USAID
FROM THE AMERICAN PEOPLE

PRIMARY HEALTH
CARE PROJECT

وزارة الصحة
دائـــرة الصحـــة العامـــة

Nursing Standards

For Primary Health Care Facilities In Iraq

DISCLAIMER
This guideline has made possible through support provided by the U.S. Agency for International Development (USAID) under Primary Health Care Project in Iraq (PHCPI) implemented by University Research Co,. LLC. This guideline has been developed in Iraq in close collaboration with the Ministry of Health (MoH) in August 2012

Table of Contents

Acronyms **5**

Acknowledgements **6**

Introduction **7**

1. Community Family Health **9**

1.1 Home visits 9

1.2 Tasks and duties: 11

1.3 Performance Checklists 12

Performance Checklist #1: Home Visits 12

3 IMMUNIZATIONS **28**

3.1 AdministeringChildhoodvaccines 28

3.2 Administering Tetanus vaccine to women 29

3.3 Tasks and Duties 31

3.3 ImmunizationPerformanceChecklists 32

PerformanceChecklist6: AdministeringChildhoodVaccines 32

PerformanceChecklist7: AdministeringTetanustoWomen 34

4. PROCEDURES 36

4.2 Measuring Adult Body Temperature 37

4.3 MeasuringRadialPulse 38

4.4 MeasuringRespirations 39

4.5 Measuring Blood Pressure (BP) 40

4.6 Sterile Dressing 43

4.7 Administering IM and Subcutaneous Injections 44

4.8 AdministeringIntravenous{IV}FluidsandMedications 46

5. Emergency and Basic Procedures **48**

5.1 Cuts and Scrapes and action 48

5.2 Puncture Wound action 49

5.3 Head Injury action 49

5.4 Fractures action 50

5.5 Bites action 50

5.6 Snakes bites and Scorpion stings action 51

5.7 Kerosene Poisoning 51

5.8 Choking 52

5.11 Cardiopulmonary Resuscitation {CPR} 57
5.9 Tasks and Duties..... 60
6. Appendices: Growth and Development Charts and Job Aids..... 62
References 74

Table of Tables

Table 1. DevelopmentalMilestonesinNewbornsandInfants 18

Table2.RecommendedImmunizationSchedule 29

Table 3: dose and schedule for tetanus toxoid to pregnant women 30

Table 4: dose and schedule for women in reproductive age 30

Table5:Drugs Routs of Administration 44

Table 6. Burn classification 56

Table of Figures

Figure1: Proper measurement of blood pressure 41

Figure 2: Heimlich maneuver 53

Acronyms

BP	Blood Pressure
PHCPI	Primary Health Care Project Iraq
PHC	Primary Health Care
MoH	Ministry of Health
USAID	United States Agency of International Development
BMI	Body Mass Index
Kg	Kilogram
QI	Quality Improvement
Cm	Centimeter
IV	Intravenous
IM	Intramuscular
ORS	Oral Rehydration fluid
CPR	Cardio Pulmonary Resuscitation
EMS	Emergency Medical Services
AHA	American Heart Association
COCPR	Compression Only Cardio Pulmonary resuscitation
PFM	Peak Flow Meter

Acknowledgements

Introduction

Nursingservicesareavitalresourceforachievingtheimprovedhealthstatus ofitscitizens.Nursescontributesignificantlytotheservicesprovidedat primaryhealthcarecentersandto theachievementof theMillennium DevelopmentGoals, particularlygoals#4and#5. Nurses constitutethebackboneofthe health systeminmostdevelopingcountriesandprovideaplatformforsupportingeffortstotackle diseasescausingpoverty andillhealth.Ifweareto succeedinimprovingthe performanceofthehealthsysteminIraq,thenurgentactionisneededtoaddressthemany andsignificantproblemsthatseriously underminethepotentialcontributionofnursingand midwiferyservices.Untiltheseproblemsareaddressed,achievingthevisionofimproved qualityoflifeoftheIraqipeople isunlikelytooccur.

The currentsituationofnursingandmidwiferyinIraqreflectsbothneglectandconflictthat havebeenthefateofthecountryoverthepasttwodecade.Specifically, nursingstaffare directedtoward workingincurativesettingswhenmorepositiveoutcomesmightbeachievedbyworkingwithinaprimaryhealthc are(PHC)service.

