

Eye Care Services in South Sudan

- Prevalence of glaucoma at Buluk Health Eye Centre
- Male participation in antenatal care
- HIV among women attending antenatal care
- Tonsillectomy care patterns
- Musculoskeletal disorders
- Case report: lower back hydatid cyst
- And much more . . .

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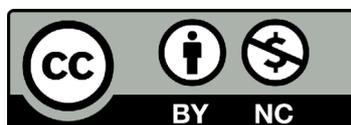
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EDITORIAL

- Eye care in South Sudan [Kenneth Lado Lino Sube](#) 86

RESEARCH ARTICLES

- Prevalence of glaucoma among patients attending Buluk Eye Centre, Juba, South Sudan: a one-year study [Kenneth Lado Sube](#), [Joseph Monday Lawrence](#), [Subek John Lado](#), [Karlin Aleso Sule](#), [Mabeny Thiik Awan](#), [Catherine Virmo Oduh](#), [Howzer Ingoro Angelo](#), [Namoun James Monjok](#), [Peter Makuac Manyuat](#), [Justin Bruno Tongun](#), [Joseph Daniel Lako](#) and [Akway Cham](#) 87
- Social demographic determinants of male participation in antenatal care in Nyamagana District, Tanzania [Sarah M. Chamos](#), [Alen Kinyina](#) and [Harrieth Mtae](#) 92
- Prevalence of HIV among pregnant mothers receiving antenatal care at Kator Primary Health Care Centre, Juba, South Sudan [Kon Paul Alier](#), [Akway Medho Cham](#), [John Ofere Oliwa](#), [Pean Mayang Chelieny](#), [Hilary Haswani Orotu](#), [Madut Marko Mathiang](#) and [Athiei Majak Lual](#) 97
- A survey of tonsillectomy care patterns in Tanzania [Daudi Ntunaguzi](#), [Christopher Simon Mwansasu](#), [Aveline Aloyce Kahinga](#) and [Zephania Saitabau Abraham](#) 101
- Musculoskeletal disorders among patients during a one-day outreach at Juba Military Hospital [Mapuor M.M. Areu](#), [Brian B. B. Madison](#), [Akau A. Aguto](#), [James Alphonse](#), [Omojowk J. Bachay](#), [Aguer Warebek](#), [Zecharia P. Ajak](#) 105

MAIN ARTICLE

- How to use experience to improve teaching practice [Rich Bregazzi](#) 108

CASE REPORT

- Lower back musculoskeletal hydatid cyst: a rare presentation in a South Sudanese patient [Lodu Swokiri N Kuju](#), [Kenneth Lado Sube](#), [Justin Bruno Tongun](#) and [Joseph Daniel Lako](#) 110

SHORT COMMUNICATIONS

- “How-to” Teaching Videos—inspired by work in South Sudan [Deborah Van Dyke](#) 114
- Role of the community pharmacy in the control of pandemics in South Sudan [Oliver Batista Ugoro](#) 116
- Profile of the Department of Paediatrics and Child Health, Al-Sabbah Children’s Hospital, Juba, South Sudan [Amanda Billy Berto Madison](#) 118

OBITUARY: Dr Frederick Khamis Tawad 120

BACK COVER: WHO: Recovering from Monkeypox at home 122

FRONT COVER: Using loupes for eye screening and torch for illumination during eye care outreach (photo credit: Kenneth Sube)

Eye care in South Sudan

The World Health Organization action plan of 2014-2019 focused on encouraging member regions/countries to play a role in reducing avoidable visual impairment and securing access to rehabilitation services for the visually impaired. Moreover, member countries are urged to integrate eye care services into the health system at all levels.

The leading causes of blindness in South Sudan are cataract, trachoma, glaucoma, and onchocerciasis. Other eye conditions include allergic conjunctivitis and refractive errors. There is variability in the pattern of eye diseases in South Sudan. From the outreach activities conducted mostly by the Ophthalmological Association of South Sudan (OASS) across the country, cataract is the leading cause of blindness in all the three regions. The second leading cause is glaucoma in Greater Bahr El Ghazal, trachoma in the Greater Upper Nile and onchocerciasis in some parts of Greater Bahr El Ghazal and Equatoria regions. Some areas in Greater Equatoria (Eastern and Central) have high a prevalence of trachoma.

To reduce these burdens, the Ministry of Health at national and state level has created tertiary and primary centres for eye care services namely: Buluk eye centre (Juba), Juba Teaching Hospital eye department, Wau Teaching Hospital eye department, Rumbek state hospital eye department, Martha eye clinic (Yei), Lui county hospital, Ave Maria eye clinic (Nzara county hospital), Nimule county hospital, Kapoeta Mission hospital, and Torit state hospital. There is just one rehabilitation centre for blindness. However, there are seven centres for refraction (all in Juba). There is one institute of ophthalmology for middle cadre training.

Outreach activities sponsored by the Ministry of Health and different supporting partners, assisted by OASS successfully conducted over 11,000 cataract surgeries (which helped to restore sight), and over 2,000 trichiasis lid surgeries (which helped to reduce blindness due to cornea opacities) across the country in areas whose population could not access eye care services in a nearby locality. Other partners participated in implementing mass drug distribution with ivermectin to reduce the burden of onchocerciasis. Currently there is an ongoing trachoma survey in endemic areas.

For a better eye care service in the country, I recommend the following:

- Annual financial support for outreach activities to areas which cannot access eye care services and which have a high burden of avoidable and treatable blindness.
- Encourage more partners to invest and support the national eye care services directorate in the national Ministry of Health.
- Integrate eye care services into the health system at all levels
- Financial support to the Institute of Ophthalmology in order to increase more human resources for eye care.
- Promote cost-effective integrated eye camps that involve service delivery teams (cataract surgery and trichiasis eye lid surgery) and other eye campaigns (trachoma survey, mass drug distribution, etc.) in order to enhance the uptake of these activities.

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Prevalence of glaucoma among patients attending Buluk Eye Centre, Juba, South Sudan: a one-year study

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ABSTRACT

Introduction: Glaucoma remains the second leading cause of blindness worldwide. Early detection and treatment play a key role in glaucoma management. The aim of this study was to determine the prevalence of glaucoma among patients attending the eye clinic at Buluk Eye Centre from 1st January to 31st December 2017.

Method: This study was a cross-sectional retrospective study using data extracted from the registration cards of patients at Buluk Eye Centre from 1st of January 2017 to 31st of December 2017. A datasheet was used to collect the relevant variables including demographic variables. Data were entered, organized and analysed using SPSS version 21 [IBM SPSS Statistics] and $p < 0.05$ was considered statistically significant.

Results: The studied population was 16,727 patients (33,454 eyes) seen, age range from 7 months to 90 years, (mean 56.7, SD 14.7). There were 63% females and 37% males, ratio of 1.7:1 ($p < 0.05$). Glaucoma accounted for 2.3% of diseases seen with $p < 0.05$. Females (58%) were more affected than males (42%), with age group 46-60 years being the most affected (36.9% $p < 0.05$). Most of the patients (71.9%) had visual acuity of less than 3/60 in both eyes ($p < 0.05$). The highest proportion of glaucoma cases (29.4%) presented in July to September, with the least (21.2%) from January to March. Most of the glaucoma cases (39%) originated from Central Equatoria and the least (1%) from Abyei.

Conclusion: Glaucoma remains a significant cause of severe sight loss in South Sudan, particularly affecting females and those aged 45-60 years.

Key words: Glaucoma, Buluk Eye Centre, Optic nerve cupping, South Sudan.

INTRODUCTION

Globally glaucoma is the second leading cause of blindness. It accounts for 8% (3.1 million) of the total blindness (39 million) worldwide.^[1] Within Africa 15% of blindness is caused by glaucoma.^[2] It has been estimated that bilateral blindness due to glaucoma will increase from 8.4 million to 11.1 million between 2010 and 2020.^[3]

Blindness due to glaucoma is influenced by many factors including: the time of onset, natural history, access to eye health services, quality of care provided by health institutions, and compliance with treatment and follow up.^[2] Furthermore in Africa there is poor or no awareness of the condition and limited access to care. The availability of diagnostic equipment and medical and surgical management is frequently less than ideal.^[2] Insecurity, corruption and poor leadership in Africa have worsened the situation.

Glaucoma prevention and treatment has gained international recognition. This is seen in the World Health Organization VISION 2020 campaign. Africa hosted its first World Glaucoma Summit in Accra, Ghana in August 2010 to commit African countries to strengthening and incorporating glaucoma management, training and education in their existing national programmes.^[4] Likewise, a meeting in Kampala, Uganda in April 2012 made a resolution in which glaucoma managers issued a call “to highlight the importance of controlling vision loss from glaucoma as an integral part of eye healthcare and in health and safety policies.”^[5]

METHOD

Study site, type of study and population

This study was conducted at Buluk Eye Centre (BEC), Juba, from the 1st January to 31st December 2017. It was a cross-sectional retrospective study which involved analysis of all records of patients attending eye clinic during that period. Patients attending eye care services at BEC undergo the following tests/examinations: visual acuity, intraocular pressure (IOP) using iCare automated tonometer, anterior segment examination using slit lamp (binocular microscope), posterior segment examination using direct or ophthalmoscope or 90D lens after full dilation with 5% tropicamide eye drop and refraction. Diagnosis of glaucoma is mainly based on the funduscopy examination of the optic nerve head. Any cup to disc ratio

>0.6 is considered as glaucoma suspect. IOP helps in the diagnosis of different types of glaucoma. Normal IOP ranges from 10-21 mmHg.

Data were collected using a structured form that included: date, name, age, sex, visual acuity and diagnosis. All patients who attended BEC from 1st January to 31st December 2017 were included.

The collected variables were entered into Excel and then transferred to SPSS version 22. Mean, mode and median were calculated with their standard deviations. Chi-squared tests were used to compare variables and p-value of less than 0.05 were considered statistically significant. Data are displayed in pie charts, bar charts and tables as appropriate.

Ethical Clearance

Ethical approval for the study was obtained from the ethical committee of the College of Medicine and the national Ministry of Health.

RESULTS

The studied population was 16,727 patients (33,454 eyes) seen at BEC in 2017. The age ranged from 7 months to 90 years with a mean of 56.7 (SD 14.7). There were 63% (10538) females and 37% (6189) males in the ratio of 1.7:1. Glaucoma accounted for 2.3% (377) of eye diseases (Table 1). Most glaucoma cases, 39% (145) originated from central Equatoria and the least, 1% (4) from Abyei (Figure 1).

The highest proportion of glaucoma cases, 29.4% (111) presented from July to September with the lowest 21.2% (80) from January to March as shown in Figure 2.

More females 58% (220) were affected with glaucoma than males 42% (157) with age group 46-60 years being

Table 1. Distribution of common five eye diseases and glaucoma at Buluk Eye Centre, 2017

Disease	n (%)
Allergy conjunctivitis	2588 (15.5)
Bacterial conjunctivitis	831 (5.0)
Dry eye syndrome	789 (4.7)
Cataract	601 (3.6)
Glaucoma	377 (2.3)
Other eye iseases*	11,541 (69.0)
TOTAL	16,727 (100)

*Other eye diseases: blepharitis, trichiasis, corneal foreign body, corneal scar, optic atrophy, stye, scleritis, bacterial keratitis, uveitis, onchocirciasis volvos, xerophthalmia, staphyloma, refractive error, chalazae, allergic conjunctivitis, pterygia, pseudophakia, retinoblastoma, corneal dystrophy, fungal keratitis, ocular injury, ophthalmia neonatrum, age related macular degeneration, phthisis bulbi, facial nerve palsy, episcleritis, endophthalmitis, aphakia, dendritic ulcer, retinal degeneration, maculopathy, amblyopia, cortical blindness, and retinal detachment.

