

POLIO EVALUATION



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Cover photo: *A collate of posters for child immunization at Kator PHCC, Juba, South Sudan (credit: Edward Luka).*

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EDITOR-IN-CHIEF

Dr Edward Eremugo Luka

South Sudan Doctors' Association

Ministerial Complex

Juba, South Sudan

opikiza@yahoo.com Twitter: [@eremugo](https://twitter.com/eremugo)

ASSOCIATE EDITORS

Dr Wani Mena

Department of Ophthalmology

Juba Teaching Hospital,

PO Box 88, Juba

South Sudan

wanigmena@gmail.com

Dr Eluzai Abe Hakim

Department of Adult Medicine & Rehabilitation

St Mary's Hospital, Newport,

Isle of Wight PO30 5TG, UK

Eluzai_hakim@yahoo.co.uk

EDITORIAL BOARD

Dr James Ayrton

james.ayrton@gmail.com

Dr Charles Bakhiet

sakib@squ.edu.om

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jhakim@mweb.co.zw

Dr Ayat C. Jervase

ayatci@yahoo.com

Dr David Tibbutt

david@tibbutt.co.uk

Prof. John Adwok

jadwok52@gmail.com

EDITORIAL ADVISOR

Ann Burgess

annpatriciaburgess@yahoo.co.uk

DESIGN AND LAYOUT

Dr Edward Eremugo Luka

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Reviewers are listed on the website

Counting the opportunity cost of abandoning the omnibus Health Professions Authority

The South Sudan Medical Council Bill, once approved, will improve the regulatory framework for health professionals. It will facilitate registration and licensing of health professionals including doctors, dentists and pharmacists. In turn this should enhance patient safety and quality of care delivered in the country.

Twenty two years of civil war ruined the healthcare system in South Sudan. Government provides only 15% of health services with the remaining 85% coming from non-Government organizations (NGO's), the quality of NGO and private sector services is unknown. With Independence in 2011 and a new constitution an opportunity to develop robust regulations for the health sector has arisen.

One of the main challenges facing the private healthcare sector in South Sudan is the absence of a regulatory body for registration of health professionals, especially those with foreign qualifications. The Medical Council Bill addresses this challenge. Other than medical doctors, dentists and pharmacists it does not cover other health professionals such as Nurses and Midwives, Public Health Professionals and Allied Health Professionals.

Cognizant of the severe lack of medical doctors who are the only cadre currently performing surgical, obstetrics and gynecological operations the Ministry of Health resorted to a task shifting approach to train mid-level cadres (clinical officers and nurses) to perform surgery and other lifesaving procedures. In the absence of a regulatory body that caters for their registration and accreditation, it will be difficult for them to operate in an environment devoid of parameters governing their roles and responsibilities and providing legal protection.

This regulatory vacuum is best resolved by establishing a Health Professions Authority to set the standards, and to supervise and regulate the medical and dental practitioners, pharmacists, public health practitioners, nurses and midwives, allied and other emerging health professions. The Health Professionals' Regulatory Authority Bill was developed after extensive consultations with stakeholders under the leadership of the Ministry of Health. It proposes to bring under one umbrella the regulation of all health professionals.

The Bill which was submitted to the Ministry of Health in July 2013 is currently awaiting enactment after all the necessary consultations. However the passage of the Medical Council Bill negates some of the key functions of the proposed Bill. Enactment of this Bill would streamline regulation and ease licensing and registration for health providers. Other merits of the Omnibus Health Professions Authority include:

- The Joint Health Professionals' Authority would streamline registration, licensing and accreditation. With a fragmented regulatory framework, health businesses face a very heavy burden of multiplicity of licenses - which increases the costs.
- The Joint Authority will have joint inspections.
- The Health Professionals Council proposed in the Bill would be a statutory body – with greater authority and a budget to implement regulation.
- The East African Community is moving towards a unified Health Professions Authority for all its member countries – South Sudan as an aspirant to join the community and would have a similar framework thus saving it from future amendments.

Dr. John P. Rumunu

Former DG Preventive Medicine, MoH GOSS.

Email: jrumunu@yahoo.com

Polio in South Sudan: the outbreak that never was

On September 30th 2013, the Government of South Sudan announced an outbreak of polio in the country. This was declared a national health emergency, since the country had been polio free since 2009.

According to the press release, “two girls, aged two and eight, living in Aweil South county, Northern Bahr el Ghazal State and a two year-old girl in Ikotos county, Eastern Equatoria State, were confirmed on September 26 as having polio. The status of the three girls is being followed closely. The cases were confirmed by the Kenya Medical Research Institute in Nairobi”.

The Honourable Dr. Riek Gai, Minister of Health, said we are “mobilizing from the highest level of Government to every community in the country in order to stop this disease” and are also “working closely with WHO, UNICEF, and other key partners around the world and here in South Sudan to ensure the most effective response. Together, we will stop the spread of polio in South Sudan”.

This outbreak in South Sudan was attributed to the confirmed cases in Somalia, Kenya and Ethiopia earlier this year. Fearing an outbreak in the country, the Ministry embarked on polio vaccination campaigns in the states considered at high risk: Jonglei, Upper Nile, Eastern and Central Equatoria and Pariang county in Unity State.

Despite these campaigns, the virus managed to slip into the country. The government established a task force with the goal of “implementing the outbreak response plan to interrupt transmission

by rapidly increasing population immunity and minimizing the risk of further spread to the rest of the country and neighbouring countries” and “to ensure that the response is adequate to interrupt polio transmission within six months of detection of the first case, as per the World Health Assembly established standards”.

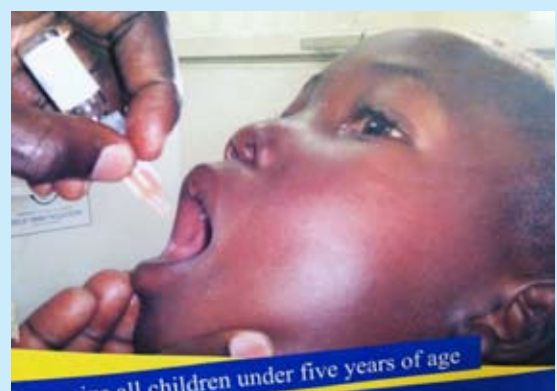
The Supplementary Immunization Activities (SIAs) designed to curb the spread of the wild poliovirus are as follows:

1. Mop-up Response: 24 Sept. to 4th Oct. 2013
2. Supplementary National Immunization Days (SNIDS): 22 – 28 Oct. 2013
3. Three consecutive NIDS:
 - a. 05 – 12 November 2013
 - b. 19 – 26 November 2013
 - c. 10 – 17 December 2013

Fortunately, it later emerged that there is no polio. The South Sudan sample was contaminated by samples from Somalia. The tests done at CDC were negative.

The SSMJ team commends the Government of the Republic of South Sudan, the Ministry of Health and all its partners in health for the quick response and mobilization to stop the spread of the virus and commitment to eradicate polio. The exercise has shown the readiness of all stake holders in working together to kick polio out of South Sudan.

Editor-in-Chief



POLIO SUPPLEMENTARY IMMUNIZATION CAMPAIGN EVALUATION: THE MABAN EXPERIENCE, SOUTH SUDAN, AUGUST 2013

Amenu Wesen Denegetu ^a

Abstract

The recent polio outbreak in Somalia, Kenya and Ethiopia demanded a safety net Sub-National Immunization Days (SNIDs) for four bordering States, including Upper Nile. Aiming to reach children aged 0-59 months, a house-to-house strategy was employed from 20-23 of August 2013 to vaccinate all children in Maban County. The post Campaign evaluation is conducted to assess coverage by finger mark (quality by proxy) and help to ensure improvements for subsequent campaigns.

The main objective of the evaluation was to assess the quality of the campaign to learn lessons for subsequent plans.

