Sierra Leone BSSH Visit to The Holy Spirit Hospital Masuba
Catholic Mission-Makeni
30th Sept-9th Oct 2017

The Team of eight

-Mr Mike Waldram (Team Lead) Consultant Orthopaedic Hand surgeon Queen Elizabeth (QEH) and Royal Orthopaedic Hospital (ROH) Birmingham
-Mr Rajive Jose Consultant Plastic Hand surgeon QEH/ROH Birmingham
-Mr Chris Baldwin Consultant Plastic Hand surgeon Sheffield Hand Centre
-Dr Shiv Chavan Consultaant Anaesthetist QEH Birmingham
-Mr Alex Pownall Operating Department Practitioner QEH Birmingham
-Mr Niko Prins Physician's Assistant Anaesthesia QEH Birmingham
-Mr Joel O'Sullivan Upper limb Physiotherapist QEH Birmingham
-Miss Eva O'Grady Plastic surgical Registrar Cambridge rotation

Preparation

Each team member was assigned tasks eg anaesthetic drugs, theatre equipment, splinting and plastering, dressings, surgical masks gloves, children's mini gifts, team sustenance drinks and sweets etc.
We purchased all anaesthetic drugs through the QEH pharmacy at cost price. (£280 with charity gift of £200) Theatre equipment and supplies were also purchased or donated by theatre equipment representatives (See Appendix A+B) A large volume of Paracetamol and Ibuprofen collected from family supermarket shops, friends and hand therapy appointments when patients were encouraged to bring back unused drugs were donated to Makeni HSH pharmacy. Codeine containing analgesics were not taken as in some countries this is a controlled drug.
Dressings (Appendix C), sutures and some surgical equipment were stockpiled in ambulatory theatre at the QEH and the outpatient depts. At QEH and Royal Orthopaedic hospital (ROH).We collected disposable tourniquets and took out diathermy plates which the May team told us were needed. Mercian medical donated two Waldram tenotomy scissors, and we purchased a new Watson knife from the internet. These were left at Makeni. We were loaned a portable ultrasound machine for regional block anaesthesia (c/o Sonosite). The ROH CEO donated X30 disposable limb drapes which proved invaluable. We had 3 camping headlights for evening power cuts during surgery. We recommend each team member takes out a portable hand held fan and spare batteries.
The whole team met twice before departure. This worked well and in my view should be done with future teams. First we had an evening of sharing a meal together and hearing a report with pictures from Dominic Power (QEH) who went to Makeni in May 2017. This was both practical but also gave us a real flavour of what to expect, in particular how friendly the staff were. Then we had an inspiring talk from Mr Francis Peart, Consultant Plastic surgeon QEH and ROH on seeing and treating soft tissue tumours in a developing country. This was an area I felt we may be weak on. We met again 3 days before departure each filling an extra hold bag with hospital provisions, mainly disposables. What was taken out seemed about right. We needed to take more histoacryl for graft anchorage for tropical ulcers.

Immunisation/Landing permits/registration

Each team member was responsible for arranging and getting and paying for their own immunisations as per 'Information for visitors to HS Hospital' document. Most were done via GP but Yellow fever was purchased privately (£60) mainly through Nomad travel office in Birmingham, or designated GP practises.

Post exposure prophylaxis (PEP) tablets were obtained from Occupational health QEH after an HIV test (leader only) We had two packs one from the May team. Neither were used and will be posted to Mr Murali for the Dec team as the expiry is ?three years (cost £210 each)

All doctors on the team informed their own defence union of the mission and were each registered with the Medical and dental council of SL (MDCSL) by sending details of their qualifications and CV in advance of travel.

All of the team sent passport details for landing permits that were emailed back and paid for at Makeni (£47 EU £53 non EU residents) after arrival.

The administration by Mohammed Tarawally, hospital administrator at Makeni and his PA Victoria was efficient, quick and friendly throughout and is to be commended. Nothing was too much trouble for them to do or help with.

