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A crashed motor cycle at Central Equatoria Traffic Police Station, Juba (*credit Edward Luka)*

Contents

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

Editorial: Helmets reduce death and brain injury in motorcycle and pushbike accidents

We at SSMJ are delighted to see that the GOSS is taking the subject of road safety seriously (1) and that Road Safety Awareness Week is taking place as we write this. We hope that this will lead to future enforceable legislation – particularly the wearing of helmets.

Many studies have shown that helmets worn by motorcyclists who crash reduce the risk of death by about 42% and of head injury by about 70% (2). Helmets have been shown to provide a 63-68% reduction in risk of severe brain injury (3).

Brain injury can:

- cause headaches, dizziness, fatigue, lack of concentration, impaired memory, irritability and mood change.
- impede physical, emotional, social, marital and vocational functioning (4).

Many of those riding bicycles and motorcycles are men whose earnings support their families (i.e. 'breadwinners'). So their death or injury can have severe effects on all family members.

The paper by Atem et al (5) on page 69 shows that significant numbers of motorised and non-motorised cyclists in Juba do not wear helmets. Most of those observed were male adults and therefore likely to be breadwinners for their families. The bad condition of the roads, non-existence of consistent certification of motorcycles coupled with lack of organised rehabilitation facilities at the local hospital (6) are all causes for concern for cyclists, and those who treat them when they crash.

So we support moves by the government to improve and enforce legislation to licence all motorcycles. We hope the authorities will:

- introduce markings on roads used by motor vehicles and motorcycles in order to regulate the flow of traffic
- create cycle tracks for pedal bicycle users
- ensure that bicycles and motorcycles are only sold *with* helmets as affordable packages
- make riding motorcycles without wearing a helmet an offence punishable by confiscation of the owner's cycle or imprisonment. Wearing a helmet when riding a pushbike is to be encouraged and should be promoted in schools.
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The **Southern Sudan Medical Journal** is a quarterly publication intended for Healthcare Professionals, both those working in the Southern Sudan and those 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 to 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, letters to the Editor, use of drugs, medical news of public interest, and nutrition and public health issues.

The Journal is published in mid-February, May, August and November and is free online at
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We encourage readers to print copies and pass them on to colleagues.

The Cyclists Helmet Study in Juba, Southern Sudan, 2006

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Abstract

Juba has a poor road network and few public transport options, with an increasing number of people riding motorised or non-motorised cycles This study seeks to characterise the cyclists (including helmet wearing) and to use the findings to make recommendations to the concerned authorities.

The study found that most of the 3564 observed cyclists were adult males; the proportion using helmets was very small (1%). Many cyclists had an extra passenger, or were carrying a load. More than half the cyclists were riding in the middle of the road. Only 18% of the motorcycles were licensed.

The conclusion is that cyclists need information on the importance of wearing a helmet. The licensing of motorcycles is important. The road network and road signs need to improve, and public transport increased.

Introduction

Motorcycles are the most dangerous form of motorised transport. Motorcyclists are about three times as likely as most vehicle passengers to be injured in a crash, and are 16 times as likely to die. Most of these deaths are caused by head injury. Leading safety advocates recommend the mandatory use of motorcycle helmets (1).

Each year about 1.2 million people die as a result of road traffic crashes in the world, and 50 million more are injured or disabled. Motorcyclists make up more than 50% of those injured or killed on the roads (2). In 2006 in Juba City (population 372 413 census 2008) there was an increase in the number of road traffic injuries (the majority involving cyclists) compared to the previous year (3). Half of the surgical beds in the Juba Teaching Hospital, the main referral hospital in Southern Sudan, were and still are filled with patients being treated for road traffic injuries. The ward is now nick-named "Senke ward". Senke is the name of the Chinese-made motorcycle commonly in use on the streets of Juba.

Juba City is just returning to normal following a two-decade-long civil war. The economy suffered greatly as the result of the war, one result being that Juba has a poor road network and little public transport. Many motorcycles and bicycles have been acquired as a low cost means of transport. The traffic rules and regulations are not being observed. Many motorcycles are seen without a license plate, and many cyclists do not bother to wear a helmet. Very young teenagers, some as young as 12 years old, are seen driving or as passengers. Most of the city roads are pot-holed, and there are few road traffic signs.

It is known that a helmet protects the wearer from serious head and facial injuries (1, 2). In our study we seek to characterise the cyclist in Juba by helmet status, gender and age. We also try to establish the proportion of motorcycle riders that have been licensed, and the bicycles that have got a reflector. Other factors that could increase the chances of a cyclist being injured are carrying an extra passenger or an additional load, or riding in the middle of the road.

Materials and methods

We conducted an observational cross-sectional study of the cyclists in Juba City during the last week of October 2006. Our team included four residents from South Sudan who are participating in the Kenya Field Epidemiology Laboratory Training Programme (FELTP). During the study period the cyclists were observed over a period of two days (one was on a weekend and one was a weekday) between 7:00 am to 10:00 am and 3:00 pm and 6:00 pm. We selected four main roads. The selection was made in such a way as to avoid or minimise the chances of one cyclist being counted in more than one observation site. The four sites were:

1. Nimule road leading from Juba Bridge over the River Nile on the southeastern side of Juba City.
2. Rokon road leading out of Juba toward Rokon and Mundri on the northwestern side of Juba City.
3. Yei road leading out of Juba to Yei on the southwestern side of Juba City.
4. Juba round-about located next to the Central Park Gardens, the Judiciary complex building, the Juba Hotel and the Central Equatoria's Governor's Office at the northeastern side of Juba City.

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Four teams of two members each made the observations using a field-tested structured questionnaire[e]. One team member called out the observation and the other recorded it. For each cyclist we recorded:

- The type of vehicle (motorized or non-motorized)
- Location on the road (middle or side).
- Gender and approximate age - i.e. adult or teenager (defined as 12 to 16 years old).
- Whether or not the cyclist:
  - was wearing a helmet.
  - was carrying an extra passenger or additional load.
- Presence or absence of:
  - a license plate number and, if present, type of plate number (government, non-governmental organisation or private plate number).
  - a headlight and, if present, whether on or off.
  - a reflector on bicycles.

The data analysis was done using Epi-info 2000 software.

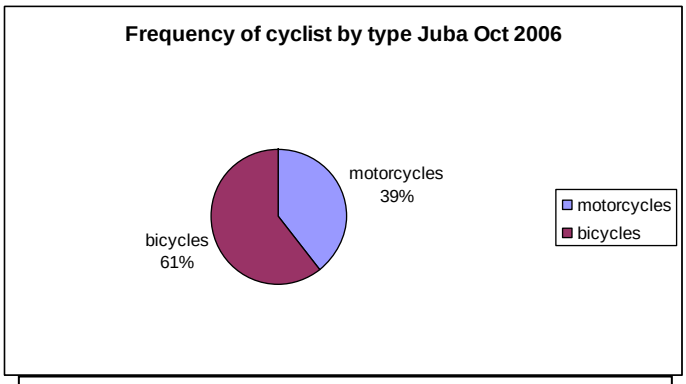

Figure 1. Frequency of cyclist by type.

Results

We observed 3564 cyclists during the two-day study period but we were unable to collect every observation on every cyclist. Hence the differences in the total observations below.

- 2166 (61%) were on motorcycles, and 1398 (39%) were on bicycles (see Figure 1).
- 14 were females.
- 3373 (95%) were adults and 188 (5%) were teenagers. (see Figure 2)
- 18 (1%) were wearing a helmet but 2561 (99%) were not. (see Figure 3)
- 738 (21%) were carrying an extra passenger.
- 308 (9%) were carrying a load.
- 1620 (46%) were riding in the middle of the road and 1939 (54%) were riding on the side of the road.
- 1515 (71%) motorcycles were not licensed. Of the 616 motorcycles that had a license plate:
  - 238 were government plate numbers
  - 20 were NGOs or Para-Statal plate numbers
  - 358 were private plate numbers.
- 433 (31%) bicycles had reflectors and 954 (69%) did not.

There were more cyclists on the road over the weekend - 2232 (63%) compared to the 1331 (37%) seen on weekdays – and more in the morning (2270 or 68%) than in the afternoon (1077 or 32%).

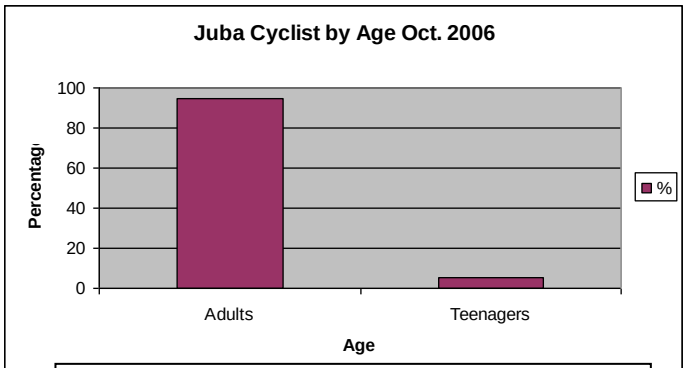

Figure 2. Cyclists by age.

