

Delays in Accessing Childhood Cancer Treatment in Western Kenya

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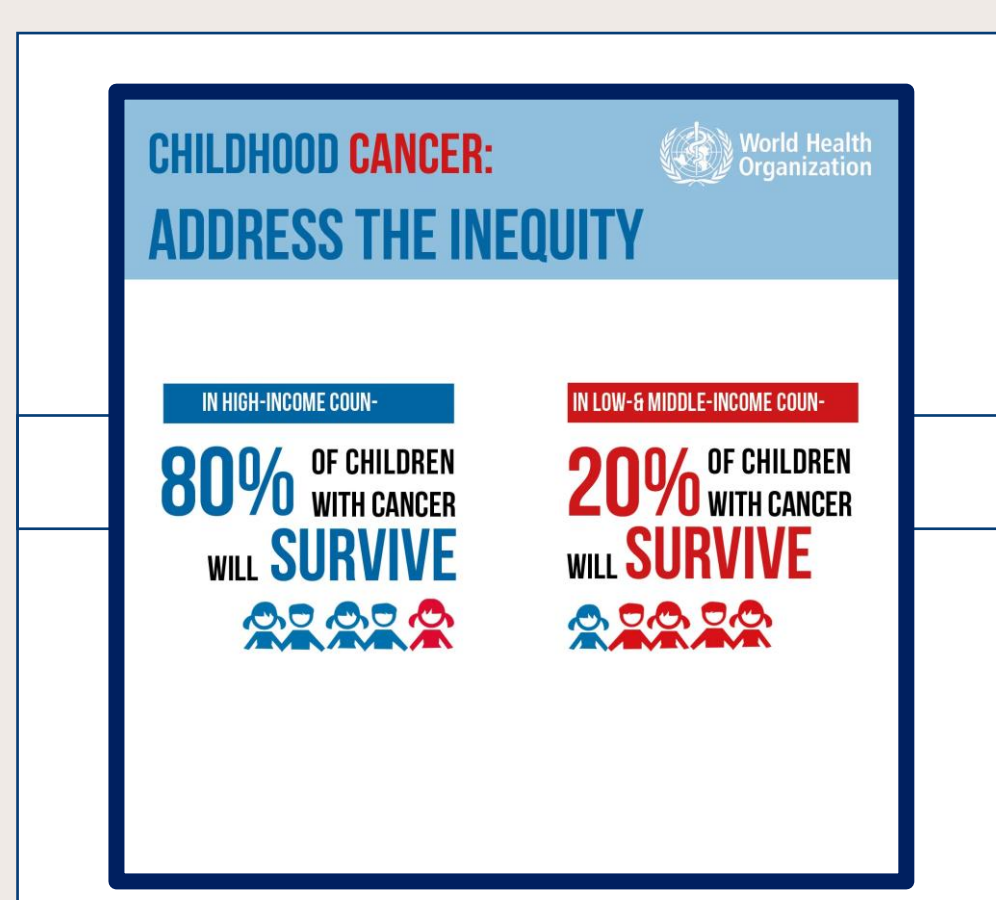
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Background

- Cancer is a leading cause of death for children and adolescents worldwide.
- Globally, at least 400,000 children and adolescents develop cancer every year.
- In high-income countries survival rates approach 80%, but in Africa, over 80% of children still die without prompt access to adequate treatment, let alone the children who die from cancer being undiagnosed.
- Several factors contribute to poor access to cancer care and the current low survival rates of children with cancer in low and middle-income countries (LMIC). Access to childhood cancer care comprises availability, acceptability, affordability and adequacy of health services
- Awareness, and early referral, diagnosis and start of treatment are crucial to improve childhood cancer survival in resource-limited settings, such as Bungoma County in Kenya.

