Einführung des Ultraschalls in die Schwangerschaftsvorsorge in der Kilimanjaroregion Tanzania

SmW Stiftung für medizinischen Wissenstransfer

Dr. Eduard Neuenschwander
FMH Gynäkologie/Geburtshilfe, Bern

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- Die Stiftung SmW
- Das Kilimanjaro Projekt 2014 - 2018
- Programm Screening Scan Week 20 – 24
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Die Stiftung SmW

Stiftung für medizinischen Wissenstransfer

Foundation for medical know how transfer

Gründung und Leitung

- Die Stiftung für medizinischen Wissenstransfer (SmW) wurde am 26. Juli 2010 gegründet und wird geleitet durch
- Dr. med. Walter Gysel, Hefenhofen
  Präsident der Stiftung SmW
- Karin Villabruna, Hefenhofen
  Administration/Kommunikation/Koordination SmW

LEITGEDANKE (VISION)

- Unser Leitgedanke beruht auf der Überzeugung, dass alle Völker der Erde Anrecht auf Wissen, technischen und medizinischen Fortschritt und Zugang zu einer situationsgerechten medizinischen Versorgung haben sollten.

AUFTRAG (MISSION)

- Die Stiftung SmW will Spitäler und medizinische Ambulatorien in Entwicklungsländern durch Schulung und Geräte-Ausrüstung in der Ultraschalldiagnostik in ihrem Leistungsauftrag unterstützen.

Tätigkeiten

- Durchführung von Ultraschallkursen in Ostafrika analog SGUM Lehrkonzepten unter Adaptation an die lokalen Verhältnisse
- 2010-2014
  18 Kurse in der Südprovinz Mombasa Kenia und Unterstützung beim Aufbau von Ultraschall-Abteilungen in 13 District Hospitals (Geräte-Vermittlung)
- 2014-2018
  19 Kurse in der Region Kilimanjaro und Aufbau von 25 Screening Centers (Geräte-Vermittlung) für die Durchführung eines unentgeltlichen Schwangerschafts- Ultraschalls

Kursleiter

- Abdomen/Notfall/Point of Care Sonography
- PD Dr. Jan Tuma, FMH Innere Medizin, Uster
- Dr. Joachim Reuss, Spezialarzt Gastro-Enterolgie, Böblingen/D
- Geburtshiflicher Ultraschall
- Dr. Eduard Neuenschwander, FMH Gynäkolgie/Geburtshilfe, Bern
- Gynäkologischer Ultraschall, TVS
- Prof. Michael Bajka, FMH Geburtshilfe und Gynäkologie, Volketswil
- Pädiatrischer Ultraschall
- Dr. Bernd Erkert, FMH Pädiatrie, Münsterlingen

- Weitere uswiesene Instruktoren/Lecturer aus Europa und Ostafrika

Teilnehmer aus

Bahari Medical Clinic Ukunda, AMEC Medical Clinic Holili Tansania, Kwale, CPGH Mombasa, Kenyatta National Hospital Nairobi, Kibwezi, Kilifi, Kinango, Kwale, Lamu, Likoni, Makindu, Malindi, Mariakani, Moi District Hospital Voi, Msambweni, Palm Beach Ukunda, Port Reitz Mombasa, Taveta, Trnava Faculty Hospital Slovakia, University of Nairobi


Mienzeni
A109
BAMBURI
Kwa Mkamba
Mombasa
Kinango
C106
A14
Kwale County
C106
Waa
Gulanze
Shimba Hills
National
Reserve
Tiwi
Ndavaya
Diani Beach
Mkomba
C106
Mvuleni
Mbegani
C108
A14
Godoma
Gazi
Kibaya
Msambweni
C106
A14
Ramisi
Lunga-Lunga
Majoreni
Funzi Island


MINISTRY OF MEDICAL SERVICES
CITIZEN SERVICE CHARTER FOR MATERNITY WING
KWALE DISTRICT HOSPITAL
SERVICE RENDERED | PATIENT REQUIREMENTS | USER CHARGE (Ksh) | TIMELINESS
Admission /physical examination | Patient file /ANC card and co-operation | 20/- | 30 Minutes
HIV counselling/testing | Client co-operation | Free | 30 Minutes
Vaginal examination | Client co-operation | 50/- | 10 Minutes
Normal delivery | Client co-operation | 00/- | 20 Minutes
Removal of stitches | Sterile stitching/renoval pack | 30/- | 10 Minutes
Daily bed care | Co-operation | 1 0/- | Per day
Caeserian section | Co-operation | 3600/- | 45 Minutes
WE ARE COMMITTED T RTESY & EXCELLENCE IN
SER DELIVERY
HUDUMA B NI HAKI YAKO
Hatua kwa Hatua. Tu
Kila mmoja

Program Congress of Ultrasound in Abdominal, Small Parts, Doppler and Chest Sonography, Kwale District Hospital, March 27 - 30, 2012

Time	Day 1 - Tuesday, March 27	Day 2 - Wednesday, March 28	Day 3 - Thursday, March 29	Day 4 - Friday, March 30
08.00-09.00	Registration	Individual training without tutor	Individual training without tutor	Individual training without tutor
09.00-09.30	Introduction WG	Liver 1: Theory BN	Urogenital Tract 1: Theory JT	Gallbladder / bile ducts / Pancreas:
	Quiz JT			Theory: BN
09.30-10.00	Technical Basics: Theory JT	Live Scanning	Live Scanning	Live Scanning
10.00-11.00	Technical Basics:	Liver 1:	Urogenital Tract 1:	Gallbladder / bile ducts / Pancreas:
	Practical examination in groups	Practical examination in groups	Practical examination in groups	Practical examination in groups
11.00-11.30	Coffee break	Coffee break	Coffee break	Coffee break
11.30-12.00	Doppler ultrasound: Theory JT	Liver 2: Theory BN	Urogenital Tract 2: Theory JT	Intestine, Abdominal wall: Theory JT/BN
12.00-13.00	Doppler ultrasound:	Liver 2:	Urogenital Tract 2:	Intestine, Abdominal wall:
	Practical examination in groups	Practical examination in groups	Practical examination in groups	Practical examination in groups
13.00-13.45	Lunch	Lunch	Lunch	Lunch
13.45-14.15	Abdominal vessels: Theory JT	Spleen / Tropical Splenomegaly: Theory AA	Thyroid, Neck: Theory AA	Thorax: Theory JT
14.15-15.15	Abdominal vessels:	Spleen / Tropical Splenomegaly:	Thyroid, Neck:	Thorax:
	Practical examination in groups	Practical examination in groups	Practical examination in groups	Practical examination in groups
15.15-15.45	Documentation AA	Live Scanning	Live Scanning	Quiz JT
15.45-16.15	Live Scanning	Meeting study group WG	Live Scanning	Goodbye ceremony WG