In recentyears,anumberofglobal discussions have focused on the important contributions that nursing and midwifery can make to improving health status.[1,2]TheMinistryofHealth (MoH)needstoaddressbothquantitativeandqualitativeissuesinordertoencourage sustainabledevelopmentofallhealthpersonnel,includingthe nursingandmidwiferyworkforce. Moreover,MoHneedstopayconsiderableattentiontoaddressingthequalityoftheservicesbeingprovided bythisimportant groupofhealthcareprovidersin Iraq,soastofoster complementaryskillsandintegrateddeliveryofservices.

TheUSAID/PrimaryHealthCareProjectinIraq(PHCPI) aimstoimprovethequalityofhealth careinIraqandincludesanumberofstrategies andapproachestoaddressmanyissues that seriouslyunderminethepotentialcontributionofthenursingandmidwiferyservices.ApproachesofUSAI D/PHCPI to strengthen nursing include:

1. Settingnationalguidelines andstandards ofpracticefornurses to strengthen nursing practice.
2. Strengtheningand enhancingtrainingprogramsandsupportingcapacitybuildingby reviewingbaselinetrainingneeds, reviewingcapabilitiesofprogramstoconduct coursesand training programsthat respondtotrainingneedsidentified andto developtrainingfocusedonessential corecontentandrelated clinicalcompetencies.

TheNursing Standards ofCareforPrimaryHealthCentersdescribedhererepresentamilestonein theroadtowardsbetterhealth.Theyaretangibleevidenceoftheconsiderablethoughtand effortthathasbeendevotedtopromotingqualityofcarebytheMinistryofhealth.

[1]WHO/EMRO. National strategy and plan of action for nursing and midwifery development in Iraq: 2003-2008.
[2]Working draft of USAID/PHCPI: A strategy for nursing and midwifery development in Iraq. 2011.

ThepurposeoftheNursingStandards istoensure thatnursing healthcenterstaffmembershave thebasicandessentialguidancerequiredforsafe,effective,andhumaneservicedelivery. TheStandards containfive chapters;eachaddressesadistinctaspectofhealthcenterfunctioningandservices.Tasksanddutiesforeachservice areincluded, performancechecklistsstofacilitateself-assessmentbythenurseandperformancereviewbythehealth centermanagerandsupervisor.Asaset,theStandards areintendedtoserveasatoolto supportperformanceimprovement.Byfollowingthesestandards, healthcenter staffisassuredthatservicesmeettheacceptedstandards ofcare requiredbytheir communities.

1.Community Family Health

1.1 Home visits

Thehomevisitisanopportunitytolearnaboutand gettoknowthefamily.Visitingfamiliesintheirhomes provides an opportunity to obtain better information about clients, understand their problems and develop a stronger rapport with them. It also enables the nurse/midwife to get to know the community in order to be more effective when providing care at the health center. Clients are often more comfortable discussing problems (particularly personal matters) in their homesthan in the health center. Visiting clients in the community is an essential part of nursing care. It can also be enjoyable and interesting.

Objectives:

1. Observethefamilyfunctioningathomeandhowfamilymembers interactwitheachother.
2. Providehealtheducationandguidanceregardingdeterminantsofhealth status;e.g.subjectssuchasnutrition, immunizations, personalhygiene,safety, exercise, smoking and drug addiction.
3. Observenursingcareprovidedtoanysickpersoninthehouseand offerguidance.
4. Identifyriskstohealthstatusandofferguidanceforhealthconcerns orproblemssuchasbathingnewborns, breastfeeding, reducingenvironmental risks,preventionofchildhoodaccidents, importance of seeking care early in pregnancy and delivering at a prepared health center or hospital.
5. Identifyfamilymembersatrisk.Suchaspregnantwomen,sickchildren orchildrenwithphysicaldisabilities,orelderlyandreferasneeded.
6. Followuppersonswhohavenotreturned tothecenterforcare.

Thoughservicesprovidedduringhomevisitsshouldcorrespondtothepurpose of thevisit,takeeveryopportunitytoimproveandpromotethehealthof the family.Forexample,ifthepurposeofthevisitistocheckthebloodpressureof afamilymemberwithhypertension,andoneofthechildrenisobservedtohaveanupperrespiratoryinfection,thenurse/midwifeshouldattendtotheneedsof eachfamilymember. Ifacaseisseriousorhighpriority, discussthesituation withthemotherand/orotherfamilymembers.Take care NOT to blame or criticize.