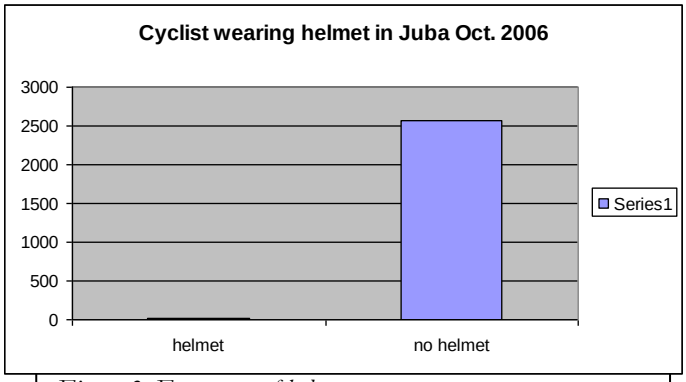

Figure 3. Frequency of helmet use.

Discussion

During our study we observed more motorcycles than bicycles on the roads in Juba. Few of the cyclists were females (only about 1%). This may be because most women in Juba are house-wives and only few go out to work. Or it could be due to cultural reasons where some communities do not believe it is appropriate for women to drive cycles. Contrary to the perception that there are many teenage cyclists in Juba, they accounted for only 5% of our study population, even though they occupied most of the surgical hospital trauma beds in 'Senke' ward.

e available from Dr Atem atemda@gmail.com

Only 1% of the cyclists wore a helmet. This very significant finding needs an immediate remedy. The risk of head injury is two to four times higher for un-helmeted riders than for those who wear helmets (5, 6). Helmets decrease the risk of fatal head injury by 27% and reduce the risk of facial injuries by two thirds (7, 8). When there are no laws requiring the use of helmet, studies show that only about 50% of cyclists use them. A combination of legislative and educational approaches can increase helmet use. Therefore we strongly recommend that the South Sudan Legislative Assembly (SSLA) pass laws making the wearing of helmets mandatory, and that they make plans to enforce those laws.

Only 18% of the motorcycles in Juba were licensed. Licensing of motorcycles ensures that only motorcycles that are road worthy are allowed on to the roads (9). This also ensures that the motorcycle riders know the traffic rules and how to ride, and are of the legal age (over 18 years) to ride a motorcycle.
Legislation requiring motorcycle lights to be on during the day has reduced the risk of fatal day time crashes by 13%. The Traffic Police department needs to do more to re-enforce this law, and to ensure that only licensed motorcycles are allowed onto the roads in Juba.

More traffic police should be on duty over weekends as there are more cyclists then than on weekdays. Police are specially needed around the custom market area leading to Yei Road, an area in which we observed more cyclist traffic. Improving the road network and more road signs will make the roads safer and so help to decrease the number of road traffic injuries.

Although this study was done four years ago, the road and traffic conditions in Juba have not changed for the better and motor cycle accidents are still a major cause of hospital admission (10). So our conclusions and recommendations are still valid today**.**

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How to read an electrocardiogram (ECG). Part 2: Abnormalities of electrical conduction

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Introduction

This is the second in a series of articles that aim to help readers to understand and interpret recordings of the surface ECG. The first article introduced the basic principles of the ECG including the electrophysiology of the heart and the features of a normal ECG (1). This one describes some of the common abnormalities of electrical conduction which can be seen on the ECG.

Electrical conduction and its abnormalities

Contraction of the heart muscle occurs in response to electrical depolarisation – the rapid spread of electrical activity throughout the myocardium which is facilitated by specialised conduction tissue. This process normally begins with spontaneous depolarisation of cells in the **sinus node**, situated in the right atrium (RA), then proceeds quickly through the atria to the **atrioventricular node**, and then down the bundle of His to the left and right bundle branches and into the ventricular myocardium. See figure 1.

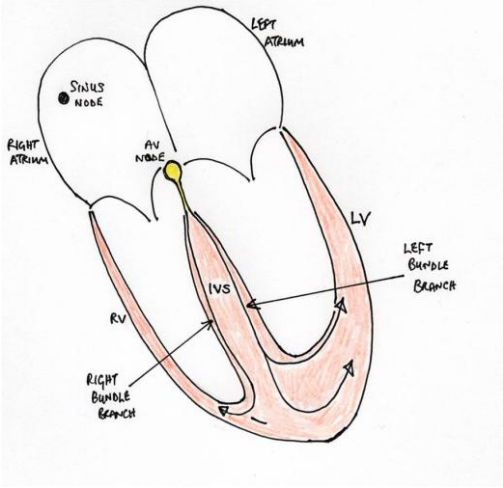

Figure 1. The normal conduction system of the heart.

This process of electrical conduction can be disrupted at any point throughout the specialised conduction system, but most commonly occurs in the sinus node itself, the atrioventricular (AV) node or in the left and right bundle branches. Conduction can be disrupted by a variety of disease processes including ischaemia or infarction, infiltrative disorders or even age-related degeneration.

Depending upon the site and severity of a conduction abnormality, the clinical consequences may vary from no noticeable effect at all (asymptomatic) through to sudden death from asystole. Commonly however patients with conduction system disease present with symptoms such as exercise intolerance or dyspnoea, transient episodes of impaired consciousness (presyncope) or complete loss of consciousness (syncope). Therefore it is important to be able to recognise conduction defects on ECG when investigating patients who present with these symptoms.

Sinus node disease

One of the characteristic features of specialised cardiac conduction tissue is its tendency to depolarise spontaneously. Under normal circumstances, the rate of this spontaneous depolarisation is fastest in the sinus node and hence the rate and rhythm of the heart is normally dictated by this phenomenon – **sinus rhythm**. The rate of depolarisation is influenced by the autonomic nervous system, speeding up under the influence of sympathetic drive during periods of exertion or stress and slowing down during periods of rest or sleep.

With increasing age it is common for the sinus node to lose some of its ability to depolarise spontaneously or to respond to autonomic nerve influence. So sinus rates may be slower than required, or perhaps may cease altogether. This may result in failure of the heart rate to rise adequately with exercise (chronotropic incompetence) leading to exercise intolerance and dyspnoea, and in severe cases may cause transient incapacity or collapse.

Sinus node disease can be manifested on the ECG as sinus bradycardia, sinus pauses, or even prolonged sinus arrest and transient asystole.

Sinus bradycardia may cause fatigue or even heart failure, and significant pauses in sinus node activity (sinus arrest) can lead to transiently impaired consciousness – presyncope if partial, syncope if complete. See figures 2 and 3.

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Figure 2. Sinus bradycardia.

Figure 3. A short sinus pause, followed by the return of sinus rhythm.

If the sinus node fails to depolarise however, the AV node is usually that part of the conduction tissue with the next fastest rate of spontaneous depolarisation and will usually take over and dictate the cardiac rhythm itself – hence the so-called **'nodal rhythm'**. It is because of this nodal 'escape rhythm' that isolated sinus node disease does not usually lead directly to death, even though it may cause significant symptoms including syncope. See figure 4.

Figure 4. A short sinus pause, followed by an escape beat arising from the AV node; note that the QRS complex is of normal morphology because although spontaneous depolarisation commences in the AV node on this occasion, subsequent conduction through the ventricles occurs in the normal way.

Atrioventricular (AV) block

Increasing age, along with other common conditions such as ischaemia or myocardial infarction, can lead to damage to the AV node or the more distal conduction tissues such as the bundle of His and the right and left bundle branches.

Damage to these structures can lead to delay or even complete failure of conduction to the ventricles – this phenomenon is called **AV block**. Depending upon the site and severity of damage to the conduction system, there are varying degrees of AV block and these result in different patterns of abnormality recognisable on the ECG.

In the mildest form of AV block, **first degree AV block**, the AV node simply conducts more slowly than usual, but with no failure of conduction. During normal sinus rhythm the wave of electrical depolarisation spreading from the atria is slightly delayed in the AV node, which is manifested on the ECG as the PR interval. In first degree AV block the delay in the AV node is simply longer than normal, which in turn leads to prolongation of the PR interval on the ECG. This long PR interval (> 200 ms) is the hallmark of first degree AV block.

As disease in the AV node progresses, there comes a point when conduction through the AV node is not only delayed but may fail completely. Often a pattern of gradually increasing PR intervals with each successive heartbeat is seen until finally one P wave fails to conduct to the ventricles at all - after which the AV node conduction recovers and the whole sequence starts over again. This is called **Mobitz type 1** AV block (also known as Wenckebach block) and is the mildest form of **second degree AV block**. See figure 5.

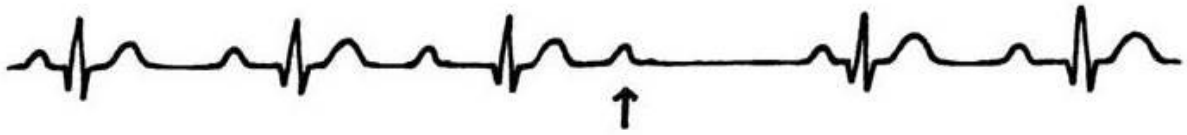

Figure 5. Mobitz Type 1 second degree AV block (also known as Wenckebach block); note that the PR interval increases with each beat until eventually there is a non-conducted P wave (arrowed) and then this pattern repeats itself.

