

# Southern Sudan Medical Bulletin

Volume 2. Number 3. August 2009



*A motorbike ambulance (credit Peter Martel Copyright© IRIN 2008)*

## Contents

- Editorial 2
- Tribute to Professor David Morley 3
- Diabetes: Part 2. Management of diabetes including hypoglycaemia and complications *Georgina Page, Liz Whittingstall and Victor Lawrence* 4
- Hypertension in Adults: Part 1. Prevalence, types, causes and effects *Muhammad Ilyas* 9
- Juba Teaching Hospital/St Mary Hospital UK Link 10
- MDR-TB is in town; and might be tugging along XDR-TB *Drs Peter A. Otto, A. Agid, Suzan and Mushtaha* 11
- Can mothers who have swine flu continue to breastfeed? Yes! 13
- Juba Teaching Hospital Resource Center: Interview – with Agnes Comfort Daru 14
- Reports from Southern Sudan 15
- Extracts from Journals 16
- For your Resource Centre 17
  
- Supplement: HIV/AIDS: HIV/AIDS: Update on Epidemiology, Prevention and Treatment - including Available South Sudan Literature (free standing document) *Professor James Hakim*

To inform, educate and positively influence the  
development of Health Services in the Southern  
Sudan

Established in 2008. A publication of the St Mary's Juba hospitals link

## Editorial: Mental Health Services in Southern Sudan – a Vision for the Future

Major mental illness exists all over the world with a remarkably similar prevalence. This includes the major psychoses such as schizophrenia, bi-polar disorder and major depression. These place a huge burden on the individual, their families and the economy. Southern Sudan is no exception. Mental illness may be less visible than physical illness but the suffering is equally great.

### St Mary's Hospital, Isle of Wight – Juba Teaching Hospital Link

St Mary's Hospital on the Isle of Wight, UK has a health education link with Juba Teaching Hospital (JTH), which started about 2 years ago - see page 10. I was privileged to visit JTH for three weeks in October 2008 with little knowledge beforehand about the mental health service there.

### Juba Teaching Hospital

Ward 12 is the in-patient facility, which also admits sleeping sickness patients. The lead clinician is a very experienced medical assistant with one deputy. Nurses do not have specialist mental health training and rotate from other areas. They work on a medical model to the best of their ability.

Accommodation is clean but basic with no therapy/meeting areas. Psychotropic drug supply is limited and irregular. Families can buy newer antipsychotic drugs if they can afford them. Patients are not fed which is a major problem for those without families. Records and observations are minimal. There is no mental health legislation. The families carry out most of the care and family bonds are strong.

Outpatients are seen in a nearby small building. The staff has just one room to see patients with their families and to use as their only office. None the less I observed excellent therapeutic relationships. The two medical assistants are assisted by nurses and a trained counsellor / social worker.

Many of the acute psychiatric patients come in through the general outpatient department and the medical wards. There is often co-morbidity with cerebral malaria and other tropical diseases. Suicide attempts and completed suicides are regularly seen. Often violent methods are used or the swallowing of toxic substances.

### Prison

The central prison has separate buildings for male and females incarcerated through mental illness and not criminal offences. The male wing is much larger. The family and a magistrate have to agree on the need for incarceration on grounds of public and personal safety.

Accommodation is extremely basic and most inmates appeared severely ill. Physical health suffers in this environment with malaria and dysentery prevalent. There is no alternative location for minors. The prison governor and health staff agrees that there is an urgent need for an alternative health-led facility. They are very aware of the inappropriate placement in prison for some adolescents with severe psychosis.

The **Southern Sudan Medical Bulletin (SSMB)** is a quarterly publication intended for Healthcare Professionals working in the Southern Sudan or those Healthcare Professionals in other parts of the world seeking information on health in the Southern Sudan.

It aims to offer education and information in all specialities and identify research that will inform the development of Health Services in the Southern Sudan. We plan to include reports of original research, critical/systematic reviews, case reports, clinical photographic materials, obituaries, letters to the Editor, use of drugs, medical news of public interest, nutrition matters, public health issues and stories of the health services in the Southern Sudan in the past.

The Bulletin is a publication of the St Mary's Juba link. It is published in mid-February, May, August and November and is free online at <http://www.iow.nhs.uk/juba> (under journals).

**We encourage readers to print copies and pass them to colleagues.**

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## Community

It is difficult to establish the prevalence of mental morbidity in the community. Certainly the Non Government Organisations deal with much minor illness and religious leaders have an invaluable role in counselling and bereavement work, etc.

A recent study based in Juba showed a high level of post traumatic stress disorder after the war. This may increase as people return from internal and external displacement. Drugs and alcohol misuse are emerging problems. There is a generation growing up minus one or both parents.

## Key Mental Health Staffing

As in much of Sub Saharan Africa skilled medical assistants or clinical officers take on the medical role. The mental health medical assistants in JTH have completed a three-year mental health training in Khartoum in addition to their previous training They carry out the functions that a psychiatrist would carry out in the UK. The student medical assistants are trained in Juba at the Health Institute and at least four said they wanted to specialise in mental health.

## International Links

St Mary's Hospital, Isle of Wight / Juba Teaching Hospital Link is a charitable organisation allied to The Tropical Health Education Trust. There are several other UK mental health links to countries in Sub Saharan Africa such as Malawi, Uganda, Ghana and Somaliland, and so there is a growing network within which to share experiences.

The Royal College of Psychiatrists has an international forum that also networks. They have an international volunteer scheme whereby the host country funds a local salary for accommodation and basic needs and applies for an experienced psychiatrist who will work for six months to one year with the local service.

## The Way Ahead

The Government of South Sudan is aware of the need to develop mental health services as well as all their other major priorities. The Ministry of Health plans to appoint a Director General with a brief for the development of mental health services. It will then be much easier to establish the needs and priorities for strategic planning. In the mean time we need to build relationships. It is essential the Link concentrates on major mental illness.

As time progresses more opportunities will exist:

- The introduction of mental health modules in medical student teaching now that the medical school has returned from Khartoum to Juba
- Similarly mental health modules in nurse and midwifery training
- Psychiatric modules for continuing professional education for junior doctors and trained nurses
- A priority will be the mental health modules for medical assistants at the Health Institute. They are a skilled, talented and committed group of young people who need support and training for their chosen speciality. In the future medically qualified doctors may wish to specialise in mental health but the priority at present is to establish mental health training for medical assistants.
- The other priorities are to relocate the prison mental health unit and develop community psychiatry.

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## What a man, what a friend of Africa and the developing world!

Professor David Morley (CBE, MD, FRCP) the widely known and loved paediatrician, died on July 2nd aged 86. After working in Nigeria, where he promoted the Child Growth Chart, he was Lecturer and then Professor (and later Professor Emeritus) at the Institute of Child Health, London. There he taught and inspired child health professionals from all over the world, and travelled widely himself, particularly to sub-Saharan Africa. In 1965 he founded Teaching-aids At Low Cost (TALC) a charity that has supported the publication and distribution of low-cost books, CDs and other teaching aids to thousands of health care professionals. He has contributed to several health care information sources including the Southern Sudan Medical Bulletin.

## Diabetes:

### Part 2. Management of diabetes including hypoglycaemia and complications

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#### Introduction

Previously<sup>1</sup> we have discussed the diagnosis, classification and prevention of diabetes mellitus. In this article we provide an overview of management of glycaemic control in diabetes mellitus as well as managing hypoglycaemia. We also look at the management of diabetic complications and provide a basis by which to run a diabetes clinic.

#### Glycaemic control

Control of glycaemia leads to a reduction in both macrovascular and microvascular complications. There are several methods by which this can be done.