Before leaving the health center:

Before:

- Review/establish thepurposeofthevisit{s)
- Prepareahomevisitbagwith supplies
- Preparedocumentstorecordobservations
- Arrangetransportation
- Obtain clients' addresses
- Plan to visit clients with non-communicable disease/problems first

Equipment and supplies:

IncludethefollowingintheHomeVisitBag:

- Bloodpressurecuff
- Stethoscope
- Thermometer
- Springweightscalefornewborn
- Soap
- Towel
- Tapemeasure
- Handoutsonfamilyplanning
- Samplesoffamilyplanningmethods
- Sterile equipment for injections
- Sterile equipment for wound dressing
- Cold box of immunization.

Bringthefollowingdocumentsonhomevisits:

Recordsforrecordingobservationsfromhomevisit

- Planofactionforfamilyhealth
- Familyrecordsandemptycards
- Penor pencil andnotebook

When you arrive:

- Greet the client/family member courteously
- Introduce yourself
- State clearly the purpose of your visit
- Do NOT enter a home without the family's permission

Evaluate the family health and function:

Duringthefirstvisit,inquireaboutandnoteallhealthservicesthatthe familyhasreceivedfromthehealthcenter,suchasimmunization,anteand postnatalcare,andchildhoodcareservices.

- Assess each individual
- Giveprioritytopregnantandpostpartum women,children underfiveyearsofage,n e w b o r n i n f a n t s, infant'srecentlyweanedandsick familymembers.
- Askwomenofreproductiveagewhatmethodofcontraception/family planningtheyareusing(ifany)andiftheyhaveanyquestions about contraceptive methods.
- Referanyfamilymemberwithsignsorsymptoms ofahealth problemtothehealthcenterasappropriate. Givefollowup appointmentsusingthereferralform.
- Recordactionstakenandnotedatesoffollow-up visits.
- Documentinthefamilyrecordimportant factsandinformation concerninganyindividualinthefamily.
- Afterprovidingservices,explainbrieflytothemotheraboutthe healthservicesthatyouandyourcolleaguesareproviding.

- Askfamilymembersaboutanyneedsorproblemstobe discussedduringthenextvisit.

Evaluate the Home Environment

- Observeanydangerousconditionsor practicesinthehomeenvironment.
- Discusswiththemotherandother familymembers howandwhy identifiedpracticesorriskfactorsmay behazardoustothefamily'shealth.
- Proposesomestepsthatthefamily cantaketocorrectdangerous conditionsandtopreventproblems thatmayoccur.
- Recordobservationsandanyactions takenduringthevisit.
- Recordanyunusualobservationsand anyrecommendedactionsonthe familyevaluationform.

1.2 Tasks and duties:

- Introduction and greeting to the family.
- For a Regular visit:
- State purpose of visit
- Assessment of family needs and problems.
- Identification of family member at risk
- Identification of risk to health status
- Identification of family functioning
- Formation plan of action
- Implementation plan of action
- Provide nursing care
- Provide healthcare related service
- Conduct health promotion and health education
- Indicate activities and date for follow up
- Diagnose minor conditions and prescribe 'over the counter' medication
- Document actions

1.3Performance Checklists

Performance Checklist #1: Home Visits

This performance checklist is used with the relevant guideline to give feedback on the health care provider's performance.

The checklist contains a list of items to be observed:

★ Rate the performance each step or task using the following rating scale:

Scoring scale:

2 = Performs the step or task completely and correctly.
1 = Performance of Step or task could be performed better (needs improvement)
0 = is unable to perform the step or task completely or correctly or the step/task was not observed.

The finding and comments are analyzed and discussed with the providers supervised. Any immediate corrective action(s) taken and further action(s) needed must be entered in the spaces provided.

Participant Name: _____ **Date:** _____

Tasks	**Score**			**Comments**
	0	**1**	**2**	
1.Greetsclientandintroducesselfina friendly manner				
2.Explainspurposeofthevisit				
Assessing the following groups:				
1.Childrenunderage5: • Immunizations • Breast feeding/weaning • Growthanddevelopment • Health problem (any disease)				
2 -Adolescents				
a. growth and development				
b. risk behaviors				

Tasks	Score			Comments
	0	1	2	
3. Women: • General health status • Pregnancy • postpartum • Family planning • Brest self-examination • Pap smear • Gynecological problem				
4. Elderly				
a. general health status				
b. activities of daily living				
c. nutrition				
5.Identification of sick family members(s). • Identification of family functioning				
Health Education and Promotion				
1.Providesappropriatehealth education teachingfor: • Pregnancy • Postpartum • Childrenunder5yearsofage • Breastfeeding • Weaning • Family Planning • Sickfamilymembers • Breast self-examination • Cleanness (personal hygiene) • Elderly health care				