A total of 31 clusters were covered from both host and refugee areas for this evaluation. Hence, 310 households have been visited by the evaluators. A total of 802 <5 children were enrolled for this evaluation purpose.

According to the finding, 97.5% of the children living in the surveyed households have been vaccinated for this round of polio SNIDs, as reported by families; i.e., coverage by history. On the other hand, 87.7% of the children have been vaccinated based on the finger mark; i.e., coverage by finger marks. One hundred and nine children have been missed out of 802 children living in the surveyed households. Besides, 46 children have been identified as first doses of OPV in this campaign, which is 5.9% of the total surveyed children. In addition, 52.3% of families had been investigated for AFP by the vaccination teams. Besides, more than three-fourth of the families knew the campaign before the vaccination team visited their houses.

It is recommended to strengthen basic/refresher training of vaccinators, improving supportive supervision, proper estimation of target population and improving social mobilization activities.

Introduction

Although there are no confirmed polio cases in South Sudan since June 2009, vital indicators for polio eradication activities are not satisfactory [1.]. Hence, the recent huge polio outbreak in Somalia, Kenya and Ethiopia demanded a safety net SNIDs for four States, including Upper Nile.

Maban is one of the 13 Counties in Upper Nile State, with an estimated target population (<5years) of 60,160. The County has five Payams (the smallest administrative unit) and is home for both host and refugee communities. The fact that the County is very close to Ethiopia prompted it to be considered for SNIDs.

According to a polio Supplementary Immunization Activities (SIAs) monitoring guideline, evaluation of each campaign after the exercise is essential to ensure all children are vaccinated and to take lessons for subsequent plans [2.].

Objective of the post-campaign evaluation

To collect critical information on quality of campaign implementation and social mobilization activities for corrective actions in next rounds.

Methods of evaluation

The evaluation was conducted house-to-house in selected clusters [3.].

For this SNIDs evaluation, evaluators were deployed to four Payams and to all four refugee camps. Six external evaluators were trained on the standard monitoring tool and deployed in the selected areas. For this evaluation purpose, finger mark is the only valid proof for a child's vaccination status.

The villages for evaluation were selected conveniently based on accessibility; however, all the four refugee camps were included. Hence, Bunj, Banashoa, Jinkuota and Jemekida Payams for the host community; Doro, Kaya, Batil and Gendrassa for the refugee community were covered.

Results and Discussion

Sampled Payams, Villages and Children

A total of 31 clusters were covered from all the four Payams and four refugee camps for this evaluation (15 from host and 16 from refugee). From these clusters, 310 households have been visited by the post-campaign evaluators.

According to the finding, 790 <5 children were seen by the evaluators in the selected villages for this evaluation

^a DLitt et Phil in Health Studies from University of South Africa
STOP Consultant, WHO/South Sudan
E-mail: denegetu@gmail.com



Figure 1. Community health worker gives vaccination, Jombu PHCU in Yei County, South Sudan (Credit: AAHI/Christena Dowsett)

purpose (420 host, 370 refugee). However, the total numbers of <5 children living in all of the households visited were 802 (426 host, 376 refugee).

Vaccination Coverage by History and Finger-mark

As depicted in table 1, 97.5% of the children living in the surveyed households have been vaccinated for this round, as reported by families; i.e., coverage by history. On the other hand, 87.7% of the children have been vaccinated based on the finger marks; i.e., coverage by finger marks. Practice of finger marking was better in the refugee camps than in the host community (Table 1).

So in general, the coverage by history is higher than coverage by finger marks. This result shows us that very few children were missed in this SNIDs campaign out of the covered areas. However, this finding may not be generalized to the entire County as clusters were taken conveniently due to accessibility and sampling was not systematic.

Missed Children

A missed child by definition is: a child without a finger mark; it could be because the children have not been vaccinated, or children were reported to have been vaccinated but without a finger mark [SSMOH, 2010]. According to the monitoring guideline: if a child is said to be vaccinated but has no finger marks, it should be recorded as missed and indicated reason as "Team did not come".

According to the finding, 13.6% (109) children have been missed out of the total 802 children living in the households. This finding is slightly more than the global target of <10% [1.]. Most of the children, 80.7%, were missed because team did not go to the houses, 18.3%

children were missed because the children were not at home when the vaccination team went to the house and one child was missed because the child was either sleeping/sick or newborn by the time the vaccination team went to the houses. However, more children were missed from host community than from refugees.

Most of those children who were missed because they were "not at home" were in the playground.

Zero Dose (First dose of Oral Polio Virus)

Children who are vaccinated for the very first time in this round polio vaccination campaign are called Zero doses [3.].

In this post-campaign evaluation, 46 children have been vaccinated for the first time during this campaign. Therefore, 5.9% of children were zero doses. The most common reason for

zero doses was newborns (40) followed by team never came and child not home when vaccination teams visited houses during previous campaigns. According to previous reports, proportion of zero doses for South Sudan is around 5.5% [1.], which seems consistent with the finding in this survey.

AFP Case Search

AFP surveillance is the gold standard for detecting cases of poliomyelitis [4.]. Polio immunizing teams are trained to enquire families for Acute Flaccid Paralysis (AFP) cases while visiting households. In this survey, out of the surveyed 310 households, 162(52.3%) families have reported as being enquired for AFP by the vaccination teams. Hence, nearly half of the families were not enquired for AFP by the vaccination teams, which can be an indication of low quality of basic vaccinators training.

Social Mobilization

According to UNICEF, social mobilization for polio SIAs is the process of sharing information with the community about polio eradication activities, the polio immunization campaign and why it is important [5.].

In this evaluation, more than three-fourth of the families knew the campaign before the vaccination team visited their houses. Meaning that, majority of the community is aware of the campaign.

Conclusion

The findings in this PCE indicated that, the polio SNIDs campaign for the County needs boosting. Practice of finger marking was not optimal. Some children were missed while vaccinators were in the villages. Proportion of zero doses was to the expectation of the national figure. Social

Table 1. Total number of <5 children living in the evaluated households and vaccination coverage, Maban County, Upper Nile State, South Sudan, August 2013.

Payam/Camp	Total <5 children living in the visited HHs	Total <5 children reported as vaccinated by care takers	Total <5 children seen by the monitors		How many <5 have marked fingers	
			0 - 11 months	12-59 months	0-11 months	12-59 months
Bunj	146	146	45	101	41	76
Jemekida	111	107	40	69	38	59
Jinkoata	122	117	38	84	34	60
Banashoa	47	46	10	33	9	30
Kaya	85	85	32	53	32	48
Batil	126	126	31	95	29	84
Gendrassa	93	89	34	59	32	55
Doro	72	66	21	45	21	45
Total	802	782	251	539	236	457

mobilization seems to have covered most areas before the campaign periods.

Recommendations

- Strengthening of quality of basic vaccinators’ training should be emphasised.
- Improving social mobilization activities during each exercise of polio SIAs.
- Proper estimation of target population is needed, to avoid vaccine shortages.

Acknowledgement

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Authors’ contributions

Author designed the study, coordinated, supervised, analyzed the data and wrote the manuscript.

Competing interest

I declare that I have no competing interests.

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Stroke in SSA: Review of current literature concerning the incidence, risk factors and mortality in this demographic

Thomas Richard ^a

Prevention of stroke has been a key target for health care interventions in developed countries for decades, with recent WHO statistics demonstrating a 42% decrease in stroke incidence since 1970 [1]. This trend is not observed uniformly worldwide, with the same review demonstrating a 100% increase in stroke incidence in developing countries over a similar time period. Economic changes in these countries are anticipated to amplify this problem, with key risk factors for stroke also increasing in prevalence [2, 3]. Furthermore, more effective treatment of childhood diseases will likely increase the proportion of elderly people in these countries, further increasing the burden of chronic disease. A large hospital based study in Tanzania estimated the incidence of stroke to be between 108-316 per 100,000 [4] with significant differences between rural and urban populations. However considerable variation in this estimate has been observed in several smaller studies [5, 6]. Information concerning the community incidence of stroke is scarce with only one large study demonstrating a significantly lower incidence of stroke than hospital based studies [7]. Reliable information on stroke in sub-Saharan Africa (SSA) is therefore poor and it is difficult to accurately estimate stroke incidence in its population. Nevertheless, the aforementioned studies demonstrate a steady, yet substantial increase in the burden of stroke, hence necessitating further research and implementation of appropriate prevention strategies.