Program Intensive Refresher Course in Obstetric Sonography - focus on Perinatal Scanning, Kwale District Hospital, October 23 - 26, 2012

Time	Day 1 - Tuesday, October 23	Day 2 - Wednesday, October 24	Day 3 - Thursday, October 25	Day 4 - Friday, October 26
08.00-08.30	Registration	Individual training without tutor	Individual training without tutor	Individual training without tutor
08.30-09.00	Opening session WG/KV			
09.00-09.30	Basics 1 Obs Sonography: Theory WG	Fetal Morphology 1: how deep? Theory EN	Perinatal Scanning 1: ? Theory EN	Problems in early Pregnancy: Theory EN
09.30-10.45	Presentation / Placenta / Amnionfluid: Practical examination in groups	Fetal Morphology 1: Practical examination in groups	Perinatal Scanning 1: Practical examination in groups	Problems in early Pregnancy: Practical examination in groups
10.45-11.15	Coffee break	Coffee break	Coffee break	Coffee break
11.15-11.45	Biometry: Theory EN	Fetal Morphology 2: Theory EN	Perinatal Scanning 2: Theory EN	IUGR / Macrosomia: Theory EN
11.45-13.00	Biometry: Practical examination in groups	Fetal Morphology 2: Practical examination in groups	Perinatal Scanning 2: Practical examination in groups	IUGR / Macrosomia: Practical examination in groups
13.00-13.45	Lunch	Lunch	Lunch	Lunch
13.45-14.15	Determination of GA: Theory WG	Placenta / Amnionfluid: Theory WG	Indications Cesarean Section: Theory EN	Twins: Theory WG
14.15-15.30	Determination of GA: Practical examination in groups	Placenta / Amnionfluid: Practical examination in groups	Practical examination in groups	Twins: Practical examination in groups
15.30-16.00	Live Scanning	Basics 2 Obs Sonography: Theory WG	Documentation WG Study meeting WG	Test / Course evaluation / Goodbye ceremony WG/KV

	Audience	**Referents/Instructors**	**Group leaders**	**Location of machines**
	__ trainees (registered)	Dr. Eduard Neuenschwander (EN) **CM**	Group black NN	Machine 1 Conference room
	Equipments	Dr. Walter Gysel (WG)	Group red NN	Machine 2 Room next to conf. Room
	5 Ultrasound machines	**Instructor**	Group blue NN	Machine 3 Internet room
		NN	Group yellow NN	Machine 4 Maternity ward
		NN	Group green NN	Machine 5 Ultrasound department
		NN		

- Fallvorstellung anlässlich Demonstration Doppler:

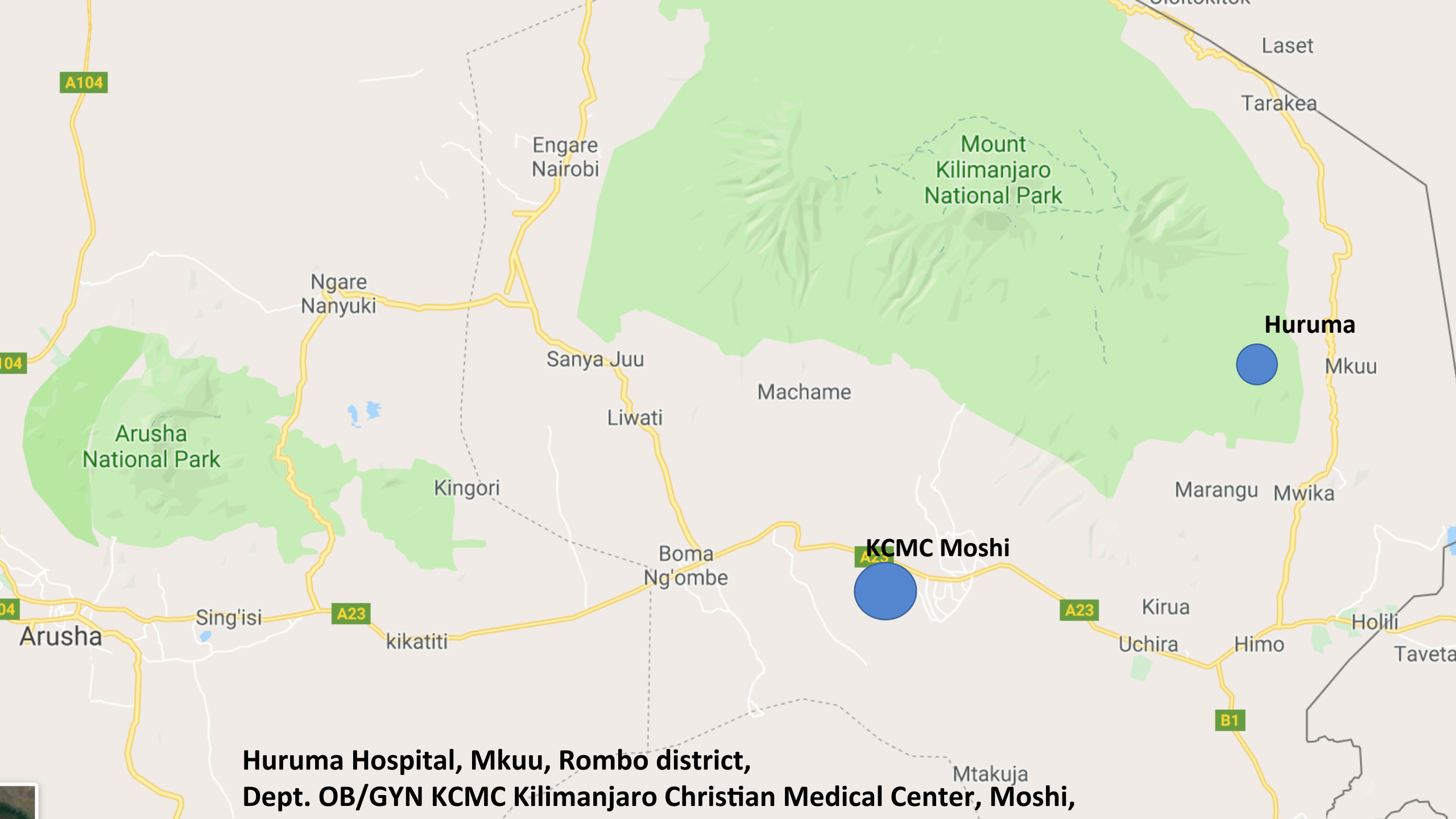
- Schwangerschaft am Termin?
- BEL, Anhydramnion, Nabelschnur um den Hals,
- Komplexe Herzmissbildung
- Fetale Gewichtschätzung 1300g

.