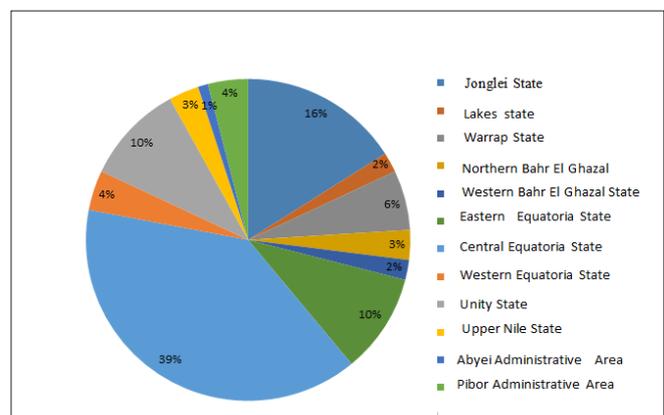
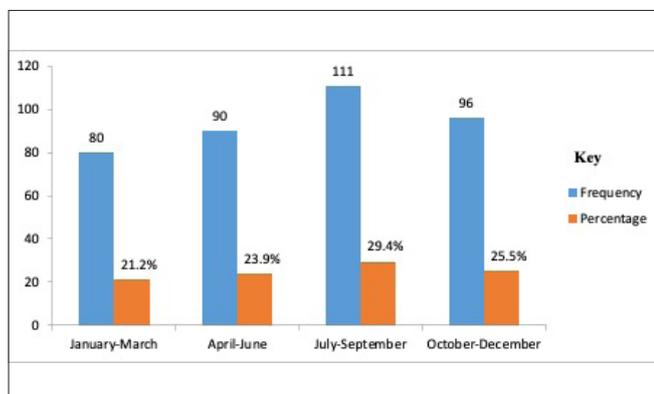


Figure 1. Distribution of Glaucoma according to patients’ residential area attending eye care services at Buluk Eye Centre, 2017.

Table 2. Distribution of age, sex, affected eye and visual acuity among glaucoma patients attending eye care services at Buluk Eye Centre, 2017

Age group (years)	Male n (%)	Female n (%)	Total n (%)	p-value
<15	9 (64.3)	5 (35.7)	14 (3.7)	
15-30	11 (42.3)	15 (57.7)	26 (6.9)	
31-45	51 (68)	24 (32)	75 (19.8)	
46-60	70 (50.2)	69 (49.6)	139 (36.9)	
61-75	71 (64)	40 (36)	111 (29.4)	
>75	8 (66.7)	4 (33.3)	12 (3.2)	
Total	220 (58)	157 (42)	377 (100)	0.020
Visual Acuity	Right eye n (%)	Left eye n (%)	Both eyes	
≥6/18	51 (49.5)	52 (50.5)	103 (13.7)	
<6/18-6/60	33 (60)	23 (40)	56 (7.4)	
<6/60-3/60	32 (50)	32 (50)	64 (8.5)	
<3/60-PL	267 (50.3)	264 (47.7)	531 (70.4)	
Total	383 (50.8)	371 (49.2)	754 (100)	0.001

*Figure 2. Quarterly distribution of glaucoma cases attending eye care services at Buluk Eye Centre, 2017.*

the most affected 36.9% (139). Those older than 75 years were the least affected 3.2% (12) with p-value 0.020 (Table 2).

The majority of glaucoma patients 70.4% (531) had visual acuity of less than 3/60 in both eyes. While the minority of glaucoma patients 13.7% (103) had visual acuity of 6/6 to 6/18 in one or both eyes with p-value 0.000 (Table 2).

DISCUSSION

Glaucoma is considered as the leading cause of irreversible blindness^[6] in the world and second leading cause of blindness after cataract.^[7]

In this study female attendance was higher than male. Females may be more aware of their eye diseases than males and consequently oriented to identify eye care service delivery centres like BEC. Moreover, they were more affected with glaucoma than males. The sex distribution of glaucoma is uncertain with a review^[8] showing that females are more affected than males while others have contradicting findings [add references]. Glaucoma in this study could not be classified due to lack of equipment.

Studies of worldwide primary open angle glaucoma prevalence among people aged 40 years and above ^[2] have showed estimates of 2.31% in Asia, 3.65% in Latin America and the Caribbean, and 4.20% in Africa. Glaucoma prevalence was 2.3% in this study. This is less than the global prevalence of glaucoma of 3.54%,^[8] Tanzania 4.5%,^[3] and South Africa 5.3%.^[3] In Uganda, the all-cause incidence of blindness was 9.9/1000 persons per year with glaucoma accounting for 3.6% of incident cases (i.e., 0.36/100 per year).^[9] In the Barbados eye studies open angle glaucoma was the second leading cause of incident blindness, accounting for 14.3% of the 9-year incidence (190) i.e., 0.14% over 9 years.^[10]

These differences may be due to the fact that these studies were population based in comparison to our study. Some studies done in Nigeria showed prevalences of 0.55%, 1.02% and 2.1%.^[2] Even though one study is similar to ours, the methodology is different. Most of these studies used different variables to define and diagnose glaucoma: IOP measurements, cup-disc ratio using optical coherence tomography and visual field test. In this study direct ophthalmoscopy was used to estimate the cupping of the optic nerve head. This is a subjective technique, so the results are not reproducible. Most of the patients, 71.9%, had visual acuity of less than 3/60 in both eyes.

The World Health Organization classifies vision into four categories namely:

1. Normal vision or no visual impairment: 6/6-6/18.
2. Visual impairment : <6/18-6/60.
3. Severe visual impairment : <6/60-3/60
4. Blindness: <3/60 to no light perception.

In our study, a very high proportion of patients, 71.9%, were blind in both eyes. Sube et al^[11] have shown only 16.7% blind due to glaucoma in a rural outreach programme. Moreover, studies done in Ghana showed 34% of glaucoma patients blind in both eyes.^[12] Buluk Eye Centre is now the only specialized facility in the whole South Sudan. Accessibility to it is very expensive especially to patients coming from outside to the capital city. Hence patients present late to the centre.

Most of the patients presented to the centre in the 3rd quarter of the year. This is because during the beginning of the year most of the patients are financially insecure, but this tends to improve by the 3rd quarter.

Buluk Eye Center is located in the capital city Juba, which is within the Central Equatoria state, in the south of South Sudan. This makes it easily accessible to people from Central Equatoria. As a result of this, 39% of glaucoma patients were from this state. Abyei is the least accessible from Juba and had the lowest attendance accordingly.

CONCLUSION

This study has highlighted that glaucoma is still the leading cause of irreversible blindness among patients attending eye care services at Buluk Eye Centre. Females were more affected than males.

RECOMMENDATIONS

The followings are the recommendations from the study:

1. Provision of diagnostic tools for glaucoma diagnosis like autotometry, visual field test, ocular coherence tomography, gonioscopes, etc.

for BEC and the eye department at Juba Teaching Hospital by the Ministry of Health.

2. Conduct population-based study for glaucoma in the country.
3. Expansion of eye care services outside the capital for better eye care by integrating them into the health care system by the Ministry of Health.
4. Development of health education tools for glaucoma by the national Ministry of Health.
5. Promotion of health education on glaucoma via different types of media outlets present in the country by the national and state Ministries of Health.
6. Involvement of interested partners in eye care services by the Ministry of Health to scale up glaucoma preventive programmes nationally as well as at the state levels.
7. Scaling up training of more ophthalmic cadres by the Ministry of Health by funding the existing Institute of Ophthalmology in order to increase the workforce.
8. Scaling up of outreach programmes by securing additional funding, in order to reduce the burden of blindness in the country.
9. Implementing a 5-year study at BEC for glaucoma.

Competing interests

The authors declare that they have no competing interests, except Joseph Monday who works as medical director of BEC.

Authors' contributions

SJL, KAS, MTA, CVO, HIA, NJM, and PMM designed proposal, data collection and manuscript writing. JBT and JDL proof-read the manuscript. AC, JML and KLS supervised the activities. KLL prepared the final manuscript and submitted it for publication.

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Clinical management and infection prevention and control for monkeypox: Interim rapid response guidance, 10 June 2022

In the context of the current multi-country monkeypox outbreak, WHO has developed interim rapid response guidance for the clinical management and infection prevention and control of monkeypox for health care and community settings.

It includes considerations for certain populations such as patients with mild disease with considerations for community care, patients with moderate to severe disease, sexually active persons, pregnant or breastfeeding women, children and young persons. The guidance also addresses considerations for clinical management such as the use of therapeutics, nutritional support, mental health services, and post-infection follow-up.

The document provides guidance for clinicians, health facility managers, health workers and infection prevention and control practitioners including but not limited to those working in primary care clinics, sexual health clinics, emergency departments, infectious diseases clinics, genitourinary clinics, dermatology clinics, maternity services, paediatrics, obstetrics and gynaecology and acute care facilities that provide care for patients with suspected or confirmed monkeypox.

See here: <https://www.who.int/publications/i/item/WHO-MPX-Clinical-and-IPC-2022.1>

Social demographic determinants of male participation in antenatal care in Nyamagana District, Tanzania

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ABSTRACT

Introduction: Globally, poor male participation in antenatal care (ANC) and reproductive health issues is still a challenge towards improvement of maternal and child health. Quality antenatal care and birth outcomes depend on the shared responsibility between men and women.

Objectives: The aim of this study was to assess the level of male participation in ANC and the associated social demographic determinants.

Method: The study was cross-sectional and was based in the community in the Nyamagana district, Tanzania. Male partners aged 18-49 years were interviewed using the four dichotomized (yes or no) variables to determine the level of male participation in ANC. The data were analyzed by using the Statistical Package for Social Sciences (SPSS Version 24). Chi-square test was used to determine the association between demographic characteristics and the level of male involvement in ANC.

Results: The level of male participation was high in this study (76.3%). Men with a primary level of education were twice (AOR 2.15, 95% CI [1.15–4.02], p-value 0.01) as likely to participate in ANC compared to men with no formal education. If the number of children was more than two, there was a significant association with male participation in ANC (OR 1.57, 95% CI [1.12–1.77], p =0.02).

Conclusion: The level of male participation in ANC is high in Nyamagana district. The number of children and level of education are social demographic determinants of male participation in ANC.

Key words: Male participation, Antenatal care, Pregnancy, Tanzania

INTRODUCTION

The provision of quality antenatal care (ANC) services involving men contributes to the empowerment of women and the achievement of the Sustainable Development Goals (SDGs) by reducing maternal and neonatal deaths.^[1] However, the level of male participation in reproductive health issues, including ANC in sub-Saharan Africa (SSA), is still challenging.^[1]

The necessity to include male partners in reproductive, maternal and child health care was established by the International Conference on Population and Development (ICPD) held in 1994 in Cairo, Egypt. This prompted nations to make special efforts to encourage men to share responsibility for safe motherhood and to emphasize their active involvement in sexual and reproductive health behaviours, including participation in ANC and family planning.^[1,2]

The World Health Organization (WHO) in 2015 set out recommendations on health interventions to promote maternal and newborn health to meet SDG 3.

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One of the recommendations urged the promotion of active involvement of men during ANC, childbirth and postnatally.^[3] In response to poor male involvement in ANC, Tanzania launched a male involvement strategy in 1994 with the intention of including men in all aspects of maternal and child health (MCH).^[4]

The Tanzania Health Sector Strategic plan 2015–2020 (HSSP IV) and The National Road Map Strategic Plan to Accelerate Reduction of Maternal, Newborn and Child Deaths in Tanzania 2008-2015 highlight the responsibility of men in supporting their partners to improve their demand for, and access to, quality health services.^[4] In the Mwanza region maternal mortality approaches at 305 per 100,000 live births while the proportion of mothers who give birth without skilled birth attendants is 54%.^[5]

Out of the seven districts in the Mwanza region, Nyamagana has the highest maternal mortality rate contributing about 42% of all maternal deaths in the region.^[5] Nkya and Kohi^[5] highlighted some factors linked to high maternal mortality in the district that include underutilization of maternal healthcare services and poor knowledge about danger signs during pregnancy.