The rising incidence of stroke and stroke associated morbidity is especially problematic in SSA. Financial constraints and delayed presentation [8] contribute to a high case fatality rate. Two studies in Tanzania and Gambia recently demonstrated 1-month fatality rates of 24% and 27% respectively [9,10]. Comparison with fatality rates of <20% in developed countries [2] demonstrates a significant area of healthcare deficit with important implications in the context of a rising stroke incidence. A large study conducted in Mozambique suggested that in-hospital complications had the strongest influence on case fatality [11]. Greater prioritisation to acute stroke

management therefore could have a large impact on case fatality in these countries. Other studies demonstrate significant variation in mortality rates throughout SSA, with some studies revealing 28-day mortality rates of >40% [12]. This emphasises the need for more rigorous studies detailing key factors affecting mortality throughout SSA populations. In addition to acute stroke mortality, the burden of stroke morbidity is especially high. One study recently estimated a seven times greater number of disability-adjusted life years lost in developing countries in comparison with their developed counterparts [13]. Long term care of patients following a stroke is healthcare intensive and often unavailable in sub-Saharan countries.

Table 1. Relative contribution of cardiovascular risk factors to stroke

Study Location	Risk Factor	Risk Factor Present (%)
Agincourt, South Africa[20] (n= 103)	Hypertension	73 (71)
	Diabetes	12 (11.7)
	Smoking	9 (8.7)
Ibadan, Nigeria[21] (n= 66)	Hypertension	66 (100)
	Obesity	12 (18)
	Alcohol / Drug Abuse	11 (16.6)
	Diabetes	9 (13.6)
Nairobi, Kenya[22] (n= 80)	Hypertension	64 (80)
	Diabetes	27 (33.7)
Blantyre, Malawi[23] (n= 147)	Hypertension	81 (55)
	Diabetes	31 (21)
	Hyper-cholesteremia	22 (15)
	Smoking	26 (18)
	Alcohol Abuse	22(15)

^a Cardiff University School of Medicine, UK.

Correspondence to: Richard Thomas, Cardiff University School of Medicine, Heath Park, Cardiff, UK, CF14 4XN. Fax: 02920 743 199. Email: thomasr55@Cardiff.ac.uk

Table 2. Contribution of risk factors for stroke: a comparison between ethnicities [24]

Risk Factors	White		Black	
	Odds Ratio	Etiological Fraction(%)	Odds Ratio	Etiological Fraction(%)
Hypertension	1.8	25	2.0	37
Diabetes	1.0	0	1.8	14
Atrial Fibrillation	4.4	20*	1.7	3*
Coronary Artery Disease	1.3	16	1.1	6

*Significant difference in causative fraction in comparison between white and black populations ($p < 0.04$)

Such substantial morbidity rates, combined with an increasing incidence of stroke in these populations, will have profound economic effects at a national level.

Preventative strategies aimed at reducing stroke incidence and mortality need first to identify key risk factors for stroke in sub-Saharan populations. Studies specifically in this demographic however, with the exception of hypertension, are rare.

Multiple studies have identified hypertension as the leading risk factor for stroke in SSAs [14] with a Nigerian study demonstrating >80% prevalence of hypertension in stroke patients [15]. Sub-Saharan populations appear to be more at-risk of developing hypertension and subsequent stroke. Current literature demonstrates higher mean systolic and diastolic blood pressures (BP) in people of African descent in comparison with their Caucasian counterparts [16]. Furthermore a recently published multi-centred study demonstrated a 2 to 5 fold increase in stroke incidence in a population of black Americans [17]. This difference could be accounted for by a combination of factors, including hypertension. A large study conducted in South Africa suggested that up to 45% of strokes in SSAs could be prevented by simple blood pressure control measures [18]. Inadequate funding and lack of infrastructure however often impair diagnosis and screening of hypertension. With an increase in stroke incidence, detection and management of hypertension must become a greater priority. The contribution of eclampsia to stroke incidence should also not be underestimated. Of those patients who progress to eclampsia, approximately 4.9% will develop a stroke [19]. This represents a small but not insignificant portion of stroke burden in this population. Better access to maternal health care services could play an important role in reducing pregnancy related stroke.

Additional cardiovascular risk factors for stroke in this population have a less obvious contribution to stroke aetiology. Several studies have investigated the incidence of these risk factors in patients from sub-Saharan countries

and these are documented in table 1.

These risk factors appear to have variable effects on stroke risk in accordance with racial group. The large population-based NOMASS study [24] recently demonstrated an increased risk of stroke in black populations and made comparisons of the relative contributions of risk factors by ethnicity. Hypertension and diabetes had a substantially higher aetiological fraction in black populations, whereas atrial fibrillation (AF) and the presence of coronary artery disease were stronger predictors of stroke in white populations. These results are summarised in Table 2.

Despite non-significance, this study demonstrates the substantial contribution of hypertension to stroke in Black populations and emphasises the potential benefit of BP control. Furthermore the increased etiological fraction for stroke in black diabetic patients highlights the importance of good glycaemic control in stroke prevention. Interestingly, the risk of stroke resulting from AF appears to be much reduced in comparison to the white study population. This could have important implications when considering the risks surrounding anti-coagulant treatment in SSA.

WHO data indicates a high estimated prevalence of 4.8% of HIV in SSA populations [25] with considerable variation throughout different regions. Research has investigated the link between HIV and risk of stroke with substantial evidence suggesting an increased risk of ischaemic stroke in HIV-positive patients [26,27,28,29]. In particular, HIV appears to disproportionately increase ischaemic stroke risk in young patients, with one study demonstrating an Odds Ratio of >4 in patients aged 18-30 years [26]. This finding is further supported by a Malawian study which demonstrated that HIV-positive stroke patients were on average 24 years younger than their HIV-negative counterparts [27]. In the same study HIV-positive patients had a lower incidence of common cardiovascular risk factors, further suggesting the causal link between HIV and ischemic stroke. The

reasons for this relationship are uncertain but the role of opportunistic infection, hypercoagulability and accelerated atherosclerosis are hypothesised [28]. The affect of HIV on risk of haemorrhagic stroke is less certain. One study suggested an odds ratio of >7 for intra-cerebral haemorrhage in patients with AIDS defining symptoms compared with a HIV-negative cohort, with no significant increase for asymptomatic HIV-positive patients [29]. This compliments the results of an aforementioned study [26] suggesting that risk of both haemorrhagic and ischaemic stroke is strongly predicted by disease severity and viral loads.

More effective and comprehensive treatment of childhood and infectious diseases in SSA will lead to an older population, with higher chronic disease burden. Increasing prevalence of cardiovascular risk factors will further increase the mortality and morbidity caused by stroke in these countries. Risk factors for stroke are well known but an uncertainty surrounding each factor's contribution to stroke risk in this population must first be determined. Further research specifically in sub-Saharan countries is required to help guide potentially simple, yet effective interventions to curb the trend of a potential stroke epidemic.

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ANSWERS TO PHOTO QUIZ FROM AUGUST ISSUE

1. What name is given to this facial physical sign?

Risus sardonicus (trismus).

2. What is the underlying cause?

Tetanus caused by *Clostridium tetani* infection of a wound

3. What parts of the body are most likely to be the infected foci?

Hands, legs and feet: in neonates the cut umbilicus.