- Fallvorstellung anlässlich Demonstration Doppler:

- Schwangerschaft am Termin?
- BEL, Anhydramnion, Nabelschnur um den Hals,
- Komplexe Herzmissbildung
- Fetale Gewichtschätzung 1300g

- No money, no (fetal) cardiologist; no neonatal heart surgery available.



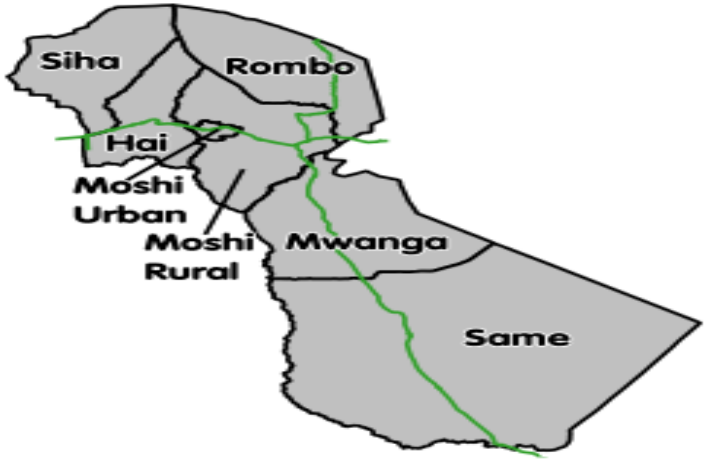
Huruma Hospital, Mkuu, Rombo district,
Dept. OB/GYN KCMC Kilimanjaro Christian Medical Center, Moshi,


CATHOLIC DIOCESE OF MOSHI
HURUMA HOSPITAL

KILIMANJARO PROJEKT 2014 - 2018

KILIMANJARO PROJEKT 2014-2018

- In der Provinz Kilimanjaro soll jede schwangere Mutter mindestens eine unentgeltliche Schwangerschaftsuntersuchung zwischen Woche 20−24 gratis erhalten



7 Bezirke mit 1,8 Mio Einwohner
ca. 63 000 Geburten pro Jahr

RECOMMENDATION B.2.4:
One ultrasound scan before 24 weeks of gestation (early ultrasound) is recommended for pregnant women
to estimate gestational age, improve detection of fetal anomalies and multiple pregnancies, reduce induction of labour for post-term pregnancy, and improve a woman's pregnancy experience. *(Recommended)*

WHO EMPFEHLUNG

Source: WHO recommendations 2016 on antenatal care and positive pregnancy experience

Screening program Rombo district

- Die Versorgungsstruktur in Ostafrika ist nicht vergleichbar mit der Schweiz
- Die fachliche Qualifikation des Gesundheitspersonals ist sehr unterschiedlich, meist Nurses und Medical Officers; es besteht Mangel an Fachärzten
- „Standorttreue“ ist schwach, Versetzungen häufig (Kriterien oft unklar)
- Es besteht eine etablierte Verwaltungsstruktur
- 4 Schwangerschafts-Vorsorgeuntersuchungen sind unentgeltlich - Schwangerenpass

Stiftung für medizinischen Wissenstransfer
Foundation for medical know how transfer

Konzept „Free ultrasound examination for every pregnant mother“ im Rombo District, Tansania

Initiator: Dr. Eduard Neuenschwander, Bern
Vorsitz am 3teiligen SmW-Lehrgang in Afrika „Ultraschall in Geburtshilfe“

Bericht von Dr. Walter Gysel und Karin Villabruna – September/Oktober 2014

final meeting Huruma october 2014

REKODI YA MAHUDHURIO YA MAMA BAADA YA KUJIFUNGUA HADI WIKI 6

Baada ya kujifungua mama ahudhurie kliniki mara tatu au zaidi.
Chunguza yafuatayo, weka (√) au Ndiyo au Hapana panapohusika.
Pale unapogundua tatizo mpeleke kwa Mganga au Hospitali.

A. REKODI YA MAHUDHURIO	Mahudhurio Ndani ya masaa 24	Mahudhurio Ndani ya siku 7	Mahudhurio Ndani ya siku 28	Mahudhurio Ndani ya siku 42
Tarehe:				
Joto la Mwili (38°c na zaidi)				
Blood Preasure 140/100 na zaidi (mmHg)				
Hb chini ya 60% (8.5gm/dl)				
PMTCT: Lishe ya mtoto: Maziwa ya mama pekee (EBF), Maziwa mbadala (RF)				
Matiti:				
• Mtoto ananyonya?				
• Maziwa yanatoka				
• Ameanza kunyonya ndani ya saa moja				
• Chuchu zina vidonda				
• Yamejaa sana				
• Yana jipu				
• Chunguza unyonyeshaji, toa ushauri				
Tumbo la uzazi:				
• Linanywea? Involution) Ndiyo/Hapana				
• Maumivu makali				
Sehemu za Uke				
Msamba / Kidonda cha upasuaji				
• Msamba: - Hakuchanika: Ndiyo / Hapana				
- Alichanika (tear)				
- Aliongezwa njia (Episiotomy)				
• Kidonda kimepona? Ndiyo / Hapana				
- Kina usaha: Ndiyo / Hapana				
- Kimeachia: Ndiyo / Hapana				
• Lokia - Inanuka? Ndiyo/Hapana				
- Nyingi / Wastani / Kidogo				
- Rangi ngapi?				
Hali ya Akili:				
- Mgonjwa / Siyo Mgonjwa				
- Matatizo mengine				
Uzazi wa Mpango:				
• Ushauri umetolewa? Ndiyo/Hapana				
Dawa za Kinga:				
• Ferrous Sulphate				
• Folic Acid				
• Pepopunda: Chanjo amepata ya ngapi? TT1, TT2, TT3, TT4, TT5				
PMTC/CTX - Kama mama ana CD4 chini ya 350 au ngazi ya 3 au ya 4 ya ugonjwa (1 2 3)				
Dawa anazotumia baada ya kujifungua (AZT, 3TC)				
Vitamini A (Amepata/Hajapata)				
Tiba Nyingine				
Tarehe ya Kurudi				
Jina la Mhudumu				
Cheo cha Mhudumu				

*Iwapo mama ana matatizo aonwe kliniki kulingana na mahitaji

KADI HII HAIUZWI RCH4

Jamhuri ya Muungano wa Tanzania
Wizara ya Afya na Ustawi wa Jamii

KADI YA KLINIKI YA WAJA WAZITO

Jaza au weka (√) panapohusika

JINA LA KLINIKI	NAMBA YA UANDIKISHAJI		
	NAMBA YA HATI PUNGUZO YA CHANDARUA		
JINA LA MAMA	UMRI:	KIMO: (CM:)	JUU YA 150 ☐ CHINI YA 150 ☐
	ELIMU:	KAZI:	
JINA LA MUME / MWENZI	UMRI:	ELIMU:	
	KAZI:		
KIJIJI/KITONGOJI/MTAA: KATA/WILAYA:	JINA LA MWENYEKITI:		

HABARI KUHUSU UZAZI ULIOTANGULIA

MIMBA YA NGAPI ..... AMEZAA MARA NGAPI ..... WATOTO WALIO HAI .....