Despite the advantages of male participation in improving maternal health outcomes, the level of male participation remains low, suggesting barriers that hinder male participation.^[6] This study aimed to identify the level and report the social demographic determinants of male involvement in ANC in Nyamagana district.

METHOD

Study design, area, and period

This study was cross sectional based in the community and conducted from May to July 2021 in Nyamagana which is one of the seven districts of Mwanza region in Tanzania. The district comprises eleven wards and one division. In 2012, the population of the Nyamagana district was 363,452.^[7] It has four hospitals, seven health centres, 17 dispensaries, four maternity homes, and seven private clinics.^[5] The district was selected for this study due to a high rate of maternal mortality which may be attributed to the poor utilization of maternal health services.

Population and eligibility criteria

Eligible participants were men aged 18–49 years having a partner with a child born within two years and residing in the selected areas. Exclusion criteria were critical illness, inability to talk or a man with hearing impairment during interview.

Sampling techniques

With the help of Ward Executive Officers (WEO), a

list of all wards in the district was obtained. Six villages were selected from the master list: two from rural, two from semi-urban and two from urban areas to ensure a wide representation. Inclusion of respondents was by random selection of households in each village. Eligible men present in the household at the time of the visit, and who consented to participate, were interviewed until we reached the sample size.

Study variables

The main outcome variable was the level of male participation in ANC. The predictor variables were age, level of education, religion, employment status, marital status and number of children.

Measurement of variables

The participation of men index was calculated using four dichotomized (yes or no) variables:

1. Accompanying his partner to ANC services at least twice during pregnancy
2. Providing financial support during pregnancy
3. Discuss together on where and when to go for ANC services
4. Jointly discuss maternal and newborn health outcomes with health care providers (HCPs).

We used the four variables to determine the level of male participation in ANC service, whereby each variable scored one if done and zero if not done. A summation of scores were calculated by adding scores of each variable done by a participant. The level of male participation was categorized as low with a score 0–2 and classified as high with a score of 3–4. Previous studies applied this approach of categorization.^[1]

Data analysis

Data analyses were performed using the Statistical Package for Social Sciences (SPSS Version 24). Chi-square test was used to indicate significant associations between male participation in ANC and the demographic characteristics. The level of significance was set at p-value <0.05.

Ethical consideration: Ethical approval was obtained from the Open University of Tanzania.

RESULTS

Level of male participation in ANC

Level of male participation in ANC was assessed by the variables shown in Figure 1. From a total of 201 respondents, 76.3% reported a high level of participation in ANC. Figure 1 indicates most participants (87%)

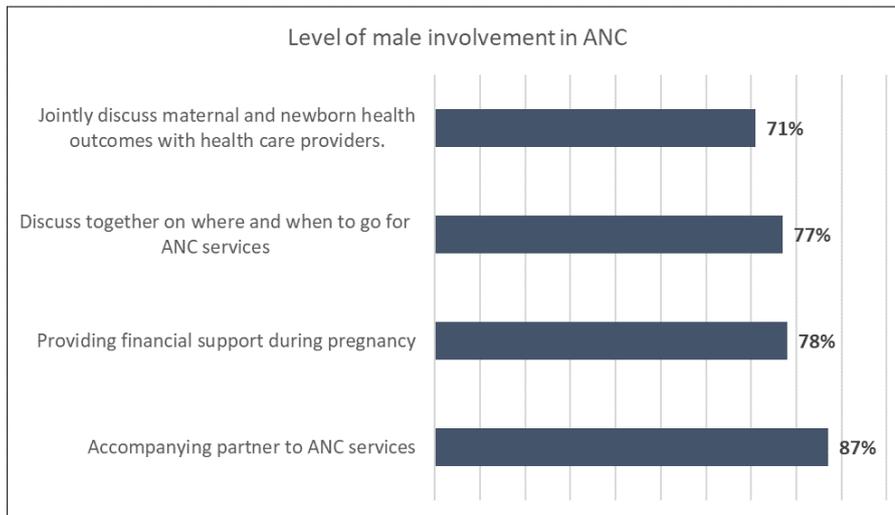


Figure 1. Level of male participation in ANC in four classified variables.

accompany their partners to ANC services. Most of the participants (78%) provided financial support during pregnancy. The majority of the respondents (77%) discuss with their partners about when and where to go for ANC services, while 71% of the respondents jointly discuss about maternal and newborn health outcomes with HCPs.

Social demographic determinants of male participation in ANC

Table 1 indicates that the demographic factors of respondents including level of education (p-value 0.003), number of children(p-value 0.011) and

Table 1. Social-demographic determinants of male participation in ANC

	Male Participation in ANC			Chi-square	p-value
	Yes n(%)	No n(%)	Total n		
Age (years)					
18-29	52(86.7)	8(13.3)	60	4.225	0.143
30-39	89(77.4)	26(22.6)	115		
40-49	12(46.2)	14(53.8)	26		
Number of children					
1-2	71(76.1)	37(34.3)	108	6.513	0.011
≥3	82(88.2.)	11(11.8)	93		
Level of education					
No formal education	13(68.4)	6(31.6)	19	13.103	0.003
Primary	105(76.1)	33(23.9)	138		
Secondary and above	35(79.5)	9(20.5)	44		
Employment status					
Not employed	41(71.9)	16(28.1)	57	4.612	0.131
Self employed	94(81.7)	21(18.3)	115		
Employed civil / private sector	18(62.1)	11(37.9)	29		
Marital Status					
Single	22(78.6)	6(21.4)	28	4.674	0.103
Married	111(75.0)	37(25.0)	148		
Separated	20(80.0)	5(20.0)	25		
Religion					
Christian	99(75.0)	33(25.0)	132	6.117	0.019
Islamic	54(78.3)	15(21.7)	69		
Total	153(76.3)	48(23.7)	201		

Table 2. Multivariate analysis of social demographic determinants of male participation in ANC

Variables	COR (95%CI)	p-value	AOR (95%CI)	p-value
Level of education				
No formal education	1			
Primary	2.41(1.12-3.91)	0.009	2.15(1.15–4.02)	0.01
Secondary and above	1.47(1.1-2.01)	0.013	1.45(1.07–2.45)	0.04
Number of children				
1-2	1			
≥3	1.51(1.16-1.69)	0.042	1.57(1.12–1.77)	0.02
Religion				
Christian	1			
Islamic	0.36(0.63-2.71)	0.051	0.56(0.49-2.71)	0.06

religion (p-value 0.019) were significantly associated with level of male participation in ANC.

Multivariable analysis of social demographic determinants of male participation in ANC

Men's level of education and number of children in a family were associated with their participation in ANC (Table 2). Men with primary level of education were twice (OR 2.15, 95% CI [1.15–4.02], p 0.01) as likely to participate in ANC compared to men with no formal education. In addition, men with secondary or higher level of education were more likely to report high male involvement in ANC (Table 2)

The number of children showed a significant association with male participation in ANC. Men with more than two children were more likely to participate in ANC compared to those with less than three children (OR 1.57, 95% CI [1.12–1.77], p =0.02).

DISCUSSION

This study found that 76.3% of men were participating in ANC. This is higher than the 70% reported in a study from Ghana^[6] but much higher than data from Mwanza city (54.4%)^[8] and Dodoma, Tanzania (53.9%).^[11]

The high male participation in ANC in this study may be influenced by some health projects support in the district such as the USAID Boresha Afya programmes. These programmes adopted a household-centred design approach that ensured not only male participation in maternal health services, but also all other members of the household.^[9] The programme aimed to maximise the involvement of male partners in all issues around maternal and child healthcare including ANC, post-natal care and family planning services.^[9]

The present study found that the level of education of a male partner was significantly associated with participation in ANC. The influence of basic education in the male involvement in ANC and other reproductive health services is reported in the similar study which was conducted in Tanzania.^[11] Enhanced education may well have increased their basic knowledge and understanding of the advantages of supporting women during pregnancy. Hence, it appears that achieving at least a primary level of education significantly increases the likelihood of male participation in ANC.

The number of children is another factor that was reported in this study as a determinant of male participation in ANC. Previous studies indicated that families with few children or primipara have more follow up with ANC services.^[10] However, in the present study, men with more than three children were more likely to be participants in ANC compared to those with less than three children. This finding may be explained by the fact that men with more children are more likely to be exposed to several health promotion sessions in previous ANC visits.

The positive experience in previous visits was reported to raise awareness and motivate men to participate in MCH and provide support in the subsequent pregnancy.^[11] This indicates that as male partners are exposed to health education sessions there is an increase in the likelihood of participating in ANC. Other studies have reported that the number of children was not associated with the level of male participation in ANC.^[1,8] These discrepancies should be assessed and explained with other strong study methodologies preferably the use of mixed methods of both qualitative and quantitative design.

CONCLUSION

The number of children and level of education are

determinants of male participation in ANC. There is a need for the government and stakeholders to promote appropriate instruction that will facilitate improvement of health outcomes in families and nationally.

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Appeal for more articles on Public Health

The articles in SSMJ are interesting, lively, educative, and bordering on the heroic, but are often dedicated to surgery, gynaecology and obstetrics. However, the diseases and health problems that affect most of the population of South Sudan fall into the Public Health Sector. It is therefore important that this aspect of the health sector is covered more adequately in the Journal.

I strongly appeal to all readers and supporters of SSMJ to submit more research papers, case studies, news and other items related to Public Health to the journal. Send them to southsudanmedicaljournal@gmail.com

From an ardent supporter of SSMJ,

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Prevalence of HIV among pregnant mothers receiving antenatal care at Kator Primary Health Care Centre, Juba, South Sudan

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ABSTRACT

Introduction: The HIV/AIDS scourge remains a major public health threat in South Sudan particularly to the unborn children due to vertical transmission.

Objective: This study aimed to assess the prevalence of HIV among pregnant mothers receiving antenatal care (ANC) services at Kator Primary Healthcare Centre in Juba.

Method: The study used a cross-sectional design in which systematically selected ANC records of January to June 2021 were collected and analyzed using SPSS Version 16.0. Fisher's exact values were obtained to test for significance.

Results: The HIV prevalence rate among pregnant mothers receiving ANC services at Kator PHCC was 2.25%. The modal age group was 21-25 years. HIV prevalence was highest among mothers who attained primary education or less, urban dwellers and married mothers in their 3rd trimester of pregnancy.

Conclusion: HIV prevalence among pregnant mothers receiving ANC services at Kator PHCC in Juba is comparable to the national average.

Key words: HIV/AIDS, prevalence, South Sudan, vertical transmission

INTRODUCTION

The global fight against human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) is far from over. In 2020, out of 37.7 million people living with HIV, 1.5 million of these were newly infected and 680,000 HIV related deaths occurred.^[1] Nine percent of global new infections were attributed to vertical transmission in 2017^[2] and over 90% of HIV infections among children less than 15 years is attributed to mother-to-child transmission (MTCT).^[3] Much as the global rollout of antiretrovirals (ARVs) has resulted into 47% decline in AIDS-related deaths since 2010,^[1] over two thirds of the HIV burden is in the African region.^[4] Also, 90% of children who acquire HIV infection through vertical transmission are from sub-Saharan Africa, yet maternal knowledge about MTCT is very low.^[5]

In South Sudan the overall HIV prevalence is estimated at 2.7% with marked heterogeneity by demographic and socioeconomic status.^[6] The pandemic is more concentrated in the Equatoria Region where prevalence is 6.8% in Western Equatoria, 3.1% in Central Equatoria, and 4.0% in Eastern Equatoria.^[7] Children born to HIV positive mothers contribute the second highest percentage (15.7%), after clients of sex workers (42.6%).^[6] The 2009 sentinel survey in all the 10 states of South Sudan showed HIV prevalence among women of reproductive age was 3% with those in the age group 15-24 accounting for 49.5%.^[8] Controlling vertical transmission of HIV is a global target.^[1] This study aimed to assess the prevalence of HIV among pregnant women attending the Antenatal Clinic (ANC) in Kator primary healthcare centre (PHCC).