4. Describe the cardiovascular complications.

These arise from the disturbance of the autonomic nervous system causing tachycardia, hypo / hypertension, peripheral vasoconstriction and shock. A sudden tachycardia plus hypertension is called an "autonomic storm" and is followed by bradycardia and hypotension. A variety of cardiac dysrhythmias (including ventricular tachycardia) may occur.

5. What is the risk of sucking out (aspirating) secretions from the trachea?

Stimulation of the trachea may increase the vagal tone leading to severe bradycardia and even cardiac arrest. This procedure must be carried out very gently.

6. With what apparently minor symptom might a neonatal case of this condition present?

Difficulty with suckling.



We are grateful to Dr. David Webster for providing this photograph of his experience in Amudat Hospital, Uganda when he was there as Medical Superintendent in the 1960's.

The power of Nutrition Impact and Positive Practice (NIPP) Circles

Nicki Connell^a, Frank Okello^b and Hatty Barthorp^a

The Nutrition Impact and Positive Practice (NIPP) circle model was designed to provide alternative, community-based treatment and prevention of moderate acute malnutrition (MAM) to food-aid initiatives, including blanket supplementary feeding programmes (BSFP) and/or targeted supplementary feeding programmes (TSFP). Through both treatment and prevention of MAM, it is hoped that this will reduce the high rates of chronic malnutrition and intra-uterine growth restriction.

Traditionally BSFPs are used to prevent MAM in high risk groups and TSFPs to treat MAM. However, the efficacy of supplementary feeding programmes has been raised repeatedly over the past 25 years, and there has been little or no improvement in most Sub Saharan African countries in reducing chronic (stunting) or acute (wasting + kwashiorkor) malnutrition since 1990. New approaches are required and it is in response to this that GOAL designed the NIPP model, as a grass-roots based approach, directly tackling the underlying behavioural causes of acute and chronic malnutrition. If successfully applied, the project has the ability to help treat mild and/or moderate acute malnutrition, prevent future episodes of acute malnutrition and reduce the incidence of chronic malnutrition and low birth weight babies. Despite having a nutrition focus, the model is designed to be sensitive to pre-identified health, hygiene-sanitation and nutrition security causes of malnutrition, in addition to addressing problematic care and feeding practices.

GOAL believes that an efficient way to improve health is to use locally available, sustainable and effective approaches. In the 1970s, policy developers tested the concept that public health interventions could be designed around uncommon, beneficial health behaviours that some community members already practiced [1]. This concept, known as ‘positive deviance’, was used successfully to improve the nutritional status of children in several settings in the 1990s [2] and the NIPP model incorporates the positive deviance concept.

GOAL uses formative research to identify key causes of malnutrition within the community. To address these causes in households with undernourished or at-risk



Figure 1. GOAL Nutrition Officer supervising a beneficiary micro-garden in Baliet County, Upper Nile State (credit Frank Okello)

family members we identify existing, positive behaviours of mothers or caretakers in well-nourished but otherwise similar households. Trained NIPP Circle ‘positive deviant’ volunteers facilitate a series of fun and interactive sessions using peer-led education, prompting and reinforcing positive behaviour change, and eradicating negative practices. The model focuses on:

- promoting the use of high-energy, high-nutrient recipes through participatory cooking practices,
- stimulating behaviour change to improve household care and feeding practices, and
- promoting household food diversity through repeat-yielding micro-gardens – see Figure 1.



Figure 2. Female NIPP circle session in Ulang County, Upper Nile State showing female participants creating a song about handwashing (credit Frank Okello)

^a GOAL Headquarters
^b GOAL South Sudan
 Email: ofrank@ss.goal.ic

NIPP Circles target households with:

- moderately malnourished children and infants under 5 years,
- malnourished pregnant and lactating women,
- cured discharged children from Outpatient Therapeutic Programmes (OTP),
- anyone with chronic illness,
- mothers who have had multiple births, and
- motivated ‘others’ who want to improve their knowledge and understanding of healthy behaviours.

Women are not the sole decision-makers regarding issues of family food, household sanitation and hygiene, child care and family feeding practices, etc. although they are often the primary implementers. Men, elders, traditional healers, community leaders and religious heads

play a role in determining acceptable practices. Therefore the NIPP model targets the husbands, fathers, brothers, etc. of the female caretakers in parallel male circles, and the community members are targeted through a third circle. The aim of the sessions of the male/community members’ circles is to improve their understanding and acceptance of why the females are being taught new practices and encourage them to support females to adopt these practices. The female circle, the male circle and the community member circle form one “macro-circle”.

Admission and discharge criteria

Enrolment to the programme is voluntary and all participants know what enrolment entails and agree to all aspects before admission.

By August 2013 GOAL had established 26 macro-

Table 1. Admission and discharge criteria

Admission Criteria to Female Circles	Discharge Criteria for Female Circles
<ul style="list-style-type: none"> • All children recently discharged cured from OTP 	<ul style="list-style-type: none"> • MUAC ≥ 12.5 cm at the end of the NIPP Circle cycle and • Carers pass the post-test assessment (includes theory and practical elements)
<p>Families with children with moderate MN:</p> <ul style="list-style-type: none"> • Children 6-59mths with MUAC 11.5cm - <12.5cm • Children with weight: height <80% referred from a health facility • Children below 80% on their road to health chart • Infants 2-6mths with MUAC <11cm with appetite • Infants <2mths with visible wasting with appetite 	<ul style="list-style-type: none"> • MUAC ≥ 12.5 cm for children 6-59 months; MUAC ≥ 11 cm for infants 2-6 months; improved nutritional status for infants <2mths on road to health charts (verified at health facility) at the end of the of NIPP Circle cycle and • Carers pass post-test assessment (includes theory and practical elements)
<ul style="list-style-type: none"> • Malnourished pregnant or lactating mothers (MUAC <23cm - check your country’s guidelines as the cut off may differ i.e. 21cm) 	<ul style="list-style-type: none"> • Carers pass post-test assessment (includes theory and practical elements)
<ul style="list-style-type: none"> • Families with CI (including HIV cases), families with twins or multiple births, families where the primary carers show a keenness to participate to improve their public health nutrition education (PHNE) knowledge 	<ul style="list-style-type: none"> • Carers pass the pass post-test assessment (includes theory and practical elements)
<p>Defaulter Criteria for Female Circles</p> <p>If the primary carer is absent for two sessions consecutively and the team are not able to trace her, the household should be discharged from the Circle as a defaulter on the second session. Similarly, if they are able to trace her but she is not interested to return, the household should also be discharged as a defaulter on the second session.</p>	
<p>Non Responder Criteria for Female Circles</p> <p>If the relevant discharge criteria have not been attained at the end of the Circle period, the household can be discharged as a non-responder (NR). If their non-response is thought to be due to lack of adequate behaviour change, the household should ideally be readmitted into the next Circle for a repeat cycle. If however, non-response is thought to be due to an underlying clinical condition, they should be referred to the nearest health facility for assessment</p>	
<p>Referral Criteria to OTP or Health Facility - if referred, should be discharged from the NIPP circle</p> <ol style="list-style-type: none"> 1. Child 6-59mths with MUAC <11.5cm, weight for height <70% or below 70% on their road to health chart 2. Child with bilateral pitting oedema 3. Infant, child or adult not clinically alert and well 4. Malnourished infant or child with no appetite 5. Infants less than 6 months who are failing to thrive (diagnosed by plotting weight for age on road to health card) 6. Unexplained weight loss or static weight gain at the end of the Circle cycle with regular attendance 	

circles: 10 in Agok, Abyei Administrative Area; 4 in Twic County, Warrap State; and 6 in Ulang County plus 6 in Baliet County, Upper Nile State.

Key stages to establish NIPP Circles

Target communities with high levels of acute malnutrition are identified through MUAC (mid-upper arm circumference) screening and health facility GMP (Growth monitoring and promotion)/OTP records. Discussions with the Ministry of Health, key community figures and lay-representatives from the community are held on the issues surrounding malnutrition in their community and the NIPP Circle project is introduced. Once the community approves the programme, community leaders and the village health committee provides support in identifying 'positive deviant' NIPP Circle volunteers for the female, male and community member circles.