#### General measures

All patients with diabetes are treated with dietary modification. There is nothing special about a 'diabetic diet' and patients with diabetes should be advised to eat the same healthy diet as promoted to the non-diabetic population. Likewise, patients with diabetes should be encouraged to participate in regular exercise of the kind that would benefit the rest of the population. Most patients with new onset type 2 diabetes should initially be managed with dietary modification (and exercise) alone although there is now a trend towards early use of metformin (see below).

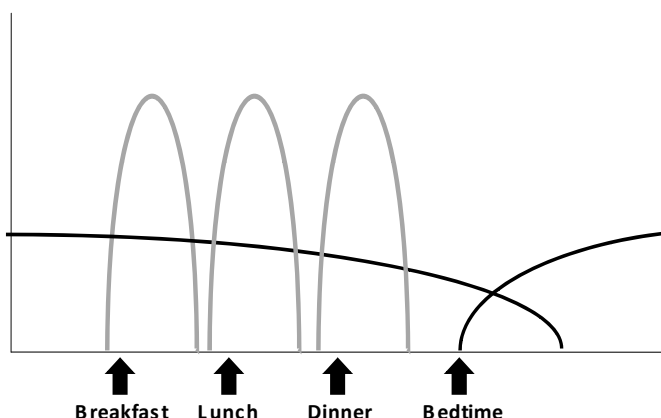
#### Type 1 diabetes

All patients with type 1 diabetes are treated with exogenous insulin and there are many different types of insulins available, all of which have different profiles. Two main insulin regimens are commonly used.

- A twice daily administration of pre-mixed insulin which contains a mixture of short acting and longer acting insulins in a ratio between 30:70 to 50:50.
- A "basal-bolus" regimen in which the patient takes the longer acting (basal) insulin at night and the shorter acting (bolus) insulin with each meal.

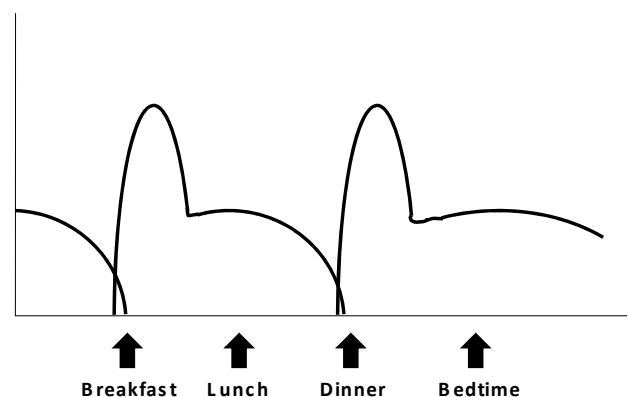
There is no one correct regimen and choice depends on patient preference, education and available support as well as availability of treatment options. In all situations patient education is vital as they are responsible for their own individual day-to-day management. Advice for storing and using insulin are included in the appendix and the plasma insulin levels achieved with basal-bolus and twice daily insulin mixes are illustrated in figures 1 & 2.

Figure 1: Basal-Bolus Regime



Plasma insulin concentrations over time with a basal bolus insulin regime

Figure 2: Premixed twice daily regime



Plasma insulin concentrations over time with a twice daily insulin mix regime

Special considerations in type 1 diabetes - sick day rules:

- When ill, blood glucose levels may rise above normal even if patients are not able to eat normal meals or drink anything, so NEVER STOP INSULIN.
- Test blood glucose levels approximately every 4 hours and adjust dose of insulin. Hypoglycaemia is common in malarial illnesses both because of the disease and also potentially as a result of drugs used in its treatment (e.g. quinine or mefloquine) so very frequent monitoring is advised and insulin dose reductions may be necessary.
- To prevent dehydration encourage the patient to drink 2-3 litres of sugar free liquids per day. This is approximately one glass every hour.
- If the patient is vomiting or unable to eat solid carbohydrate foods replace this with liquid carbohydrates such as fruit juice, sugary drinks.

### Type 2 Diabetes

#### Oral hypoglycaemic agents

- Metformin reduces blood glucose levels by decreasing hepatic glucose output and increasing peripheral glucose uptake and utilisation in insulin sensitive tissues. It is the mainstay of treatment in obese individuals with type 2 diabetes and can be used alone or in combination with other medications including sulphonylureas and insulin. Approximately one-third of patients on metformin will have transient nausea, anorexia or diarrhoea, abdominal discomfort, and metallic taste. These side effects can be minimised by starting with a low dose (e.g. 500 mg daily with the main meal) gradually increasing the dose up to a maximum of 2 g per day in divided doses. The main limitation to metformin use is the risk of developing the potentially fatal complication of lactic acidosis. This is higher in individuals with either renal (creatinine >130-150 micromol/l), cardiac or hepatic failure where either the metabolism of metformin is impaired or lactate production is increased. Metformin must be used with caution or stopped in these individuals. Also be aware that chronic metformin use can lead to Vitamin B12 deficiency.
- Sulphonylureas (Gliclazide, Glibenclamide, Glipizide, Tolbutamide) increase the pancreatic release of insulin and are used to treat patients with type 2 diabetes who have adequate insulin

### Hypoglycaemia

Hypoglycaemia is the commonest complication of type 1 diabetes and is frequent in type 2 diabetes with insulin or sulphonylureas. Always try to find out

reserve. Because of their tendency to promote weight gain, they are best used as first line agents in non-obese patients but may be added to metformin in obese patients with inadequate control. The main side-effect associated with this class of medication is hypoglycaemia and all patients need to be warned of this possibility.

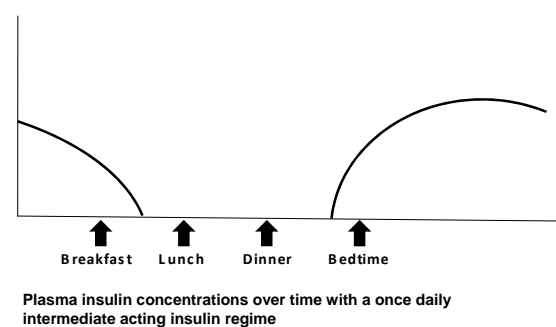
- Thiazolidinediones are also insulin sensitizing agents. They are second-line agents that can be used in combination with metformin and sulphonylureas but are contraindicated in individuals with ischaemic heart disease, cardiac failure, severe renal insufficiency, pregnancy, breastfeeding and hepatic dysfunction. The most significant side effect is weight gain mainly due to fluid retention.

### Insulin in type 2 diabetes

Patients with type 2 diabetes require treatment with insulin on average 7 years after diagnosis. Insulin treatment of patients who are already overweight or obese carries the risk of inducing further weight gain. Unfortunately this can lead to further increases in insulin requirements and more weight gain. However, as these patients do not usually require exogenous insulin action throughout the 24 hour period other regimes may be considered, particularly addition of once-daily longer acting insulin (e.g. NPH insulin, insulin glargine or insulin detemir) in combination with oral hypoglycaemic agents. Plasma insulin concentrations achieved with once daily intermediate acting insulin is illustrated in figure 3. The main limitation to insulin use is hypoglycaemia.

Most patients with type 2 diabetes, especially those who are overweight, should remain on metformin when insulin is instituted/started in whatever form unless there are contraindications to its use.

Figure 3: Once daily regime



the cause of any hypoglycaemia as it will determine future management. Common causes include:



- Malaria
- Dietary – missing or delaying a meal
- Too much insulin: inadvertent administration
- Unaccustomed exercise
- Alcohol/recreational drugs
- Over dosage of sulphonylureas.

Symptoms can be classified as:

- early autonomic symptoms: sweating, shaking, palpitations, hunger, nausea
- later neuroglycopenic symptoms: confusion, poor concentration, and co-ordination

Occasionally seizures or localising signs such as hemiparesis occur.

