of Charity and other partners who made a huge contribution to the development of the hospital. We value everyone's role in the realization of the 2023/2024 action plan; the Ministry of Health, Rwanda Biomedical Center (RBC) and other partners, and last but not least, the hospital's staff. The hospital targets to increase the level of achievement of the coming year's action plan.

Done at Ndera, on 2<sup>nd</sup> October 2024.

Brother Charles NKUBILI

Director General