The selected NIPP Circle volunteers then attend a ten day NIPP Circle training. This is divided into:

- a preliminary phase in which trainee volunteers assume the role of beneficiaries and receive the training by GOAL/MOH support staff;
- phase two in which volunteers act as the Circle lead and practice leading mock sessions.

After the training, community sensitisation and MUAC screening are done to identify NIPP Circle beneficiaries. Once the circles are formed, female volunteers lead sessions with the primary carers and influential female elders at their homesteads, and male volunteers lead parallel sessions elsewhere targeting the male heads of the same households the female beneficiaries are from. The third volunteer, who can be either male or female, leads the community member circles.

Monthly/ bi-monthly feedback sessions are held with NIPP Circle volunteers to identify problems, and to support volunteers with possible solutions and share

successes. This improves the quality of the programme and boosts motivation.

Costs are kept to a minimum to ensure the sustainability of this project with the ultimate objective being that it can be run by the MOH, a community-based organization (CBO) or a national NGO. Therefore low-cost, non-financial incentives for the volunteers are used, such as volunteer recognition days, inviting NIPP circle volunteers to GOAL-led staff trainings, and providing a certificate upon completion of one cycle of a NIPP circle. For the same reason, a starter pack of seeds is the only material item provided in the NIPP circle project to the beneficiaries and all other items required are provided by the communities and participants themselves.

Duration and timings of circle sessions

Female NIPP Circle sessions run three times a week for 12 weeks for no longer than two hours per day – see Figure 2, and are divided into three parts:

Part One of every Session: Behaviour Change Communication & Counselling. Each session focuses on a different 'core' topic lasting approximately 45 minutes, until the topic is well understood by all participants (this may take one session or it may take a week).

Core topics are determined by crucial gaps in participants' knowledge and the behaviour change needed to improve nutritional status, as identified in the formative research by the 'barrier analysis' (BA). BAs are conducted on a limited number of prioritised 'significant' behaviours. However, in addition to these prioritised behaviours there are often a few additional practices that are thought important. Examples might include:

- awareness and signs of malnutrition;
- availability of foods at markets, benefits of home gardens and the role of traditional foods in addressing nutritional needs;
- appropriate maternal nutrition and health during pregnancy and lactation including advocacy to access micronutrient supplementation from health facilities, elimination of cultural practices that limit consumption of a nutritionally adequate diet, reducing the risk of low birth weight and so the risk of inter-generational malnutrition;
- exclusive breastfeeding up to 6 months, with practicals on infant positioning, and promotion of breastfeeding up to 2 years;
- Infant and young child feeding including timely introduction of appropriate complimentary foods, adequate number of feeds and active feeding;
- knowledge on how to best to spend household money



Figure 3. Tippy tap with soap dispenser in a NIPP Circle beneficiary home in Twic County, Warrap State (Photo courtesy of Nicki Connell)

Table 2. Progress to Date in South Sudan (funded by ECHO, Irish Aid and Common Humanitarian Fund)

State/Area	Warrap State	Abyei Administrative Area	Upper Nile State	Upper Nile State	Comments
County/Area	Twic	Agok	Baliet	Ulang	
# Circles opened	4	10	6	6	
Date opened	May 2013	Feb – Aug 2013	June 2013	March 2013	
# Admitted	29	97	60	47	
% Graduating successfully*	96.6%	56.9%	66.7%	57.4%	As graduation is based on admitted participants achieving improved nutritional measures, attaining a certain level of knowledge and illustrating that they are using newly acquired practices at a household level, the % graduation may be low in some areas due to one of those criteria not being fulfilled during the pilot of this project.
% eating produce from the microgarden at graduation	92%	97.2%	100%	56.8%	The % in Ulang was lower than the other sites because some of the participants chose to sell the produce in the market rather than eat it in the household. Due to access to Ulang being compromised at times during the cycle, support to beneficiaries to encourage household consumption was limited. GOAL is working to address the issue of access for future circles.
% knowing how to make high-energy porridge at graduation	92.3%	100%	100%	93%	
% with handwashing facility at graduation	10.7%	82.9%	12.8%	7.1%	Uptake of handwashing facilities in Agok was higher due to the beneficiaries largely being Muslim, where handwashing is an inherent part of their lifestyle.

*Successful graduation includes achieving a MUAC 12.5cm or greater if aged 6-59 months/a MUAC 23cm or greater when PLW, in addition to passing a post-test which includes verifying key behaviour changes through home visits.

on healthier more nutritious foods;

- the multiple roles of men in facilitating positive behaviour change.

In addition all NIPP Circles must include:

- hand-washing points – see Figure 3;
- latrines;
- assessment for viability of use of fuel efficient stoves and
- practical demonstrations of different food processing techniques, preservation and storage practices.



Figure 4. Use of food flash cards, Agok, Abyei Administrative Area (credit Frank Okello)

Part Two: Micro-gardens for Improved Nutrition and Food Security. This is dedicated to practical learning, around construction and maintenance of a micro-garden, lasting for around 45 minutes. Participants are led through a step-by-step process of how to construct and maintain a small-scale garden, using a model garden at the volunteer homestead. They are encouraged to replicate at home what they have learned. There are different options for household micro-gardens, including key-hole gardens, bag gardens, kitchen gardens etc., whereby teams choose the most appropriate type of garden for the context. In order to incentivise participants, groups are encouraged to visit each other's gardens, to provide inspiration and help problem solve if necessary.

Part Three: Cooking Demonstrations. Together the group prepares a high energy, micronutrient rich complementary food, taking no longer than 45 minutes. Usually up to 5 recipes are taught. To ensure these are fully learnt, they are repeated on a weekly basis. Sessions include discussion about the recipe, sometimes using picture drawn by participants to help them remember the ingredients; participatory food preparation, cooking and subsequent feeding of the children and/or pregnant/lactating women and the chronically ill. The purpose is to show carers how they can improve the nutritional status of their family, and thus help prevent future episodes of malnutrition. As already mentioned, all foods are provided by the participants themselves and the volunteer helps to coordinate the group, to ensure the relevant ingredients are made available for each session. Obtaining and bringing foods is practice to reinforce that idea. In order to help the volunteer coordinate the provision of different foodstuffs by participants they use Food Flash Cards (cards showing photos of different food types) – see Figure 4. The cards are used to enable Circle participants to work out the complete range of foods available in the community and then get participants to put them into appropriate food groups. This way the Circle can:

- see the complete range of food types available/accessible to them;
- use the images to make up different recipe ideas by taking foods from different food groups and
- identify the different ingredients they will need to bring between them to make each recipe. In this way carers can see how to diversify family diets, both between meals and from day to day.

Male NIPP Circle sessions use a similar agenda, although the duration of each is shorter as some practical exercises are only covered in theory, whereas the women's groups need to practice and master new behaviours. Male circle members are taught how they can proactively support the women in their household to adopt new positive practices.

Community member NIPP Circle sessions run for around 3-7 days for approximately 2 hours each. The meetings introduce the key topics covered in Female and Male Circles. They include practical demonstrations on simple nutritional screening techniques, signs used to identify malnutrition, and the responsibilities of key individuals (including those participating) to refer 'at risk' patients to OTPs or NIPP Circles.

In Agok weights were collected for all children aged 6-59 months. Analysis of children's weights for those who graduated successfully, showed that 51.5% were growing better than they had on admission. Collection of weight as well as MUAC data will be done at all new circles.

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Unruptured tubal pregnancy in the second trimester

Mame Diarra Ndiaye Guèye^a, Mamour Guèye^a, Ibou Thiam^b, Magatte Mbaye^a, Abdou Magib Gaye^b, Abdoul Aziz Diouf^a, Mouhamadou Mansour Niang^a, Jean Charles Moreau^a

Introduction

The incidence of ectopic pregnancies varies from 10 to 39.5/1,000 deliveries [1,2,3]. The ampullary portion of the fallopian tube is the most common location [4]. Many risk factors are associated with ectopic pregnancies. Tubal pregnancies generally rupture between 5 and 11 weeks of gestation [3].