Tasks	Score			Comments
	0	1	2	
• Drug abuse • Communicable disease • STDs				
2.Orients client(s) about healthcenter services				
3. Provides educational booklets or brochures on smoking, breast self-examinations, immunization, breastfeeding, and/or other appropriate topic related to family needs.				
HomeEnvironment				
1.Assess homeenvironmentby observing sanitation water supply, lighting and ventilation.				
2.Discussesneeds and problems withmother/familymembers				
3.Develop a plan of action				
4. Implement plan of action a. nursing care b. health related services c. health education and promotion				
5. Follow up				
6.Diagnose minor conditions and prescribe 'over the counter' medications				
7. Document actions				

2 Childhood Growth and Development

2.1 Child Growth Assessment for under five years old

Basic growth assessment involve measuring child`s weight and length or height and comparing these measures to growth standards

Steps:

1- Identify the sex of the child
2- Calculate the age of the child

- Child birth date: if the child was born in 20th Dec 2007 and the date of the visit is 12th July 2009 the age will be one year,6 months and 22days.
- If the child`s age is less than three months, record the age in number of weeks.
- If the child`s age is between three months and below one year, record the age in number of months.
- If the child`s age is equal or more than one year, record the age in number of years and months.

3- Assessunder nutrition, record and refer to hospitalnutrition and rehabilitation center.
   - Marasmus.
   - Kwashiorkor.
   - Marasmus-kwashiorkor.
   - Edema of both feet.
4- Measure and record child's weight with the mother (tarred weighing) by uniscale if the age is less than 2 years and cannot stand
   - Measure child's weightalone if more than 2 years and can stand
5- Measure and record child`s length or height.
   - Measure length for under 2 years old children.
   - Measure height for children older than 2 years old by board

- Note: length = height + 0.7cm

6- Calculate the Body Mass Index (BMI) by equation or table (BMI table)
   ★ check the appendices for calculation of BIM (beginning on page 58)
   BMI = Child`s weight (Kg) / Square meter of height or length
7- Plot points on growth charts
   ★ check the appendices page 58
8- Interpret the plotted points
   If plotted points On Z-score line, it is considered in less severe category
   - For growth monitoring status, we use four growth charts (height or length for age, weight for age, weight for height or length and BMI for age)
9- Interpret trends on the growth charts

   To identify trends in child`s growth - look at points for growth indicators plotted at a series of visits.

- If there are two visits or more join between them by straight line to identify the trend.
- Normally growing children follow trends that are, in general, parallel to the median and Z-score line, most children will grow in a “track” that is on or between Z-score line and roughly parallel to the median, the track may be below or above the median.

- We must be alert when the following situation is identified
  - A child`s growth line crosses the Z-score line.
  - There is a sharp incline or decline in child`s growth line.
  - The child`s growth line remains flat (stagnant), i.e. there is no gain in weight or height or length.
  - If the child has been ill for a while, has lost weight, there may be a rapid gain (shown by the chart inclination in the growth chart (catching up growth).
  - If the shift is toward the median, this is probably a good change, if the shift is away from the median it is likely a signal of a problem or a risk; if the child’s line stays close to the median occasionally crossing above and below,this is fine.
  - Sharp incline or decline in the trends:
    - Attention should be paid if there is chart incline or decline in the trends
    - If there is increase in weight without increase in height or length,this means there is a growth problem.
    - If there is an increase in weight, height or length,this is interpreted that good growth is achieved.
  - If there is a chart decline in trends this means that there is a problem in growth.
  - For obese and overweight children, there should be no intended decrease in weight, but there should be maintenance of weight with increase in height or length and age until the child reaches the normal weight.
  - Flat growth (stagnation)
    - A flat growth line, also called stagnation, usually indicates a problem if the child weight stays the same overtime as height or age increase the child most likely have a problem .
    - If height stays the same over time, the child is not growing,except when the child is overweight so maintaining the same weight over time to bring the child to a healthier weight for height, BMI and age.
  - Trends in BMI for age
    - BMI does not normally increase with age as do weight and height individually; by looking at BMI for age charts, you will notice that for infants,the BMI goes up sharply as the infant rapidly gains weight relative to length in the first eight (8) months of life, the BMI decreases in the later infancy and remains relatively stable from age 2-5 years.
    - BMI for age is similar to weight for age,length or height and is useful for screening for overweight and obesity,when there is a risk of overweight it is helpful to consider the child parents, if the child have an obese parent, the child will be at a risk of becoming an overweight, achild with one obese parent have a 40% risk of becoming obese, if both parents are obese, the probability goes up to 70% and it is important to know that overweight and obesity can co-exist with stunting .