With more severe disease of the AV node, conduction may suddenly fail even without any prior prolongation of the PR interval. This may occur with variable frequency. Sometimes it occurs just once, before normal conduction then resumes, or perhaps after alternate P waves (so-called 2 to 1 AV block). Sometimes there may be several non-conducted P waves in succession before one is then conducted normally – hence this can be 3 to 1, 4 to 1, or 5 to 1 block depending on the pattern. These are all examples of **Mobitz type 2** AV block, which is a more severe form of **second degree AV block** (see figure 6).

Figure 6. Mobitz Type 2 second degree AV block; on this occasion only 1 P wave in 3 is conducted to the ventricles, but note that each conducted beat has a normal, and constant, PR interval.

Mobitz type 2 is distinguished from Mobitz type 1 AV block by the fact that there is no prolongation of the PR interval in type 2. In other words there is complete non-conduction of the affected P waves, and those P waves that *are* conducted to the ventricles do so with a normal PR interval.

The most severe form of AV block is characterised by complete failure of any conduction from atria to ventricles – this is called complete or **third degree AV block**. The site of such AV block may be within the AV node or in the more distal conduction tissues - but the hallmark of this condition on the ECG is the complete lack of a consistent relationship between P waves and QRS complexes.

One may wonder, if there is absolutely no conduction possible from atria to ventricles, why ventricular asystole does not occur, but the reason is that usually an **escape rhythm** takes over. This is the heart's safety mechanism. If no signals reach the AV node from the atria, the AV node itself may spontaneously depolarise (as may happen in sinus node disease, described above), and in this way the ventricles may continue to contract and to preserve life. If the AV takes over the heart rhythm in this way, the ventricles will still depolarise normally via the His bundle and the right and left bundle branches and the QRS complex on the ECG will be normal. However, if the AV node fails to depolarise the patient has to rely on some more distal conduction tissue taking over this escape rhythm (usually slower and less reliable than an AV nodal escape rhythm). In this case conduction through the ventricles may be abnormal and give rise to a broad QRS complex. Whatever the level of the escape rhythm though, there is never any relationship between the P waves and QRS complexes in third degree block – a phenomenon known as **AV dissociation**. Note also that in third degree AV block the P wave rate is always faster than the QRS rate (see figure 7).

Figure 7. Third degree (also known as 'complete') AV block; note that there is no consistent relationship between the P waves and the QRS complexes – this is known as AV dissociation.

Bundle branch block

Sometimes disease of the conduction system is confined to either the **left** or the **right bundle branches** and this results in a characteristic pattern of the QRS complexes on a 12-lead ECG.

Keeping in mind the normal specialised conduction system (see figure 1) it can be appreciated that if, for example, conduction down the left bundle branch is blocked, then the wave of electrical depolarisation has to travel first down the right bundle branch and can then only reach the left ventricular myocardium via non-specialised conduction tissue. In other words the left ventricle is depolarised via an abnormal route, which takes longer than usual and therefore results in prolongation of the QRS complex on the ECG. This abnormal sequence of electrical depolarisation of the ventricles, with the right ventricle depolarised before the left (instead of the two together as normal) is what causes the characteristic ECG pattern known as **left bundle branch block** (LBBB). See figure 8.

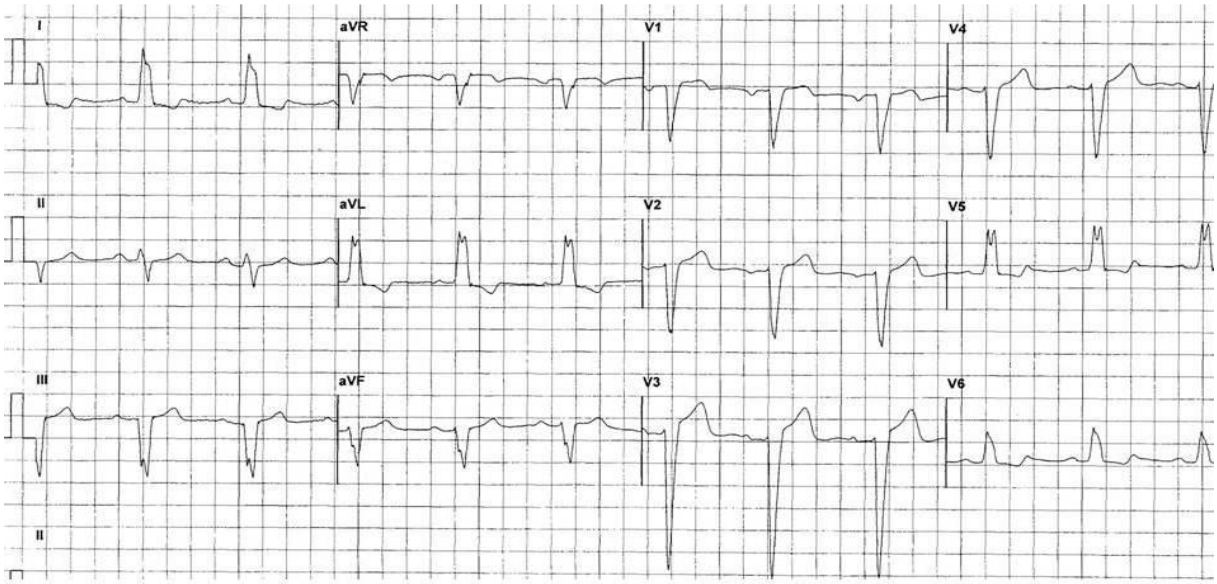

Figure 8. Sinus rhythm with Left Bundle Branch Block (LBBB).

Conversely, if conduction down the right bundle branch is blocked, then the wave of electrical depolarisation has to travel first down the left bundle branch before it can then reach the right ventricle. In this case the right ventricle is depolarised later and via an abnormal route, again taking longer than usual and resulting in a characteristic broadened QRS complex pattern known as **right bundle branch block** (RBBB). See figure 9.

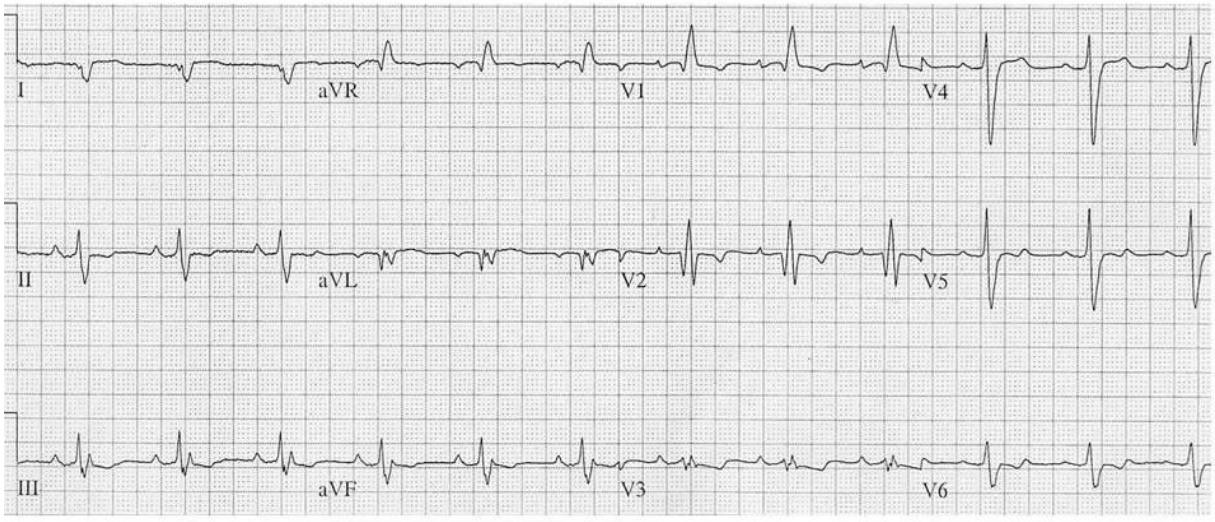

Figure 9. Sinus rhythm with Right Bundle Branch Block (RBBB).

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Low back pain - look for the "Red Flag Signs"

David Tibbutt DM, FRCP[a]

[Partly based on reference 1.]

Over the last few years I have visited Rwanda many times working at a beautiful but remote rural health centre (Kirambi, about 100km south–west of Kigali). The "Land of a thousand hills", as Rwanda is sometimes called, is a land that is difficult to cultivate needing a lot of hard work. The people there attend the health centre at Kirambi with a wide variety of complaints but, at my recent visit in July, the striking fact was the frequency of low back pain ("mugongo"). It affected at least ten per cent of the adult patients I saw. The sites were mainly the sacro-iliac and lumbo-sacral regions with associated and often severe tenderness.

In most cases the cause was clear - the use of long hoes with heavy heads. People tend to hold the hoes with outstretched arms putting a huge strain on the low back that becomes the fulcrum of the force. Digging the often hilly land is crucial for feeding their families and resting was not a realistic option. Our advice was to use the hoe closer to the body to reduce the back strain (see Figure 1). Indeed we kept a hoe in the consulting room and taught the nurses how to instruct groups of patients.

