Non-Communicable Diseases: A Significant Cause of Death among People Living with HIV in Nigeria. (L-07)

Author 1 : Chiamaka Onuoha [1], Author 2 Olaposi Olatoregun [2], Uchechukwu Chinedu [3], Kehinde Balogun [4], Chinenye Henshaw [5] for the Research Group Name (**Chiamaka Helen Onuoha**)
Public Health Information, Surveillance Solution, and Systems, APIN Public Health Initiatives, Abuja, Federal Capital Territory, Nigeria.

BACKGROUND

Antiretroviral therapy (ART) has significantly reduced AIDS-related deaths, yet death rates remain higher among people living with HIV (PLHIV) compared with individuals without HIV. This has been partly attributed to a higher risk of non-communicable diseases (NCDs) among PLHIV. Providing insights into NCDs' contribution to the cause of death among PLHIV will guide priority setting for the reduction of mortality among them.

METHODS

Between August 2021 and October 2024, verbal autopsy (VA) data for 11,239 deceased PLHIVs from 657 ART facilities in 33 states was collected from the Nigeria HIV Mortality Surveillance database. Causes of death (COD) were determined using the SmartVA-Analyze (Tariff 2.0 algorithm), and descriptive data analysis was performed in Microsoft Excel.

VA data determined the COD for 11,239 PLHIVs, comprising 6,245 (55.6%) females and 4,994 (44.4%) males. The leading COD was AIDS, accounting for 3,313 deaths (29.5%), followed by non-communicable diseases at 2,136 (19.0%). The most common NCDs were stroke (551; 25.8%), acute myocardial infection (424; 19.9%), diabetes (356; 16.7%), malignancy (265; 12.4%), and chronic kidney disease (235; 11.0%). Among (204: 17.1%) women with malignancies, breast cancer 131; 6.1%) and cervical cancer (26; 1.2%) were the most common. In men, prostate cancer (18; 0.8%) and stomach cancer (6; 0.3%) were most prevalent. For adults aged 15+, the leading NCDs included stroke (550; 25.3%), acute myocardial infection (423; 19.4%), diabetes (356; 16.4%), chronic kidney diseases (229; 10.5%), breast cancer (131; 6.0%) and cirrhosis (126; 5.8%). In the pediatric group (<15), the main causes were digestive diseases (38; 82.6%), childhood cancer (33; 71.7%), chronic kidney disease (6; 13.0%) and other non-communicable diseases (2; 4.3%).

RESULTS

Table 2: Cause of death by Non communicable diseases, and sex

Cause of death	Classification	Sub-classifications	Frequency	NCD %	Female	NCD %	Male	NCD %
Stroke	Non-communicable diseases	Cardiovascular	551	25.8%	285	23.9%	266	28.2%
Acute Myocardial Infarction	Non-communicable diseases	Cardiovascular	424	19.9%	228	19.1%	196	20.8%
Diabetes	Non-communicable diseases	Diabetes	356	16.7%	197	16.5%	159	16.8%
Chronic Kidney Disease	Non-communicable diseases	Genitourinary	235	11.0%	119	10.0%	116	12.3%
Breast Cancer	Non-communicable diseases	Malignant neoplasm	131	6.1%	131	11.0%	0	0.0%
Cirrhosis	Non-communicable diseases	Digestive diseases	126	5.9%	58	4.9%	68	7.2%
Other Non-communicable Diseases	Non-communicable diseases	Other Noncommunicable	69	3.2%	39	3.3%	30	3.2%
Chronic Respiratory	Non-communicable diseases	Respiratory diseases	69	3.2%	39	3.3%	30	3.2%
Digestive Diseases	Non-communicable diseases	Digestive diseases	38	1.8%	21	1.8%	17	1.8%
Leukemia/Lymphomas	Non-communicable diseases	Malignant neoplasm	38	1.8%	21	1.8%	17	1.8%
Childhood Cancer	Non-communicable diseases	Malignant neoplasm	33	1.5%	16	1.3%	17	1.8%
Cervical Cancer	Non-communicable diseases	Malignant neoplasm	26	1.2%	26	2.2%	0	0.0%
Prostate Cancer	Non-communicable diseases	Malignant neoplasm	18	0.8%	0	0.0%	18	1.9%
Esophageal Cancer	Non-communicable diseases	Malignant neoplasm	5	0.2%	4	0.3%	1	0.1%
Stomach Cancer	Non-communicable diseases	Malignant neoplasm	6	0.3%	1	0.1%	5	0.5%
Other Cancers	Non-communicable diseases	Malignant neoplasm	4	0.2%	3	0.3%	1	0.1%
Lung Cancer	Non-communicable diseases	Malignant neoplasm	4	0.2%	2	0.2%	2	0.2%
Other Cardiovascular Diseases	Non-communicable diseases	Cardiovascular	2	0.1%	0	0.0%	1	0.1%
Childhood Cardiovascular Diseases	Non-communicable diseases	Cardiovascular	1	0.0%	2	0.2%	0	0.0%
Total			**2136**		**1192**		**944**	