2.2 Monitoring Growth and Nutritional status

Objectives

1. Determinetheweightofnewborn,Infant, orchild 5yearsof ageoryounger.
2. Assessgrowth,healthstatus,and nutritionalneedsofinfantsorchildren under5 years of age.
3. Accuratelymeasureweight togetherwith theheight(length)of infant/child, determine BMI and for age from a table and calendar.
4. Detect any deviation from the median.

Obesity in infants and children

Achild whoisoverweightshouldalsobemonitored.Ifachild'sweightis consistentlyabovethecurvedlinesonthegrowthchart,andtheheightof thechildisnotaboveaverage(childrenwhoaremuchtallerthanaveragewillprobablyalsoshowweightsabovethecurvedlines),thecauseshouldbe investigated.Obesityin childrencanleadtochronicdiseasesinadulthood, suchashighbloodpressure,diabetes,andheartdisease.

2.3Developmental screening

Developmental screening helps providers identify problems in infants and children at an early stage so that they can be referred forappropriate care. Simple developmental screening should always be done during routine well childand immunization visits.Thenurse/midwife plays animportantrolein screening,educating,andsupportingfamilies.Parentsandotherfamilymembers enjoylearningwhattheirchildrencandoatdifferentages,andprovidersshould takeevery opportunity toeducate andcounsel parents about theirchildren's development, includingthepreventivemeasures theycantaketoenhance their children'shealthandwellbeing.

Objective:

Toidentifyandreferdevelopmentalproblemsininfantsandchildrenat anearlystage.

Key points:

- Screeningisapreliminaryinvestigationnotdefinitive
- Referralandfurthertestingbyaqualifiedpediatrician ordevelopmental specialistarenecessarytoconfirm anyfindings
- Ifaproblemisconfirmed,afollowupandtreatment plan shouldbedevelopedtohelpparentsimproveormanage theirchild'scondition

Equipment for developmental testing

Userattles,blocks,oranybrightlycoloredtoystotestbabiesandinfants duringvisitstothehealthcenter.Youcanmakeblocksoutofdiscarded cardboardmedicationboxesbycoveringthemwithbrightpaper.Wooden tonguedepressors canbewrappedwithbrightyarnormaterial.Ballscan bemadeoutofbrightstringoryarn.UseyourimaginationAskcommunity members ormembers of yourownfamilytodonatetoystousefor developmentalscreening.

Table1.DevelopmentalMilestonesinNewbornsandInfants

Age	Milestone
0-3 months	• Canraiseheadupwhenlyingonstomach watcheshandsandfeet • reactstosounds • smilesatmother • attemptstograbobjects
3-6 months	• Can rolloverfrombackontostomach • followsobjectsinanydirection • Recognizespersons • cangrabobjectineachhand • beginstoimitatesounds
6-9 months	• Sitswithouthelp • Clapshands • Canwavewithwrist • Sayswordslike"MaMa"&"DaDa" • Canpassobjectswithhands
9-12 months	• Standswithhelp • Startstocrawl • Putsandtakesoutobjectsfromabox • Grabswithtwofingers • Pronouncessinglewords • Has2-4Teeth
1-2 years	• Walksandbeginstorun • Opensandclosesdoors • Associatesobjectsandpersons • Helpstogethim/herselfdressedandundressed • Knowsmeaningofsomewords("no")
2-3 years	• jumpsusingbothfeet • Saysshortphrases(2-3wordsentences) • Drawslinesandcircles • Buildstowerwith3-4blocks • Statesownname

Children at risk

Itisimportant fornurse/midwivestoscreenfor,identify,andcloselymonitor childrenwhoareconsidered"highrisk"forgrowthanddevelopmental problems.Earlydetectionandtreatmentofproblemscanhelppreventserious illnessandevendeathin children.