However, some cases of advanced tubal pregnancies have been reported with a different presentation. This event is rare because it is unusual for the fallopian tube to dilate to the point of containing a second or third trimester foetus. The diagnosis of an ectopic pregnancy is more often made earlier by sonography in developed countries. In developing countries, where resources are limited, most women do not undergo ultrasound examination during pregnancy. Where ultrasonography is available it is usually done in the second trimester. We report a case of unruptured advanced tubal pregnancy, which we have observed for the first time in our unit.

Case report

A 30-year-old patient, gravida 5, para 4, at 17 weeks of gestation was admitted with abdominal pain and no vaginal bleeding. Her general medical history revealed no other problems. Her four previous pregnancies had ended



Figure 1A. A large vascular mass, 15 x 15 cm which proved to be the right fallopian tube (credit Mamour Guèye).



Figure 1B. Hysterectomy with the fallopian tube and foetus that weighed 190g, without dysmorphic features on external appearance (credit Mamour Guèye).

at full term with vaginal deliveries. Her current obstetric care had included one clinic visit without sonographic examination.

The patient was haemodynamically stable without abdominal tenderness or peritoneal signs. A mass, around 15 cm in diameter, was palpable between the umbilicus and the pubic bone on the right side of the abdomen. The mass was tense with regular contours.

Mobilization was limited and painful.

Vaginal examination revealed a closed cervix. Sonographic examination found an empty uterus with a foetus in the abdominal cavity. An emergency laparotomy was carried out. A large vascular mass, 15 cm x 15 cm was found which proved to be the right fallopian tube (Figure 1A). The uterus was small with a normal left tube and ovaries. Further inspection of the pelvis and abdomen did not reveal any other abnormality.

A total hysterectomy was performed. The fallopian tube was opened. It revealed a foetus that weighed 190g. No dysmorphic features were noted (Figure 1B). The pathology examination showed a placenta invading the external surface of the fallopian tube. Histology demonstrated second-trimester villi with areas of inter villous fibrin deposit and haemorrhage. The patient had an uneventful postoperative recovery.

Discussion

The incidence of ectopic pregnancies varies from 10 to 39.5/1000 deliveries [1,2,3]. The ampullary portion of

a Clinique Gynécologique et Obstétricale, EPS Aristide Le Dantec, 1, Avenue Pasteur, BP 3001, Dakar, Sénégal

b Service d'Anatomie et de Cytologie Pathologique, EPS Aristide Le Dantec, 1, Avenue Pasteur, BP 3001, Dakar, Sénégal

Corresponding author: Dr. Mamour GUEYE mamourmb@yahoo.fr

the fallopian tube is the most common location. Bouyer et al. [4] reported the site of ectopic pregnancy from a 10-year population based study of 1,800 cases. They found that only 4.5% were extratubal (ovarian and abdominal) and 73% were ampullary.

Risk factors for ectopic pregnancy include a previous ectopic pregnancy, the presence of tubal damage from an infection or prior abdominal/pelvic surgery, a history of infertility, treatment for in vitro fertilization, increased maternal age and smoking [5]. Half of the women with ectopic pregnancies have no identifiable risk factors [6].

Before the introduction of “early pregnancy units” 85% of ectopic pregnancies were diagnosed after the tube ruptured but now this has greatly reduced with less maternal morbidity and mortality [6]. In developed countries, the majority of ectopic pregnancies are diagnosed using transvaginal ultrasound.

In developing countries ectopic pregnancies are most often discovered when ruptured. Cissé et al. [7], in a study in Senegal, reported 242 out of 255 (94.9%) being detected at the time of rupture. The incidence of late diagnosis is the consequence of late antenatal care and absence of ultrasound facilities and is responsible for significant mortality: 1.2% in the study of Cissé et al.

In Senegal, at least four antenatal clinic visits and three ultrasound scans, one in each trimester, are recommended during pregnancy. However because of limited financial resources, most women do not undergo ultrasound examination during pregnancy. If ultrasonography is carried out it is usually done in the second or third trimester.

Tubal pregnancies generally rupture in the first trimester between 5 and 11 weeks of gestation [3]. However, some cases of advanced tubal pregnancies were reported with different presentations. Late ultrasound examination may fail to recognize advanced tubal pregnancies as in our case. Nkwabong et al. [3] and Sachan et al. [8] reported advanced ectopic pregnancies that were diagnosed as intrauterine pregnancy with death of the foetus after several unsuccessful attempts of induction of labour. Finally they resorted to laparotomy which diagnosed the ectopic pregnancy [3, 8].

Few cases of ampullary pregnancies carried to

term have been reported in the literature. These were diagnosed at laparotomy initially planned as Caesarean section [3]. Such instances are rare because it is difficult for the fallopian tube to dilate to the point of containing a live foetus at term. Late diagnosis of ectopic pregnancy leads to major complications in almost all cases and needs emergency surgical intervention. However in our case, in spite of prolongation of the pregnancy, the patient was haemodynamically stable.

The treatment of advanced tubal pregnancy is always a total salpingectomy. Even if the patient had the desire for future child-bearing, it would be difficult to perform conservative tubal surgery due to excessive deformation of the fallopian tube [3]. In our case, we performed laparotomy due to the site of the ectopic pregnancy being near the interstitial portion of the tube.

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How to carry out a clinical audit project

Eluzai A Hakim, FRCP (Edin&Lond)

What is Clinical Audit?

It is, “A quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and implementation of change. Aspects of the structure, processes and outcomes of care are selected and systematically evaluated against explicit criteria. Where indicated changes are implemented at an individual team or service level and further monitoring is used to confirm improvement in health care delivery” [1].

Why should clinicians conduct Clinical Audit?

It is expected of junior doctors in training to engage with quality improvements through the process of Clinical Audit by the United Kingdom General Medical Council, the Postgraduate Medical Education and Training Boards and the Royal Colleges [2]. It is vital for Trainees to undertake an Audit as this is often asked about in interviews for jobs. Besides it is an important practice to engage in Audit in order to contribute towards delivery of quality health care in the Department.

The basis of Audit is to improve bad systems, not finding bad people. Hence Clinicians should not shy away from having their work audited, either by themselves or by peers.

Proposed Audit Methodology

a. The Audit Standard

Once you have chosen a topic to be audited, agree an Audit criterion such as, “All patients admitted through the Emergency Ward must have all observations carried out at admission”. The target may be 100%, but it is unrealistic to set such a high percentage target since some people may not have their investigations for some reason. Hence a realistic target would be 95%. The third component of the Audit Standard is “exceptions”. Exceptions are valid reasons for non-compliance with the criteria set for the Audit. This may include death on admission or perhaps refusal to have the investigations carried out. The fourth and last component of the Audit Model is “definitions”.