The risk of hypoglycaemia provides the main limitation to the achievement of good glycaemic control in diabetes. Effects may be devastating, permanent and may occur over minutes or hours. Some 2-4% of deaths in type 1 diabetes are thought to be due to hypoglycaemia.

Patient education and recognition of hypoglycaemia with appropriate management is an important aspect of diabetes management. In the event of symptomatic hypoglycaemia or a blood glucose 72g/dl (<4mmol/l) treat with 20g of fast acting oral carbohydrate (3-4 cubes sugar/glucose tablets) followed up with a longer acting carbohydrate (bread, biscuits). In the event of severe hypoglycaemia the patient may be unable to help themselves and management includes intravenous glucose (20-30ml of 50% dextrose) repeated as necessary or glucagon (1mg im, iv or sc). Both of these treatments need following up with further oral or iv carbohydrate depending on response with ongoing capillary glucose monitoring until stable.

### Complications

The many complications related to diabetes mellitus can be divided into:

- macrovascular – stroke, MI, peripheral vascular disease
- microvascular – nephropathy, retinopathy, neuropathy.

To achieve good glycaemic control aim for blood glucose values to be:

- 70-125 g/dl (4-7mmol/l) fasting,
  - <140g/dl (7.8mmol/l) post prandial,
  - <35g/dl (2 mmol/l) with prandial excursions;
- or ideally an HbA1c of 6.5-7.5% (48-59mmol/mol).

Ideally blood pressure should be < 140/80 mmHg but patients with nephropathy may benefit from even tighter control e.g. 130/70 mmHg.

Lipid control in type 2 diabetes usually requires an HMG CoA Reductase Inhibitor e.g. simvastatin 40 mg od to achieve target LDL levels of below 2-3 mmol/l. Some advocate the addition of a fibrate

such as fenofibrate if triglyceride remains elevated (e.g. above 2.3-2.8 mmol/l).

### Nephropathy

Prolonged hyperglycaemia leads to glomerular hyperfiltration which eventually can lead to proteinuria. A stage of microalbuminuria is detectable by laboratory analysis of urine before a urine dipstick becomes positive for proteinuria (which almost always precedes a fall in renal function). Good glycaemic control with aggressive blood pressure control (<130/80) and use of ACE-Inhibitors or Angiotensin II receptor blockers can delay the progression of microalbuminuria to proteinuria. Other causes of renal failure (e.g. stones, infections, renovascular disease) should be considered if there is no evidence of proteinuria or retinopathy: diabetic nephropathy without retinopathy is almost unheard of.

### Eye disease (retinopathy)

This is a common cause of blindness worldwide and after 15 years of diabetes about 2% of people are blind with 10% having severe visual impairment. In addition, cataracts and glaucoma are more common in people with diabetes. There are 2 main stages of diabetic retinopathy:

- pre-proliferative (almost always asymptomatic)
- microaneurysms and small haemorrhages visible on retina
- proliferative (usually asymptomatic but can cause blurring or reduced vision and dark spots)
- new vessel formation on retina and optic disc with risk of retinal detachment.

Maculopathy is another significant complication caused by reduced blood supply to the macula which in turn leads to macular oedema and blindness. There is no treatment for the early stages of diabetic retinopathy and prevention is achieved by good glycaemic and blood pressure control. Later stages of retinopathy can be treated with laser therapy by experienced specialists. Ideally all diabetic patients should have annual retinal examinations.

### Neuropathy

Almost any neuropathy can be caused by diabetes and may be focal (e.g. cranial and peripheral mononeuropathies), diffuse (e.g. painful sensory neuropathy) or autonomic. Alternative diagnoses must always be considered as patients are at risk of neuropathies of other cause (e.g. thyroid dysfunction, B12 deficiency, vasculitis, malignancy, drugs, alcohol, infection). There are no specific treatments for diabetic neuropathies but most will respond to improved glycaemic control, sometimes with insulin. Pain can be treated with simple analgesics initially although they are not always successful and medications such as amitriptyline (e.g. 10mg od) or gabapentin can be tried.

Mononeuropathies will usually resolve spontaneously over 6-24 months.

### **Diabetic foot disease**

This is a complex pathological process in which the culmination of vasculopathies and neuropathies associated with the poor wound healing of diabetes can lead to foot ulceration, infection and ultimately amputation. Routine foot examination is an important part of preventing this potentially fatal complication and should be performed regularly by all patients. The presence of callus often implies abnormal loading and high risk for ulceration. Simple advice includes:

1. Look carefully at the feet each day including in between the toes for signs of infection or deformity. If the patient is unable to do this then someone should do it for them.
2. Cut nails following the curvature of the toe.
3. Wash feet regularly and dry carefully.
4. Try to avoid walking barefoot.
5. Wear well-fitting footwear.

### **Running a diabetes service**

When setting up a diabetes clinic ideally all people with diabetes have an annual review with interim visits guided by the availability of access, presence/absence of complications, glycaemic control and patient choice.

In Table 1 we provide a checklist for covering what should be addressed at each annual review. Specifics need to be targeted to each individual as appropriate.

**Table 1. What to do at a patient's annual review**

HISTORY	
General medical and non medical events	
Specific problems	
Problems with diabetes treatment	e.g. assessment of adherence, side effects, interactions etc.
Problems with other treatment	e.g. assessment of adherence, side effects, interactions etc.
Glycaemic control	Barriers to, treatment for, understanding of, goal setting for, fasting, postprandial, other
Hypoglycaemia	Frequency, severity, awareness, precipitants, driving, acceptability, avoidance etc
Education	Sick day rules, hypoglycaemia, good control, foot care, specific issues, glycaemic control etc
Lifestyle factors	Diet, exercise, smoking, weight, other drugs, other factors
Contraception/Conception	Higher dose folic acid (5 mg) pre-conception. Close antenatal care with tight glycaemic control to reduce risk of foetal anomalies, macrosomia etc
Vascular risk assessment and treatment (e.g. ?aspirin, ACE etc)	Glycaemic control, microalbuminuria, smoking, BP, lipids, FH, duration of diabetes, FH of microvascular complications etc.
Diabetes prevention	Post GDM, family members, IGT etc.
EXAMINATION	
Microvascular Complications	Neuropathy (autonomic or peripheral), nephropathy, retinopathy, foot examination
Macrovascular Complications	Claudication, Stroke, amaurosis fugax, MI, angina
Other complications	Infections, bladder, bowel, muscle, cognitive etc.
Erectile Dysfunction	Detection, ask, differential diagnosis, testosterone, prolactin, treatments for etc
Injection sites	Inspect for lipoatrophy or hypertrophy
BLOOD AND OTHER TESTS	

Use this checklist when assessing the foot:

1. Inspection – colour, shape, hard skin, cracked skin, ulcers, hair distribution
2. Palpation – pulses (dorsalis pedis and posterior tibial), warmth, capillary refill time
3. Assessment of protective sensation (10g monofilament, vibration sense, light touch perception).

Treatment measures include appropriate treatment of infections with anti-microbial therapy (e.g. flucloxacillin as 1<sup>st</sup> line therapy but directed as appropriate to suspected or cultured organism) and the ulcer base should be debrided of any non-viable tissue as appropriate. Equally important is appropriate footwear with offloading any pressure on the affected area and appropriate dressings in order to prevent further infection/ulceration. Hyperglycaemia over around 200g/dl (11.1 mmol/l) is associated with marked reduction in immune function and tissue repair and should be tackled where possible.