Team costs

Flights out Birmingham to Paris to Freetown Air France
Return KLM Freetown (via Liberia) to Amsterdam to Birmingham £2747.64
(Including travel insurance)

Landing permits			£406
Pick up and return from airport	£74.46x2		£148.92
PEP pack			£210
Anaesthetic drugs (excluding £200 donation)			
And Anaesthetic / theatre equipment			£249.44
		Total	£ 3762

Food at guest house excluding drinks 8x8 days team paid (£272.34)(Total)

Donations received;

Mr Mike Hammond (QEH charities personal donation)	£200
Eva O'Grady coffee morning	£100
Ambu/ Intersurgical /Fannin provided airway kits (LMA's,airways,masks,circuits,catheter mounts)	
Pajunk provided nerve block and spinal needles	
Donated anaesthetic equipment total	£400
Mercian Medical Waldram tenotomy scissors x2	£200
Royal Orthopaedic Hospital x 30 Limb drapes	£110
Total	£910

There were no accommodation costs (see patient costs below)
The team purchased their own drinking water and beers on average £14.0 per day
There are no card payment facilities in SL

Total cost of trip to BSSH £3762-£910=£2852

Outpatients

The day after arrival the team took an informal walk around Makeni which was invaluable to see the sort of home conditions that patients were coming from. On the Monday morning we received a warm and friendly welcome from Dr Patrick Turay the medical director at HSH, and met key nursing staff. We were all impressed at the facilities. Our visit had been advertised locally, but this did not include payment details

On our first day we saw 48 outpatients (see appendix C) with all four Doctors working. A combined Ortho/plastic input worked well. In the week there were 73 consultations.(Appendix D)

Our defined remit followed an agreed protocol set by the leader. All patients for theatre should be DOC1

D iagnosis known

O peration known

C omorbity low

1 operation needed

Patient registration before being seen was helpful but the team found the patient names confusing. The consent form was generic and included the relatives name and a thumb print. There were no details of the surgical procedure and it is recommended that this is changed.

The team found turning patients away with complex or chronic problems difficult. Of note however was a 15 yr old girl with untreated clubfoot who could not speak and had no parental support . The team liaised via her sponsor with an American benefactor who is helping support a German surgical team who are coming to Makeni in Nov and specialise in untreated clubfoot. We debrided her ulcers in preparation for this.

The digital Xray machine was broken so the Xray staff had fashioned a makeshift machine with suspect wiring. This needs checking particularly in the light of an electrical fire in the physiotherapy block last year. We were told that the fire brigade response in Makeni is very slow.

The ultrasound service at Makeni was quicker and more efficient than any UK equivalent.

Hospital charges

We were the first team to trial a different charge system for patient care. We did not have to pay accommodation costs

Each patent paid

£4 consultation fee

£12 Xray

£50 set surgical fee

We noted some patients listed for surgery did not turn up (Appendix E) We offered to pay for their surgery or short fall as we were keen that these new charges should not be a barrier to the treatment we could offer. The surgical fee appeared high to us in relation to the poor income of the majority of patients attending.

This new system needs careful analysis by both Dr Patrick Turay, Mr Mohammed Tarawally, Sister Norah and ReSurge Africa to decide the best way forward

Theatre

The theatre staff were both experienced and helpful. Their willingness to learn and work in a cheerful positive way was commendable. They adapted well to a new team of surgeons. There was excellent cleaning between cases and in theatre surgical scrub cleanliness was good and strict. All sterilisation was with a small 'downward displacement sister unit' in the changing room
There were 21 procedures during our time and two cancellations, one with uncontrolled hypertension and one did not attend for surgery.
Areas the team highlighted for improvement were

A) Closer adherence to WHO Check.

This was followed during our stay but there is not a 'WHO culture' That is the whole team pause during the check because everyone understands they are protecting the patient and each other from surgical mistakes (*Global patient safety challenge 'Safe Surgery Saves Lives 2008 WHO)*

B) More rigorous swab count, double checked

We instituted a white board to record each patients swab count. This should also be manually entered in a theatre record book with the patients full name, operation, surgeon, assistant, scrub nurse and runner recorded. We strongly recommend this is started. Raytec swabs with an X ray marker only should be used during surgery but NOT for dressings.

C) ALL instruments should be handed to and from the surgeon in a kidney dish.

We bought out a number of these for this purpose, but the practice was obviously not second nature, and should be for high risk open surgery. A needle stick injury was avoided by double gloving which we did throughout

D) Anaesthetic Machine leak

There was a large leak in the circle system and the team could not fix it. It wasted expensive valuable Halothane exposing theatre personnel to exposure. For this reason we chose more spinal anaesthetic which was also more time consuming. The supplier and any service contract should be explored as a priority. The monitor has an agent/CO2 module, but it is not working.