METHOD

The study was conducted at Kator PHCC, a healthcare

facility located in Kator Payam in Juba City, Central Equatoria State providing general outpatient services including HIV, Tuberculosis and ANC services.

Table 1. Socio-demographic characteristics and HIV status

Variables (N =400)		HIV status			Total n (%)	p value
		Negative n (%)	Positive n (%)	Unknown n (%)		
Age	15-20	78 (89.7)	0 (0)	9 (10.3)	87 (21.8)	0.074
	21-25	118 (90.8)	2 (1.5)	10 (7.7)	130 (32.5)	
	26-30	102 (85.0)	3 (2.5)	15 (12.5)	120 (30.0)	
	31-35	44 (89.8)	3 (6.1)	2 (4.1)	49 (12.2)	
	36-40	10 (71.5)	1(7.1)	3 (21.4)	14 (3.5)	
Education level	Never went to school	67 (90.5)	3 (4.1)	4 (5.4)	74(18.5)	0.094
	Primary level	131 (84.0)	5 (3.2)	20 (12.8)	156 (39.0)	
	Secondary school	109 (89.3)	0 (0)	13 (10.7)	122 (30.5)	
	Post-secondary	45 (93.7)	1(2.1)	2 (4.2)	48 (12.0)	
Occupation	Housewife	236 (87.4)	3 (1.1)	31 (11.5)	270 (67.5)	0.064
	Business	40 (90.9)	3 (6.8)	1 (2.3)	44 (11.0)	
	Student	35 (89.7)	0 (0)	4 (10.3)	39 (9.8)	
	Unemployed	18 (90.0)	2 (10.0)	0 (0)	20 (5.0)	
	Salaried employee	10 (83.4)	1 (8.3)	1 (8.3)	12 (3.0)	
	Others	13 (86.7)	0 (0)	2 (13.3)	15 (2.8)	
Marital status	Single (never married)	9 (90)	0 (0)	1 (10.0)	10 (2.5)	0.295
	Married: monogamous	271 (88.8)	6 (2.0)	28 (10.2)	305 (76.2)	
	Married: polygamous	71 (85.6)	3 (3.6)	9 (10.8)	83 (20.8)	
	Others	1 (50.0)	0 (0)	1 (50.0)	2 (0.5)	
Number of pregnancies	One	91 (91.0)	2 (2.0)	7 (7.0)	100 (25.0)	0.757
	Two	75 (87.2)	1(1.2)	10 (11.6)	86 (21.5)	
	Three	73 (90.2)	1(1.2)	7 (8.6)	81(20.5)	
	Four and above	113 (85.0)	5 (3.8)	15 (11.2)	133 (33.2)	
Residence	Urban	342 (88.6)	8 (2.1)	36 (9.3)	386 (96.5)	0.096
	Rural	10 (71.5)	1(7.1)	3 (21.4)	14 (3.5)	
Number of ANC visits	One	103 (81.7)	0 (0)	23 (18.3)	126 (31.5)	0.001
	Two	81 (90.0)	3 (3.3)	6 (6.7)	90 (22.5)	
	Three	76 (89.4)	5 (5.9)	4 (4.7)	85 (21.2)	
	Four and above	92 (92.9)	1(1.0)	6 (6.1)	99 (24.8)	
Trimester	1st	26 (86.7)	1 (3.3)	3 (10.0)	30 (7.5)	0.292
	2nd	157 (86.7)	2 (1.1)	22 (12.2)	181(45.2)	
	3rd	169 (89.4)	6 (3.2)	14 (7.4)	189 (47.2)	
Overall		352 (88.0)	9 (2.25)	39 (9.75)	400 (100)	

A cross-sectional design was employed, and sampling was systematic; every 4th ANC record, from January to June 2021, was selected and reviewed. Sample size was estimated using Cochran's formula where the confidence level was 95%, 0.05 as the precision and z score of 1.96. Permission was obtained from the University of Juba, Central Equatoria State Ministry of Health and Kator PHCC while the researchers made sure no identifiers were included in the results in order to observe anonymity. Using SPSS Version 16.0, Fisher's exact test of significance was performed. HIV prevalence was estimated by dividing the total number of HIV positive mothers by the sample total size (400).

RESULTS

Socio-demographic characteristics

A total of 400 pregnant mothers who attended ANC at Kator PHCC were included into this study. The age group 21-25 years contained the highest number. Around 40% of the mothers obtained primary education and over two thirds were housewives (67.7%) and in monogamous marriages (76.2%). A third (33.2%) of mothers was pregnant for the fourth or more times and almost all mothers (96.5%) came from urban centres. There was a fairly even distribution of mothers among the recommended number of ANC visits although those in their first visit comprised a quarter (24.8%) of the records. Most of the mothers visited during their last trimester and just four mothers had recorded disability (Table 1).

HIV prevalence

Of the 400 mothers who attended ANC at Kator PHCC, around 90% were tested for HIV, of which nine (2.25%) were positive (Figure 1). Of the nine positive cases, six were aged 26-35 years and more than half attained primary education or less. All nine cases were married, of which two thirds were in monogamous marriages and more than half were in their fourth or more pregnancy (Table 1)

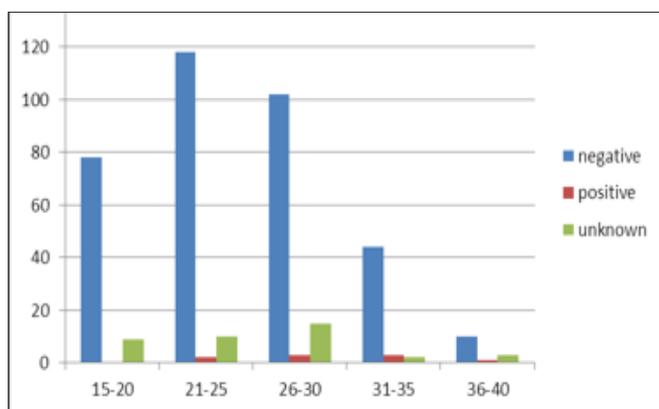


Figure 1. Variation of HIV status by age group

No statistically significant relationship was observed between age, educational level, occupation, marital status, and number of pregnancies, residence, trimester of pregnancy or disability and HIV prevalence. However, a statistically significant relationship was observed between the number of ANC visits and HIV prevalence (p value = 0.001).

DISCUSSION

The prevalence of HIV among pregnant women attending ANC services at Kator PHCC is 2.25 %, slightly less than both the national average of 2.7 %^[9] and the 3% reported in the 2009 sentinel survey.^[8] It is also less than the Eastern and sub-Saharan African HIV prevalence among pregnant women which is 5.75% in Ethiopia, 5.6% in Tanzania and 22.5% in Zambia^[10] while in Cameroon a 4.9% prevalence was reported among pregnant adolescents.^[11] While our figure is marginally lower than the regional average, 225 HIV cases for every 10,000 pregnant women should be cause for alarm given the potential risks to the unborn child via vertical transmission. It is also challenging in light of the global vision of getting to zero new HIV cases.^[12]

The number of ANC visits was associated with being HIV positive (p<0.005). This contrasts with other studies where age, number of sexual partners and consistent use of condom were likely factors for HIV infection in Cameroon^[11] while education, residence and alcohol abuse were shown to contribute to HIV prevalence among pregnant women in Botswana.^[13] Similarly a retrospective study that used a weighted sample of 46,645 women aged 15-49 years from 10 African countries, established that the key enablers for uptake of ANC services were higher education level for the partners, higher income, and availability of the services, while long distances to the facilities were identified as barriers.^[3] Our finding could mean that those with health problems, including HIV, adhere more to subsequent ANC visits. It is also important to note that the records reviewed for this study were captured during the COVID-19 pandemic. This could also mean those with underlying conditions feared the consequences of the disease more and frequented the facility while the healthy ones feared unnecessary movements in the face of COVID-19 restrictions.

Also with many mothers turning up for ANC services late, opportunities for identifying potentially life-threatening conditions could easily be missed. Could this be attributed to attitudes? Mude and others, in a household survey on knowledge and attitudes among 9,061 women of child-bearing age in South Sudan, found that only 22% exhibited positive attitudes toward ANC.^[14]

Another key finding is that the uptake of HIV services was 90.2%. Although this is more than the regional average

of 80.8%,^[3] the 9.75% that failed to respond to testing, calls for more work to ensure that all pregnant mothers know their status to curb mother to child transmission (MTCT). Why a mother refuses to be tested when this concerns her child, is an unanswered question.

CONCLUSION

This study underscores the unfinished battle against the HIV pandemic in the country in light of the global targets against the disease. HIV prevalence among pregnant mothers attending ANC services at Kator PHCC was 2.25 % which is comparable to the national average. The observed inverse association between the number of ANC visits and HIV prevalence could suggest that mothers who experience health problems adhere to subsequent ANC visits more. Sensitization of pregnant mothers on the benefits of early ANC visits is strongly recommended.

Conflict of interest: None

Sources of funding: None

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A survey of tonsillectomy care patterns in Tanzania

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ABSTRACT

Introduction: Tonsillectomy is one of the commonest surgical procedures performed worldwide and has implications for reducing morbidity for patients. There has been variability in tonsillectomy care patterns but we are unaware of any study conducted in Tanzania to survey such variable patterns. The objective of this study is to assess the current patterns of peri-operative care, techniques used and outcome of tonsillectomy by otorhinolaryngologists in Tanzania.

Methods: This was a descriptive cross-sectional study in which a structured 18-item questionnaire was used to obtain information on tonsillectomy care patterns. Data were analyzed using Statistical Package for Social Sciences Version 20.

Results: Among 26 (78.8%) of 33 otorhinolaryngologists practicing in Tanzania who responded to the questionnaire, three (11.5%) were females and 23 (88.4%) were males. Regarding intraoperatively use of steroids, eight (30.8%) otorhinolaryngologists do not use intraoperative steroids while four (15.4%) always used steroids. Twenty-four (92.3%) routinely prescribed postoperative antibiotics. Among the otorhinolaryngologists, 34.6% reported to have never performed same day tonsillectomy while 65.4% sometimes performed same day tonsillectomy.

Conclusion: This study has shown a similar diversity as compared elsewhere in the world of the practice of tonsillectomy care patterns, technique used and outcome among otorhinolaryngologists.

Keywords: Tonsillectomy care, patterns, otorhinolaryngology, Tanzania

INTRODUCTION

Tonsillectomy is the commonest surgical procedure performed worldwide by otorhinolaryngologists. Studies have shown that patients who underwent tonsillectomy, with or without adenoidectomy, have shown significant improvement in quality of life.^[1-6]

Advancement in technology and evidence from research have contributed greatly to the techniques of tonsillectomy and perioperative care. Earlier techniques such as cold steel dissection and utilization of ligature for haemostasis are being replaced by the introduction of microdebrider, coblation, laser and diathermy. These are faster and result in less bleeding. Nevertheless, there is a wide variability in practice even in developed countries.^[3,7-11]

Several guidelines have been proposed in developed countries but perhaps because of differences in culture and traditions. Some centres in developing countries are not following these guidelines.^[12,13]

The routine use of post-operative antibiotics has been controversial. The new guideline by the American Academy of Otorhinolaryngology and Head and Neck Surgery (AAOHN) recommends avoidance of perioperative prophylactic

antibiotics and promotes dexamethasone instead.^[9-11] However, some surgeons believe routine post-tonsillectomy antibiotics are beneficial.^[14]

Protocols for post-operative hospital length of stay varies. The commonest is for an overnight stay for monitoring for sleep apnoea and other complications.^[5,9,10] Some authors recommend overnight post-operative monitoring only for special groups for example patients under two years old.^[16]

METHOD

This was a descriptive cross-sectional study over three months. Otorhinolaryngologists registered by the Medical Council of Tanganyika and by Tanzania Ear, Nose and Throat (ENT) Society and who consented to participate were recruited. At the time the study was conducted, there were 33 otorhinolaryngologists registered by the professional board and practicing in the whole of Tanzania.