BP	Postural hypotension, pulse (autonomic neuropathy)
Urine dipstick	Proteinuria, haematuria, glycosuria, infection
Blood tests	Creatinine, HbA1c, Lipids, LFTs, TFTs, Autoantibodies etc
AGREED MANAGEMENT PLAN	Specific targets and management plan for factors identified

### Appendix: Advice for insulin usage

1. Storage - keep unopened vials/cartridges of insulin in the fridge until needed. Once open each vial/cartridge can be safely stored at room temperature for 1 month. Insulin should not be exposed to extremes of temperature (very hot or very cold) as this will affect its action.
2. Mixing – pre-mixed insulins need to be rocked/rolled approximately 20 times until the mixture is uniformly cloudy before use to ensure the ratio administered is correct.
3. Expiry – all insulin has an expiry date, do not use after this date as the action of the insulin cannot be guaranteed
4. Changing needles – needles are designed for single use only and repeated use of needles reduces the accuracy of insulin administration.
5. Needle disposal – all needles should be disposed of safely into a sharps bin. If a sharps bin is not available a thick plastic bottle with a child-proof lid (e.g. empty bleach bottle) is a good substitute.

### Reference and further reading

1. Lawrence V. 2009 Diabetes. Part 1. Definition, Diagnosis and Prevention *Southern Sudan Medical Bulletin* 2:2 p7  
The following on-line resources provide further information and links to other relevant sites:

- American Diabetes Association (ADA) *Clinical Practice Guidelines* <http://www.diabetes.org/for-health-professionals-and-scientists/cpr.jsp>
- ADA *Guidelines on Diabetic Emergencies* [http://care.diabetesjournals.org/cgi/content/full/27/suppl\\_1/s94](http://care.diabetesjournals.org/cgi/content/full/27/suppl_1/s94)
- National Diabetes Information Clearing House <http://diabetes.niddk.nih.gov/>

### See also:

**Lancet special issue on diabetes** 23 May 2009 Volume 373 Number 9677

<http://www.thelancet.com/journals/lancet/issue/current>

The editorial states, "..... Four-fifths of all patients with diabetes live in developing countries. Across Africa, the Middle East, and South and Central America, the prevalence of diabetes is estimated to rise by about 80% over the next 15 years." It points out that research efforts in developed countries have produced effective screening and prevention programmes and drug treatments for the management of diabetes, but that "...little of this expertise is available in developing countries that are only now beginning to recognise the burden of chronic non-communicable diseases. .... Few diabetes drugs feature on essential drugs lists, and those countries that have access to insulin often store it at a central location, beyond the reach of the majority."

Articles in this issue include:

- A comprehensive meta-analysis showing that women with gestational diabetes have a seven-fold increased risk of subsequently developing type 2 diabetes compared with women with a normoglycaemic pregnancy (and an accompanying Seminar on gestational diabetes).
- A meta-analysis suggesting that intensive glucose control can significantly reduce rates of adverse coronary events, without increasing the risk of death.

**HIV infection and diabetes** A recent study shows that HIV infection itself does not increase the risk of diabetes. The results showed that at the start of the study, people with HIV had a lower risk of diabetes than HIV-negative individuals. However, this was because of the low body mass index (BMI) of untreated HIV-positive individuals; an improving immune status, treatment with antiretroviral drugs, and hepatitis C virus were all shown to increase diabetes risk in people with HIV. There is general agreement that traditional risk factors for diabetes, such as increasing age, obesity, and race, are responsible for most cases of the condition diagnosed in people with HIV. What is less clear is the role of risk factors such as the use of antiretroviral drugs and co-infection with hepatitis C virus. *Butt AA. HIV infection and the risk of diabetes mellitus. AIDS 23: 1227-34, 2009.*

**The Diabetes Foundation report** on implementing national diabetes programmes in sub-Saharan Africa  
[http://www.access2insulin.org/Diabetes\\_Foundation\\_report\\_on\\_implementing\\_national\\_diabetes\\_programmes\\_in\\_sub-Saharan\\_Africa\\_full\\_report.pdf](http://www.access2insulin.org/Diabetes_Foundation_report_on_implementing_national_diabetes_programmes_in_sub-Saharan_Africa_full_report.pdf)



## Hypertension in Adults: Part 1. Prevalence, types, causes and effects

Dr Muhammad Ilyas, Specialist Registrar Acute Medicine, St Mary's Hospital Isle of Wight, UK\*

### Introduction

Arterial hypertension is a common and preventable cardiovascular risk factor, leading to about 1.7 million deaths/year worldwide.

### Prevalence

The incidence and prevalence of hypertension depends upon the racial composition of population and criteria used to define hypertension (see Table 1). The prevalence of hypertension in the USA ranges from 4% in 18-29 years olds to 65% in those aged 80 years and over. Prevalence of hypertension in South Sudan is unknown but a review of studies in sub-Saharan Africa<sup>1</sup> showed it was higher in urban than rural areas and, like other races, increased with age. In most studies reviewed:

- Less than 40% of people with blood pressure above the defined normal range had been detected
- Of people with previously diagnosed hypertension, less than 30% were on drug treatment.

**Table 1. Classification of BP levels** (according to The British Hypertension Society)

Category	Systolic BP (mm Hg)	Diastolic BP (mm Hg)
Optimal	< 120	< 80
Normal	< 130	< 85
High Normal	130 - 139	85 - 89
Grade 1 (mild)	140 - 159	90 - 99
Grade 2 (moderate)	160 - 179	100 - 109
Grade 3 (severe)	≥ 180	≥ 110

Hypertension occurs more frequently in 'black' compared to 'white' populations and is associated with:

- A higher incidence of cerebrovascular and renal complications
- A greater tendency to develop left ventricular hypertrophy
- Enhanced sodium retention with a higher incidence of salt-sensitive hypertension, expanded plasma volume and A higher prevalence of low plasma renin activity.

- Reduced sodium-potassium ATPase activity with a tendency towards increased intracellular sodium and calcium concentrations
- Greater frequency of proteinuria.

### Types of hypertension

There are two types:

1. Primary or essential hypertension (97-98%) has no clear underlying cause but appears to be the result of an interplay of complex genetic and environmental factors.
2. Secondary hypertension (2-3%) is caused by a specific underlying mechanism usually involving kidneys or endocrine system.

### Mechanisms in primary hypertension

Several patho-physiological mechanisms contribute to the development of primary hypertension. The factors include:

- Genetics
- High salt intake
- Low physical activity
- Obesity
- Insulin resistance
- Renin – angiotension system
- Sympathetic nervous system
- Intrauterine nutrition and low birth weight

### Causes of secondary hypertension

These are unusual but are important because the cause may be curable:

1. Endocrine causes:
  - Cushing's syndrome
  - Conn's syndrome
  - Pheochromocytoma
  - Hyper / Hypothyroidism
  - Acromegaly
  - Hyperparathyroidism
  - Exogenous hormones, e.g. contraceptive pills, glucocorticoids.
2. Renal causes:
  - Glomerulonephritis
  - Diabetic nephropathy
  - Polycystic kidney disease
  - Renal artery stenosis.
3. Other causes:
  - Coarctation of the aorta
  - Pregnancy associated hypertension
  - Alcohol
  - Acute stress.

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### Effects of Hypertension

Damage to organs (end organ damage) appears in two main forms:

1. Obstruction to arterial blood flow: atherosclerosis causing cerebral infarction ("stroke"), coronary and peripheral arterial disease.
2. Rupture of arteries: e.g. cerebral haemorrhage ("stroke") and aortic dissection.

Organ damage can also result from drugs used for treatment of hypertension. Other common complications of hypertension include:

- Atrial fibrillation
- Left ventricular hypertrophy and failure
- Kidney damage leading to failure
- Retinopathy.