E) **The scrub room technique can be improved**

We bought our own surgical scrub dispensers of Hibiscrub Chlorhexidine and Iodine Vidine. Although we also bought the plunger dispenser they really require a simple wire cage that can be wall mounted and elbow operated by the scrub person. I was unclear what system was normally used, but any system should be operated by the scrub person alone

A visual inventory of theatre equipment was made during our stay and is included in appendix F. There is a lot of out of date Orthopaedic hardware that is not relevant to the hospital setting and should be removed. Two sets were found and should be marked as valuable. A K wiring box and a complete small fragment set. There is a battery operated wire driver but only one functioning battery that is charged. The electric Zimmer dermatome has the blades but screws missing from the assembly. We tried to obtain these from Zimmer in UK before our departure but were unsuccessful. This is such a time saving piece of equipment a new one should in our view be purchased.
There is a general shortages of bandages. We left plaster of Paris rolls but these will soon be exhausted.

Wards

The team found the standard of ward nursing to be extremely high. The beds were well spaced, and the ward space light and airy. The nursing staff were very attentive to any team visit however busy they were, and whatever time. They were quick to clarify written post operative instructions and attentive to drug and fluid prescriptions being correctly written.

Following the experience of the May team of skin graft rejection In an attempt to reduce the Pseudomonas infection risk all tropical ulcers for debridement and skin grafting were treated for at least three days with topical ascetic acid diluted threefold. We purchased vinegar from the local supermarket and each patient had their named bottle. The nursing staff cooperated with these instructions well.

There were no areas needing improvement.

Teaching

The team decided that opportunities to teach any staff would be given maximal priority as this would be far more effective in the long term than any short burst of surgery. We conducted two early morning teaching sessions covering;

-a practical demonstration of applying a plaster slab

-wound healing

-Advanced life support in an emergency

-Basic principles of early burn management

We completed the donation started by the previous BSSH team, of Orthopaedic textbooks that came from the family of Mr Mohamed Arafa, a West Midlands Hand surgeon who had sadly died of liver cancer.

We were impressed by the Resurge teaching block with a well stocked library of surgical textbooks in English, and large number of computer stations. We agreed it was better than any teaching space we can use in the UK. However we never saw the computers in use, and noted how many of the nursing staff appeared to do back to back shifts including day following nightshifts presumably to assist their income.

We taught three medical students from Freetown all week assigned to HSH who had variable interest in our work.

We commend the appointment of Haroldleen who we suggest is best suited to implement the theatre recommendations.

Religion

We were impressed at the daily morning prayers and weekly communion in the outpatient reception that started each day. This seemed to give the staff a calm and right perspective as they went to work. The Hospitals strong Christian ethos was evident in a refreshingly bold way. The links with the lively Catholic church on sight clearly gave many staff a strong focus. There were also Muslim staff who worked in an apparent cohesive manner and this is to be commended.

Comparative medical care

Some of the staff had the opportunity to visit the government hospital in Makeni where we were also asked an opinion on a 50yr old lady motorcycle RTA with bilateral closed fracture of humerus. The hospital was well spaced out but the facilities poor and some staff we met appeared disillusioned and weary. The laboratory had insufficient reagents to do many basic blood tests, and the theatre anaesthetic equipment was very basic. The paediatric ward was dark and unclean, with beds too close together and staff who were overworked. The hospital is also fee paying like Holy Spirit hospital.

We came away grateful of the facilities and attitudes of the staff at HSH

Guest House

The guest house facilities were excellent and provision of three meals a day and fresh fruit welcome in the hot climate. The provision of Mosquito nets for each bed and cold refreshing showers was also welcome. The provision of a night watchman and an internet dongle was also reassuring. We felt very cared for and safe. We strictly adhered to only using bottled water for drinking, brushing teeth etc. A number of the team suffered viral or gastrointestinal upset during our stay. In retrospect we recommend fresh washing up scouring pads, brushes, liquid and Tee towels are bought by each team, and that all cutlery and crockery is washed in boiled water rather than rain water from the tap and completely dried before use.

Surgical scrubs were available and washed daily, but the larger sizes (UK pink and orange colour tab) were less available and should also be bought out by the next team.