Mimba zilizoharibika	Mwaka	Umri wa mimba	Mimba zilizoharibika	Mwaka	Umri wa mimba

TAREHE YA KWANZA YA HEDHI YA MARA YA MWISHO (LNMP): .....

TAREHE ANAYOTAZAMIA KUJIFUNGUA (EDD): .....

CHUNGUZA VIDOKEZO VIFUATAVYO KWA MAMA AJAPO KWA MARA YA KWANZA

A **WEKA ALAMA YA (√) PANAPOHUSIKA, MPELEKE KITUO CHA AFYA AU HOSPITALI KWA UCHUNGUZI/USHAURI ZAIDI ENDAPO MAMA ANA**

UMRI CHINI YA MIAKA 20 ☐
MIAKA 10 AU ZAIDI TOKEA MIMBA YA MWISHO ☐
KUJIFUNGUA KWA KUPASULIWA ☐
KUZAA MTOTO MFU/KIFO CHA MTOTO MCHANGA (Wk 1) ☐
KUHARIBIKA KWA MIMBA 2 AU ZAIDI ☐
UGONJWA WA MOYO ☐ KISUKARI ☐ KIFUA KIKUU ☐

B **WEKA ALAMA YA (√) PANAPOHUSIKA, MPELEKE KITUO CHA AFYA AU HOSPITALI KWA KUJIFUNGUA ENDAPO MAMA ANA:**

MIMBA YA 5 AU ZAIDI ☐ MIMBA YA KWANZA ZAIDI YA MIAKA 35 ☐
KIMO CHINI YA CM 150 ☐ KUZALISHWA KWA KUPASULIWA AU VACUM ☐
KILEMA CHA NYONGA ☐ KUTOKA DAMU NYINGI **BAADA** YA KUJIFUNGUA ☐
KONDO LA NYUMA KUKWAMA ☐

VIPIMO MAALUM VYA MAABARA:

DAMU: GROUP ..... Rh ..... VDRL/RPR .....
VIPIMO VINGINE: .....

Toleo 2008

*Iwapo mama ana matatizo aonwe kliniki kulingana na mahitaji

REKODI YA MAHUDHURIO

CHUNGUZA VYOTE KILA MAHUDHURIO MPELEKE KITUO CHA AFYA /HOSPITALI IWAPO KIWANGO KINAZIDI AU KINAPUNGUA ILIYO KWENYE MABANO

Mimba isiyo na matatizo mama anahitaji mahudhurio 4: chini ya wiki 16, kati ya wiki 20-24, 28-32, 36-40*

TAREHE YA MUDHURIO						
UZITO (Kilo)						
BLOOD PREASURE (140/90mmHg)						
ALBUMIN KWENYE MKOJO (+)						
DAMU/Hb (8.5 gm/dl)						
SUKARI KWENYE MKOJO (_)						
UMRI WA MIMBA KWA WIKI						
KIMO CHA MIMBA KWA WIKI						
MLALO WA MTOTO						
KITANGULIZI (KUANZIA WIKI YA 36)						
MTOTO ANACHEZA BAADA YA WIKI 20 (NDIYO/HAPANA)						
MAPIGO YA MOYO WA MTOTO BAADA YA WIKI 20, YAPO (Y), HAKUNA (H)						
KUVIMBA MIGUU (Oedema) (++)						
Ferrous Sulphate (2 kila siku)						
*Folic Acid (1 kila siku)						
MALARIA: Sulphadoxine/Pyrimethmine (SP) vidonge 3 baada ya wiki 20, rudia dozi hii baada ya wiki nne						
Mebendazole (500gm start)						
PEPOPUNDA: Angalia chati kama amepata chanjo (jaza amepata ngapi) TT1, TT2, TT3, TT4, TT5						
MAMA AMESHAURIWA KUHUSU: • Dalili za Hatari						
• Uzazi wa Mpango						
• Maandalizi ya Kujifungua						
• Magonjwa yatokanayo na kujamiana na matumizi sahihi ya kondomu						
PMTCT:						
• PMTCT/ART (0,-,1,2)						
• Dawa: (1N, 1Z, 1K)						
• CTX- Kama mama ana CD4 chini ya 350 au ngazi ya 3 au ya 4 ya ugonjwa (1 2 3)						
• Uhusiano na huduma ya CTC (EO, E1, 1R, kama ameandikishwa andika namba ya kadi ya CTC na tarehe						
• Ushauri juu ya lishe ya mtoto: Maziwa ya mama pekee (EBF), Maziwa mbadala (RF)						
• Ufuasi (Adherence): (P= Poor) (G = Good)						
Tarehe ya Kurudi						
Jina la Mhudumu						
Cheo cha Mhudumu						

C **VIDOKEZO VYA MIMBA VYA KUANGALIA KATIKA KILA HUDHURIO. WEKA ALAMA (√) PANAPOHUSIKA BA MPELEKE HOSPITALI KAMA ANA DALILI ZA HATARI**

BP 140/90 AU ZAIDI ☐ UMRI WA MIMBA ZAIDI YA WIKI 40 ☐
Hb Chini ya 60% (8.5gm/dl) ☐ MTOTO KUFIA TUMBONI ☐
ALBUMIN KWENYE MKOJO ☐ MTOTO AMELALA VIBAYA BAADA YA WIKI 36 ☐
SUKARI KATIKA MKOJO ☐ KUVIMBA MIGUU, USO/MIKONO ☐
KAMA ANAZO DALILI ZA HATARI ☐ MAMA ANA MAPACHA ☐
KIMO CHA MIMBA KIKUBWA ZAIDI AU KIDOGO ZAIDI KULIKO UMRI WAKE ☐
MAMA ANASHAURIWA AZALIE WAPI: .....

*Baada ya wiki 40 mama ahudhurie kliniki kila wiki.

REKODI YA UCHUNGU

JINA LA KITUO .....

KULAZWA Tarehe ..... Saa .....

UCHUNGU UMEANZA: Tarehe ..... Saa .....

CHUPA IMEPASUKA: NDIYO/HAPANA: Tarehe ..... Saa .....