Figure 1. Rwandan lady using the typical hoe. Note that she is using the hoe close to her body with the left hand grip at least half way down the long handle. (credit David Tibbutt)

The anatomy of the African lumbo-sacral spine is different from Caucasian spines because there is an exaggerated lumbo-sacral lordosis. This may have the mechanical effect of putting even more strain on the region when using heavy hoes. We need more research in this area of orthopaedics in spite of it not being a "glamorous" subject. However it is important as the problem causes much discomfort, impaired ability to work on the land, reduced resources for families, visits to healthcare facilities and increased use of analgesics - all of which carry a cost.

In "industrialised" countries up to 80% of the population is affected at some time by low back pain. In the UK this leads to over 50 million working days lost each year. Fortunately in 90% of these cases the symptoms go within two months.

Causes of acute back pain

'Acute low back pain' is defined as pain in the back, anywhere between the lower ribs and the buttock crease, and is often associated with disability. It usually improves in less than 6 weeks but often re-occurs (2).

Most (97%) causes of acute back pain arise from a mechanical process. For example, strains (70%) like those I saw in Rwanda, herniated intervertebral disc, spinal stenosis and fractures. The remaining three percent fall into two groups:

1. **Non-mechanical processes of the spine:**
   - Malignancies: primary cord tumours, secondary, myeloma, lymphoma
   - Infective discitis, osteomyelitis, abscesses (paraspinal and epidural)
   - Herpes zoster.
2. **Referred pain:**
   - Urinary tract: pyelonephritis, renal calculus, perinephric abscess, prostatitis
   - Gynaecological: tubal pregnancy, endometriosis
   - Gastrointestinal: peptic ulcer, cholecystitis, bowel cancer, pancreatitis
   - Aortic aneurysm.

In less than one per cent of cases of acute back pain is the cause serious (i.e. the "red flag signs") and it is on this group that this review now focuses.

Diagnosing acute low back pain and "red flag signs"

To diagnose the cause of acute back pain:

- Take a careful history and
- Examine the patient looking particularly for the following "red flag signs":

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- **bacterial infection**
- **malignancy**
- **spinal cord compression and**
- **spinal fracture.**

1. A **bacterial infection** may give rise to a **discitis** or an **epidural abscess.** These should be suspected in the presence of these systemic symptoms:
   - weight loss
   - fever
   - night sweats
   - waking at night with pain.

   Included in this group should be those with a history of
   - **recent infection** elsewhere
   - **immunosuppression** (e.g. **HIV infection**)
   - **use of steroids** and
   - **intravenous drug abuse.**

   Tuberculosis may also have a similar presentation.
2. **Malignancy**, primary or secondary, may present with similar systemic features as infection. A history of a known primary carcinoma (e.g. breast, lung or prostate) gives a useful pointer to a probable cause of back pain.
3. **Spinal cord** or **cauda equina compression** often presents with a rapid onset of neurological signs including saddle anaesthesia and bladder and/or bowel problems (faecal incontinence). The commonest causes are a tumour or a prolapse of an intervertebral disc centrally. Urgent investigation of these cases is required because a delay with decompression procedures will lead to irreversible damage. If the cord compression is considered to be caused by a secondary tumour then this can be managed initially with high doses of dexamethasone (16 mg daily).
4. **Spinal fracture** should be suspected if there is a history of an accident, especially a fall from a height. If a patient is known to have osteoporosis then even minor trauma may cause a fracture.

Investigations depend on circumstances and availability. Unless the cause of pain is obvious the following is an ideal list:

- Full blood count ('haemogram')
- Erythrocyte sedimentation rate (ESR)
- C reactive protein
- Renal biochemistry: urea, creatinine, electrolytes
- Hepatic biochemistry: bilirubin, alkaline phosphatase, alanine transaminase, albumen, globulin
- Bone biochemistry: calcium, phosphate
- Screening for myelomatosis (protein in urine and serum protein electrophoresis)
- Prostatic specific antigen in males
- Plain skeletal Xrays.

So key messages for diagnosing and treating acute low back pain are:

- Take a good history, examine the patient and be aware of "red flag signs".
- Treat the cause as appropriate.
- Where necessary, teach a better technique for lifting heavy objects and using hoes (see Figure 1).

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Critical thinking in healthcare: Reflections on Southern Sudan

John Adieng Adwok FRCS (Edin), PhD[a].

A Vietnamese proverb states, "The mouse does not know life until it has been into the mouth of the cat". The Vietnamese practice the Buddhist religion and firmly believe in incarnation or rebirth after death. The Southern Sudanese healthcare system has already been 'into the mouth of the cat' during the liberation war. Those of us who remember the dilapidated state of the healthcare services before and during the war do not want to see a similar system reborn or 'know life'.

We have to put our faith in the long process of conception, gestation, delivery, and nurturing of a modern healthcare system. Yet, faith alone or handouts from donors will not take us far and we must use our critical thinking skills to bring a new and effective healthcare system to life. Sustainable outcomes will not materialise without the use of *creditable evidence based information*. This is in sharp contrast to what is assumed, believed, or felt to be the right strategy.

What is critical thinking?

So what is 'critical thinking' and how does it apply to healthcare delivery?

- Beistle, Smith & Nagel (1) describe critical thinking as simply putting structure to your thoughts or expanding your thinking in a thorough and systematic way so that it is possible to consider all aspects of a problem.
- Hall (2. p39) eloquently summarised the status of skepticism or critical thinking thus: "Minds are not meant to change easily. Humanity has managed pretty well with instinct, magical thinking and superstition for a long time, and it will probably continue to muddle through. The scientific method is a recent innovation; it isn't easy, and it doesn't come naturally".
- Mole (3) defines critical thinking as "learning how to evaluate arguments and to sort truths from falsehoods".

The key to critical thinking is to continuously and vigorously apply the methods of science to navigate the treacherous straits between "know nothing", skepticism and "anything goes" credulity (4).

The healthcare professional has to be a critical thinker, ready to learn to evaluate arguments and sort truths from falsehoods in the context of evidence-based medicine as well as personal attitudes. Our world is full of people who believe in angels but not in germs in spite of ample evidence for the latter and none for the former. Hall (2) gives two examples of how knowledge obtained through reliable means is often ignored to guide healthcare practices.

- At a presentation a chiropractor insisted that newborn babies need immediate chiropractic adjustment, because their necks are stretched to twice their length during childbirth, even by Caesarean section. A midwife who knew that was not true confronted him explaining that kind of stretch could not happen without killing the baby. To which the chiropractor assured the audience that, yes, the procedure does a lot of damage!
- Another presenter at the same meeting claimed that he did not believe in the germ theory arguing that if germs caused disease we would all be dead. He insisted that the only reason why people get sick is that their spines are out of alignment.

Evidently, the chiropractors had no scientific evidence on which to base their claims. And it is surprising how many obviously intelligent but non-critically minded people would accept these assuming that the chiropractors had obtained their knowledge through reliable means.

Some alternative medicine practitioners, traditional healers, herbalists, and witchdoctors may harm patients, even causing death by delaying and denying evidence-based medical care to patients. Yet, many people often turn to these "healers" in the absence of a better alternative.

The time to act is now

Our dilapidated healthcare services in Southern Sudan are stretched to the limit and it will take a massive effort to introduce a 21st century healthcare model.

Possible obstacles to the emergence of viable healthcare services in Southern Sudan include:

- Health policy lapses
- Complacency
- Dependency.

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Healthcare workers and policy makers in resource poor countries have a tendency to regard existing healthcare systems as the norm or simply resign themselves to the prevailing conditions and wait for the World Bank or IMF to come to their 'rescue'. Surprisingly, many of our policy makers believe that these Breton Wood organisations will solve all our problems. Most of the so-called aid (in fact loans that will be paid by future generations) rarely trickles down to those who need it most. The cost of a new Toyota land cruiser is sufficient to purchase mosquito nets that could save the lives of hundreds of children and pregnant women. We all know there is a massive healthcare vacuum that still requires to be filled in Southern Sudan 5 years after the Comprehensive Peace Agreement. Yet, these persistent healthcare issues will probably not be corrected by waiting for expensive handouts of questionable value.

The suffering of the Southern Sudanese should jolt all of us out of the current complacency so we start working to fill the healthcare vacuum. **All the evidence is before us and it is time to act**. It is not fair to heap the blame for our ailing healthcare system on the policy makers considering the fragile political climate we have had for the last 5 years. There is much that we could do as healthcare professionals to help alleviate the suffering of our people. It might be an uphill task, but it has to be done (see Figure 1).