Future

We recognised the long term goal of employing two Ghanaian Plastic surgeons at HSH but this was far from near. We wondered how they would be motivated to stay at Makeni vs the draw of private work in Freetown?

We recommend team reports are circulated to the next three teams due to visit and not just the next BSSH team. This will bring better continuity, strategy and long term development of surgical practice at HSH.

We strongly recommend the BSSH Ortho-plastic teams should continue.

Two anaesthetists (one registrar level) might be work better in case one is ill. At least three surgeons. Two Plastic and one Ortho works well in the outpatient and theatre setting

At the end of our stay we were treated to a nice hotel meal and given gifts and a certificate. The whole team found this a humbling experience as we felt that we had all experienced such a unique and profoundly thought provoking time and were returning home the richer for it.

Since return we have communicated with What's App ward rounds.

We all are keen to keep up links with HSH and hope to one day have the opportunity to return and witness progress. We are grateful for friendly colleagues that we had the rich privilege to work alongside

MW Nov 2017

Summary

Preparation
-take disposables
-Histoacryl, Vicryl rapide
-bandages, jelonet and drapes
-electric zimmer dermatome
-portable electric fans each
-assign tasks and meet twice before departure
-book flights as group booking with travel insurance

Immunisation/landing permits/registration
-Two PEP packs passed on to each BSSH team
-landing permits and MDCSL via info HSH
-Inform defence union

Costs
-Lead takes £800 cash HSH accepts £
-team members take £200
-pay for immunisation drinks and gifts

Outpatients
-Ortho-plastic review
-DOC1 patients
-priority for charity funds to obtain safe working Xray
-U/S service excellent
-Update consent form

Theatre
-closer adherence to WHO check/culture
-more rigorous swab count/white board
-No Raytec swabs in dressings
-instruments transfer in kidney dish
-sort anaesthetic machine leak
-improve scrub room technique. Wire cage for dispensers.
-cleaning in between cases and scrub nurse sterility excellent
-clear out of date or unused orthopaedic kit
-obtain new batteries for wire driver

Wards
-Exemplary nursing and bed standards
-use diluted acetic acid pre skin graft of tropical ulcers

-Teaching

-books donated to library-encourage visiting teams to hold practical teaching session-develop computer use? dongle internet access for nursing study periods and link to printer in Resurge study room.

-Use nurse educator to improve theatre practice for safe surgery

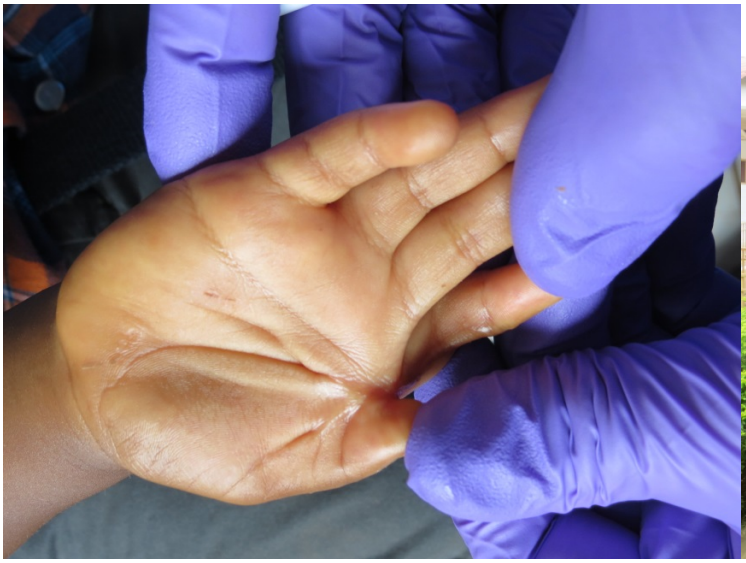
Future

-team reports to always go to next team

-encourage virtual ward rounds post team or opinion on any patient attending HSH (MW happy to accept any digital opinions/X rays to pass around team)

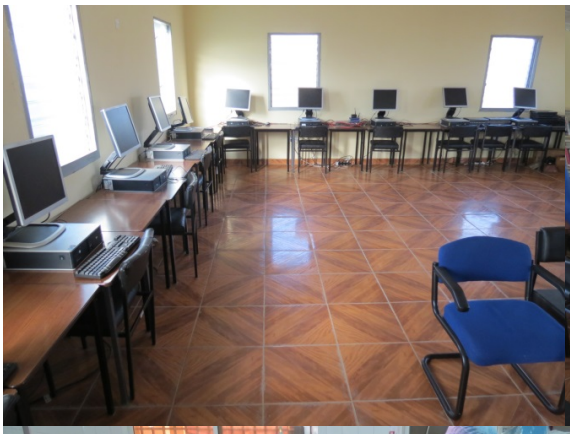
-BSSH teams should continue for the next three years.