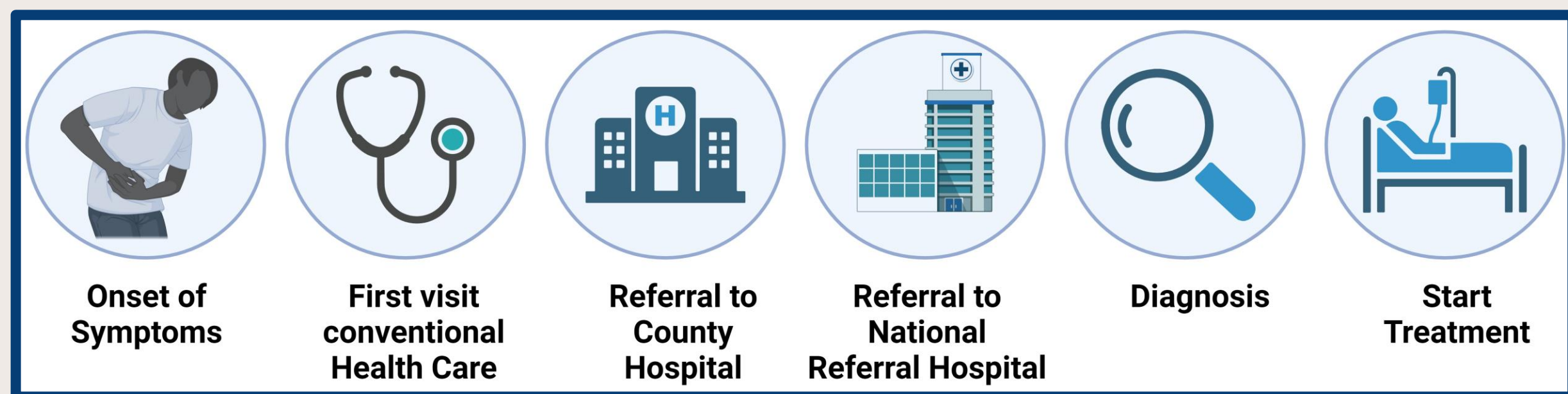
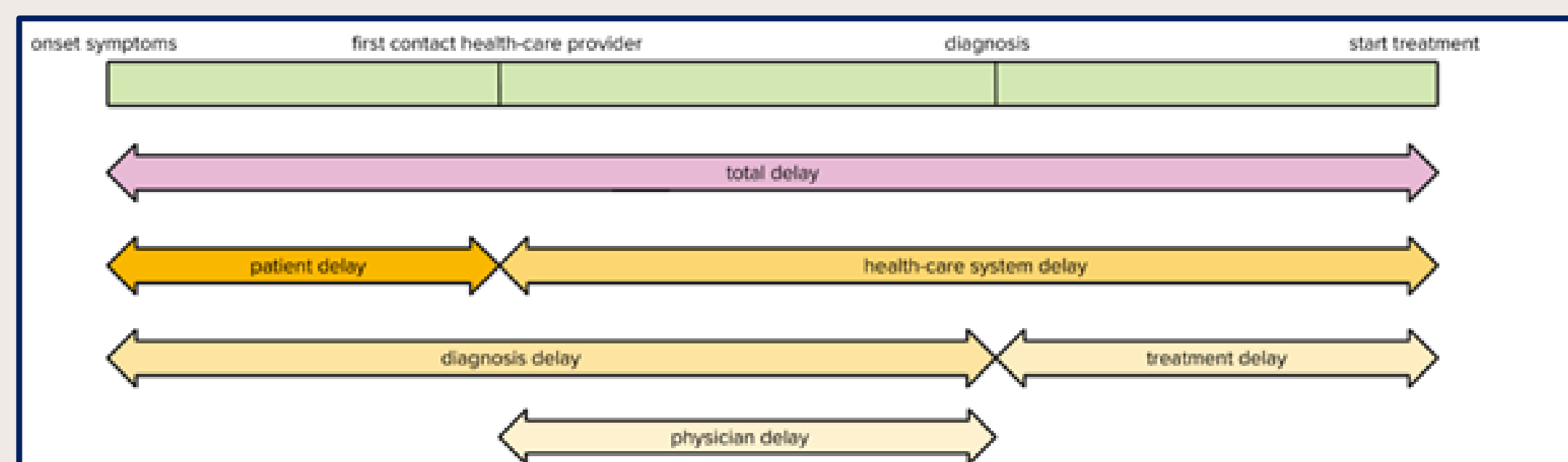


Aim

- To compare the annual number of diagnosed children with cancer from Bungoma County to the expected number in this region;
- To explore diagnosis, treatment and total delay among these children;
- To determine patient characteristics that influence these delays;

Methods

- This study combined a **retrospective medical records review** with an **illustrative case report**.
- Data on delays and socio-demographic and clinical characteristics of children from **Bungoma County** diagnosed with cancer between **2010 and 2016** at MTRH, a large academic hospital, were collected.
- Among these children, the researchers identified a 13-year-old child with Hodgkin's lymphoma. A home-visit was conducted in November 2022 to interview the parents of that child using a semi-structured questionnaire, after obtaining Informed consent.



Results

- Between 2010-2016, **92 children** were referred from Bungoma County.
- The annual average of 13 children constitutes **only 9%** of the expected 150 children developing cancer in this region.
- Most common diagnoses were: non-Hodgkin lymphoma (17%), acute lymphoblastic leukemia (16%), rhabdomyosarcoma (12%).

	Number of patients N=X(%)
Gender	
Male	55 (60%)
Female	37 (40%)
Age at diagnosis (in years)	
Mean ± SD	7.2 ± 3.8
Median (range)	6.7 (0-15.3)
Distance to MTRH	
≤100 km	56 (61%)
>100 km	36 (39%)
Referred from other facility (n=89)	
Yes	84 (94%)
No	5 (6%)
Diagnosed with cancer at other facility (n=88)	
Yes	32 (36%)
No	56 (64%)
Duration of symptoms prior to first hospital admission at MTRH (n=89)	
≤3 months	52 (58%)
>3 months	37 (42%)
Types of cancer	
Solid tumors	44 (48%)
Hematological tumors	48 (52%)
Cancer stage at diagnosis (n=53)	
Low	23 (43%)
High	30 (57%)
Health-insurance status	
Health-insurance	35 (38%)
No health-insurance	57 (62%)
Tribe (n=41)	
Luhya	32 (78%)
Kalenjin	7 (17%)
Kikuyu	1 (2%)
Masai	1 (2%)

- Median total delay** was 108 (7-1731) days.
- Median diagnosis delay** (97 days) was significantly longer than **median treatment delay** (3 days; P<0.001).
- Significantly longer total delay was associated with: referred from another facility (P=0.008), longer symptoms duration (P<0.001), solid cancer type (P=0.013), low stage at diagnosis (P=0.036).
- The case study highlights challenges encountered by families of children with cancer: health beliefs and fear of conventional medicine led to delayed seeking of appropriate treatment.

Future

- Implementing a childhood cancer awareness program in Bungoma County, Kenya
- Training healthcare workers in primary care facilities
- Creating awareness in communities on childhood cancer

Conclusions

Delays in access to childhood cancer treatment are considerable. Several factors impact delays, such as referral from another health care facility and solid cancer type Increasing awareness amongst communities and primary care physicians is an important step towards reducing delay and ultimately improving childhood cancer survival.

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Increased Awareness

Early Referral

Early Diagnosis

Early initiation of Treatment

Better Survival