### Risk Factors for a poor prognosis in hypertension

- Black race
- Youth
- Male gender
- Persistent diastolic BP > 115 mm Hg
- Smoking

- Diabetes Mellitus
- Hypercholesterolaemia
- Obesity
- Excess alcohol intake
- Evidence of end organ damage.

### References

1. Addo J, Smeeth L & Lean DA 2007 Hypertension in Sub-Saharan Africa: A Systematic Review *Hypertension*. 2007;50:1012.  
<http://hyper.ahajournals.org/cgi/content/abstract/50/6/1012> )

**With thanks to Dr David Tibbutt for editing this article.**

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### What do you know about the Juba Teaching Hospital/St Mary Hospital UK Link?

The objective of the link between Juba Teaching Hospital (JTH) and St Mary's Hospital on the Isle of Wight is: "To promote understanding of the needs and to support the Government of Southern Sudan, in order to improve clinical services through the development of education and training."



Over the past year trainers from St Mary's have supported the following activities at JTH:

- a 3-day workshop for midwives,
- a week long course in Applied Surgical Physiology
- a course in Trauma Management
- a needs assessment in psychiatry and daily teaching in psychiatry for the medical assistants and a review of educational needs.

In addition 2 trainee doctors from UK had a 4-month attachment to Juba Teaching Hospital where they undertook a major review of the functioning of the Emergency Unit and provided teaching to the local healthcare professionals – see photo.

News of the latest 2009 visit from trainers to JTH will be in the next issue of the Bulletin. And we will tell you about some fundraising activities on the Isle of Wight. For more information email [eluzai\\_hakim@yahoo.co.uk](mailto:eluzai_hakim@yahoo.co.uk) or [twalsh721@btinternet.com](mailto:twalsh721@btinternet.com).

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## MDR-TB is in town; and might be tugging along XDR-TB

Dr Peter A. Otto\*, Dr A. Agid, Dr Suzan and Dr Mushtaha.

\*Dr. Peter Adwok Otto is an Associate Professor and Dean of the Faculty of Medicine and Health Sciences, Upper Nile University and contact person on MDR-TB in Sudan. [adwokotto@hotmail.com](mailto:adwokotto@hotmail.com)

**Multi-drug resistant tuberculosis (MDR-TB)** is defined as TB that is resistant to the two main first-line drugs (isoniazid and rifampicin).

**Extensively drug resistant TB (XDR-TB)** is a relatively rare type of MDR-TB and is defined as TB which is resistant to isoniazid and rifampicin, plus resistant to any fluoroquinolone and at least one of three injectable 2<sup>nd</sup> line drugs (i.e. amikacin, kanamycin or capreomycin).

### Study Design

Setting: Abu-Anja Teaching Hospital for Respiratory diseases.

Period: January to September 2008.

### Rationale for the study

It has been noted that there is a rapid increase in the number of patients who have completed first line anti-tuberculous drugs once or more, but their sputum remain heavily positive with *Mycobacteria*, while others have empirically started 2<sup>nd</sup> line treatment.

### Specific objectives

1. To find out if these cases are MDR-TB, and to record the trend and the percentage of MDR-TB at Abu-Anja Hospital during this period.
2. To find out the reasons for development of MDR-TB among these patients.
3. To assess the number of the patients on 2<sup>nd</sup> line treatment before culture and sensitivity, and how they procure the drugs.
4. To find out if there are cases resistant to 2<sup>nd</sup> line drugs.
5. To assess the size of co-infection (HIV/TB etc.) in the study group.

### Materials and methods

An exploratory, descriptive & analytic retrospective and prospective study of:

- All patients who had been treated with 1<sup>st</sup> line anti-tuberculous drugs and whose sputum remains positive, and those who have started the 2<sup>nd</sup> line treatment.

An instructed questionnaire was used, with 24 open-end questions, 10 multi-choice questions and 2 comments. Each patient attempted to answer all the questions.

Exclusion criteria: Patients who have defaulted, but whose sputum is negative for AAFB (acid alcohol

fast bacilli), or whose drug sensitivity test remains sensitive to both Rifampicin and Isoniazid (INH).

## Results

### Details of the 24 MDR-TB patients questioned

- 17 (71%) were males and 7 (29%) were females.
- Marital status: Single 44%; Married men 33%; Divorced 6%; Housewives 17%.
- Numbers in each age group: 20-30 years 10; 31-40 years 6; 41-50 years 5; 51-60 years 3.
- Occupation: Self-employed 33%; Jobless 13%; Student 4%; Housewife 17%; Farmer 29%; Government employee 4%.

### Compliance and defaulting

Table 1. Compliance with anti-TB drug treatment (numbers)

	TB Treatment completed	TB Treatment interrupted once	TB Treatment interrupted >once
1 <sup>st</sup> line drugs	9	4	6
2 <sup>nd</sup> line drugs	6	5	13

Reasons for TB treatment interruptions: No money, no drugs, felt well.

Table 2. Defaulting in TB Treatment by age groups

	20-30 years	31-40 years	41-50 years	51-60 years
Complied	2	2	1	3
Defaulted	7	2	1	0
Others	3	1	2	0

### MDR-TB numbers and trends at Abu-Anja Teaching Hospital

Numbers of MDR-TB cases by year: 2004 0; 2005 4; 2006 4; 2007 7; 2008 9.

Evaluation of 11 case cohort from 2005-2007: Died 2; Treated and hearing disability 2; Treated completely 3; Loss to follow up 4 (1 died without sputum conversion).

### MDR-TB cases from January-September 2008

Of the 24 cases 21 (88%) were MDR-TB only; 1 (4%) was MDR-TB+HIV and 2 (8%) were MDR-TB+DM (diabetes mellitus).

Table 3. Sensitivity test to 1<sup>st</sup> line TB drugs

	INH	Rifampicine	Streptomycin	Ethambutol
Sensitive	0	2	1	4
Resistant	24	22	23	20

## Conclusions

- The MDR-TB trend is rapidly rising.
- The MDR-TB situation at Abu-Anja hospital is the tip of an iceberg. The number of patients will increase if 2<sup>nd</sup> line drugs are available free of charge.

- This reflects previous poor management of TB at different levels.
- The study is small, but reflects serious indicators.

### Recommendations

1. To revisit the DOTS package strategy, and to strengthen and implement it to reach those who are difficult to reach (i.e. they have no access to medical facilities). This should prevent more patients becoming cases of MDR-TB.
2. Early monitoring of MDR-TB to contain its spread, by providing services free of charge (e.g. sputum culture and drug sensitivity test of 2<sup>nd</sup> line drugs which should be sustained and free of charge).
3. Urgent training of a task force for management of MDR-TB in the South Sudan.
4. Urgent TB-survey of South Sudan to discern the magnitude of the problem.

### DID YOU KNOW?

Only 10 percent of all deliveries in South Sudan are assisted by skilled health personnel, according to the UN Office for the Co-ordination of Humanitarian Affairs in South Sudan.

The theme of **World Breastfeeding Week** (1 to 7 August) was "Breastfeeding - a vital emergency response. Are you ready?"

It highlights the need to protect, promote and support breastfeeding in emergencies for infant and young child survival, health and development. As part of emergency preparedness, hospitals and other health care services should train health workers to help mothers establish breastfeeding and/or overcome difficulties.

**WHO recommends exclusive breastfeeding until a baby is six months old, and continued breastfeeding with the addition of nutritious complementary foods for up to two years or beyond.**

### Closing note:

At the launching of JUBA INITIATIVE on HIV in 2003, I said, "this war is;

- A war against an invisible enemy.
- A war in which no wounded soldiers survive.
- A war in which there are no warlords to negotiate with.
- A war in which no people of goodwill are effective.
- A war in which no one should turn back, because it is directed against US ALL."