Outpatients


Michael aged three had release of burn contracture of his thumb and skin graft by Chris Baldwin

Memunata (aged 15) had untreated clubbed foot and had never been to school. We debrided her ulcers and liaised with a German surgical team visiting later in Nov who specialise in untreated clubbed foot surgery




Resurge teaching, Theatre


The team with our cook Osman

Appendix A

Anaesthetic drugs:

Propofol 1%	30 ampoules (20 ml)
Rocuronium 10mg/ml	20 x 5ml
Neostigmine/Gycopurrolate (2.5mg/0.5mg)	20X1 ml
Ephedrine (30mg/ml)	10X 1ml
Metarminol (10mg/ml)	10 X 1ml
Adrenaline (1mg/ml)	10 X 1ml
Glycopyrrolate (0.6mg/3ml)	10X 3 ml
Levobupivacaine 5mg/ml	30X10ml
Lignocaine 2%	60 X 10ml
Lignocaine 1%	60 X 10ml
Diclofenac inj (75mg)	20 X 2ml
Ondansetron 4mg/2ml	20 X 2ml
Cyclizine 50mg/ml	20 X 1ml
Hydrocortisone (100mg)	5 vials
Dexamethasone 3.3mg/ml	10X 1ml
Flucloxacillin 1gm/Co amoxiclav 1.2g	20 vials
Clindamycin 300mg/ml	20 X 2ml
Gentamicin (80mg/2ml)	20 X2ml
Saline for injection	50 X 10 ml
Water for injection	50 X 10 ml
Intra lipid	1 bags

Triamcinolone Acetomide 40mg/ml vials x30

Surgical scrub

Chlorhexidine Hydrex 4% x4

Iodine Videne 7.5% x2

Plus two plungers that attach to the bottles

Future teams recommend take IV Paracetamol bottles and 0.5% Heavy Bupivacaine.

Appendix B

Anaesthetic equipments:

(Estimated use durng week 15%)

Guedel airways : 3, 4, 5 (10 each)
LMAs : 3, 4, 5 (10 each)
ETTs : 6, 7, 8 (10 each)
Masks : 3,4,5 (10 each)
C circuit : 5
HME filters : 20
Catheter mount : 20
Reservoirs bags : 5
Nerve stimulator : 1
Ayer's T piece: 2 (paed circuit)
Nerve block needles
Ultrasound (Loaned from sono)
Bougies : 10
Airtraqs (if we can get hold from company or out of dates from hospital)
? cannulas : 20 G X 20
22G X 20
Pressure bags : 2
Laryngoscopes : Size 3 X 5
Size 4 X 5
ECG dots : 100
Hypodermic Needles (Orange, Blue and Green): 50 each
Chlorhex swab sticks : 30
Chlorhex skin wipe : One box
IV cannula dressing: 50
ETT tube tape : one roll
Sticky tape: 5
Syringes 30X 2ml
50 X 5ml
50 X 10ml
50 X 20 ml

APPENDIX C
Dressing bag. Left at HSH

Plain guaze swab	6
Bandage roll	3
Cosmopore assorted	50
Mepore assorted	37
N-A dressing assorted	29
Powderplast NA dressing	51
Jelonet	14
Tensoplast/Transpore	9
Non woven swab	7
Tegaderm	6
Inadine	5
Kidney dish	3
Hyperfix	1
Mefix	1
Duoderm	3
Drape	2
Surgical limb drapes	30
Chloroprep	5
Rt Futura wrist splint	6
Shoulder support	3
Cricket bat knee brace	1

Appendix D

Outpatient /Theatre activity SUMMARY

	Mon	Tues	Wed	Thurs	Fri	total
Number	48	11	8	5	1	73
Male	30	8	4	2	1	
Female	18	3	4	3		