UMRI WA MIMBA: (Wiki) ..... KIMO CHA MIMBA (Wiki) .....

MLALO WA MTOTO ..... KITANGULIZI .....

MPIMAJI WA NYONGA:
- Sacral Promontory inafikiwa? Ndiyo / Hapana
- Ischial Spines zimejitokeza? Ndiyo / Hapana
- Outlet: Finyu? Ndiyo / Hapana
- Nyonga ni kubwa ya kutosha? Ndiyo / Hapana

MAONI YA MPIMAJI: .....

JINA LA MHUDUMU: ..... CHEO .....

CHUNGUZA VIDOKEZO HIVI WAKATI WA KUMLAZA. WEKA ALAMA (√) PANAPOHUSIKA. MPELEKE HOSPITALI AU MWARIFU DAKTARI HARAKA.

KIDOKEZO A AU B KATIKA UJAUZITO	☐	HOMA ZAIDI YA 38 Centigrade	☐
CHUPA IMEPASUKA BILA UCHUNGU	☐	KONDO LA NYUMA KUKWAMA	☐
UCHUNGU KABLA YA WIKI 34	☐	KIFAFA CHA MIMBA AU BP ZAIDI YA 140/90	☐
NI ZAIDI YA SAA 12 TOKEA UCHUNGU ULIPOANZA	☐	UPUNGUFU WA DAMU CHINI YA (8.5gm/dl)	☐
MLALO TANGULIZI KIBAYA CHA MTOTO	☐	NYONGA NYEMBAMBA UA MTOKO MKUBWA	☐
KUTOKA DAMU UKENI	☐	MECONIUM	☐
MAPIGO YA MOYO YA MTOTO YANABADILIKA BADILIKA (Chini ya 120 au zaidi ya 160 kwa dakika)	☐		

BAADA YA KUZAA

KUCHANIKA VIBAYA KWA MSAMBA	☐	KUPOTEZA DAMU ZAIDI YA ML 500	☐
DAWA YA MACHO (EYE OINTMENT) IMETOLEWA NDIYO/HAPANA		VITAMINI A IMETOLEWA: NDIYO/HAPANA	

MAELEZO YA UZAZI

KUJIFUNGUA: Tarehe ..... Saa .....

NJIA YA KUJIFUNGUA .....

KAMA AMEPASULIWA: SABABU ZA KUPASULIWA .....

KONDO LIMETOKA: Tarehe ..... Saa .....

KONDO NA MEMBRENI ZIMETOKA KAMILI? NDIYO/HAPANA .....

DAMU ILIYOTOKA ..... ML ERGOMETRINE/OXTOCIN ..... I.I.M

MSAMBA: HAUKUCHANIKA ☐ UMECHANIKA ☐ ULICHANWA (EPISIOTOMY) ☐

JINA LA ALIYESHONA MSAMBA ..... CHEO .....

BP BAADA YA KUJIFUNGUA ..... (mmHg)

MUHTASARI: HATUA YA 1 Saa ..... Dakika ..... HATUA YA 2 Saa ..... Dakika .....
HATUA YA 3 Saa Dakika.....

JINA LA MZALISHAJI ..... SAINI .....

MENGINEYO MUHIMU..... ARVs Baada ya kujifungua ☐ 1Z ☐ 1A ☐ Hakunywa

MTOTO: Jinsia ..... Uzito ..... Kgs

APGAR SCORE 1 dakika ..... 5 dakika .....

Kama mama ni PMTCT1, Je, mtoto amepewa ARVs ☐N ☐z ☐ Hakunywa (ndani ya masaa 72)

AZT dispensed ☐ 1 wk ☐ 4 wk

Lishe ya mtoto: Maziwa ya mama pekee EBF ☐ Maziwa mbadala RF ☐ Huduma ya unasihi ya kusaidia ulishaji wa watoto wachanga ☐