Infantsandchildrenathighriskforgrowthanddevelopmentalproblems includethosewith:

- Birthweightbelow2.5kg
- Brothersorsisterswhoshowsignsofmalnutrition
- Families with4ormorechildren
- Twinsormultiplebirths
- Birthdayslessthan2yearsafterlastsibling
- Historyofsiblingdeath
- Singlemotherorfather
- LowApgarscore
- Sickbaby
- Complicatedlaboranddelivery
- Congenital anomalies

Note: in measuring height 5 points should be attached to the board: head, shoulder, buttock,leg and ankle

2.3 MeasuringHead CircumferenceofChildren

Objective

Screenforabnormaldevelopment ofthebraine*.g.*(hydrocephalus)bymeasuringtherateofgrowthof theskull.

Equipmentandsupplies

- Clothorsoftplasticmeasuringtape(scaledincm)
- Penandrecordtorecordmeasurements

Procedures for Measuring Head Circumference

1. Washhandsthoroughly.
2. Welcomemotherandaskherthepurposeofhervisittothehealthcenter.
3. Reviewtheinfant'scardto verifyname,age,immunizationsandprevious height/weightmeasurements.
4. Explaintomothertheimportanceofmeasuringheadcircumferenceis to monitorchild'sgrowthanddevelopment.
5. Explainproceduretomotherandaskforherassistance.
6. Smileandtalkreassuringlytotheinfant.Handlethe infantgently.
7. Placeinfantonaflattableonacleansheetortowel.
8. Placemeasuringtapeovertheoccipitalandfrontalprominence(i.e. aroundinfant'soccipital regionandforehead)andtakethecorrect reading.
9. Removethemeasuringtape.
10. Readthemeasurementonthetapeincentimeters.

11. Recordthereadingobtainedonchild'srecord.
12. Informandexplaintothemothertheresultsyouobtainedandaskthe motherif shehasanyquestions.
13. Askthemotheraboutherownhealthandwhatmethodoffamily planningsheisusing.Answeranyquestionsshehasandreferherfor followup,ifnecessary.
14. Washhandsthoroughly.

2.4 Tasks and duties

1. **Type of Facility _____PHCCenter**
2. **Type of Work/Program: ☐MCH☐ NCD/Chronic Illness Management ☐Other** _Growth monitoring &development
3. **Supervision and Report (Reports to Whom)**:MOH,DOH,PHC Section and PHC Center Manger
4. **Communication (Horizontal and vertical) e.g. QI Team:**
   Other working Team, NGO and QI Team
5. **Tasks and Duties related to Job:**
   - Accuratelymeasuresweight--togetherwith theheight(length)of infant/child 5 yearsof age.
   - Determine BMIin relation to age from a table and calculate.
   - Assessgrowth,healthstatus,and nutritionalneedsofinfantsorchildren 5 years of age.
   - Measure head circumference of children.
   - Identifyandreferdevelopmental problemsininfantsandchildrenat anearlystage.
   - Referandfurthertestingbyaqualifiedpediatrician ordevelopmental specialistarenecessarytoconfirm anyfindings and Ifaproblemisconfirmed,afollowupandtreatment plan shouldbedevelopedtohelpparentsimproveormanage theirchild'scondition.
   - Providesappropriate healtheducationmessagesonchild'snutrition, care,hygiene,andvaccinations.
6. **Requirements:**
   Education: BSc,Diploma,Secondary school/Nursing, Midwifery
   Years of Experience: 2 years after graduation
   Other: Training courses on growth monitoring &development

   Approved by: ___MOH_____

2.5Childhood Growth and Development Performance Checklists

Performance Checklist 2:Monitoring GrowthandNutritionalStatus

Instructions:

This performance checklist is used with the relevant guideline to give feedback on the health care provider's performance.

The checklist contains a list of items to be observed:

★ Rate the performance each step or task using the following rating scale:

Scoring scale:

2 = Performs the step or task completely and correctly.

1 = Performance of Step or task could be performed better (needs improvement)

0 = is unable to perform the step or task completely or correctly or the step/task was not observed.

The finding and comments are analyzed and discussed with the providers supervised. Any immediate corrective action(s) taken and further action(s) needed must be entered in the spaces provided.