61% Male av age 34.1 yrs

Surgical listings
20 listings became 18 listings with 2 cancelations x1 uncontrolled hypertension, x1 DNA

18 listings =21 procedures

Nonsurgical procedures injected
3 keloids
1 ACJ
1 Heel spur
1 patella

Operative breakdown

Chronic wound closure/debridement/skin graft		7
Keloid /lipoma removal		5
Contracture release skin graft		3
Other	eyelid	1
	Microstomia	1
	Subcut swelling	1

Anaesthesia

GA	8
Spinal	6
Regional	1
LA	3
Sedation	1
Total	19

APPENDIX C cont'd

OUTPATITIENT ACTIVITY BY DAY

NS =No surgery L=Listed M=male F=Female

MON (48)

45F Tropical ulcer L
54M Noma of face NS
9F Perthes of hip shoe raise
17M Fracture radius and ulna 6 mos synostosis NS
19M glass injury 1 month ols ? ulna nerve Futura splint NS
15M Osteomyelitis tibia full ROM Paracetamol/Ibuprofen
18F fracture femur leg short NS shoe raise
68F L thigh keloid NS
6F post burn contracture L hand with previous amputated fingers Listed scar revision DNA
14F keloid from chicken pox L
24M RTA ankle fracture Chronic osteomyelitis NS
17M burn contracture Rt hand prev BSSH surgery L
20 M upper lip swelling U/S atypical Micobacterial infection NS
15M supracondylar fracture elbow 9 yrs ago NS
11M sore throat NS
17M Lipoma left ear L

13M swelling scalp declined surgery
6F Microstomia L
30F tropical ulcer from fishbone L
41M RTA 2008/acid injury SSG to face L
1M bilat cleft pallet NS
11M 4/12 injury rt arm. Painful shoulder . ?brach plexus injury also open wounds rt forearm closed LA. Forearm splint fabricated
13F iyr hist of L wrist deformity. X ray Madelung's NS
40F L shoulder pain reduced ROM X ray A/C disruption grade 3 AC injection MW full ROM
34M 1 yr sub trochanteric fracture Poor gait ?non union LLD. Shoe raise NS
34M L ring finger enchondroma no fracture NS

53M fall i/12 ago poor abduction L shoulder. Deltoid intact . X rays and axillary view post fracture dislocation L for surgery but uncontrolled HTN 204/138 . Echo. Strong FH HD Therefore cancelled after in depth team discussion. Could abduct 30degress painlessly.

TUE (11)

16M Keloid rt ear from chickenpox Injected
65F infected wound L foot with exposed tendons. Mult surgery needed therefore NS
20M fracture rt radius with wound NS
9M swelling/growth L neck 2 yrs and rt eye NS diag uncertain
9M fall at home L scapular two open wounds X ray odd appearance ?infected haematoma L
At surgery curetted TB looking appearance . Wounds closed referred for chemotherapy
35ML tibial fracture one yr ago with tropical ulcers . Acetic acid L for SSG
3M poor R UL function from birth .f ull ROM. Likely CP NS
19M fracture tibia 6 yrs ago. with bulbous swelling. Ankle mvts and sensation intact NS
23F mult keloids bilat ears prev surgery regrown injection L ear
50M 20yr hist of neck swelling . Diag Lipoma post neck NS
3M Burn contracture rt first web space 1 yr ago. Otherwise well L contracture release and FT skin graft from groin.

WED (8)

26M 1 yr wound ulcer foot spreading to knee which became contracted FFD 130/110 Rt lower leg L, could not walk L Contracture release SSG. Final pos -30 in splint. Popl nerve across FFD
2M facial burn 7/12 ago with oil. Hypertrophic scars lower face NS
18M wort on Gt toe Rx Salicylic acid, and purchase wort cream NS
19F wrist ganglion NS
65F swelling temporal face likely Lipoma NS
15F `bilat cong club foot untreated. Bought in by sponsor. L for debridement prior to German surgical team doing corrective osteotomy late Nov. Financial support from charity network in New Jersey USA
35M displ fracture patella. Prox rubbing on Femur Injected NS
9M Further review of scapular wound. Proceed L

THURS (5)

48M comminuted fracture head humerus July/17 from motorcycle RTA. NS
35M swelling forehead ? seb cyst offered surgery L DNA
18F rt breast lump. No malignant features nS referred gen surgeon HSH
35M painful heel spur . X rays normal NS Injected
19F tooth abscess and Osteomyelitis of jaw referred dental service government hosp

FRI (2)

57M 2mos hist atraumatic swelling and pain in calf. TA rupture recovering. NS given internal heel paddsx2 as shoe raise for 2 mos.