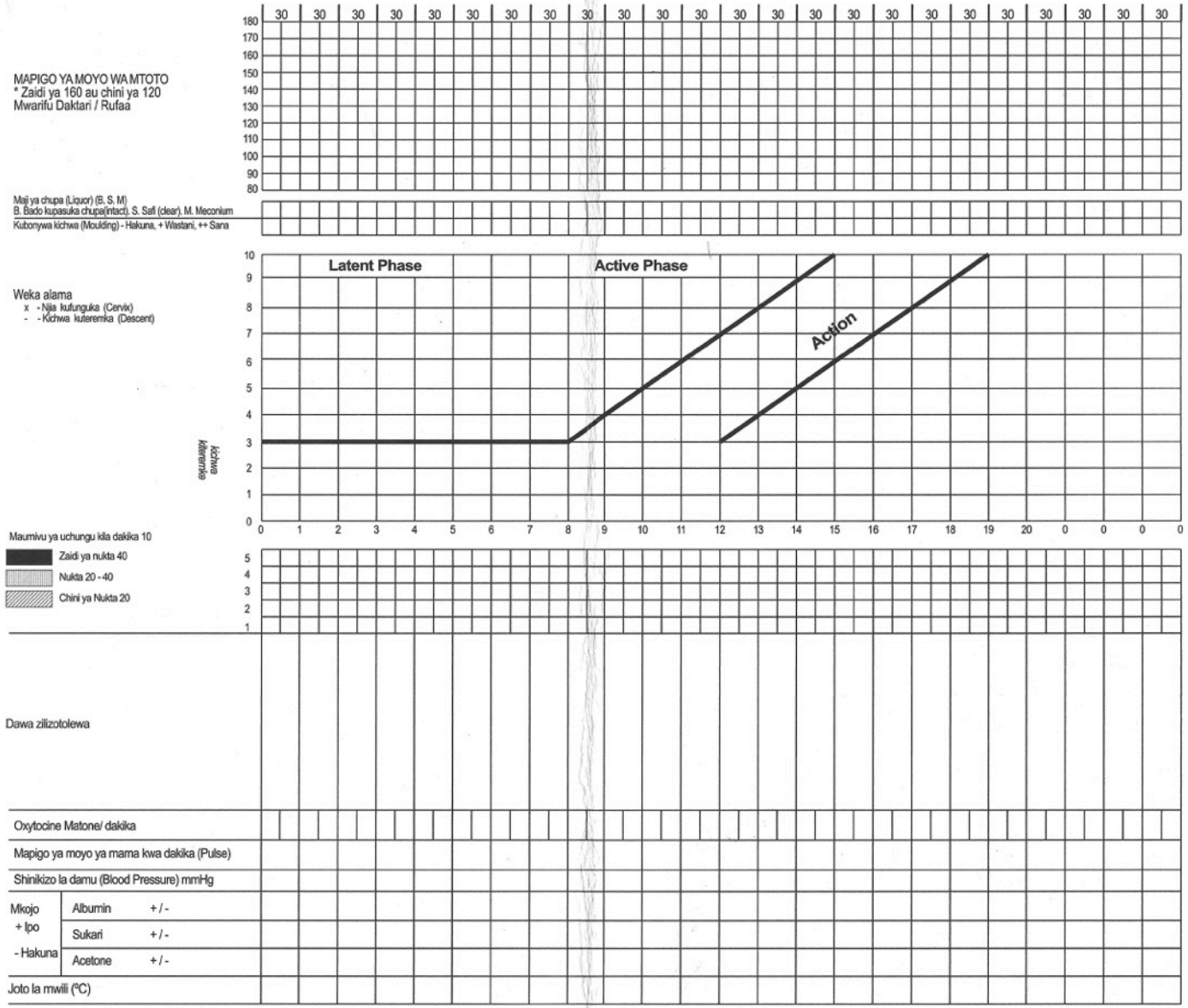
VIDOKEZO VYA HATARI KWA MTOTO BAADA YA KUZALIWA

***Weka alama ya (√) panapohusika. Mpeleke hospitali**

Uzito chini ya kilo 2.5 ☐ Homa kali zaidi ya digrii 38°C ☐ Mtoto kushindwa kunyonya ☐
Mtoto kushindwa kupumua vizuri (APGAR SCORE chini ya 5 baada ya dakika 5) ☐
Chunguza maumbile ya mtoto tokea kichwani hadi miguuni

Grafu ya Uchungu

TAREHE _____ SAA _____



main causes for maternal and neonatal morbidity and mortality

- **Infections**
- **Malnutrition**
- **Intrauterine growth restriction**
- **Prematurity**
- **Postmaturity**
- **Complications during delivery: arrest, breech or transverse lay,multiples**
- **Placental pathology: low lying and praevia**
- ***Abruptio placentae***
- ***Bleeding post partum***
- ***malformations***

PARETO PRINCIPLE or 80 to 20 rule

1906: richest 20% own 80% of land 1989: richest 20% earn 82.70% of world GDP

80% percent of pregnancies will deliver without complication
20% will need special measures

PARETO EFFICIENCY

80% of the effects come from 20% of the causes
with 20 percent effort you can reach 80 percent of results

Ultrasound examination

- Determination of gestational age - biometry
- Location of placenta in relation to cervix
- Determination of multiplicity
- Amniotic fluid
- Fetal growth – biometry – *doppler study*
- Fetal position
- 20% of effort - 80% of results

- Fetal morphology – malformations

  80% of effort - 20% of results

Program 16th Ultrasound Course of SmW, Huruma Hospital, Mkuu, Rombo, Tanzania, February 5 - 7, 2015

Course in Obstetrical Sonography for Physicians, Clinical Officers and Nurses (3rd of 3 courses)

Time	Day 1 - Thursday, February 5	Day 2 - Friday, February 6	Day 3 - Saturday, February 7
08.00 - 08.30	**Registration**	Individual training without tutor	Individual training without tutor
08.30 - 09.00	Opening session WG		
09.00 - 09.30	Theory EN **Trimenon 1, Biometry, Complications**	Theory EN **Morphology Trimester 2 + 3**	Theory EN **Compl. at delivery, Indic. CS, pp Sonographie**
09.30 - 11.00	Practical exercises in groups	Practical exercises in groups	Practical exercises in groups
11.00 - 11.30	Coffee break	Coffee break	Coffee break
11.30 - 12.00	Theory EN **Trimenon 2 + 3, Biometry**	Theory EC **Doppler, UC, CM, AU**	Theory EC **Urogenital Ultrasound of non pregrnant female**
12.00 - 13.30	Practical exercises in groups	Practical exercises in groups	Practical exercises in groups
13.30 - 14.15	Lunch	Lunch	Lunch
14.15 - 14.45	Theory EN **IUGR, Macrosomia**	Theory EN **Sono at admission maternity**	Theory EN **Screening program Rombo District, week 20-24**
14.45 - 16.15	Practical exercises in groups	Practical exercises in groups	Practical exercises in groups
16.15 - 16.45	Live Scanning	Live Scanning	Goodbye ceremony WG/KV

Course in Obstetrical Sonography - Basics and Pregnancy Screening Scan Week 20-24

Introduction of a basic ultrasound examination in to the primary pregnancy care allready in place in tanzanian and kenian districts.

Offering a basic obstetrical training course in screening scan 20-24 weeks of pregnancy, of 6 months duration, consisting of:

1st course of four days:
Introductory lectures:
- Aim of screening 20-24 weeks
- Content of screening examination
- Documentation of screening scan

Hands-on training under direct supervision by Specialists/ Lecturers in sonography

followed by:
Individual training at participants workplace under local supervision and weekly group meetings, organized in the district
Weekly report of screening scan findings for evaluation

2nd course of four days:
Lectures
Hands-on training and repetition under direct supervision by Specialists/ Lecturers in sonography
Final exam: on successful completion the candidate gets a

Certificate of Competence Screening Scan 20 – 24 Weeks of Pregnancy
Which allows to execute the screening scan without direct supervision
This certificate will be endorsed by tanzanian, kenian and international (swiss) organisations.
creening

«Calibration of Examination»

- Patient
- Clinical information
- Ultrasound machine
- Examiner
- Probe handling and adjustment

Reporting

20 -24 week screening scan

Name:

DOB:

Date of examination	/ / 201	
LMP	/ / 201	
wks of pregnancy (LMP) :	+	
EDD (LMP)	/ / 201	
Biometry	wks of pregnancy	
BPD mm	+	
HC mm	+	
FL mm	+	
Confirmed EDD :	**/ / 201**	
Risk evaluation		
Multiple	Yes / No	
Placenta low	Yes / No	
Amnion fluid	low / normal / high	
Other	Yes / No	
if Yes: specify:		
Recommendation:		
Examinator:		
Institution:		