Now this invisible **ENEMY** becomes faster and more **LETHAL** in presence of **MDR-TB**.

**Compiled by Dr Peter Otto from his Powerpoint presentation.**

## Can mothers who have swine flu continue to breastfeed? Yes!

The risk for H1N1 influenza transmission through breast milk is unknown. However, reports of viraemia with seasonal influenza infection are rare. Also unknown is the specific protection to the baby of the antibodies the mother passes through her breastmilk. However the strong recommendations from Centers for Disease Control and Prevention (CDC)<sup>1</sup> and the UK National Health Service<sup>2</sup> are **that mothers with swine flu should continue to breastfeed**. Below are suggested answers to questions mothers may ask you.

### Can I continue breastfeeding if I get swine flu?

- **YES**, when you have flu your body makes protective substances to fight the flu and these pass via your milk to your baby, and protect him or her too. So continue breastfeeding at least as often as usual. Remember to breastfeed exclusively until your baby is 6 months old.
- Babies who are not breastfed get sick from flu and other infections more often and more severely than babies who are breastfed.
- If you become really sick, express your breastmilk and ask someone else give it to the baby by cup.
- You should also continue breastfeeding if you are given medicine for the flu.

### If my baby gets sick can I continue breastfeeding?

- **Yes**, breastfeeding is the best way to feed a sick baby or young child. Feed frequently and on demand day and night - it may be the only food a child wants. Sick babies need more fluids than usual and the fluid in breast milk is better than anything else, even water, because it helps to protect your baby's immune system.
- If your baby is too sick to breastfeed, he or she can drink your expressed milk from a cup.



### Reducing transmission

Explain to the mother and other family members that the main way the flu virus is transmitted is by 'droplets' from coughs and sneezes. So the family

can reduce the risk of infecting each other (including mother and baby), and other people by:

- Washing hands with soap frequently and thoroughly, especially after sneezing.
- Not sharing handkerchiefs with anyone.
- If possible, using paper handkerchiefs to cover the nose and mouth when coughing or sneezing, and then burning or burying them.
- Not putting their hands into a baby's mouth, eyes and nose.
- Washing a baby's hands if they have been in her/his mouth.
- Preventing the sharing of toys and other items that children may put in their mouths. Wash thoroughly with soap and water any items that have been in a child's mouth.
- If dummies are used, washing them with soap and water before giving to a baby – and washing afterwards.
- Limiting contact with others. People should stay home when they have swine flu to avoid infecting others.

Advise the family to seek medical advice if anyone (especially a young child) becomes seriously ill, or has a serious health problem such as AIDS.

Note: The symptoms of swine flu can be similar to those of malaria (fever, aches, pains, etc). It is important to exclude and treat malaria before diagnosing swine flu.

### References and useful websites

1. Centres for Disease Control and Prevention <http://www.cdc.gov/h1n1flu/breastfeeding.htm> . Check the [CDC H1N1 website](http://www.cdc.gov/h1n1flu/) for the most recent updates.
2. National Health Service UK [www.dh.gov.uk/en/Healthcare/Children/Maternity/Maternalandinfantnutrition/DH\\_099965](http://www.dh.gov.uk/en/Healthcare/Children/Maternity/Maternalandinfantnutrition/DH_099965) and [www.ukmicentral.nhs.uk/drugpreg/qrg\\_p1.asp](http://www.ukmicentral.nhs.uk/drugpreg/qrg_p1.asp)

See also:

- The Breastfeeding Network [www.breastfeedingnetwork.org.uk/drugs-in-breastmilk-information-and-factsheets.html](http://www.breastfeedingnetwork.org.uk/drugs-in-breastmilk-information-and-factsheets.html)
- *DynaMed* clinical summary for H1N1 flu for health care providers throughout the world. <http://hldemo.ebscohost.com/DynaMed-SwineFlu>

Thanks to Dr Louis Danga for reviewing this article, and to Dr David Attwood for the photograph.

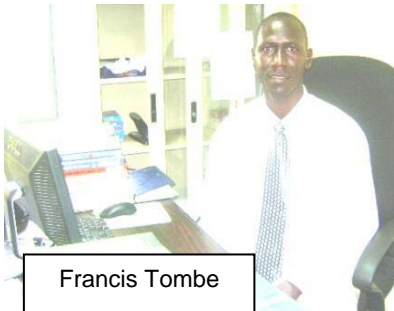


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## Interview with Agnes Comfort Daru, Country Coordinator, The Capacity Project about the Juba Teaching Hospital Resource Center

### When did the resource center start?

The Resource Center (RC) opened on May 17, 2008, and is housed at the Juba Teaching Hospital in the special wing. Based on the success of the Juba RC, the USAID Capacity Project is now in the process of opening the second RC at the Wau Teaching Hospital, in Western Bahr el-Ghazal. We procured a space for the second RC and recently completed the renovations. **Francis Tombe, librarian for the Juba RC**, will co-ordinate the activities of the two RCs and continue mentoring the manager of the Wau RC. Now, the staff at the Wau Teaching Hospital will have access to health information and be able consult information through the Internet.



Francis Tombe

### Who supports you?

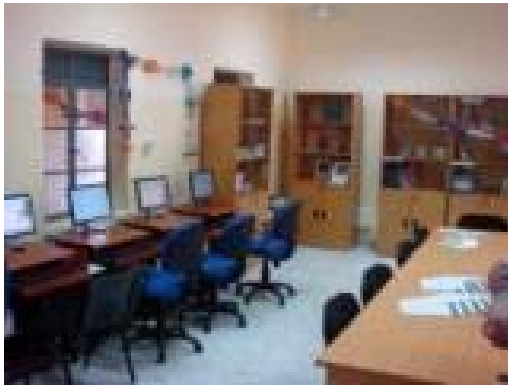
USAID is the RC's main source of support. After opening the RC we received donations of books, CDs and electronic resources from Ann Burgess, St. Mary Hospital, UK-Juba Link, Dr. David Southall, the World Health Organization and Teaching-aids At Low Cost (TALC). Strategies for Hope Trust-UK assists us by processing book shipments to the RCs.



Agnes Comfort Daru

### What materials and equipment do you have?

The materials available include medical textbooks, journals, magazines, novels, videos, DVDs and CDs; there are 862 resources in the current collection. There are also six computers in the Juba RC, and we provide free computer skills instruction and Internet services.



### Who can use it?

RC users include hospital staff, medical students, Ministry of Health personnel and staff from various non-governmental organizations. Users have access to electronic materials, library services, free Internet access and free computer skills training.

### What plans do you have for the future?

There is a funding constraint since the Capacity Project ends in September 2009. The Project will hand over the two RCs to their respective hospital administrations. However, the need for these types of RCs is very high and we hope to replicate them in an additional eight state hospitals.

### How many people have used the Juba RC?

To date, the Juba RC has attracted a total of 3,179. RC users can now search for health information through the library website and the Internet. Furthermore, the RCs services have helped users to become more information literate!

### Thank you, Agnes

The Juba Teaching Hospital Resource Center opens from Monday to Friday from 9:00am to 12:45pm and from 2:00pm to 5:00pm.

To access the list of available books and other materials visit: <http://www.librarything.com/catalog/jubath>. For further information contact Francis Tombe on tel: 0477216408 or e-mail: [tombe296@yahoo.com](mailto:tombe296@yahoo.com).

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## Reports from Southern Sudan

### Southern Sudan Nutrition Health Convention

The Government of Southern Sudan (GOSS), Ministry of Health (MOH) Directorate of Nutrition (DN) hosted a Nutrition Health Convention in April 2009 in Juba. One hundred thirty-four participants attended, including representatives from the MOHs of nine states, teaching hospitals, UN agencies, NGOs and nutritionists from outside South Sudan. Its aims were raise awareness of nutrition to health outcomes, and to be a launch pad for developing a Nutrition Health Policy, which will lead to integrating direct nutrition interventions into primary health care services.