A structured 18-item questionnaire (page 10-12, online at <http://journal.entnet.org>) adopted from the Australia Society of Otorhinolaryngology, Head and Neck Surgery was e-mailed, hand delivered or sent by courier services to all participants with a letter inviting participation in the study. The questionnaire covered general demographic details and aspects of tonsillectomy practices and perioperative management. All questionnaires were returned to researchers for analysis by email, hand delivery or courier services.

Ethical approval to conduct the study was obtained from Research Ethics Committee of the Aga Khan University and adherence to the Declaration of Helsinki was ensured. Data were analysed using Statistical Package for Social Sciences (SPSS) version 20.

RESULTS

Age and sex distribution of the participating otorhinolaryngologists

Twenty-six otorhinolaryngologists were recruited (78.8% response rate). Twenty-three (88.5%) were males and three (11.5%) females. Most otorhinolaryngologists were aged 30-39 years 19(73.1%). Two (7.7%) were aged 50 years and above. (Table 1)

Intraoperative use of steroids by otorhinolaryngologists

Over half (53.8%) of otorhinolaryngologists occasionally used steroids intraoperatively. About one third (30.8%) never provided steroids. (Table 2)

Postoperative use of antibiotics by otorhinolaryngologists

Table 1. Age and sex distribution of study participants

Age group (years)	Female n(%)	Male n(%)	Total n(%)
30 to 39	1(5.3)	18(94.7)	19(73.1)
40 to 49	2(40.0)	3(60.0)	5(19.2)
50 and above	0(0.0)	2(100.0)	2(7.7)
Total	3(11.5)	23(88.5)	26(100)

Table 2. Intraoperative use of steroids by otorhinolaryngologists

Steroids intraoperatively	n(%)
Never	8(30.8)
Always	4(15.4)
Sometimes	14(53.8)
Total	26(100)

Table 3. Postoperative use of antibiotics by otorhinolaryngologists

Steroids intraoperatively	n(%)
Never	1(3.8)
Always	24(92.3)
Sometimes	1(3.8)
Total	26(100)

Table 4. Frequency of performing same day tonsillectomy by otorhinolaryngologists

How often perform same day tonsillectomy	n(%)
Never	9(34.6)
Sometime	17(65.4)
Total	26(100)

Twenty-four (92.3%) of otorhinolaryngologists routinely used postoperative antibiotics while only one (3.8%) never prescribed antibiotics after tonsillectomy. (Table 3)

Frequency of performing same day tonsillectomy by otorhinolaryngologists

Two thirds (65.4%) of otorhinolaryngologists reported having sometimes performed same day tonsillectomy while the remainder never performed same day tonsillectomy. (Table 4)

DISCUSSION

The practice of tonsillectomy, without adenoidectomy, has evolved due to advanced technology and evidence-based practice.^[3,7,12] The aim of this study was to survey tonsillectomy care practices by registered otorhinolaryngologists in Tanzania.

This study has found that a large number of otorhinolaryngologists do not use steroids perioperatively despite the strong evidence of reduced postoperative morbidity.^[17] Many studies have shown benefit of intraoperative dexamethasone such as reduction in length of post-operative hospital stay, reduction in post-operative pain, nausea and vomiting.^[11,17]

Our data have shown that a large number of otorhinolaryngologists always used antibiotics postoperatively in spite of evidence that routine use of antibiotics post-tonsillectomy has no added advantages except in selected cases.^[18] However, some studies in Australian and South African show that a significant percentage of otorhinolaryngologists still routinely prescribe postoperative antibiotics.^[10,12]

Some otorhinolaryngologists are shifting from “the overnight tonsillectomy” to “the same day tonsillectomy”. Our study supports this trend with 65.4% of otorhinolaryngologists reporting that they sometimes performed same day tonsillectomy. This finding appears to correlate with what has been found elsewhere with same day tonsillectomy being the commonly preferred option.^[19,20]

CONCLUSION

This study found a diversity of practice of peri-tonsillectomy care among otorhinolaryngologists in Tanzania. There is a need for agreed standardization of guidelines for peri-tonsillectomy care.

Conflicts of interests: None

Sources of funding: None

Authors' contributions: DN designed the study, collected data, performed data analyses and prepared this manuscript. CSM, AAK, ZSA contributed to the study design, analyses and comments to the manuscript drafts. All authors read and approved this manuscript.

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Visceral leishmaniasis and HIV coinfection: WHO publishes new guideline with region-specific treatment recommendations

8 June 2022 Departmental news Geneva

The World Health Organization (WHO) has published new treatment recommendations for visceral leishmaniasis in patients who are coinfecting with the human immunodeficiency virus (HIV). The guideline targets visceral leishmaniasis in East Africa and South-East Asia.

Visceral leishmaniasis, or kala azar, is caused by different *Leishmania* species in distinct geographical areas. 1 In East Africa (Ethiopia, South Sudan and Sudan) and South-East Asia (Bangladesh, India and Nepal), it is caused by *L. donovani* and has an anthroponotic² cycle with a human reservoir.

“Optimal region-specific treatment regimens are needed because parasite virulence and drug susceptibility differ,” said Dr Saurabh Jain, Medical Officer, Global leishmaniasis programme, WHO Department of Control of Neglected Tropical Diseases. “Also, very few studies have been conducted in the past in leishmaniasis-endemic regions other than Europe and this made it difficult to provide recommendations suitable to specific geographical settings.”

The new recommendations are based on the results of studies conducted in India³ by Médecins Sans Frontières and partners, and in Ethiopia⁴ by the Drugs for Neglected Diseases initiative and partners. They are expected to increase access to treatment and improve treatment outcomes, and thereby benefit national control programmes for neglected tropical diseases, HIV, tuberculosis and vector-borne diseases. Up to 5-7% of visceral leishmaniasis patients in India are detected with HIV infection – the highest in South Asia; a significant proportion also suffer from another fatal comorbidity: tuberculosis.⁵

Read more here: <https://www.who.int/news/item/08-06-2022-visceral-leishmaniasis-and-HIV-coinfection-WHO-publishes-new-guideline-with-region-specific-treatment-recommendations>

Musculoskeletal disorders among patients during a one-day outreach at Juba Military Hospital

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ABSTRACT

Introduction: The number of patients presenting with musculoskeletal disorders to the outpatient clinic at Juba Military Hospital is increasing. The aim of this study was to determine the proportion and types of musculoskeletal disorders among patients attending the orthopaedic outreach clinic during September 2021.

Method: A cross-sectional study designed to determine the proportion and types of musculoskeletal disorders among patients presenting to Juba Military Hospital. One hundred and thirty-three patients were recruited. After informed consent, data were collected using a paper-based Questionnaire and analysed using Statistical Package for the Social Sciences (SPSS) version 22.

Result: A total of 327 patients presented to outreach clinic, 133 patients consented and were included in the study. The mean age was 41 years (3 to 73 years, SD 16.9); 52.6% were male and 47% female. The conditions diagnosed were osteoarthritis of major joints, 20.3%, low back pain 18.8%, non-union 15.8% and mal-union 11.3%. Among patients with knee problems, 54% were unilateral knee osteoarthritis and 28% bilateral knee osteoarthritis. Patients with back problems: 80% low back pain of unspecified cause, 16% spondylolisthesis and 4% Pott's disease of the spine. Also 29% mal-union femur and 25% femoral neck fracture. Tibia condition: 40% Non-union, 20% mal-union Tibia fracture.

Conclusion: Musculoskeletal disorders are common among the residents of Juba city. There is high proportion of osteoarthritis and low back pain among other diagnosed conditions.

Key words: Musculoskeletal disorder, Outreach, Outpatient clinic, Juba Military Hospital.

INTRODUCTION

The number of patients attending outpatient clinics with musculoskeletal disorders is increasing globally and is an occupational related health care issue.^[1] The international Labour Organization (ILO) has reported nearly 160 million work-related disorders occurring around the world annually. "A musculoskeletal disorder is defined as an inflammatory and / or degenerative condition that affects muscles, tendons, ligaments, joints, peripheral nerves and supportive structures like in the spine vertebrae."^[2,3,4] These disorders affect individuals and lead to a personnel and financial burden on businesses and institutions. The prevalence of musculoskeletal disorders is high: at 52.3% among cleaners in Mekelle (Northern Ethiopia), and 74.2% and 58.4% among nurses in Kenya and Uganda respectively.^[3,5,6] The proportion and types of musculoskeletal disorders has not previously been reported in South Sudan hospitals and this study will provide preliminary data. This study was conducted during orthopaedic outreach clinics organized by the South Sudan Orthopaedics and Trauma Society (SOTS) in

September 2021. The aim of this study was to determine the proportion and types of musculoskeletal disorders among patients presenting during the outreach at Juba Military Hospital.

METHOD

This was a cross-sectional study designed to determine the proportion and types of musculoskeletal disorders among patients presenting during the outreach at JMH in September 2021. All patients attending outreach clinic who signed an informed consent, were assessed clinically and radiologically and were diagnosed with musculoskeletal disorder were included in the study. In advance the date of the outreach clinic was disseminated to the public through the South Sudan Broadcasting Corporation (SSBC) and local FM stations within Juba City. Patients were managed according to their diagnoses and were later asked if they were willing to participate in the study. The consent form was written in English. For those unable to read or write, consent was explained in simple Juba Arabic. It was explained that refusal to participate would not deny patients free treatment.

Data were collected using a paper-based questionnaire. Demographic data, clinical and radiological diagnoses were collected including age, gender, residence, clinical onset of the disease and the diagnosis.

Statistical Analysis: Data were collected on paper and analysed using the Statistical Package for the Social Science (SPSS) version 22. The proportion and categorical variable were reported as percentages and age as the only continuous variable, and it is reported as mean, range and standard deviation (SD).

RESULTS

A total of 133 patients participated in the study out of 327 who presented to the outreach clinic from 8:00 am to 5:00 pm.

The mean age was 41 years (range 3 to 73 years, SD 16.9). There were 52.6% males and 47.4% females. Commonly diagnosed conditions were osteoarthritis of major joints 20.3%, low back pain of no specified cause 18.8%, non-union 15.8%, mal-union 11.3% and chronic osteomyelitis 6%. Table 1.

Amongst patients with knee problem 54% and 28% were unilateral and bilateral osteoarthritis respectively. Of patients who presented with back symptoms, 80% were diagnosed with low back pain of no specified cause, 16% spondylolisthesis and 4% with Pott’s disease of the spine. Mal-union of the femur and femoral neck fracture were 29% and 25% respectively. In patients with a tibial problem, 40% were non-union, 20% mal-union and 20%

Table 1. Common diagnosed conditions

Diagnosed cases	n (%)
Osteoarthritis	27 (20.3)
Low Back pain	25 (18.8)
Non-union of Fractures	21 (15.7)
Malunion of Fractures	15 (11.3)
Others	13 (9.7)
Chronic Osteomyelitis	8 (6.0)
Spondylolisthesis	5 (3.8)
Patients with Implants	5 (3.8)
Planter Fasciitis	3 (2.3)
Neglected Dislocation	3 (2.3)
AVN femoral head	2 (1.5)
Frozen shoulder	2 (1.5)
Genu valgus	2 (1.5)
Symptomatic BKA stamp	2 (1.5)
Total	133 (100)

AVN: Avascular Necrosis. BKA: Below Knee Amputation.