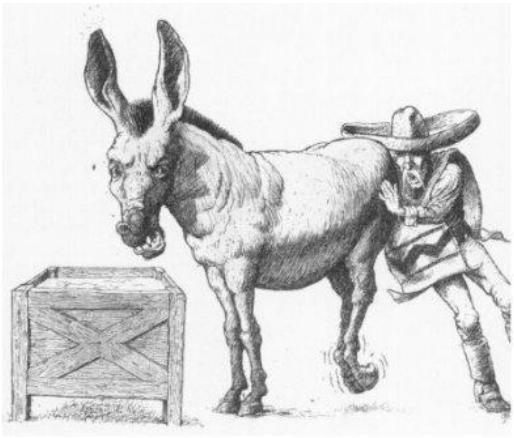

Figure 1. "It might be an uphill task but it is time to act" (Adapted with permission from reference 5).

It is time for all healthcare workers to get involved and engage with healthcare policymakers in Southern Sudan to build an effective and efficient healthcare system. Using critical thinking methods in constructive arguments are not a challenge to authority as this is the foundation of modern scientific method. We have to critically examine what is assumed normal and proper practice whether in healthcare delivery at the individual or at the policymaking level.

The questions we should ask ourselves include:

- Is the current method wrong or ineffective?
- Is there another and better way of doing it?
- Can others confirm that this method works?

As the Zen proverb states: "Where there is great doubt, there will be great awakening; small doubt, small awakening; no doubt, no awakening" (4 p20). Critical thinking is an integral part of evidence-based medical practice. It is a skill every healthcare worker needs so that healthcare delivery continually improves at all levels.

References

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Do you agree? In the HIFA2015 email forum (www.hifa2015.org) of 23 October 2010 Neil Pakenham-Walsh put forward the following premise for discussion among HIFA2015 members: "…. **public misunderstanding of mental illness is the single most important underlying factor in the specific failure of mental health care in Africa.** It is a major factor, if not the leading factor, in all the following four areas:

- stigma, ostracism and consequent additional suffering of people with mental illness
- failure to seek and obtain appropriate treatment
- doctors' and nurses' decisions to avoid mental health as a career option
- low priority of mental health among decision-makers and funders.

Increased understanding among the general public about the nature and treatability of mental illness, and their right to receive such treatment, has the potential to drive sustainable improvements in mental health care more surely than any other approach."

Personal patient-held 'health books' – should everyone have one?

In this age of electronic media, here is an idea for South Sudan's health services. Massimo Serventi, a doctor with wide African experience and presently working in Darfur, suggests that everyone, especially children, should have and *keep* their **own personal paper 'health book'** – and keep it throughout life. The main aim being to improve the diagnostic orientation of health professionals.

Dr Serventi first introduced these books when he was working in a public hospital in Tanzania. He asked every patient to buy an ordinary exercise book, available in the shops at low cost. In this book, the doctor (or other health professional) had to write:

- date
- short history of the current illness (e.g. fever for 3 days, cough for 1 week...)
- major signs and symptoms
- suspected diagnosis
- treatment (including non-pharmacological recommendations)
- signature (easily readable)
- rubber stamp (if possible).

Any laboratory results were enclosed *in* the book which the patient (or parent) kept.

These books functioned well for several reasons:

1. Medical contacts were in chronological order. As prescribers, we know that many hospital forms are not easy to read and are often mis-filed; if there are many it become difficult to trace the chronological progress of the disease. And this is important especially in cases of chronic illness, such as diabetes, asthma or hypertension.
2. Doctors were 'obliged' to write clearly *all* important information; they knew that other colleagues would see the book in the future.
3. They helped the doctor make a diagnosis. The doctor could *see* in one place all the previous medical contacts. Many times the information on previous pages gave a clue to the present ill-health problem. Example: Dr Serventi says, *"Suppose I read in the book that a child had several episodes of otitis in the first year of age, recurrent abscesses of the skin, oral thrush and a poor growth.....then I would consider investigating her HIV status."*

If in-patient files were missing the book was used to follow the progress of admitted patients.

Dr Serventi remembers that the 'natural' opponents to patient-held records were hospital administrators who wanted the record of medical contacts to *remain* in the hospital, and researchers who needed to analyse records. Although Dr Serventi agrees that duplicate records can, and perhaps should, be kept by the health facilities, he believes that patient-held records are *more important* because:

1. Files left in the hospitals are easily lost and privacy is not guaranteed.
2. A file left in the hospital does not allow a second doctor to orient him/herself. In case of deterioration of the health condition (maybe in the middle of the night) the patient should be able to *show* to a second doctor how he or she was previously treated. Or, if travelling somewhere else, the patient can show his/her past health history to other health staff and request that it is properly filled in. All the health professionals that the patient sees whether in a private or public clinic/hospital, should write on the same book.

A health book like this encourages us to *write down* what we see and feel openly (even if we put a question mark to show that we have not yet come to a clear conclusion). Dr Serventi says, *"No-one should leave a consultation room without all the doctor's findings and conclusions written in her/ his health book."* He adds, *"All patients have the right to have their books properly filled and to keep them for ever".*

"A car service report is kept in the car....and not in the garage."

Examples of other patient-held paper health records

The most well-known is the child growth/health chart promoted by David Morley and still widely used although this only covers the individual until about the age of five years (www.talcuk.org/accessories/child-health-charts.htm). According to the email forum HIFA2015 (see www.HIFA2010.org) patient-held paper records are also being used in Nigeria, Malawi, Indonesia and South Africa. And below there is an example from UK.

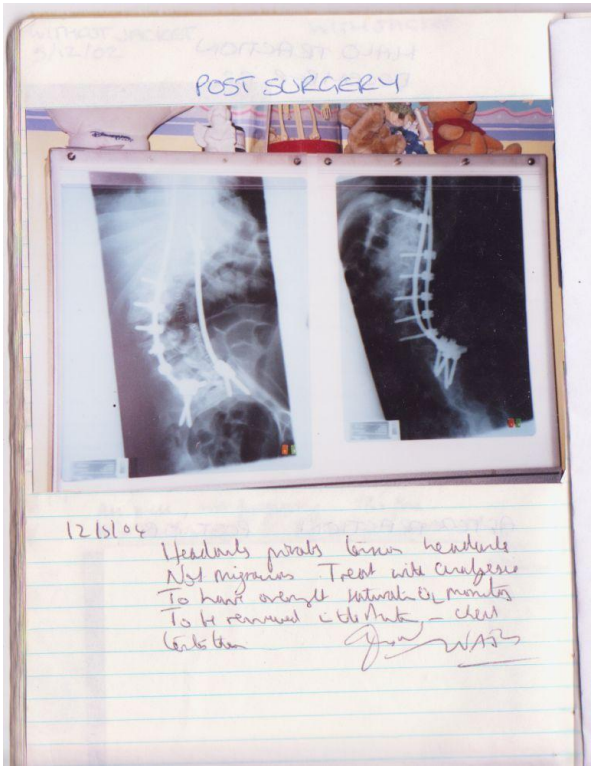
Dr Serventi says, *"Whatever is used (e.g. a card or exercise book) there must be there space enough for the health professional to write down all information obtained in that consultation (i.e. the findings, diagnosis, lab results and treatment)".* He emphasises that a health book should not 'belong' to a certain hospital, NGO or institution. It should not be used only to record special diseases.

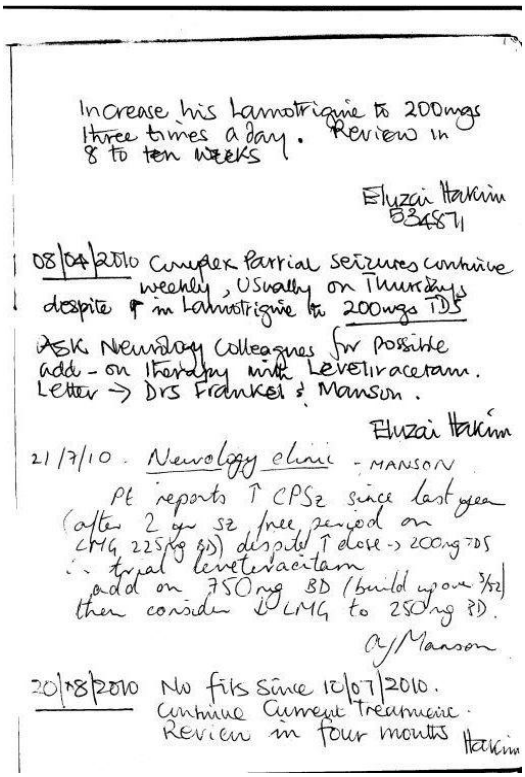
Example of a health book from UK

Below are two pages from the 'health book' of a male patient (DN) living in UK who was born in May 1989. DN was diagnosed with congenital muscular dystrophy, complicated by scoliosis and later on developed complex partial seizures. He needed to be seen in various clinics by different specialists who managed his physical disabilities and epilepsy. The complexity of DN's condition necessitated a record of each visit to enable parental understanding of DN's treatment and follow up arrangements.

DN's mother says, *"I have held this exercise book as a complete record of hospital appointments, investigations, surgical procedures and medication from my son's birth to the present day. At each appointment a brief note of any procedure or advice was noted for future reference. The book has been an invaluable source of information for me, and for all the healthcare professionals who have been involved up until now - and will be for any who may be involved in the future".*

Two pages from DN's health book *(published with permission of his mother)*





Do you agree with Dr Serventi that what is *wrong* and *does not* help are those papers (from hospital or private/public clinics) where the prescriber writes, "erytromycine 5mlX4X5days, paracetamole5mlPRN" and nothing else – with *no* other indication of the disease treated, the complaints, the symptoms or the diagnosis?
Note: a doctor in this article includes any health professional who diagnoses, treats and counsels patients.