Participant Name: _____ **Date:** _____

Task	Score			Comments
	0	1	2	
1. Greetsclientandintroducesself in afriendlymanner.				
2.Asksmotherwhatthepurposeof hervisitisandinquiresaboutthe infant/child'shealthandnutrition				
3.Reviewsinfant'scard toverifyname, age,previousimmunizations,weight andheightmeasurements.				
4. Explainstomothertheimportance ofmeasuringweight.				
5.Placesacleanpieceof paper/cloth onthescalefortheinfanttolieon.				
6.Checkstomakesurethattheweight scaleiscalibrated(thescale should register0beforeweighing)and rebalancesscaleifnotcalibrated.				
7. Asksmothertoassistinremoving theinfant'sclothes.				
8. Talkssoothinglytoandsmilesatthe infantandhandlestheinfantgently whenplacingthemonthescale.				
9.Watchesthe babyconstantlyand holdsonehandcloselyoverthebaby (nottouching)whileweighinghim/her.				
10.Measuresandrecordsweightaccurately				

Task	Score			Comments
	0	1	2	
11.Showsmothertheweight onthegrowthcard,explainsthe importanceofweighttohis/herage anddevelopment.				
12.Asksmotherifshehasanyquestions.				
13. Providesappropriate healtheducationmessagesonchild'snutrition, care,hygiene,andvaccinations.				
14. Informsmotheraboutthenextappointmentandnotesdateoninfant card/record.				
15.Counselsmotheronhealthydiet &familyplanningoptions.				
16. Reportsanyunusualfindingto thephysician.				
17.Washeshandsthoroughly.				

Performance Checklist 3: Developmental screening

Instructions

This performance checklist is used with the relevant guideline to give feedback on the health care provider's performance.

The checklist contains a list of items to be observed:

★ Rate the performance each step or task using the following rating scale:

Scoring scale:

2 = Performs the step or task completely and correctly.

1 = Performance of Step or task could be performed better (needs improvement)

0 = is unable to perform the step or task completely or correctly or the step/task was not observed.

The finding and comments are analyzed and discussed with the providers supervised. Any immediate corrective action(s) taken and further action(s) needed must be entered in the spaces provided.

Participant Name: _____ **Date:** _____

Task	**Score**			**comments**
	0	**1**	**2**	
Task				
All clients				
1.Greetstheclientandintroducesself inafriendlymanner.				
2.Asksmotherwhatthepurpose ofhervisitisandinquiresabout Infant/child'shealthandnutrition.				
3.Reviewsinfant'scardtoverify name,age,immunizations.Weight andheightmeasurements.				
4.Explainstomothertheimportanceof screeningtoassesschild'sdevelopment.				
5.Washeshands.				
6. Talk soothingly to and smiles at the infant.				
Development Assessment: All Infants/Children				
1.Asksmotherifshehasanyquestions aboutchild'sdevelopment.				
2.Providesappropriatehealth educationmessagesonchild's growthanddevelopment, nutrition,				

Task	Score			comments
	0	1	2	
care,hygieneandvaccinations.				
3.Informsmotheraboutthenext appointment,notesdateoninfant card/record.				
4.Recordsfindingsfrom developmentalscreening				
5.Notifiesphysicianofany unusualfindings				
Months0-3 Checksforallofthefollowing developmental milestones: • Raisesheadwhenlyingonstomach •Observeshandsandfeet • Reactstosounds •Smilesatmother • Attemptstograbobjects				
Months3-6 Checksforallofthefollowing developmentalmilestones: • Rollsoverfrombacktostomach • Followsobjectsinanydirection • Cangrabobjectineachhand • Canimitatesounds				
Months6-9 Checksforallofthefollowing developmental milestones: • Maintainssittingposition withoutassistance • Clapshands • Waves •Sayssimplewords • Passesobjectswithhands				
Months9-12 Checksforallofthefollowing developmental milestones: •Standswithassistance •Startstocrawl • Putsandtakesobjectsfromabox • Graspswithtwofingers • Pronouncessinglewords				
1-2Years Checksforallofthefollowing developmental milestones: • Walkingandrunning • Openingandclosingdoors • Abilitytoassistin dressing • Understands simplewordslike "yes"and"no"				
2-3Years Checksforallofthefollowing				

Task	Score			comments
	0	1	2	
developmentalmilestones • jumpswithbothfeet •Says2-3wordsentences • Drawslineandcircle • Buildsa3-4blocktower • Respondstohis/hername.				

Performance Checklist 4: Measurement to children under 2 years

Instructions

This performance checklist is used with the relevant guideline to give feedback on the health care provider's performance. The checklist contains a list of items to be observed:

★ Rate the performance each step or task using the following rating scale:

Scoring scale:

2 = Performs the step or task completely and correctly.

1 = Performance of Step or task could be performed better (needs improvement)

0 = is unable to perform the step or task completely or correctly or the step/task was not observed.