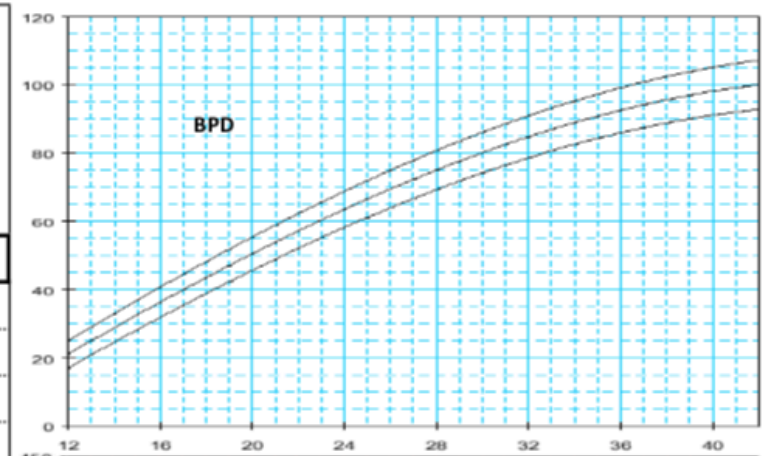
BPD mm	wks	HC m	FL mm
42	17+4	146	24
43	17+6	150	25
44	18+1	155	26
45	18+3	158	27
46	18+5	162	28
47	19+0	165	29
48	19+2	170	30
49	19+4	172	31
50	19+6	176	31
51	20+1	179	32
52	20+3	183	33
53	20+5	187	34
54	21+0	190	35
55	21+2	194	.5
56	21+4	196	36
57	22+0	202	37
58	22+2	205	38
59	22+4	208	39
60	22+6	211	40
61	23+1	214	41
62	23+4	218	42
63	23+6	221	0.5
64	24+1	225	43
65	24+4	229	44
66	25+0	233	45

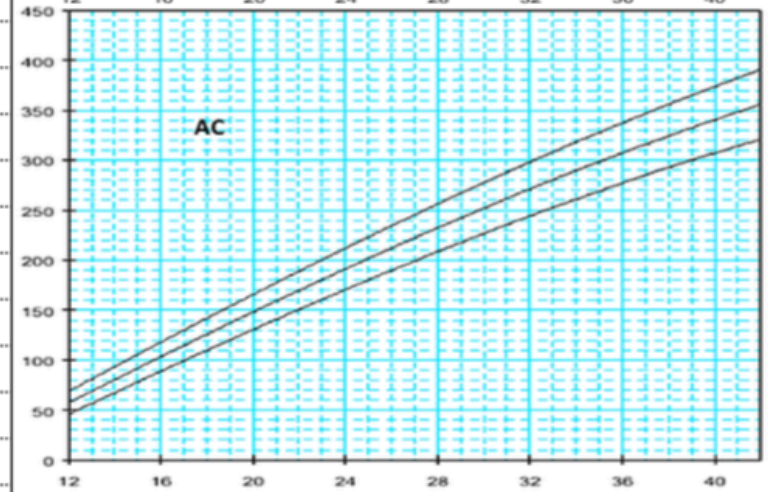
Follow up - Diagnostic Scan

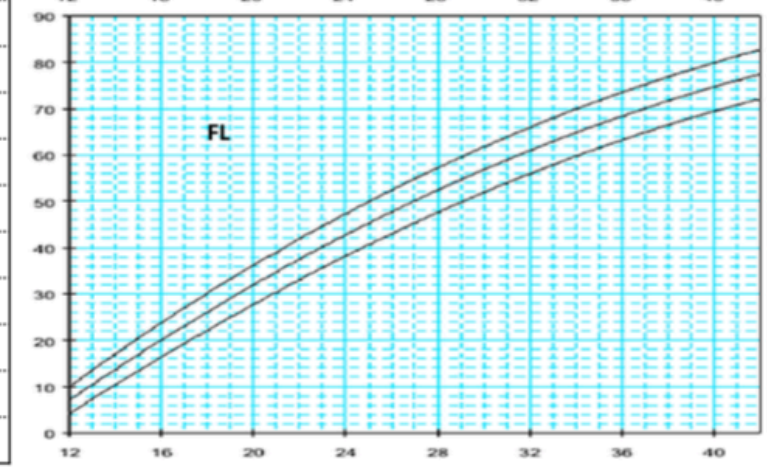
clinical question:

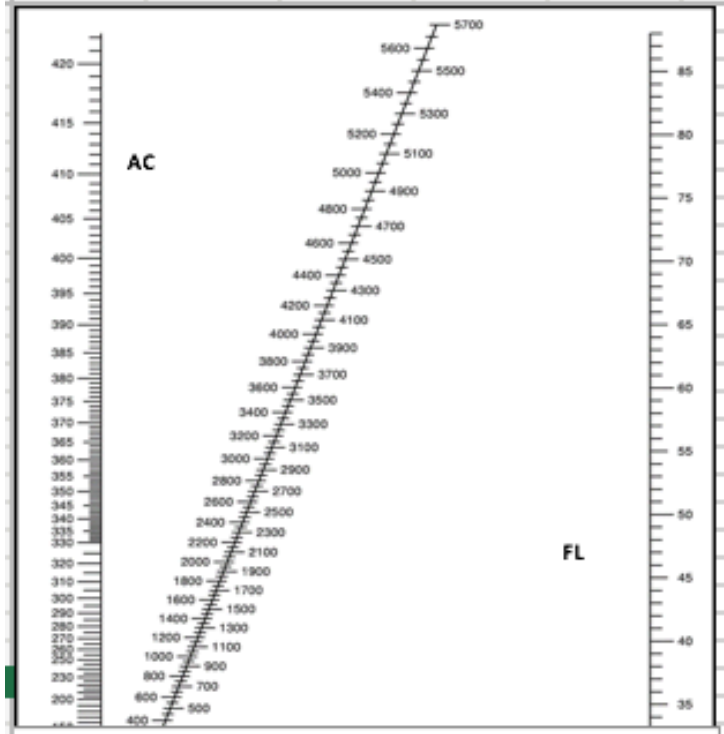
date:

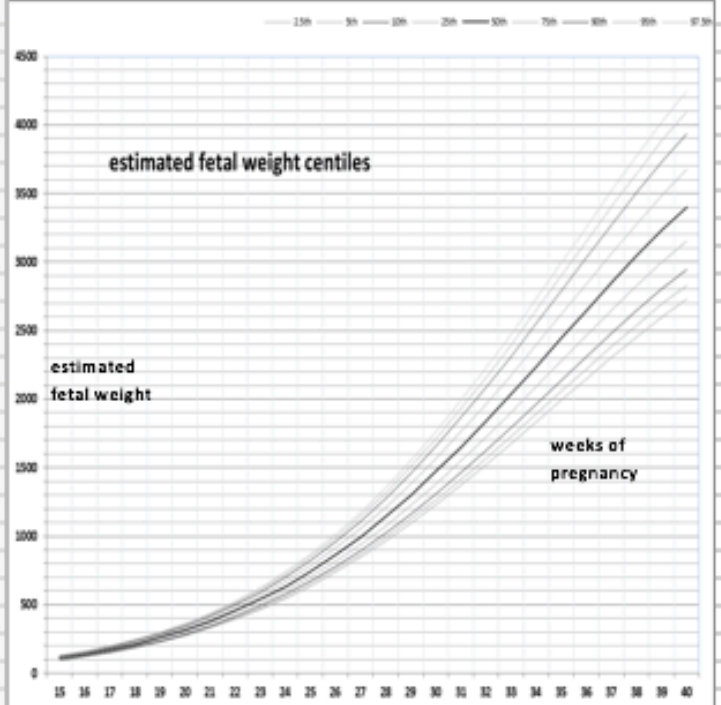
date			
wks			
BPD			
AC			
FL			
weight			
AFI /AF			
placenta			
doppler			
fetal position			