You explain in brief detail what the observations to be carried out on admission are, where you get this

Table 1. The differences between clinical audit and research [3]

Research	Audit
<ul style="list-style-type: none"> Process which involves the scientific verification of a predicted, but not necessarily proven relationship between or among variables. It contributes to scientific knowledge about what constitutes appropriate care. Larger samples often needed in research studies. 	<ul style="list-style-type: none"> Systematic peer evaluation of the quality of patient care based on explicit and measurable indicators of quality of care. Aimed at demonstrating and improving quality of patient care. Samples used are often small and collected by less rigorous methods.

information from and within what period of time the observations should be carried out. This section is very important for non-clinical Audit Data Collectors who may be standing in for a Clinician. They need to know in explicit terms what to collect.

b. Data collection

Define the period within which the Audit will be carried out, for example, January 2013 to June 2013 inclusive. Contact the Medical Records Department and retrieve all notes within that period. Design a simple Audit Collection Form such as is shown in Table 3, and run the each Audit Criterion against each set of clinical notes. If a particular patient meets the criteria put a tick against each of the observations predefined in the Audit. Those who do not meet it will get a cross. The number of those who have met each criterion are added up and a percentage of all audited clinical notes are calculated. If this percentage is less than 95% it means that the Audit Criterion has not been met for this particular Audit.

c. Results

The ages of the patients, gender, the number of observations that have met the criteria and those that have not will be displayed as either bar or pie charts.

d. Recommendations

A set of recommendations is then drawn up by the Auditor and his or her Supervisor to inform those working in the Emergency Department, for example, about the importance of carrying out observations on all patients admitted to the Unit. The results of the Audit

a Consultant Physician, St Mary's Hospital, Isle of Wight, UK.
eluzaihakim@doctors.org.uk;

Table 2. Audit standard model used in practice

Criterion	Target	Exceptions	Definitions & Instructions.
All patients admitted to the Emergency Department must have observations made and recorded.	95%	1. Death on admission. 2. Refusal to have observations carried out.	Observations include body core temperature, pulse, BP, oximetry reading and nutritional assessment

may be presented to the hospital or to the Emergency Department in order to convey the essential message about the quality of care in this particular area of Clinical Practice. A poster may be made with the results of the Audit and the recommendations, disseminated throughout the Hospital in order to inform all healthcare professionals of the suggested changes. A date should be set for a re-audit to see whether the message contained in the recommendations has bedded into clinical practice.

e. Conclusions

- Audits are aimed at detecting “bad” systems, not bad people.
- Hospital Administrators, Managers, Clinicians, Patients and Patient Interest Groups, may be involved in Audit.
- Audit is not research.
- Develop an Audit Standard Model to facilitate the Audit process.
- Identify someone to see through the changes recommended by the Audit.

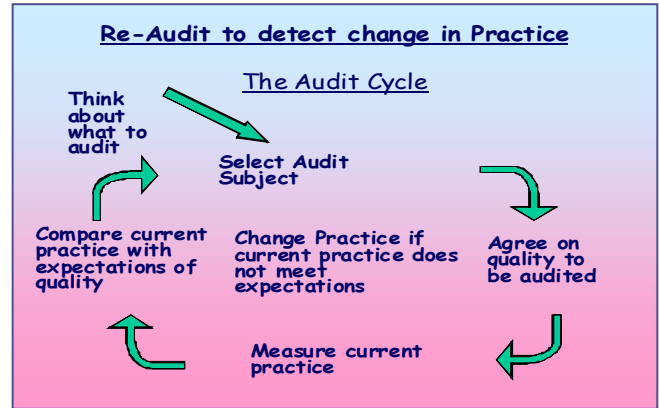


Figure 1. Audit cycle adapted from reference 1

Table 3. Audit Collection Form

Audit Criteria	Met (tick)	Not Met (tick)	Comments

- Re-audit in order to complete the Audit cycle (see Figure 1).

Audit Data Collection (Table 3)

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“Water water everywhere nor any drop to drink”

James Malia^a

Wide awake in the middle of the night, I switched on the radio: BBC World service. Someone was talking about South Sudan and the prevalence there of the water-borne disease, Guinea-Worm fever, one of the few countries in the world where the disease is endemic and, in South Sudan's case, the speaker explained, virulently so. The symptoms he described were obscene.

South Sudan? What did I know about Sudan? Gordon of Khartoum, the Kitchener expedition, British colonial domination, forced linking of Northern and Southern regions, independence, suppression by Muslim North of the partially Christian South, twenty years of civil war, and finally the establishment of the sovereign country of South Sudan.

But what a country! Twenty years of bitter fighting had left the ramshackle infrastructure almost beyond repair. And now: Guinea Worm disease. Water-borne. I looked it up on the internet. The illustrations were revolting. I switched to general health statistics, abstract but no less shocking: less than half the population with direct access to healthcare, mortality in childbirth highest in the world, infant life expectancy shortest in Africa, diarrhoea, hepatitis, malaria. The health situation was dire. What was being done? I was concerned.

I found out to my relief that something was indeed being done and on our own doorstep. Staff of Saint Mary's hospital on the Isle of Wight had taken matters very much into their own hands. Doctor Hakim, consultant physician, himself from South Sudan, had enlisted the expertise and generosity of retiring consultant-surgeon, Tim Walsh along with Tim's wife, Zorina, medical education manager, also on the point of retirement. Together they set about recruiting a core team of medical and clinical staff from the hospital to form what has become known as Saint Mary's JubaLink.

A fact-finding visit to Juba, the chief city of South Sudan and in particular to the university teaching hospital revealed details of the urgent need. On return,



Figure 1 The almost-ready JubaLink Guest House
(Credit Eluzai Hakim)

surgeon Tim Walsh reported their findings: “Although material and equipment for the provision of healthcare is very limited, it is the absolute lack of skilled healthcare staff that is the most crucial issue. There are needs for training in virtually all areas, particularly emergency obstetrics in primary care, midwifery, nursing and medicine, integrating nutrition more fully into secondary healthcare. Unless ongoing education and training is developed and supported, it is difficult to see how the health service in South Sudan can progress”. He added, “Furthermore, there are many able and dedicated South Sudanese doctors and other healthcare professionals whose enormous potential is just waiting to be developed.”

Following the visit, the team went into action: multi-professional training visits were organised, examination of undergraduate medical students was undertaken. The visiting staff attended conferences, arranged meetings with senior doctors, visited government health-officials. Along with the American Real-Medicine Foundation and World Children's Fund, JubaLink participated in the establishment of a school of nursing and midwifery at university teaching-hospital, where the group are currently involved in developing a post-graduate medical training programme.

Regular visits and hands-on involvement over the past few years have established JubaLink as a very meaningful element in the regeneration of South Sudanese healthcare.

All of this costs money. Although medical staff give generously of their own time and contribute to the expense involved, a shortfall remains, not least the expense of accommodation. Hotels in Juba are not cheap. To counteract this, the team have undertaken, with commendable initiative, the construction of a twelve-bedded Guest House, Saint Mary's 'JubaLink House', designed to accommodate visiting medical staff and, as is planned, other groups in need of temporary accommodation at a reasonable price - an investment it is seen for the future financing of the JubaLink project.

^ajimnita27@yahoo.com

The Guest House is basically finished. Furnishing and connection to utilities Figure 4. Use of food flash cards, Agok, Abyei Administrative Area (credit Frank Okello) s remain. It was at this point I became involved as more than a well-wisher. My wife and I gave the project a donation. What it was I cannot remember but it may have been significant; I was invited to a JubaLink board-meeting. Innocently I accepted. I was made most welcome and informed that I had been elected as a trustee. "What does that mean?" I enquired. "When we are in trouble, you are responsible," was the smiling, good natured reply. My medical qualifications were zero; my teaching degree was of little use. However I had experience as a fund-raiser and in that role I joined the merry band.

I was not alone. Fund-raising, the life-blood of the project, was already well under way, seeking large-scale grants from professional bodies to smaller scale but very important one-off projects: an auction, raising four figures, a Scottish fiddle-band raising the roof, sponsored triathlon, cake-stalls, jumble sales, fashion show; the variety was equalled only by the enthusiasm. Then there were the steady, quiet, sometimes anonymous sponsors and donors, nursing staff contributing to the hospital's charity in far-off Africa, hospital patients helping quietly but significantly. Donations kept flowing in. They were needed. Building-debt, although much reduced, had to be cleared. The Guest House still had no running water. I was asked to do something about it.