Rates of malnutrition and food insecurity in Southern Sudan are extremely high:

- The Global Acute Malnutrition Rate (GAM) among 6-59 month old children is around 22%, significantly higher than the WHO 15% threshold for nutritional emergencies.
- Although data are lacking, micronutrient deficiencies (especially iron, vitamin A, zinc, iodine and folic acid) are almost certainly widespread.
- The number of people who are food-insecure is expected to reach one million by mid-2009.

Several speakers outlined the many causes of malnutrition. These included:

- Destroyed infrastructure due to the war, leading to problems with access, and making it difficult to detect and treat people suffering from malnutrition.
- Poor water supplies and sanitation conditions.
- Practices and beliefs related to child feeding, hygiene practices, and health-seeking behaviours.
- Lack of knowledge and illiteracy of caregivers, and cultural issues leading to proscriptions of healthy foods for pregnant women and children.
- Climate conditions such as frequent drought and flooding that reduce crop production; cattle raids; and inter-ethnic violence.
- High levels of poverty.

There is lack of capacity at national and state MOH levels because of:

- Budgetary constraints.
- Nutrition services having collapsed or never having developed sufficiently.
- Infrastructure, human skills, workspace, equipment, supplies and supervision mechanisms being inadequate or non-existent.
- Lack of instruction and training.
- Poor communications and logistics.

- Most health professionals being male while nutrition is still perceived as the domain of female health professionals.
- Most NGOs implementing nutrition interventions following an emergency model rather than addressing underlying developmental factors.

In order to reach the GOSS MOH/DN's goal of integrating direct nutrition interventions into primary health care and to mainstream nutrition into the health system, participants agreed that there is a need to:

- Improve human resources capacity (defining staff roles and strengthening nutrition-related skills).
- Improve staffing levels and training.
- Develop a nutrition policy, protocols and guidelines.
- Improve coordination between the GOSS MOH and state MOHs.
- Improve linkages with other sectors, especially food security.
- Conduct a mapping of nutrition programs.
- Increase emphasis on non-emergency interventions.

During the Convention the following topics were presented and discussed. We hope to bring more details of these in a future issue of this Bulletin.

- 2006 WHO growth standards.
- Nutrition surveys and surveillance.
- Infant and Young Child Feeding.
- Micronutrients.
- Management of acute malnutrition and the community-based management of acute malnutrition (CMAM) approach.
- Nutrition and HIV.
- Food Security.

At the end of Convention, the state representatives affirmed their commitment to working in partnership with the MOH/DN in the future. They said that they were now more aware of the importance of developing nutrition departments at state and county levels, and had a new appreciation for the significance of good nutrition to the wellbeing of the people of Southern Sudan. They asked for MOH/DN assistance for staff recruitment, capacity building and training, and equipping the nutrition departments. The states expressed their desire to establish formal coordination mechanisms at all levels, standard reporting formats and internet-based communications.

**Thanks to Diane De Bernardo for supplying the data on which this summary is based and Victoria Eluzai for approving the summary.**

## Motorbike ambulances for safer childbirth

See photo on front page

The Ministry of Health has introduced motorbike ambulances (5 scrambler motorbikes with sidecar "beds") to Eastern Equatoria region in a pilot scheme aimed at cutting the high rates of maternal mortality. "We have a problem bringing critically sick people to the few referral facilities available. We have in our budget this year at least one ambulance per county, but even that one ambulance will not be enough" said Atem Nathan Riek, Director-General of Primary Healthcare.

The motorcycles, donated by UNICEF, cost about US\$6,000 each and provide space for the patient to sit or lie down and for a health worker to sit behind the patient. Two mechanics are being employed, and they will train local mechanics. The bikes have some advantages over heavier vehicles as they can more easily negotiate narrower paths around flooded tracks and are cheaper and easier to maintain in remote areas. The service is free for pregnant women and if successful, the pilot project will be extended to the rest of the country.

Reproduced with permission from IRIN news service (<http://www.irinnews.org/>)

## Extracts from Journals, etc.

Please send us more material for future issues of the Bulletin.

**AF AWARE (Atrial Fibrillation Awareness And Risk Education)** is a joint initiative of the World Heart Federation, Atrial Fibrillation Association, Stroke Alliance For Europe, and European Heart Rhythm Association that aims to deal with issues that contribute to the growing world-wide burden of **atrial fibrillation**. Incidence is expected to double by 2050 due to the growing proportion of elderly people. See [www.world-heart-federation.org/about-us/partnerships/af-aware-initiative](http://www.world-heart-federation.org/about-us/partnerships/af-aware-initiative)

## Malaria overdiagnosis and burden of malaria misdiagnosis in the suburbs of central Sudan: special emphasis on artemisinin-based combination therapy era

Accuracy of diagnosis is central for malaria control. Although microscopy is the gold standard in malaria diagnosis, its reliability is largely dependent on users' skills. This study evaluated practitioners' clinical and microscopists' technical skills in diagnosis of malaria in central Sudan. Results showed that the rate of false-positive diagnosis of malaria was 75.6% and false-negative diagnosis was 0.01%. The study disclosed poor skills of the GPs and GMs in malaria diagnosis because nearly half of both groups failed to

make a single true-positive malaria diagnosis. Economically, the calculated cost of diagnosis and treatment of malaria in Sudan in 2000 is US\$100 million, whereas the calculated cost of true malaria is approximately US\$14 million. Different scenarios were suggested for improvement of malaria diagnosis.

*Salwa M.E. A-Elgayoum, Abd El-Karim Ahmed El-Feki, Babiker Ahmed Mahgoub, El-Amin El-Rayah, Hayder A. Giha. Diagnostic Microbiology and Infectious Disease, Volume 64, Issue 1, May 2009, Pages 28-34 ([http://www.dmidjournal.com/article/S0732-8893\(09\)00050-9/abstract](http://www.dmidjournal.com/article/S0732-8893(09)00050-9/abstract) or look under <http://www.dmidjournal.com/>)* Thanks to Leela McCullough for this item.

## 'Salt and high blood pressure: two silent killers'

was the theme for **World Hypertension Day** on 17 May 2009. Hypertension is the largest single cause of death worldwide, and salt is the major factor that increases blood pressure. WHO recommends reducing salt intake to six grams a day - equivalent to one teaspoon. Most of the salt intake in Africa is from salt added 'at the table' or while cooking. World Hypertension Day 2009 promoted these messages:

- High blood pressure is the largest single cause of death worldwide through strokes, heart attacks, and kidney diseases.
- Salt is the major factor that increases blood pressure.
- Reducing salt intake reduces blood pressure across the population.
- If salt intake was reduced by half it would save approximately 2.5 million people a year dying unnecessarily of strokes, heart attacks, and chronic kidney diseases.

For more information see [www.who.int](http://www.who.int) (and write 'hypertension' in the navigation bar), [www.worldhypertensionleague.org](http://www.worldhypertensionleague.org) and [www.worldactiononsalt.com](http://www.worldactiononsalt.com), Find Factsheets on [www.worldactiononsalt.com/home/resources.htm](http://www.worldactiononsalt.com/home/resources.htm).

## HAART and pregnancy

This study evaluated the impact of antiretroviral therapy during pregnancy on birth weight, length and head circumference of uninfected infants born to HIV-1-infected mothers in the Agence Nationale de Recherche sur le SIDA French Perinatal Cohort CO1. It concluded that HAART during pregnancy does not increase the incidence of infants who are small for gestational age.