Reports from Southern Sudan

Our Medical Elective in Juba

Genevieve Crudden, Trinity College, Dublin, Ireland gcrudden@tcd.ie

Every year, many medical students do four-week electives in foreign places as part of their medical training. My friend, Laura-Ann Lambert, and I are medical students from Trinity College, Dublin, Ireland. We have just completed our electives in Juba Teaching Hospital (JTH), Southern Sudan. As two twenty-one year old female 'Kawajas', we were discouraged from taking our medical electives there. In western society, Sudan is still perceived as a dangerous place. Little did they know the wonderful teaching two young prospective doctors could receive in Juba. We spent two weeks in the Paediatrics Department with Dr Louis Danga and Dr Chollong Hassan followed by two weeks in the Obstetrics and Gynaecology Department with Dr Abdallah Mergani and Dr Martin Maring.

In the Paediatric Department

We spent most of the working day doing ward rounds, attending Out-Patient Clinics as well as A&E Intake. Dr. Danga provides wonderful care to every child who is admitted yet he still found time to teach us. He not only taught us clinical medicine in the Sudanese setting but also the medicine that would be practised in our own Western setting.

The spectrum of patients we saw ranged from premature babies to bronchiolitic toddlers to patients suffering from dehydration. It was the rainy season so it was not surprising that many children were being treated for respiratory infections and malaria. We also saw children with meningitis. Malaria is now seen more frequently in the west so it was of great value to Laura-Ann and I to witness it being treated so effectively by those who are experienced in dealing with the disease.

Dr. Danga also treated children with malnutrition. These children had their own ward where they received food supplements and where naso-gastric tubes could be inserted. At the time of our placement, the hospital did not have food in the hospital kitchen.

We also saw patients with rheumatic heart disease, suspected glycogen storage disease and suspected lymphoma. From an academic perspective these cases were very interesting but it was also frustrating to see these patients sent home as nothing could be done in the Southern Sudanese setting.

Since I have returned home many people have asked me to identify the differences between medicine in South Sudan and medicine as practised in Ireland. I think one of the key differences is that the doctors in JTH rely more on their own clinical observations to diagnose and treat patients whereas in Ireland most physicians turn to laboratory results, machines and monitors before making a diagnosis. South Sudanese doctors are very good at diagnosing medical conditions using their five senses alone. In JTH they do have facilities to ascertain haemoglobin level, white cell count, malaria and HIV status. The HIV test is not done routinely on the paediatric patients.

Figure 1. Dr Abdallah Mergani with Laura-Ann (left) and Genevieve (right).

Technological advances, of course, are an asset to medical health workers but nothing can replace sitting down with the patients, listening to them and then examining them thoroughly. We have been told this many times in medical school and JTH hammered this point home for me. Another difference I found was the role of the nurse. In Ireland, nurses ensure that the patients are comfortable and stable by regular monitoring of vital signs. They make sure their patients receive their medication in bed. In South Sudan the nurses assisted the doctor on the ward round but they did not seem to monitor the patients when the doctor left.

When we had decided to go to South Sudan, Dr Hakim (of the St Mary/Juba hospitals link) asked Laura-Ann and I to do a study on the prevalence of HIV among the children attending the A/E Department. Our plan was to do anonymous testing using the blood that each child (aged 2-12) gives as part of its work-up. We received ethical approval for this in Ireland and Sudan and took the equipment for it. This project, unfortunately, was not facilitated for us in Sudan on the ground. Kora Healthcare, Swords Dublin had kindly donated 239 Human Hexagon rapid diagnostic kits. When the research project failed to go ahead due to unavoidable circumstances we gave the kits to the laboratory of JTH and a rural healthcare centre in Rumbek. The current findings are that the overall HIV prevalence in Southern

Sudan is approximately 3% (2008 census). As a result of the lack of routine HIV testing we did not see a representation of that figure and we only met one confirmed case.

In the Obstetrics and Gynaecology Department

For our last two weeks, we joined the Obstetrics and Gynaecology Department. Coincidentally Dr. Mergani and Dr. Maring were giving a GOSS and WHO sponsored five-day course in Emergency Obstetrics to the medical officers working in rural areas. Laura-Ann and I were very impressed with the teaching we received. It was a brilliant contribution to our knowledge of obstetrics. At the end of the course, all participants received certificates from the Minister of Public Health and a representative of WHO. We spent the following week in the Obstetrics Department doing ward rounds, examining the clients and observing in theatre. Like Dr Danga, Dr Mergani and Dr Maring work very hard to ensure that the welfare of the women who are admitted is given priority.

Figure 2. Dr Martin Maring, Laura-Ann and Dr Abdallah Mergani.

Outside the hospital

As Laura-Ann and I stayed with the lovely people of the Sudanese NGO ACROSS, we were able to do some medical work outside the hospital. ACROSS with its partner, the UN Refugee Agency (UNHCR), look after the members of the Ethiopian Anuwak Tribe at Lologo refugee camp. With Roda, one of the ACROSS medical officers, we immunised the camp's pregnant women and babies - giving tetanus, OPV, measles and BCG. The following week, we helped at a Health Awareness Day for the pregnant women explaining the dangers of smoking and drinking alcohol during pregnancy. These were invaluable experiences for us.

Would I recommend Southern Sudan as a destination for her/his elective to a friend? Yes, I would. Ours was not a typical Medical Elective with safari parks and back-packing expeditions but I think it was better. Not only did we learn a great deal but also we enjoyed ourselves and met some wonderful inspirational people.

We are very grateful to Dr Danga, Dr Mergani, Dr Maring, Dr Eluzai Hakim, Dr Sarah Goldsmith, the staff at ACROSS, Ingrid Deutrom of Kora Healthcare, Prof Orla Sheils and all of those people who helped to make our elective possible as well as effective. Despite all things in South Sudan being quite 'tricky' we will do our very best to return.

Correction to photograph

The photograph on the cover of SSMJ 3 3 wrongly said that Ms Bilha Achieng was in it – we apologise for this mistake. The photograph below shows Bilha (in white trousers in front row) with students from the Juba College of Nursing and Midwifery in their new uniforms (*credit Bilha Achieng).*

SUDAN: Southern hospital cannot cope with demand

MALAKAL, 23 September 2010 (IRIN) - Doctors are working 12-16 hour shifts to cope with the increasing demand at Malakal teaching hospital in Upper Nile State of Southern Sudan, say officials.

"We are trying to encourage more doctors to come work here," Upper Nile State health minister Steven Lor said. The relatively poor living conditions in Malakal, however, made it difficult to convince Southern Sudanese doctors working in the capital Khartoum to move.

The hospital director, Tut Gony, said in the past two months, more than 2,000 people had sought treatment at the hospital. These included 700 malaria cases, many of whom were children. "Our capacity and resources at this hospital do not match the high demand for services," Gony told IRIN. The hospital, the only such facility in the state, has 14 doctors for the state's population of 126,000, according to the 2006 national census.

To cater for this population, as well as some patients from neighbouring Jonglei State, the hospital needed more beds, new surgical equipment and a steady stream of drugs, Gony said.

The current rainy season, which has left four of Upper Nile's nine counties partially under water, was likely to increase health risks. "We have a serious problem with sanitation in Malakal," he added. A survey by the NGO Relief International in 2007 found that 80 percent of the residents had no access to latrines or any other toilet facilities.

Extract from IRIN News (www.irinnews.org) 23 September 2010 – see full article at http://www.irinnews.org/Report.aspx?ReportID=90563

Note from Population Services International

"In the volume 3, number.2 issue of the SSMJ, Population Services International was featured in the organizational profile on page 14. PSI wishes to provide further information to clarify its role in Southern Sudan. Since opening its office in Southern Sudan, PSI has worked in close collaboration with the Government of Southern Sudan, Ministry of Health in support of the Ministry's efforts to improve the health of the people of Southern Sudan. With funding and support from the Ministry of Health through MDTF, PSI distributed over 1 million LLINs in 2008 and 2009. In 2009 and 2010, PSI and its partners distributed 2.5 million nets through the Global Fund, Round 7 Malaria grant in collaboration with the National Malaria Control Program, Ministry of Health – GoSS".

News and Resources

This section gives relevant clinical information from other journals and reports, and suggests materials that can be freely downloaded, and/or obtained in hard copy or on CD. Items are grouped under: Chronic diseases; HIV and other infections; Maternal, newborn and child health; Surgery; General resources.

Please look out for other publications to include in this section. Send them to Dr Wani Mena wanimena@gmail.com **or Dr Eluzai Hakim** eluzai_hakim@yahoo.co.uk.