My experience of some years in West Africa had made me keenly aware of the necessity of a reliable source of clean water. Four months of rainless dry season is a force to be reckoned with. In Juba the water-problem I learned, is acute. Normal supply is direct from the river, bowsers delivering, at a price, water that is neither filtered nor treated. I thought of the Guinea Worm, the water-borne parasite ingested and preying upon its host-victim until the malignant worm has grown to over half a metre in length. At this stage, I read, the little dragon, as its Latin title calls it, begins to bore its way out through the subcutaneous flesh of its host forming an intensely painful blister accompanied, I continued to read, by fever, nausea and vomiting.

Although a massive post-war effort has been launched to combat the disease, South Sudan still has by far the greatest level of Guinea Worm fever in Africa. It is not curable but it is preventable: a simple nylon micro-mesh filter can ensure parasite-free water. Simple, involving trained health workers, good clinical practice, primary care - a JubaLink speciality.

But on a more positive level, the greatest means of prevention is a reliable source of good clean water. This is what JubaLink has undertaken to effect with borehole, pump and tank, basically for the Guest House but, on a wider scale, available to the neighbouring community. What a gift! A dream! Reminding us of the song: "All day we faced the barren waste without the taste of water, cool water and way up there He'll hear our prayer and show us where there's water, cool clear water." But at a cost. Nine thousand pounds to be precise, ten thousand euros. A challenge but not an impossible one. I accepted the challenge. I was not alone. A senior staff-member recently retired, fellow parishioner and JubaLink trustee, joined the campaign. We appealed to the parish. We were promptly given a cheque for a thousand pounds. Another parishioner arranged a standing order for a hundred pounds a month. A fund-raising concert was organised. A free showing of 'Mama Mia' with accompanying merry singalong was arranged, free but with the inevitable donations-bucket. The pennies and pounds were rolling in. Heart-warming but with some distance to go.

Fund-raising is of two types, global and parochial. Caritas International, Trocaire, Cafod, Concern Ireland have a world-wide appeal and commitment, the bedrock of overseas aid. JubaLink is much more limited. Income is in thousands rather than millions. But this restriction has a definite advantage: the personal touch. The clean-water appeal, for example, is quite specific. The donors know that their money is going towards the sinking of a borehole, the setting up of a solar-powered electric pump, a water-tank, not any old water-tank but a specific tank serving a specific identifiable purpose. Small charities have a purpose. And who knows what blessings can be heaped upon simple faith.

JubaLink is not a religious organisation as such. It is an organisation based fundamentally and simply upon goodwill towards the suffering and deprived.

Eight hundred years ago, the Cistercian abbey of Saint Mary the Virgin at Carisbrooke on the Isle of Wight founded a hospital for patients suffering from the then incurable disease of leprosy. Traces of the foundations of that leprosarium can still be seen near the village. It is claimed that the present Saint Mary's hospital can trace its ancestry through turbulent times to the hospital attached to the monastery of Saint Mary the Virgin. It is pleasant to think that JubaLink, so closely connected to the present-day Saint Mary's, is carrying on that tradition of care for the sick and deprived established so many years ago by the Cistercian Monks of Carisbrooke.

Resources

Maternal Health and Family Planning

Facts for Family Planning: A New Tool for Family Planning Knowledge and Awareness

Facts for Family Planning is a new publication that presents a comprehensive collection of key information and messages for anyone who communicates to others about family planning. This booklet is a helpful resource for project staff who want to increase their knowledge and awareness for family planning and will help to ensure that family planning messages are accurate and reflect the most current and updated information.

Containing 10 easy-to-read chapters on important family planning topics such as delaying first pregnancy, spacing pregnancies, understanding fertility, and family planning methods, with special chapters focused on unmarried youth and HIV/AIDS, Facts for Family Planning can be a useful tool for counselors, social workers, community health outreach workers, teachers, religious leaders, or others working in developing country settings. Furthermore, program directors and managers can use this information as a guide in the development of training materials, communication messages, and other program-related activities.

You may download individual chapters or a complete PDF of all chapters. To order single and multiple print copies, email info@jhucp.org or fill out the order form.

Review of Effectiveness of community health workers delivering preventive interventions for maternal and child health in low- and middle-income countries

This review found moderate evidence that community health workers are effective in delivering preventive interventions for maternal and child health in low- and middle-income countries.

Evidence suggests several strategies that should be explored, including combining hygiene education with breastfeeding interventions with the prospect of reducing diarrhoea rates in infants, using visual aids, which can be left with the mother as educational tools, and specifically targeting health messages. Variations in interventions, training and outcomes make it difficult to compare all included studies, however some important findings emerged from this research:

- Community health workers are effective at increasing acceptability of mother-performed practices, such as skin-to-skin care and exclusive breastfeeding.
- Community health workers are capable of providing interventions beyond their traditional scope and with more intense training, such as those of a psychosocial nature or delivering scheduled intermittent preventive treatment for malaria. 3.
- Community health workers are effective in delivering health promotion or education, especially with simple, targeted messages. The use of visual aides may also be very valuable in relaying these messages.

Reference: Brynne Gilmore & Eilish Mcauliffe. Effectiveness of community health workers delivering preventive interventions

for maternal and child health in low- and middle-income countries: a systematic review. BMC Public Health 2013, 13:847 doi:10.1186/1471-2458-13-847 <http://www.biomedcentral.com/1471-2458/13/847/abstract>

[from HIFA 2015]

National, regional, and global rates and trends in contraceptive prevalence and unmet need for family planning between 1990 and 2015: a systematic and comprehensive analysis

Expansion of access to contraception and reduction of unmet need for family planning are key components to improve reproductive health. This study estimated and projected indicators of contraceptive prevalence and unmet need for family planning from 1990 to 2015.

Using data from nationally representative surveys, for married women aged 15–49 years, it was found that the worldwide, contraceptive prevalence increased from 54.8% in 1990 to 63.3% in 2010, and unmet need for family planning decreased from 15.4% in 1990 to 12.3% in 2010. In 2010, 146 million women had an unmet need for family planning. The absolute number of married women who either use contraception or who have an unmet need for family planning is projected to grow from 900 million in 2010 to 962 million in 2015, and will increase in most developing countries.

Ref: The Lancet, Online Publication, 12 March 2013. doi:10.1016/S0140-6736(12)62204-1

Infections

Malaria Conference in Durban

According to WHO 2010 statistics, malaria caused an estimated 660 000 deaths with 95% of these occurring in Africa. Together DR Congo and Nigeria, Africa's most populous nations, account for more than 40% of the global deaths.

Although some countries are moving towards malaria elimination, this background statistic was in the minds of researchers at the 6th Multilateral Initiative in Malaria (MIM) Pan-African Conference in held Durban in October. They said that control and surveillance efforts need to be sustained to prevent a resurgence in malaria cases and deaths. Speakers pointed out that malaria elimination requires major changes in thinking—to include targeting of asymptomatic carriers of sub-microscopic parasite densities, and strengthening surveillance. Sharing available data and tools, using limited resources better, and networking are crucial to malaria elimination.

Publications

Neurology in Africa

A downloadable, free book by William Howlett, 2012 is at <http://www.uib.no/cih/en/resources/neurology-in-africa>. It is also available in the open research archive BORA.

Evidence Based Health Care Newsletter

Produced by the International Society for Evidence Based Health Care - see <https://docs.google.com/file/d/0BwbofjJjycFNmU1V3pOM1N3Q1k/edit?pli=1>.



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XVTH WORLD CONGRESS

STUDENTS AND JUNIOR GRADUATES PRE-CONGRESS & MAIN CONGRESS

19-26 July 2014

REFLECTION

- Bible reading
- Lectures & seminars
- Faith & science, working cross-culturally, sharing the Good News, career choices, preventing burn out, integrity in medicine, leadership, work-life balance, ethics, medical missions, ethics in dentistry, etc.

FELLOWSHIP

- Worship
- Different cultures and ages
- Students & professors, junior & senior doctors
- United in Christ
- Small groups
- Fun time

CELEBRATION

- 50 years ICMDA
- Gala dinner

- Best facilities
- City center

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• One of the largest, impressive skyline,

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