*Briand N, Mandelbrot L, Le Chenadec J, et al. AIDS 2009 May 06; 23.*

**Strengthening care of injured children** The **Disease Control Priorities Project** has shown that

the following interventions are cost effective for improving trauma care of injured children:

- Strengthening of pre-hospital care through training of community-based paramedics and village lay-first responders
- Community ambulances
- Basic surgical care (including care of injuries) at district hospitals.

Mock C et al. Bull World Health Organ 2009;87:382-389. <http://www.who.int/bulletin/volumes/87/5/08-057059.pdf>

## For your resource centre

### e-TALC Health Development CD-ROM issue 10

This new CD-ROM provides reliable health materials for workers in developing countries who have access to computers but limited access to the internet. The materials are arranged under the following categories: Child Health, Community, Family Planning, HIV/AIDS, Other Medical Specialities, Mental Health, News from other organisations, Nutrition, Obstetrics, Midwifery and Maternal Health, Rehabilitation and Surgery. Of particular interest are two video clips: how to measure mid-arm circumference and the 'breast crawl' (showing a newborn finding her way to the mother's nipple).

If you are not already on the e-TALC mailing list contact TALC at [e-talc@talcuk.org](mailto:e-talc@talcuk.org) or write to TALC, P.O. Box 49, St Albans, Herts, AL1 5TX, United Kingdom. Remember to send your full postal address.

You can also visit the e-TALC website ([www.e-talc.org](http://www.e-talc.org)) for information on previous editions of the e-TALC CD-ROMs.

[www.TropIKA.net](http://www.TropIKA.net) (**Tropical Disease Research to foster Innovation and Knowledge Application**) is a web-based platform sharing information and facilitating identification of priority needs and major research gaps in the field of **infectious diseases of poverty**. Recent articles include news that a gene map has been made for the parasite that causes schistosomiasis, a trial has begun of a new drug for river blindness, and a trial of an improved treatment for sleeping sickness has given encouraging results.

*TropIKA is supported by UNICEF, UNDP, World Bank and WHO.*

### Neglected Tropical Diseases (NTD) Website

[www.neglecteddiseases.gov](http://www.neglecteddiseases.gov) was launched recently and gives the latest information and news on NTDs. The USAID's NTD control program is one of the first efforts to integrate existing disease-specific treatment programs to control these diseases in Southern Sudan and other specific countries,

targeting onchocerciasis, schistosomiasis, trachoma, lymphatic filariasis, soil-transmitted helminthiasis (whipworm, hookworm, roundworm).

### Surgery in Africa Monthly Reviews:

- **June 2009 Review, "Sigmoid Volvulus - an Update"** by R Jayakrishnan and G J Oettle
- **May 2009 Review: Cataract surgery in Africa** by Karin Lecuona, Colin Cook and Van Lansingh.
- **March 2009 Review: Penetrating Injuries to the Abdomen - Part II**, a continuation of the February Review by J. MacLeod. Part I is available at the bottom of this review.

These reviews, archives of reviews since 2005 and a resource library, are available free at [www.ptolemy.ca/members](http://www.ptolemy.ca/members)



Wounded child in South Sudan

**WHO's Safe Surgery Saves Lives Campaign** aims to improve the safety of surgical care by ensuring adherence to proven standards of care. The WHO Surgical Safety Checklist has improved compliance with standards and decreased complications from surgery in eight pilot hospitals where it was evaluated. To help practitioners know how to implement the checklist in their own facilities the following tools and resources can be downloaded from <http://www.who.int/patientsafety/safesurgery/en>

- **WHO Surgical Safety Checklist** identifies three phases of an operation, each corresponding to a specific period in the normal flow of work. In each phase, the checklist helps teams confirm that the critical safety steps are completed before it proceeds with the operation.
- **Checklist Implementation Manual** walks through how to perform the checklist, understanding that different practice settings will adapt it to their own circumstances.
- **Frequently asked questions**
- **Starter Kit** to help administrators, clinicians, nurses, and other patient safety personnel walk through the process of implementing the WHO Surgical Safety Checklist.
- **Speakers' kit** to teach colleagues about the Safe Surgery Saves Lives campaign and to ask them



to consider implementing the checklist at your institution.

- **Videos:** How to use the checklist; How not to use the checklist.
- **Other materials:** WHO Safe Surgery Saves Lives guidelines and poster.

**Family Health International** ([www.fhi.org](http://www.fhi.org)) has published **Guidance for Nurse Prescription and Management of Antiretroviral Therapy**. This is the first in a new series 'New Directions in Healthcare for Resource-Limited Settings'. The publication describes processes that HIV programme implementers can use to consider the need for, and implications of, nurse-prescribed and nurse-managed ART in resource constrained settings. It also considers additional resources that may be necessary to introduce the new practice to current healthcare facilities.

To request a hard copy contact [publications@fhi.org](mailto:publications@fhi.org) or download from [http://www.fhi.org/en/HIVAIDS/pub/guide/res\\_Nursing\\_Guide\\_for\\_ART.htm](http://www.fhi.org/en/HIVAIDS/pub/guide/res_Nursing_Guide_for_ART.htm)

**African Journal of Primary Health Care & Family Medicine** is an open-access journal on primary healthcare and family medicine in an African context. See [www.pbcfm.org](http://www.pbcfm.org)

**The Resources for HIV/AIDS and Sexual and Reproductive Health Integration Web site** ([www.hivandsrh.org](http://www.hivandsrh.org)) hosted by **Johns Hopkins University Knowledge for Health (K4H) Project** provides a comprehensive knowledge base for health professionals working to integrate the prevention and treatment of HIV/AIDS with sexual and reproductive health (SRH) services. The classification and search system allows users to select from many criteria to find what they are looking for quickly and efficiently. The site encourages users, especially those from developing countries, to contribute their own resources thus linking people working on different aspects of integration. The site contains over 650 materials, including documents, news, photos, communication materials, and Q&As.

**World Diabetes Foundation newsletter** is a quarterly electronic newsletter about type 1 and type 2 diabetes initiatives around the world. The first issue of 2009 focuses on sub-Saharan Africa, particularly the Congo, Ghana, Rwanda, and Tanzania.

See [www.worlddiabetesfoundation.org/composite-447.htm](http://www.worlddiabetesfoundation.org/composite-447.htm) – newsletter 2009 Q1.

The URL is: <http://www.ebt-forum.org/ebtj/journal/v1/full/ebtj08001a.html>

**MAKER website 'Managers taking Action based on Knowledge and Effective use of Resources'**

<http://www.who.int/management/en> This is a website for health managers working in areas of limited resources; it provides concepts, guidance and tools to help you make best use of resources or solve problems to do with:

- Working with staff
- Collecting and using information
- Obtaining and managing drugs and equipment
- Maintaining equipment, vehicles and buildings.

**The Uganda Continuing Medical Education Newsletter Jan- March 2009. Issue 55**

contains the following article: Global Library of Women's Medicine, Persistent Rhinitis, Low back pain, Radicular pain, Some new facts in tropical medicine, Deep vein thrombosis, Not all DNA is in the nucleus, Lack of healthcare information threatens patient safety, AED-Satellite's free health information newsletters.

To request an e-copy of this and other Uganda CME newsletters, email Dr David Tibbutt at [david@tibbutt.co.uk](mailto:david@tibbutt.co.uk)

**C-Channel 10**, the monthly e-newsletter from C-Change, gives current peer-reviewed research findings on social and behaviour change communication. Topics include family planning and reproductive health, HIV prevention, malaria, and maternal health and antenatal care. See abstracts at <http://c-changeprogram.org/c-channel/Issue10>

**Late news: We have just heard of the death of Professor Chris Wood who has done much to improve the health services in Southern Sudan.**

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