Table 2. Common diagnosed diseases according to their frequency of presentation

Disease condition	n (%)
Diseases affecting the knee	
• Unilateral OA Knee joint	17 (53.1)
• Bilateral OA knee joint	9 (28.1)
• Genu valgus knee joint	3 (9.4)
• Juvenile rheumatoid Arthritis knee	2 (6.3)
• Septic arthritis knee joint	1 (3.1)
Total	32 (100)
Diseases affecting the back	
• Low back pain	25 (80.6)
• Spondylolisthesis	5 (16.1)
• TB spine	1 (3.3)
Total	31 (100)
Diseases affecting foot and ankle	
• Mal-union bimalleolar fracture	16 (50.0)
• Planter fasciitis	8 (25.0)
• Neglected club foot	5 (15.6)
• Post-traumatic osteoarthritis	3 (9.4)
Total	32 (100)

chronic osteomyelitis. The commonest presentations in patients with ankle fractures were 50% with mal-union of bimalleolar (i.e., middle and lateral malleoli) fracture. Table 2.

Six patients underwent surgery with two non-unions being fixed with a Surgical Implant Generation Network (SIGN) nail, proximal humerus fracture and mid-shaft femur and bimalleolar fracture were fixed with plate and screws, and non-union patella was fixed using tension wire band. Patients who attended the outreach clinic came from almost all corners of Juba City.

DISCUSSION

The study was conducted among patients presenting to hospital during a surgical and consultation outreach clinic at Juba Military Hospital; 327 patients came from 20 residential locations around Juba, 133 patients were recruited into the study. Average age was 41 years, musculoskeletal disorder was higher among male 52.6% compare to female 47.4%. The commonest musculoskeletal disorders were osteoarthritis 20.3%, low back pain 18.8%, non-union 15.8%, mal-union 11.3%. our study found unilateral knee osteoarthritis at 54% was higher than bilateral knee osteoarthritis at 28%, compared to 14.6% knee osteoarthritis reported among Chinese health workers.^[7] Low back pain was 18.8% in our study which is low compared to 38.7% reported among staff at special school in Germany and 34% among cleaners at university of Mekelle and 61.48% among the operating room personnel.^[3,6] Our study has also found 15.8% non-union and 11.3% mal-union of fracture as complications among patients treated by traditional bone setters compare to 40.8% non-union and 24.5% mal-union higher as reported by Odatwuwa.^[8] Chronic osteomyelitis was 6% in open fractures due to motor traffic crash injuries and were poorly managed by traditional bone setters, with tibial chronic osteomyelitis was 20% in our study, lower compared to 31 - 35% reported in sub-Saharan Africa.^[9]

CONCLUSION

The proportion and types of musculoskeletal disorders has not previously been reported among the general population in the city of Juba. Our study has seen a high proportion of musculoskeletal disorders such as osteoarthritis and low back pain. There is a need to conduct a study with a larger sample size and to determine associating factors of musculoskeletal disorder among the residents of Juba city.

Limitation: First, our study was limited to the few patients who attended the outreach clinic at a specific time. Second, we did not look into factors related to musculoskeletal disorder in the country.

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How to use experience to improve teaching practice

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In a previous edition of the South Sudan Medical Journal^[1] we made a commitment to publish a series of educational ‘How to’ articles. These are intended as guides to improve teaching practice.

Our aim is to target the core activities of the healthcare teacher (see Table 1). We are also seeking opinions from our readers. We would welcome questions and suggestions for educational topics.

How can these articles be used to improve teaching? Here, I set out how they can contribute to a wider process of self-directed learning by healthcare teachers.

Teaching is a practice, and it is learnt in practice. Each time we teach is different, even if we are teaching the same topic. Each time we teach we can think about what happened, what went well, what went less well, and why. We can decide how we could do things a little differently, making improvements based on our own experience and understanding.

David Kolb^[2] explains how individuals learn from experience. His model describes a process of learning through the synthesis of thought and action. Action, and experimentation with different approaches, gives us experiences. Thought allows us to make sense of those experiences: to describe them, to evaluate what happened, and to explain why things happened as they did. This deliberate process of action, evaluation and explanation, offers a basis for developing our ideas about what works and why, and for deciding what we might do differently to improve our teaching.

However, we are not limited to our own experiences and ideas. We can talk to colleagues about their experiences. We can read articles that give advice about teaching practice. We can grapple with learning theory, which seeks to explain how people learn, and so provides pointers towards how we might support that learning. In these ways, our personal experience is informed by the experience and ideas of others.

Table 1. Core educational activities for the healthcare teacher

1.	Teach in a range of settings
1.1	Teach large groups
1.2	Teach small groups
1.3	Teach in a clinical setting
1.4	Support in-service learning.
2.	Assess performance
2.1	Assess performance using formative methods.
2.2	Assess performance using summative methods.
3.	Support progress
3.1	Respond to concerns about performance.
3.2	Review learners’ progress against educational goals.
4.	Improve healthcare education
4.1	Evaluate and improve teaching practice
4.2	Evaluate and improve a taught course
4.3	Evaluate and improve the clinical workplace to support learning
4.4	Carry out research in healthcare education
5.	Develop programmes of healthcare education
5.1	Design a new course.

So, the depth and scope of our thinking-about-teaching is important. It is supported by the thinking of others, sought from colleagues, and uncovered in the literature. By utilising these additional resources, we become informed beyond our own experiences. This increases our potential for understanding our practice, and offers us further options for change and improvement.

As well as recognising the importance of deliberately acquiring information to supplement our experiential learning, Michael Eraut^[3] explains the importance of controlling this learning process through ‘metaknowledge’. Metaknowledge concerns self-awareness, knowledge of one’s own skills, strengths and weaknesses, and self-management. It too is learnt through experience and thought: thought that is ‘reflexive’, focused upon one’s own qualities. In learning to teach, we must also learn about ourselves.

The thrust of this is that learning to teach revolves around action that is mindful and controlled, supplemented by deliberately acquired information, and reflected upon in order to evaluate and explain practice, decide what to do differently, and develop ‘metaknowledge’. Figure 1 illustrates this self-directed learning process.

This model of self-directed learning allows us to draw out a number of things that we can do to support our improvement as teachers.

Teach, because teaching is learnt through practice. Practice allows experience to be acquired, and new approaches to be tried. Aim for teaching that is mindful and controlled, with attention given to monitoring and managing teaching ‘in-action’.

Seek information about your teaching, from students and from colleagues, because this feedback offers information

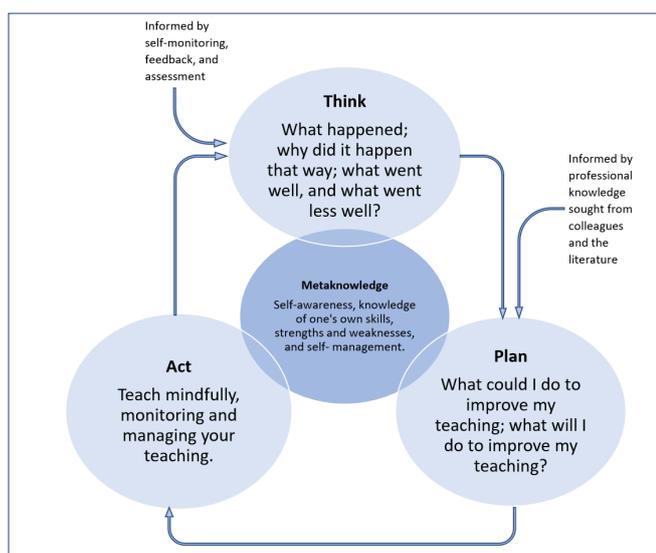


Figure 1. Learning to teach: experience supplemented by information, increasing our potential for improvement action (Credit: Rich Bregazzi).

Table 2. Personal teaching experiences: thinking about practice

A ‘teaching experience’ might be a particularly interesting experience, it might be an aspect of routine practice, or it might be something that gives you particular cause for concern.

1. What was the experience? Why have you chosen it for further reflection?
2. What happened? What was the outcome?
3. What factors shaped what happened; how did your own behaviour affect what happened?
4. How did you feel about it? What went well, what went less well, and how do you know?
5. What additional information could help you better understand the situation, or what you could do to improve? How can you find that information?
6. What have you learnt from this, and what do you intend to do in order to improve your teaching?

about how your practice is perceived by others, and adds an important perspective to your understanding of your teaching.

Assess what students have learnt, because formal and informal assessment helps you monitor and manage your teaching (it also helps learners to monitor and manage their learning).

Think about your practice, so that you can manage and better understand both your practice, and your qualities as a teacher.

Seek further information about learning and teaching, because knowledge about learning and teaching, sought from the educational literature and from discussion with colleagues, supplements our experience and offers new ways to understand ourselves and our teaching practice.

Implement plans to improve, because new understanding needs to be transformed into new practice, which gives us new experiences from which to learn.

Make time for your learning, because it takes time to think, to acquire information, and to plan how teaching can be improved.

This series of articles will contribute to your experiential learning process by providing ideas that can be adapted and used to improve your teaching. Meanwhile, Table 2 offers some questions that you can usefully ask of a specific teaching experience, to help you think about your practice, and so transform experience into learning.

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Lower back musculoskeletal hydatid cyst: a rare presentation in a South Sudanese patient

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ABSTRACT

Echinococcosis (hydatidosis) remains a crucial public health concern in areas of endemicity including South Sudan. It affects mostly liver and lungs but rarely musculoskeletal system. A female, aged 75 years, presented to Kapoeta State Hospital, with a three years' history of a painless mass on her back, gradual onset. There was no history of trauma, pain or fever. On examination there was a mass of 8cm x 5cm, soft, non-tender and lobulated on the right lower back above the gluteal region with intact skin. Imaging investigations (ultrasound, X-ray, CT scan) were not available. A provisional diagnosis of a lipoma was made. Surgery was done successfully and a hydatid cyst was found and removed. There were no post-operative complications. She was discharged on the next day with oral albendazole (400mg), twice a day for 28 days. Six months later, the patient was seen with no complains or recurrence. In endemic areas hydatid cysts should be considered in the differential diagnosis of any cystic swelling or lump. In low resource countries, incorporation of health education to school curriculum will play a key role in reducing incidence or prevalence of the disease.

Key words: Echinococcosis, lump, excision, hydatid cyst.

INTRODUCTION

Cystic echinococcosis, known as hydatidosis or hydatid disease, is an important public health concern especially in endemic areas in Africa, Asia, Middle East, Mediterranean countries, Australia and South America.^[1] Out of the four causative organisms, *Echinococcus granulosus* and *Echinococcus multilocularis* are the commonest causing hydatid and alveolar cysts respectively. Humans are infected by the ingestion of eggs passed either by dogs, sheep, goats, cattle and camels. These eggs then form oncospheres that which pass through the intestinal mucosa thence being distributed via the blood to the liver and other structures where they develop into embryos. These can either form cysts or they spread to other parts of the body via blood.^[2]

The liver (75%) and lungs (15%) are the most commonly affected organs^[3,4] as they filter blood, preventing the parasite from entering the systemic circulation.^[5] The musculoskeletal system is less often affected with prevalence ranging from 0.7-3 %^[6,7] to 7.2 %.^[8] This is due to high levels of lactic acid which creates a hostile environment for the parasite to survive.^[3] Our case report is to alert clinicians to the need to consider the possibility of hydatid disease especially in endemic areas. Such a mass requires careful surgical excision.

CASE PRESENTATION

A 75-year-old lady presented to the outpatient department, complaining of a painless mass on her back of three years duration. The lump started as a small mass that gradually increase in size. There was no history of trauma, pain or fever.



Figure 1. Some of vesicles and ruptured cysts from the patient with presumed lipoma.

On examination there was a mass of 8cm x 5cm, soft, non-tender and lobulated on the right lower back above the gluteal region with intact skin. Further investigations were not available. A clinical diagnosis of lipoma was made and surgery under general anaesthesia was planned after a full explanation to the patient. A complete blood count was normal. A hydatid cyst was revealed and meticulously dissected from the surrounding tissues. It was removed completely with some ruptured cysts (Figure 1).

The cavity was irrigated with hypertonic saline, and povidone iodine 10% solution (Figure 2). A drainage tube was placed, cavity tissues approximated with absorbable sutures and the wound closed with non-absorbable sutures. After 24 hours, the drain was removed. She was discharged on the next day with oral albendazole (400mg), twice a day for 28 days. Six months later, she was reviewed and found healthy without signs of recurrence.