Appendix E
Patient costs with shortfall of new Resurge policy

HOLY SPIRIT HOSPITAL
CATHOLIC MISSION
SUMMARY OF MEDICAL BILL
NAME OF ORGANIZATION: BSSH 30 September - 8 October

NO	DATE	NAME	AGE	AMOUNT DUE	AMOUNT PAID	BALANCE
1	3/10/17	Abdul Dixon	41	500,000	200,000	300,000
2	3/10/17	Abdul Kalawa	61	500,000	250,000	250,000
3	4/10/17	Alhaji Tarawallie	20	500,000	250,000	250,000
4	4/10/17	Idrissa Kanu	20	500,000	150,000	350,000
5	5/10/17	AbuBakarr Kamara	3	200,000	100,000	100,000
		Total		**2,200,000**	**950,000**	**1,250,000**

THE HOLY SPIRIT HOSPITAL
SIGN
DATE
MASUBA MAKENI

APPENDIX F
Theatre Inventory (visual inspection) **Bold = useful**

Changing room
Zimmer electric dermatome (screws missing)
Zimmer electric dermatome power source
AO scews and screw driver and depth guage (assorted)
Large bone clamps and deep retractors
Cerclage wiring set
Plate bender
Fine drills assorted (Conmed/linvatec)
Medical probes 1.25mm (expired x2 boxes
Bone holding forceps
Periosteal elevators
Assorted needle holders
Diathermy monopolar handles (expired, unsterile)
Diathermy leads assorted 2 boxes
Suction coagulators (expired)
Monopolar electrodes (expired)

Recovery room

Curettes numerous fine and large
Forceps multipla
Reatrctors
Ragnall retactors
Langenbeck reatrcators
Arterial and bowell clamps
Bone oscillating saw
Pelvic Ex Fix set complete
Pennig wrist fixator sets x2 complete but not many screws
Aptus radius fixation set incomplete
AO screws assorted
Large fragment screws assorted
Aesculap assorted bone screws ? sterile
Artery clips assorted
Assorted fine drills , and drill bits
Enders nails
Gamm femoral locking nail set
Ext fix devices and equipment various
2.7mm Synthes plating set Incomplete
(screws and K wires present missing drill bits)
Chuck keys assorted x4
Towel clips
Babcock and x4 Babcock curved retractors
Assorted plates , drill bits
Fasterman Ex fixators various

K wires various lengths and sizes (bottom shelf)
Modular flexible reamersx2
Hip Blade plates assorted
Halo equipment incomplete
GK nails various
GK Tibial nails various
Abdominal retractors
Perkins traction kit Threaded Steinman pin
Complete small fragment set
Hand drill
Micro-air electric driver Stryker
Brace and bit
Drill bits

<u>Opposite recovery</u>
Anaesthetic equipment

Tongue depressors
Filtered nebulizer system
Breathing filters
Assorted ET tubes
Paed face masks
Syringes assorted
Connectors assorted
O2 masks and tubing
Paed nasal catheter
IV giving sets
Reservoir bag
Urinary catheter
ECG electrode
Elastoplast pink and white
POP 6 inch x3
Kimflex compression wrap 2 inch
Petroleum jelly
Nerve stimulator B Braun ? working (needs battery)
Plenty of ET tubes and LMA mask bought out by this team

<u>OR</u>

<u>Sutures</u>
Vicryl
Ethylon
Monocryl
PDS
Prolene 5/0 6/0
Gloves well stocked
Nylon skin sutures well stocked

Tourniquet cuffs well stocked (This team)
Esmarch x8 bandage bought out by this team
(**NOTE IF STERILISING WRAP WITH CREPE BADAGE SO HEAT PENETRATES INNER CORE)**
Skin markers many
Wide white Elastoplast plenty
Steristrips plenty
15 blades plenty
10 blades plenty
12 blades plenty
mepore dressings plenty

lacking
Vicryl 5/0 rapide
4/0 Vicryl repide
histoacryl
POP rolls 6 inch 4inch
Padding
Tubigrip
Crepe bandages MUCH NEEDED