Date of examination	/ /201	
LMP	/ /201	
wks of pregnancy (LMP) :	+	
EDD (LMP)	/ /201	
rebook for screening scan:		

Vitality:
Multiple
chorionicity: monochorial dichorial
Other:

Biometry 1st trimester

REMPEN 90

mm	CRL	BPD	mm	CRL	BPD
1			31	9+5	14+6
2	6+0		32	9+6	15+1
3	6+1	6+6	33	9+6	15+3
4	6+2	7+1	34	10+0	15+5
5	6+3	7+3	35	10+1	16+0
6	6+4	7+5	36	10+2	16+2
7	6+5	8+0	37	10+2	16+4
8	6+6	8+2	38	10+3	16+6
9	7+0	8+4	39	10+4	17+1
10	7+1	8+6	40	10+5	17+3
11	7+2	9+1	41	10+5	17+5
12	7+3	9+3	42	10+6	18+0
13	7+4	9+5	43	11+0	18+2
14	7+5	10+0	44	11+0	18+4
15	7+6	10+2	45	11+1	18+6
16	7+6	10+4	46	11+2	19+1
17	8+0	10+6	47	11+2	19+3
18	8+1	11+1	48	11+3	19+5
19	8+2	11+3	49	11+4	20+0
20	8+3	11+5	50	11+4	20+3
21	8+4	12+0	51	11+5	20+5
22	8+5	12+2	52	11+5	21+0
23	8+5	12+4	53	11+6	21+2
24	8+6	12+6	54	12+0	21+4
25	9+0	13+1	55	12+0	21+6
26	9+1	13+3	56	12+1	22+1
27	9+2	13+5	57	12+1	22+4
28	9+3	14+1	58	12+2	22+6
29	9+3	14+2	59	12+3	23+1
30	9+4	14+4	60	12+4	23+2

20-24 screening scan

follow up scan

obstetric diagnostic sonography

KCMC

name:

DOB:

- 50 durchgeführte und dokumentierte Untersuchungen

- Monatliche Reports der durchgeführten Screening-Untersuchungen und deren Resultate
- Regelmässiges peer group training
- Supervision durch lokale Experten

- Zweiter Kurs Refresher
- Abschlussprüfung: Certificate of Completion 20-24 week sreening scan

KCMC Tuesday Febrary 6

Certificate of Completion SmW in Pregnancy Screening Scan Week 20-24

Introduction	All groups		
Hall			
Part one: practical screening	Group one	Group two	Group three
Examining rooms	11.00-11.30	11.45-12.15	12.30-13.00
Part two: reports	Group two	Group three	Group one
Hall	11.00-11.30	11.45-12.15	12.30-13.00
Part three: written exam	Group three	Group one	Group two
Hall	11.00-11.30	11.45-12.15	12.30-13.00

Part one: practical screening	Group four	Group five	Group six
Examining rooms	13.45-14.15	14.30-15.00	15.15-15.45
Part two: reports	Group five	Group six	Group four
Hall	13.45-14.15	14.30-15.00	15.15-15.45
Part three: written exam	Group six	Group four	Group five
Hall	13.45-14.15	14.30-15.00	15.15-15.45

correct report form: measurements, amniotic fluid, singleton/multiples.	oK	
correct conclusion and recommendation	oK	
	passed	
Part 2:		
Report form:		
Time: 30 minutes		**failed**
information set given, three sets:		
biometry measurements; placental position,		
LMP given : one corresponding to biometry, one discordant, one missing.		
Minimal standard:		
correct determination/correction of EDD	oK	
correct reporting form	oK	
correct conclusion and recommendation in all three cases	oK	
	passed	
Part three:		
Multiple choice/ questions:		
Time: 30 minutes		**failed**
Minimal standard: to be determined	**passed**	
		points
Conclusion complete test:	**passed**	**failed**
Recommendation:		
		failed

2018

- In allen Distrikten der Region Kilimandscharo sind Ultraschallgeräte und in den Kursen Ausgebildete stationiert

Präsidentschaftswahlen: neuer Präsident

die Behörden üben verstärkte Kontrolle in allen Bereichen aus

- Kompetenz zur diagnostischen Sonographie ist ausschliesslich den Radiologen zugeteilt
- Änderungen müssten durch das Medical Council des Gesundheitsministerium vorgenommen werden
- Die erst vorhandene Unterstützung durch die Provinzbehörde (Regional Medical Officer): keine Antwort unter dieser Nummer…
- Interesse der praktizierenden Gynäkologen vorhanden?
- Zugang zum Ministerium schwierig
- Registrierung des Kurses bei der nationalen Behörde?
- Administrativer Aufwand – Zeitaufwand

- Fazit: Kurse nur noch möglich im Rahmen der Spezialarztausbildung (Kompetenz des Klinikdirektors KCMC)

Ausblick/ Projekte

Einführungkurs „point of care“Sonographie zu Beginn der Spezialausbildung (nach Kursen in Biostatistik, Ethik, Grundkurs Reanimation), aller Fachgruppen: ist in Kompetenz des College KCMC

aber: Erlaubnis zur Fachausbildung im KCMC zur Zeit aufgehoben, Zukunft unklar.

Motivation zur Schaffung einer Ultraschallabteilung in der gyn/gebh Klinik des KCMC

Association of Gynecologists and Obstetricians of Tanzania AGOTA:

Vorschlag der Einführung der Sonographie in die Ausbildung und Kompetenz des Fachgebiets

Zusammenfassung:

- Geräte in gutem Gebrauchszustand! sollen nur in Kombination mit der Sicherstellung entsprechender Ausbildung gespendet werden
- Intensivkurse mit Theorie und praktischem Training sind effektiv und effizient
- Die flächendeckende Einführung des geburtshilflichen Screening-Ultraschalls ist schwierig und nur in bestehende Strukturen möglich
- Dem Verhältnis Nutzen – Aufwand (personell und finanziell) ist speziell Aufmerksamkeit zu widmen

Weitere Informationen/ Kontakt

www.stiftung-smw.ch
office@stiftung-smw.ch

Besten Dank im Namen der

Stiftung für medizinischen Wissenstransfer
Foundation for medical know how transfer