DISCUSSION

The World Health Organization has recognized human echinococcosis as one of the neglected tropical diseases.^[9] It is endemic in South Sudan with a prevalence of 3.5%.^[10] Molecular studies^[11] indicated that the main strain is a camel genotype G6 of *E. canadensis* which is more infective to animals and human. A prospective study on 117 patients referred to Juba Teaching Hospital,^[12] indicated that most of the cases (98%) were from Pibor (65%), Kapoeta (18%) and Lafon (15%) with different patterns of symptomatology.

These ranged from abdominal mass (76%), breast mass (5%), neck swelling (3%) and other masses (9%). The liver and lungs (78%) were the most commonly affected organs.^[12] Most (93%) of the patients were successfully managed surgically while 7% were medically managed due to the dissemination of the disease to multiple organs.^[12]

Surgical success is partly dependent on the careful



Figure 2. The wound being washed and aspirated with a sucker using normal saline for toileting the cavity.

dissection at surgery. However, secondary hydatid cysts^[13] can occur without such care. Surgery is the most favoured procedure to treat hydatid disease. This involves careful and complete removal of the cyst with vigorous irrigation of the cyst cavity with scolicidal agents like povidone iodine 10%, hypertonic saline 15-30%, formalin 10% and chlorhexidine gluconate 5%.^[14] Each needs exposure time of 10 minutes. Hydrogen peroxide 3% and silver nitrate with exposure time to tissue of 15 and 5 minutes respectively can be used. Avoidance of cysts rupture is important in order to avoid complications such as anaphylaxis. All these solutions will reduce recurrence. Patients need to be followed up for possible recurrence.

To diagnose hydatid cysts, ultrasonography, CT scan and MRI play a key role. However, in low resource countries like South Sudan and particularly in rural health facilities, clinical and epidemiological knowledge is of a paramount importance. Any lump or swelling in endemic areas must include hydatid cyst in the differential diagnosis.

We feel that "One health" approach could be useful in reducing the burden of echinococcosis in human as well as in livestock in communities living in endemic areas. The approach deals with the concept that health of

people is related to the health of the animals as well as environment.^[15] There are several definitions. One Health Global Network: “One Health recognizes that the health of humans, animals and ecosystems are interconnected”. While the US Centers for Disease Control and Prevention and the One Health Commission is: ‘One Health is defined as a collaborative, multisectoral, and transdisciplinary approach—working at the local, regional, national, and global levels—with the goal of achieving optimal health outcomes recognizing the interconnection between people, animals, plants, and their shared environment’.

This approach recognizes that animals and humans are mostly infected by the same microorganisms as they share the same ecosystem. Thus, usage of one sector in prevention or control or elimination of a particular infectious disease won't succeed.

CONCLUSION

In endemic areas, any cystic swelling or lump should include hydatid cyst in the differential diagnosis. Imaging facilities are helpful. The gold standard of management is careful surgical excision of the mass. In low resource countries, incorporation of health education about echinococcosis in the school curriculum should play a key role in reducing the incidence of the disease. “One Health” approach could be cost effective in reducing the burden of the disease in both humans and livestock. This requires collective efforts of Ministries of Health, animal resources and livestock, and other concern agencies to work together and establish a national Echinococcosis control programme.

Competing interests: The authors declare that they have no competing interests.

Authors' contributions: LN did the surgery and prepared the photos and the history of the patient, KS did the literature review, writings and compiled the manuscript, JB and JL did proofreading. All authors read and agreed to the final manuscript.

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Letter to the editor

Dear Editor-in-Chief

I am David Bassiouni, former UN and South Sudan Senior official, writing to first express my appreciation for producing the high quality and content-rich South Sudan Medical Journal. Thanks to Dr Eluzai Hakim, I have been receiving and reading it with great interest.

The journal covers very well the representative medical problems and issues of South Sudan. However, I have noticed that it is stronger in the Surgical, Gynaecological and Obstetrics areas than in Public Health which is where our major health problems are. I would greatly appreciate it if you could, in future, give Public Health greater coverage and priority.

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“How-to” Teaching Videos – inspired by work in South Sudan

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ABSTRACT

Global Health Media Project creates teaching videos on basic health care practices for providers and people in low-resource settings. The organization was founded by Deborah Van Dyke, whose work and experience in South Sudan helped her see that practical, “how-to” videos would be an effective way to teach health workers at scale. Their live-action videos—filmed in developing world clinics—feature “best-practice” care with real patients. They have now produced more than 200 videos that fill an important gap in health care education worldwide.

Key words: video, global health, health workers, training, films

INTRODUCTION

South Sudan was my home during four missions with Médecins Sans Frontières (MSF) from 2002 to 2008 when I worked in Akeum, Marial Lou, Yambio, and Pibor. See Figures 1 and 2.

We saw health problems that providers in most developed countries can only imagine: tetanus, severe malnutrition, terrible infections, tuberculosis, snake bites. While our clinics made valuable contributions to improve health care in these communities, it was easy to imagine how much more needed to be done for so many people in South Sudan and around the world.



Figure 1. The author caring for a malnourished child in the MSF feeding center, Akeum, South Sudan, 2002 (Credit: Deborah Van Dyke)

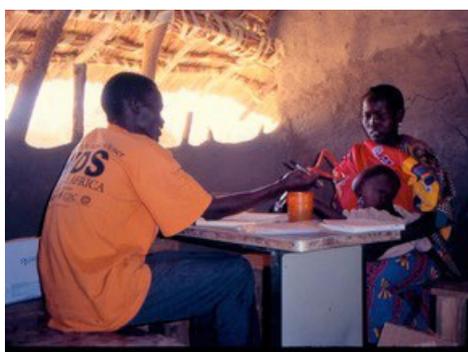


Figure 2. Health worker seeing mother and child at Akeum 2002 (Credit: Deborah Van Dyke)

In addition to South Sudan, I worked in several other countries with MSF and other international NGOs – a total of 14 missions over a span of two decades. Training, mentoring, and working side-by-side with health workers gave me the opportunity to better understand the realities health workers face when providing care in the developing world. Most had limited training and almost no opportunity to find answers to their questions in a book, consult with a more

experienced colleague, or refer to a higher-level facility. Beyond their initial schooling, refresher training programs were often not available to these providers. I realized that health workers lack of ready access to practical clinical information significantly limited their ability to provide effective health care.

A more efficient way to train health workers at scale was needed.

DEVELOPMENT OF VIDEOS

On two occasions – in South Sudan and Afghanistan – I used a few videos to teach health workers. Their response to those videos was truly remarkable. They

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Role of the community pharmacy in the control of pandemics in South Sudan

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ABSTRACT

Recently, special attention has been given to the community pharmacy and how ready it is to meet the growing demand for health care at times of pandemics. Several studies have discussed the roles and contributions of the community pharmacy amid COVID-19. An online assessment among pharmacy personnel in South Sudan showed that 57.5% of respondents had answered correctly to at least 60% of knowledge questions on the COVID-19 pandemic. The attitudes were a mix of neutral and positive. Physical distance (“social distancing”) and hand hygiene practices (95%) were the most often preventive measures used at the community pharmacy. In conclusion, the pharmacy is the first and, often, the last point of contact for patients. Therefore, it can play a role in identifying suspected infectious diseases and advising and instructing the public against any health emergency.

INTRODUCTION

On March 20th, 2020 in Juba, South Sudan, “Republican Order No.08/2020 for the formation of a high-level Task Force Committee to take Extra Precautionary Measures in combating the spread of Coronavirus Disease (COVID-19) into the Republic of South Sudan, 2020 A.D.”, increased the alert level for COVID 19. There was a series of instructions for the temporary closure of all educational institutions and health science institutions, suspension of all planned sports activities, religious, socio-cultural, and political events.

More than two years since the emergence of COVID-19 in Wuhan, China, the pandemic, that is still challenging the global health system, has affected our socio-economic activities and health service delivery at different levels.^[1,2] While community pharmacies remain accessible to patients, service at clinics and hospitals was restricted during the pandemic due to the facility being overwhelmed or unavailable.

In some developing countries, like South Sudan, with fragile health systems, economic challenges, and logistical constraints, health care seekers are forced to go directly to a community pharmacy for medication. This was despite the regulations putting restrictions on dispensing without a proper diagnosis or prescription. This became worse during the pandemic, increasing the number of

patients who do not get the correct treatment resulting in deterioration in public health.^[3,4,5]

COMMUNITY PHARMACIES

A community pharmacy or retail pharmacy is categorized according to the Drug and Food Control Authority Act 2012 as license C among the four categories of licenses for pharmaceutical premises in South Sudan. Their functions include, but are not limited to, ensuring appropriate stocks of pharmaceutical products and devices, dispensing medicines and health-related commodities in line with the guidelines, advising on drug-drug interaction/drug-food interaction, triaging, and referring. The pharmacy workforce is in contact with patients or clients and comprises non-health professionals, pharmacists, pharmacy technicians, and occasionally nurses. The team works under the supervision of a registered pharmacist “whose name is in the registry of pharmacists in accordance with the pharmacy profession and practitioners’ regulations as shall be determined by the South Sudan General Medical Council.”

Recently, special attention has been given to the community pharmacy and how ready it is in terms of regulation and structure to meet the growing demand for health care during pandemics. Several studies have discussed the roles of the community pharmacy amid COVID-19 and its contribution toward clarifying misconceptions, screening

patients for COVID-19, minor ailment consultations, monitoring and managing chronic conditions, telehealth services, and chronic medication renewal.^[6,7] For example, “in France and Portugal, pharmacists have been authorized to repeat dispensing of prescribed medicines for patients with long-term conditions”. Spain used community pharmacies to support victims of domestic violence.^[8]

Knowledge, Attitude, and Practices toward COVID-19 pandemic

In 2021, a descriptive cross-sectional survey was conducted with the support of the Pharmaceutical Society of South Sudan (PSSS) to assess the knowledge, attitude, and practices of community pharmacy health personnel in South Sudan in relation to the COVID-19 pandemic. The Survey used an online questionnaire in the Google form between August and September, with an appropriate sampling technique. The assessment showed that 57.5% of the respondents had answered correctly to at least 60% of knowledge questions on the COVID-19 pandemic. The attitudes were positive towards wearing a face mask and practicing social distancing within the community pharmacy premises. While it was neutral towards the personnel measures such as short hair or beard recommended by the International Pharmaceutical Federation (FIP) to improve mask fit, and also towards the use of community pharmacies as testing or immunization centres for COVID-19.^[9]

However, the findings showed that 62.5% of respondents had not received any training related to COVID-19 infection prevention or proper use of Personnel Protective Equipment (PPE). Physical distancing and hand hygiene practices were the preventive measures (95%) most often used at the community pharmacy. Also, 42.5% indicated no changes in working hours, whereas 15% of respondents increased their hours during the pandemic; 32.5% applied mitigation procedures that led to referring a suspected case of COVID-19 to specialized care. This limited study has highlighted gaps and capabilities in terms of workflow and practices at community pharmacies during COVID-19 that could be utilized in support of other health facilities.

CONCLUSION

A community pharmacy is the most readily available health facility. Therefore, it has a role in combating pandemics in the country. First, by disseminating the correct information and practicing all precautionary measures recommended by the World Health Organization and Ministry of Health to prevent the spread of disease. Secondly, a pharmacy is the first, and often the last, point of contact for patients. Pharmacy personnel can play a vital role in identifying suspected infectious diseases and directing the patients to the next step, advising and instructing the public against any health emergency.

In order to maximise the use of community pharmacies in combating future pandemics, guidelines on the protection and operation of pharmacy teams during pandemics as well as adopting appropriate legislation on pharmacy practice are some of the plans that need to be put in place.

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Profile of the Department of Paediatrics and Child Health, Al-Sabbah Children's Hospital, Juba, South Sudan

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The Al-Sabbah Children's Hospital was established by the Kuwait Government in 1983 and is a government hospital under the Ministry of Health, Central Equatoria State. It is located along Unity Avenue, Juba.