Chronic diseases

Africa: Diabetes becoming more prevalent The diabetes population in Africa is estimated to double over the next 25 years impacting poor people living in slums or informal settlements more than the general population, according to the **International Diabetes Foundation**. The IDF also said Africa will see a 24% increase in NCDs by 2015. Increases in development, disposable income, urbanization, mechanization, globalization of food markets and changes in lifestyle behaviors are attributed to the increase of diabetes in Africa. Rising diabetes rates are becoming another barrier to the survival of those who are low income. Blog 4 Global Health Council's Policy, Research and Advocacy team at http://bit.ly/cPYks9

All Africa conference on heart disease, diabetes, and stroke The Cardiovascular Journal of Africa is calling for abstracts for PASCAR's 2011 conference in Kampala, Uganda. The deadline for submission is 30 January 2011. Submit online at: http://www.cvja.co.za/pascarabstracts.php. CVJ Africa Conference website: http://www.pascar.co.za/

HIV and other infections

The HPV Vaccine Global Community is an online global network of people who share an interest in preventing cervical cancer and in the role of Human papillomavirus (HPV) vaccines in health programs. We use the internet to share and exchange knowledge, ideas and resources to explore the feasibility of introducing HPV vaccines within cervical cancer control programs and thereby ensure that people around the globe have equitable access to the best available health care. See http://hpv-vaccines.net

[Seen on HIFA2015 3August 2010]

Maternal, newborn and child health

1,000 Days: Change a Life, Change the Future (http://www.thousanddays.org/about)

Maternal and child nutrition during the first 1,000 days—pregnancy through age two—shapes a child's future. With adequate nourishment in the earliest years of life, children have an opportunity to grow to reach their full potential. There is a critical window of opportunity between pregnancy and age two during which nutrition can have a measurable lasting impact on growth, brain development, incidence of disabilities and susceptibility to disease or infection. The full long-term effects reach beyond health—with poor early nutrition leading to limited educational achievement and decreased lifelong economic opportunity.

Each year, 3.5 million mothers and children under five die as a result of malnutrition, and millions more suffer the effects of poor early nutrition. The impact of malnutrition during the first 1,000 days is irreversible—but these consequences are preventable. Each year, we can save the lives of more than one million children and help 360 million more children and their mothers have a healthier future. An annual investment of $10 billion in child nutrition offers the best return on investment in global development, and it is the right thing to do.

A wide range of organizations have come together to ensure that children and families get a healthy start at life. 1000 Days: Change a Life, Change the Future supports international experts and advocates working to improve early nutrition. Organizations including InterAction, Bread for the World, Concern, Save the Children, World Vision, and the Hunger Project are sharing information and co-ordinating efforts to support effective, evidence-based actions to improve nutrition.

Infant and young child feeding. New documents (available in hard copy) from WHO's Department of Maternal, Newborn, Child, and Adolescent Health:

- **Model chapter for textbooks for medical students and allied health professionals.** This summarises essential knowledge for health professionals and provides tools to support mothers and other caregivers. The content is compatible with the WHO/UNICEF counselling course on infant and young child feeding. Download from http://www.who.int/child_adolescent_health/documents/9789241597494/en/index.html
- **Indicators for assessing infant and young child feeding practices.** The documents present the indicators and their rationale and a standard protocol for their measurement.
  - Part 1: Definitions http://www.who.int/child_adolescent_health/documents/9789241596664/en/index.html
  - Part 2: Measurement http://www.who.int/child_adolescent_health/documents/9789241599290/en/index.html
- **Guidelines on HIV and infant feeding 2010 update.** Download from http://www.who.int/child_adolescent_health/documents/9789241599535/en/index.html

To request hard copies email cah@who.int

Making Pregnancy Safer

The following documents have been published by WHO's Making Pregnancy Safer Department:

- **Technical consultation on postpartum and postnatal care**. See http://www.who.int/making_pregnancy_safer/documents/WHO_MPS_10_03/en/index.html
- **Packages of interventions for family planning, safe abortion care, maternal, newborn and child health.** See http://www.who.int/making_pregnancy_safer/documents/fch_10_06/en/index.html

Maternal iron/folic acid combined with antimalarial drugs reduces early infant deaths

Malaria infection during pregnancy is especially dangerous because it can lead to maternal anaemia, a condition linked to premature birth and low birth weight. Consequently, antimalaria prophylaxis for pregnant women is often recommended. Administration of iron and/or folic acid supplements improves maternal anaemia and pregnancy outcomes - but there are reports that iron supplements may increase the risk of malaria infection, especially in women and children. However, these studies are not consistent and researchers recently investigated the independent and combined effects of iron/folic acid supplements and malaria prophylaxis on neonatal outcomes in 19 sub-Saharan African countries using data from over 100,000 births.

The researchers found that infants whose mothers received both iron-folic acid supplements and sulfadoxine-pyramethamine during pregnancy were 24% less likely to die in the first month of life than infants whose mothers used neither. This protection was not conferred by either treatment alone, nor from other antimalarial drugs.

Reference: Titaley CR etal Combined iron/folic acid supplements and malaria prophylaxis reduce neonatal mortality in 19 sub-Saharan African countries. Amer. J. Clin. Nutr. 2010;92:235–43.

[seen at procor 16Sep2010]

Measuring newborn foot length to identify small babies in need of extra care: a cross sectional hospital based study with community follow-up in Tanzania.
Measurement of newborn foot length for home births in resource poor settings has the potential to be used by birth attendants, community volunteers or parents as a screening tool to identify low birth weight or premature newborns in order that they can receive targeted interventions for improved survival.
For details see BMC Public Health 2010, 10:624
http://www.biomedcentral.com/content/pdf/1471-2458-10-624.pdf

PED-EM-L is an international email forum for professionals interested in the emergency care of children. It includes discussions of individual clinical cases.
To join, send an email to LISTSERV@LISTSERV.BROWN.EDU and put the following text in the body of the message:
subscribe PED-EM-L yourfirstname yourlastname
For more details, including a hypertext archive and links to other Internet resources see:
http://listserv.brown.edu/ped-em-l.html
[Seen on CHILD2015 email forum http://www.hifa2015.org/child2015-forum]

idoc Africa (www.idoc-africa.org) is a site dedicated to improving delivery of hospital care for newborns and children in Africa. This website houses teaching approaches developed for the ETAT+ (Emergency Triage Assessment and Treatment PLUS admission care) WHO and Kenya courses, job aides used to try and improve care, tools for measuring the quality of care used in operational research and much more.

Surgery

Practical Plastic Surgery for Non-surgeons a book by Nadine Semer (a reconstructive plastic surgeon who has worked in several rural areas of Africa) is available free as a pdf at http://www.practicalplasticsurgery.org/book.html. [recommended by Professor John Adieng Adwok]

www.palliativedrugs.com is a website providing independent information about drugs used in palliative and hospice care. The content is based on the UK Palliative Care Formulary (PCF, 3rd edition). It includes details about unlicensed (unlabeled) indications and routes, and the administration of multiple drugs by continuous subcutaneous infusion. There are regularly updated 'Latest additions' and 'News' sections, and a Bulletin board which covers drug and non-drug issues. There is also a search facility that covers the whole site. Free registration is at the website.
[Seen on HIFA2015 14August 2010]

Practical Pointers for Primary Care Medicine
These are abstracts from key medical journals selected as being most clinically important (e.g. British Medical Journal). 6-8 abstracts are added each month and an index lists these by medical subject. The site allows access to many of the full articles. See www.practicalpointers.org.
[seen at HIFA2010 HIFA2015@dgroups.org 16/9/2010]

MedlinePlus is the USA National Institutes of Health's free website for patients and their families and friends giving information about a large range of diseases, conditions, and wellness issues in language patients can understand. Although meant for Americans parts of the site may be useful for patient education and support in South Sudan.

Free access to Journal of the American Medical Association (JAMA).
You can get free access to the abstracts (and some research articles) in this journal at http://jama.ama-assn.org. You may be able to get email alerts of the table of contents of new issues at http://pubs.ama-assn.org/misc/alerts.dtl

*****New e-TALC CD-ROM will be available soon*****
e-TALC is a project of Teaching-aids At Low Cost (TALC) which aims to bridge the digital divide in health by disseminating up-to-date, high quality health information on CD-ROMs free to health care workers in developing countries.

CD-ROMs are cheap to produce and post, they can hold thousands of pages of information and can be used on almost any computer. A variety of electronic resources are included on the e-TALC CD-ROMs including journals, books, newsletters and interactive educational content. These resources are donated by a variety of NGOs, publishers and individuals involved in health and development in developing countries. The resources are sorted and chosen for inclusion on future issues of e-TALC by our expert editorial board who make their selection based on the relevance of the resource to health care workers in resource-poor settings.

If you are not on the e-TALC mailing list and would like a copy of the next (11th) CD, please contact Simon Redmore at simon@talcuk.org.

UK training fellowships in medicine under the Medical Training Initiative Scheme with the Royal College of Physicians of London

Royal College of Physicians (RCP), in partnership with Federal Ministry of Health, Sudan Medical Specialization Board and Sudan Association of Physicians, is now accepting applications of interest to join the Medical Training Initiative (MTI) Scheme.

The MTI scheme offers the opportunity of 2 years clinical training and experience in UK National Health Service (NHS) hospital trusts for a small number of suitably qualified international medical graduates.