Table 3: NCD Cause of death by Age Groups

	Pediatrics						Adults											
COD	<1	1-4	5-9	10-14	Total	NCD %	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+	Total	NCD%
Stroke	0	0	0	1	1	**2.2%**	6	4	9	36	47	66	67	92	61	61	101	**550**	**25.3%**
Acute Myocardial Infarction	0	0	0	1	1	**2.2%**	3	8	11	20	30	39	52	83	58	48	71	**423**	**19.4%**
Diabetes	0	0	0	0	0	**0.0%**	1	7	9	17	42	42	35	63	47	49	44	**356**	**16.4%**
Chronic Kidney Disease	0	0	0	6	6	**13.0%**	7	9	11	20	34	35	40	29	13	16	15	**229**	**10.5%**
Breast Cancer	0	0	0	0	0	**0.0%**	2	3	9	17	26	29	9	14	17	3	2	**131**	**6.0%**
Cirrhosis	0	0	0	0	0	**0.0%**	4	5	4	10	20	19	20	17	13	7	7	**126**	**5.8%**
Other Non-communicable Diseases	0	0	0	2	2	**4.3%**	0	1	7	2	4	10	8	19	10	2	4	**67**	**3.1%**
Chronic Respiratory	0	0	0	1	1	**2.2%**	1	2	4	8	13	7	8	4	4	4	13	**68**	**3.1%**
Digestive Diseases	2	19	13	4	38	**82.6%**	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.0%**
Leukemia/Lymphomas	0	0	0	0	0	**0.0%**	2	1	2	4	3	9	5	2	6	3	1	**38**	**1.7%**
Childhood Cancer	1	8	17	7	33	**71.7%**	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.0%**
Cervical Cancer	0	0	0	0	0	**0.0%**	0	0	1	1	4	4	7	1	4	1	3	**26**	**1.2%**
Prostate Cancer	0	0	0	0	0	**0.0%**	0	0	2	0	0	3	1	3	3	2	4	**18**	**0.8%**
Esophageal Cancer	0	0	0	0	0	**0.0%**	0	0	0	0	0	1	1	0	1	2	0	**5**	**0.2%**
Stomach Cancer	0	0	0	0	0	**0.0%**	0	1	0	0	2	1	0	1	1	0	0	**6**	**0.3%**
Other Cancers	0	0	0	0	0	**0.0%**	0	0	0	0	1	0	0	1	1	1	0	**4**	**0.2%**
Lung Cancer	0	0	0	0	0	**0.0%**	0	0	0	1	0	1	0	0	1	1	0	**4**	**0.2%**
Other Cardiovascular Diseases	0	0	0	0	0	**0.0%**	1	0	0	0	0	0	0	1	0	0	0	**2**	**0.1%**
Childhood Cardiovascular Diseases	1	0	0	0	1	**2.2%**	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.0%**
Total	**2**	**8**	**18**	**18**	**46**		**35**	**47**	**88**	**162**	**248**	**281**	**261**	**337**	**249**	**201**	**266**	**2175**	

CONCLUSIONS

This work highlights the importance of closely monitoring the causes of death among PLHIV. Information on mortality trends for PLHIV would guide the implementation of fit-for-purpose interventions to prevent avoidable deaths. Ultimately, these targeted interventions can support the provision of appropriate standards of care, thereby improving their treatment outcomes and reducing mortality rates amongst HIV-positive individuals.

ADDITIONAL KEY INFORMATION

Author Contact Information
onuohachiamaka14@gmail.com
+2348064856719

*A **Poster Development Guide** is included with the notes for this slide. Click View -> Notes to see the guide**.***