Early in 2017, the Department of Paediatrics and Child Health at Juba Teaching Hospital (JTH) was moved to Al-Sabbah Children's Hospital (excluding the Nursery which is still in JTH but administered by Al-Sabbah Children's Hospital).

At the moment, Al-Sabbah Children's Hospital is the only functional paediatric hospital in South Sudan, receiving patients from all parts of the country and giving clinical training to students from both public universities (University of Juba and Upper Nile University) and private institutions (for Nursing and Clinical Officers).

The department has different cadres that work hand in hand, smoothly and with a good team spirit for the benefit of the patients. Currently, there are twelve Paediatricians, twenty two Medical Officers (GP), eight Clinical Officers, three Pharmacists, six Pharmacy Assistants, five Theatre Attendants, seventeen Laboratory Technicians, eight Registered Nurses, forty six Certified Nurses, six Nutrition Officers, three Social Workers, seven Human Resource and Record Officers, two Public Health Officers, five Accountants, seven Statistic and Data Analysis Officer, two Vaccinators, four Electricity Officers, four Guards, three Police Officers/ Security, five Labourers, twenty Cleaners and one Driver. See Figure 1.

The core work of the department is to conduct daily clinical ward rounds, weekly major ward rounds and monthly grand rounds which are usually done in collaboration with other departments from Juba Teaching Hospital. Being the only paediatric hospital in the country, majority of the lecturers in the public universities are also staff of the department of Paediatrics and Child Health at Al-Sabbah Children's Hospital. Therefore, orientation, mentoring and teaching of junior doctors to acquire knowledge, clinical skills and to build their careers are the most important activities of the department.

Besides teaching, the department also organizes weekly continuing professional development (CPD), quarterly mortality audits for the different wards (General, Gastroenterology, Nutrition, and Neonatal) and weekly referral clinics for neonates and general paediatrics.

Currently, there is no ongoing research at the department but there are several proposed topics such as:

- Factors associated with neonatal outcome at Al-Sabbah Children's Hospital.
- Prevalence and factors associated with neonatal sepsis at Al-Sabbah Children's Hospital.
- Prematurity and associated factors at Al-Sabbah Children's Hospital.

The department needs funding to be able to carry out these research studies.

There is no short-term attachment of overseas medical students at the department,

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Figure 1. Some of the staff of the Department of Paediatrics and Child Health (Credit: Abraham Dut)

but it would be good to establish such collaboration to improve productivity, share experiences and explore opportunities for research and funding.

The aspiration for the department is to establish more specialized clinics such as Sickle Cell, Diabetic, Chest, Cardiac and Neurology clinics. Most paediatric patients from Juba and different parts of the country are attended to at the department; to provide holistic care to the children we need to establish other departments like Paediatric Surgery, Otorhinolaryngology Surgery, Radiology, Physiotherapy and Dermatology.

Establishing a Department of Obstetrics and Gynaecology with a modern Neonatal Intensive Care Unit Nursery (NICU) would make a significant impact on the Department of Paediatrics and Child Health at Al-Sabbah Children's Hospital.

The laboratory at the department can do only basic investigations including routine tests, haematology, and chemistry. Thus, expanding the laboratory with more diagnostic investigations would improve the care of children in the hospital.

Furthermore, the bigger dream of the department is to have sub-specialized training for the general paediatricians currently practicing in the hospital. This would have a positive impact on the quality of care offered at the hospital. To achieve this, the department may need external support.

Tribute to Our Friend, Brother and Colleague Dr Frederick Khamis Tawad

We are profoundly devastated and saddened by the untimely passing on of our friend, brother and colleague Dr Frederick Khamis in Nairobi, Kenya on 14th May 2022. I had the privilege of being one of his closest friends for several years. Recently, I travelled to see him in Nairobi on his sick bed and encouraged him to be determined to get well so that he can quickly return to serve the people of South Sudan in his capacity as a surgeon and a mentor. Those who had the same privilege of knowing him know how much he loved his work. He was always there to deliver and, as one of the finest and bravest surgeons of his time, he was always determined to save lives.

Dr Frederick strongly believed in local initiatives and innovations, teamwork and networking. He was very much committed working for the common good. He freely and unconditionally helped many people to succeed thus, lending him many friends from different categories of people across South Sudan. Dr Frederick believed that nations cannot be built without first building people's capacity. I have no doubt he had contributed in building South Sudan both directly and indirectly. Therefore, let the people, friends and colleagues and indeed his children who still have chance to live for more years keep his legacy shining.

I am personally connected to Dr Frederick in many ways but I would just like to mention three important ones.

Firstly, and professionally, he inspired and mentored me throughout my medical career and always celebrated with me my professional achievements.

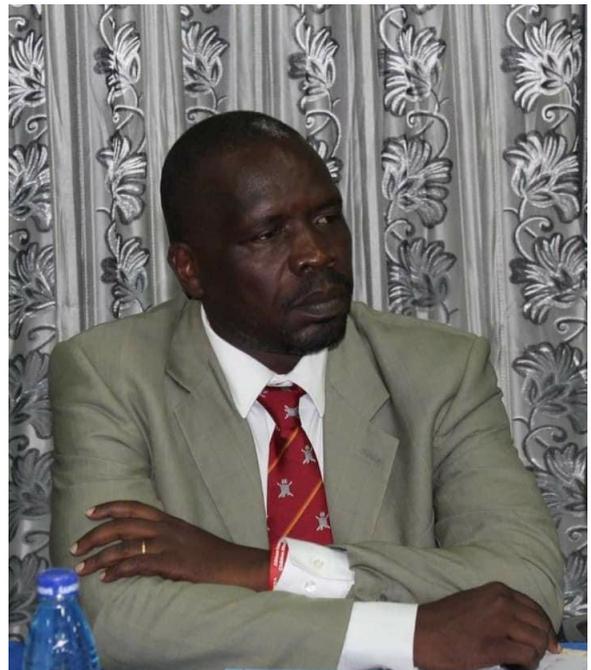
Secondly, and socially, he represented my family during the earlier processes of my marriage arrangements. And, just before his illness started, he remained strongly connected to my family and in many ways continued to support my family and me. As he stood firm with us, we will do the same to his family in return.

Thirdly, and in terms of institutions, I worked very closely with him and other colleagues to build Gudele Medical and Surgical Home and Doctors on Move, where he was the President. Both institutions provided remarkable medical services to the people of South Sudan. Dear all, let us keep faith in God because in all kinds and times of immeasurable loss such as the untimely death of our friend, our colleague, our brother, our father, our educator, our inspirer, our motivator; God will always create an exit. God will always provide solutions, God will always create new opportunities, God will always provide for the needs of the family and children. God hear our prayers.

We all know that in the history of mankind, no person has ever lived forever. However, that which lives forever is our individual legacies. Dr Frederick has left a legacy that will live forever. Rest In Peace, my friend.

Lastly, I would like to extend my thanks to everyone here, friends, colleagues and family members who unconditionally supported Dr Frederick and his family during the time of his illness. Special thanks to colleagues in Nairobi who helped physically and been with the family throughout. Thanks also to the women's group in Kampala for their unwavering support. Let us continue to support this family especially the children.

May your soul rest in peace my good friend. We are proud of you and will continue to celebrate you. Fare thee well, Kemi.



By Dr Louis Edward Danga

Dr Frederick Khamis Tawad Biography

Frederick Khamis Tawad Ayuku is a Kakwa from the Bura na Mose clan in Payawa Boma of Mugwo Payam, Yei River County. He was born in Yei on 17th October 1969 and died in Nairobi Kenya on the 14th May 2022. His parents were late Eng. Tawad Ayuku Sartiel and Jennifer Muna Tadayo from Bura na Bebe clan, Yari Boma of Mugwo Payam. Late Prof. Fred was married to Madam Suraya Rudolf, Elizabeth Peter and Lily Johnson Kibo and God has blessed them with 12 children and 1 has died.

Education background

1. Primary Education at Payawa village school (1976-1982)
2. Kujo-meje Intermediate school (1982-1984)
3. Yei Day secondary School (1985-1989)
4. University of Juba college of medicine (1990 –1996)



Credentials

1. Associate Professor of Surgery, college of Medicine, University of Juba from 2018.
2. Head of the department of Surgery at Juba University (2017 up to the time of his death),
3. President of the College of Physicians and Surgeons of South Sudan and Director for special training in the College and a lead in training of Associate Clinicians and Tutorship Training Program at the College of Physicians and Surgeons of South Sudan (2017 up to time of his death).
4. Chair of The Medical Advisory Panel (MAP) to the National Taskforce on COVID-19
5. South Sudan Country Representative in the College of Surgeon of East, Central and Southern African (COSECSA).
6. Deputy Dean of the College of Physicians and Surgeon of South Sudan (2015-2017).
7. President of the Doctors on Move-Charitable organization providing medical care services to the poor without access to secondary level of care (From 2012 up to the time of his death)
8. Head Surgeon Gudele Medical and Surgical Home, private hospital providing a wide range of medical services (From 2012 up to the time of his death).
9. Assistant professor of Surgery, School of Medicine, University of Juba and consultant Surgeon Juba teaching hospital (2013 -2018).
10. Consultant General Surgeon and Head of Surgical Disciplines–Nyala Teaching Hospital and Associate Lecturer at Al-Fashier University in Darfur (2004-2012)
11. Served as Medical Officer and later as a Registrar in many hospitals in Sudan from (1998- 2004).

Dr Frederick Khamis started feeling unwell in January 2022. He traveled to Nairobi on the 6th March 2022 for Medical Check-ups. Five days later his condition worsened and he was admitted to Nairobi Hospital with acute renal failure where he underwent dialysis and other treatments and he was discharged two weeks later. Although that acute attack was controlled, his condition worsened and he was re-admitted at the Coptic Hospital where he developed a cardiac arrest and died on the 14th May 2022.

Recovering from monkeypox at home

If you think you might have monkeypox, self-isolate and contact a health worker immediately. If they advise that you isolate at home, keep in touch with them and seek immediate advice if your rash becomes more painful, shows signs of being infected (such as fever, redness or pus), if your fever, nausea or vomiting get worse, if you are unable to eat or drink, have difficulty breathing or if you feel dizzy or confused.

How to take care of yourself if recovering at home:



Keep hydrated, eat well and get enough sleep. Use medication for pain and fever if needed.



Take care of your rash:



Don't scratch



Clean your hands before and after touching lesions



Keep your rash dry and uncovered



Keep rash clean with sterilised water/antiseptic



Rinse lesions in your mouth with salt water



Take warm baths with baking soda/Epsom salt



Use paracetamol to manage the discomfort of lesions, if needed

Take care of your mental health:



Do things you find relaxing/enjoyable



Stay connected



Exercise if you feel well enough and can do so while isolating



Ask for support if needed

How to protect others if you are isolating at home:

Avoid contact with anyone until all of your lesions have scabbed over, fallen off and a fresh layer of skin has formed. Ask friends or family to deliver supplies.

If you live with other people:



Isolate in a separate room



Use a separate bathroom, or clean and disinfect (with household disinfectant) after each use



Clean hands frequently using soap and water or an alcohol-based hand sanitizer



Clean and disinfect frequently touched surfaces and objects with soap and water and household disinfectant



Avoid sweeping and vacuuming



Use separate dishes, cups, bedding, towels and electronics such as phones



Do your own laundry. Put everything in a plastic bag before carrying it to the washing machine. Use soap and water > 60 degrees.



Open windows

If you can't avoid being in the same room as someone else:



Cover rash with clothing/bandages



Avoid touching each other



Wear well-fitting medical masks



Open windows



Clean hands often

18/07/2022

Every effort has been made to ensure that the information and the drug names and doses quoted in this Journal are correct. However readers are advised to check information and doses before making prescriptions. Unless otherwise stated the doses quoted are for adults.