If appointed to a position after joining the scheme, doctors will be directly contracted to an NHS Trust and be remunerated at standard UK rates. Positions are currently available in a number of hospitals across the UK at both core medical and speciality training grades.

For those appointed, the RCP is able to assist with facilitating professional registration with the General Medical Council and a Tier 5 visa for the UK under the Government Authorised Exchange Category. This visa category is restricted to a maximum of 2 years, with no return to work in the UK under the same category for a further 5 years.

The criteria for applications to the scheme includes:

- having been engaged in clinical practice/training for 3 or more years since obtaining your primary medical qualification
- having achieved an minimum IELTS score of 7.0 in all categories within the last 2 years. Please see www.ielts.org for information on your nearest test centre.
- having obtained a postgraduate qualification equivalent to the level of the MRCP (UK) within the last 5 years *or* have passed MRCP part 1 within the last 2 years.

If shortlisted for the scheme, you will be interviewed in your home country using a UK standard interview format to assess knowledge and communication skills.

To apply for the scheme, please contact Dr Alaadin Hassan Ahmed RCP International Advisor for Sudan; E-mail: MTI_Sudan@hotmail.co.uk at Faculty of Medicine, University of Khartoum, Vice Dean office. **Completed application forms together with CVs should be received by Tuesday 30th of November 2010.**. These posts offer exceptional opportunities for enthusiastic graduates to widen their medical experience by working in the UK for periods up to two years.

Important information: The MTI scheme has been set up to facilitate UK clinical training opportunities for a small number of international medical graduates. This scheme is in no way a route to settlement in the UK as you will be required to leave the UK at the end of your training under the requirements of the Tier 5 visa category. Acceptance to the MTI scheme does not guarantee placement at a UK hospital, and those accepted may have to undergo a second interview with the hospital and will have a probationary period built into their contract.

WHO charts for everyone caring for children in hospital

On pages 88 and 89 we reproduce **Chart 4. How to manage the airway in a child with obstructed breathing** from **'Pocket Book of Hospital Care for Children - Guidelines for the Management of Common Illnesses with Limited Resources**' WHO 2005 – see the whole book at http://www.ichrc.org/. We published Charts 1, 2 and 3 in previous issues of this journal (vol 3, nos 1, 2 and 3) and plan to publish more in future issues.

You can use these charts in different ways. For example, you can print them and display them in relevant wards or clinics (laminated if possible), or use them as a 'memory aid' in your pocket, as handouts or as training aids.

We thank the WHO for permission to reproduce these charts, and Dr O'Hare who gave us the idea of making the charts more widely available.

CHART 4. How to manage the airway in a child with obstructed breathing (or who has just stopped breathing) where no neck trauma is suspected

Child conscious

1. Inspect mouth and remove foreign body, if present
2. Clear secretions from throat
3. Let child assume position of maximal comfort

Child unconscious

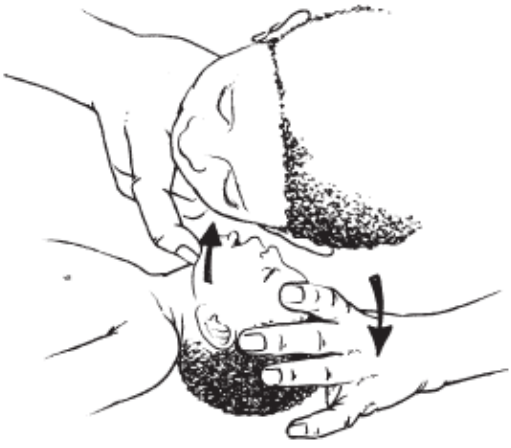
1. Tilt the head as shown
2. Inspect mouth and remove foreign body, if present
3. Clear secretions from throat
4. Check the airway by looking for chest movements, listening for breath sounds and feeling for breath

INFANT

Neutral position to open the airway in an infant

OLDER CHILD

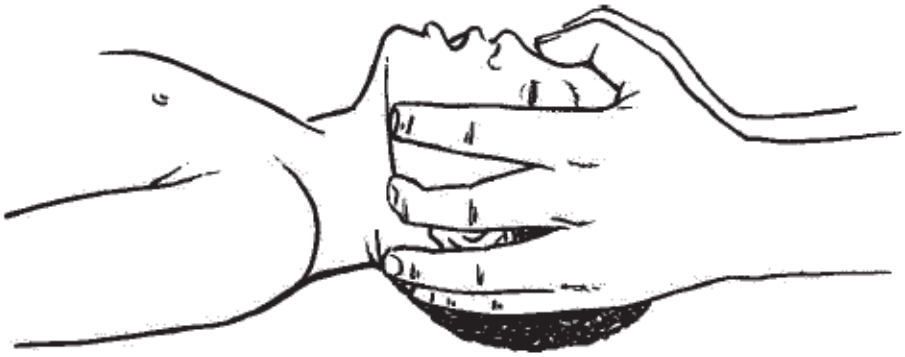
Sniffing position to open the airway in an older child



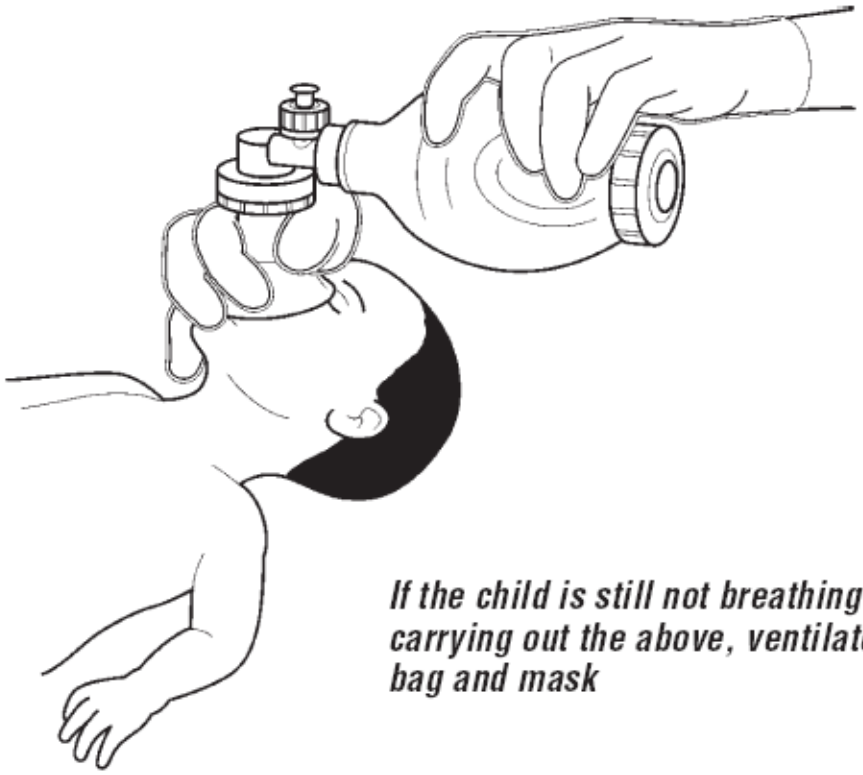
Look, listen and feel for breathing

CHART 4. How to manage the airway in a child with obstructed breathing (or who has just stopped breathing) where neck trauma or possible cervical spine injury is suspected

1. Stabilize the neck, as shown in Chart 6
2. Inspect mouth and remove foreign body, if present
3. Clear secretions from throat
4. Check the airway by looking for chest movements, listening for breath sounds, and feeling for breath



Use jaw thrust without head tilt. Place the 4th and 5th finger behind the angle of the jaw and move it upwards so that the bottom of the jaw is thrust forwards, at 90° to the body



If the child is still not breathing after carrying out the above, ventilate with bag and mask

South Sudan Doctors' Association

Quality health service for the people of South Sudan

SOSDA Announces that the registration of new members, production of membership cards and updating of register of old members is now on!

Registration Guidelines

An individual wishing to register as a member in SOSDA should fulfil the following criteria:

1. Must be a South Sudanese
2. Be a graduate of college of Medicine, Dentistry or Pharmacy
3. Registered in the Sudan Medical Council or equivalent
4. Paramedical staff and students of the above colleges can register as affiliated members
5. Must accept and abide by the constitution of the Association.
6. Fill and submit the registration form with copies of the following documents enclosed
    a) Birth or assessment of age certificate
    b) Nationality certificate/Passport
    c) Certificates – basic degree/postgraduate
    d) Registration certificate from the Sudan Medical Council or equivalent
    e) Two recent photos (passport size)
    g) An official statement from the college (students)
7. Must pay the registration fee SDG 50
8. Annual subscription fees SDG 300

Please contact the SOSDA Office in Juba for the Registration forms or send an email to the address below:

South Sudan Doctors' Association
Secretariat Office
Ministry of Health Compound, GOSS
Juba, Southern Sudan
Email: sosda.sudan@yahoo.com, sosda.sudan@gmail.com
Tel: +249(0)90 838 333 665 / (0)955 103 487

A limited number of printed copies of this issue of the journal are available – contact Dr Edward Luka at <opikiza@yahoo.com>