The finding and comments are analyzed and discussed with the providers supervised. Any immediate corrective action(s) taken and further action(s) needed must be entered in the spaces provided.

Participant Name: _____ **Date:** _____

Task	Score			Comments
	0	1	2	
1.Greetstheclientandintroducesself inafriendlymannerandinquires aboutthepurposeofthevisit.				
2.Reviewsthechild'srecord				
3.Washeshands				
4.Gentlyplacesthechildontheclean measuringsurface				
5.Gentlybutfirmlypressesthesoles ofthechild'sfeetagainsttheuprightstructurethatisat pointzeroonthe measuringruler.				
6.Makessurethatthechild'sknees areextended.				
7.Correctlymeasuresandrecords child'sheight/lengthongrowthcard.				
8.Asksmotherifshehasany questionsandgivesappropriate healthmessages.				
9.Informsmotheraboutthenext appointment,notesdateoninfant card/record.				
10. Washes hands.				

Performance Checklist 5: Measuring Head Circumference of Children

Instructions

This performance checklist is used with the relevant guideline to give feedback on the health care provider's performance.

The checklist contains a list of items to be observed:

★ Rate the performance each step or task using the following rating scale:

Scoring scale:

2 = Performs the step or task completely and correctly.

1 = Performance of Step or task could be performed better (needs improvement)

0 = is unable to perform the step or task completely or correctly or the step/task was not observed.

The finding and comments are analyzed and discussed with the providers supervised. Any immediate corrective action(s) taken and further action(s) needed must be entered in the spaces provided.

Participant Name: _____ **Date:** _____

Task	Score			Comments
	0	1	2	
1.Greetstheclientandintroducesself inafriendlymannerandinquires aboutthepurposeofthevisit.				
2.Reviews thechild'srecord.				
3.Washeshands.				
4.Gentlyplacesthechildonaclean examtable.				
5.Measurestheheadbyplacinga measuringtapeoverthelargest axisfromtheocciputtothe frontal prominence				
6.Recordsthereadingontheinfant's recordandreportsanyunusual findingtophysician.				
7.Informsandexplainsthereadingand asksthemotherifshehasquestions.				
8.Providesappropriatehealtheducation messageschildnutritionandcare.				
9.Inquiresaboutmother'sgeneraland reproductivehealth,answersany questions,andrefersforfollow-up ifnecessary.				
10. Washeshands.				

3 IMMUNIZATIONS

3.1 AdministeringChildhoodvaccines

Objective

Toprotectinfantsandchildrenfromchildhooddiseasessuchasdiphtheria, pertussis(whoopingcough),tetanus,polio,measles,andhepatitis B, EPI targeted disease, Hepatitis B,Rota virus Vaccine.

Equipment and supplies:

Atraycontaining instruments forpreparingand administeringvaccines,including:

- Thermometer
- Vaccine
- Cottonswabsmoistened withnormalsaline
- Drycottonswabs
- Syringes
- Sharpscontainer forusedneedles (safety box)
- Record book (daily record book)
- Cold box

Procedure of administering a vaccine:

1. Welcomethemotherandi n f o r m herabouttthepurposeofhervisit.
2. Askthemotherifherchildhasreceivedthespecificvaccinebefore.
3. Compareinformationwithimmunizationcardtoconfirmimmunization status(previousdosesofvaccineanddates).
4. Explain to the mother the importanceofgiving vaccinesontimeaccordingtoprescribed schedule and answer any question asked by the mother.
5. Answerif mother has anyquestions about the vaccines and do the following:
    a. Ask motherifherchildhashadanypreviousreactionstoan injectionorvaccine.
    b. I f no(thechildhasnothadareaction),continuewiththeimmunization.
6. Washhandsthoroughly.
7. Preparethevaccine(makesureithas notexpired)andnecessarysupplies forimmunization are present.
8. Exceptforthepoliovaccine,whichis givenorally(2dropsinthemouth),and Rota vaccine(2ml)askmothertoholdherinfantforthe injection.Talksoothinglytothechild, smileandhandletheinfantgently.
9. Cleanthevaccinationsitewitha drycottonswab ormoistenedwithnormal saline,usingacircularmotion.
10. Administercorrectdoseofthevaccine.
11. Insertneedlefirmlyandquicklythroughtheskinatthechosensite;take thesyringeoutquickly holdingneedleatthebase;compressthesite withadrycottonswaborgauze.
12. Disposeoftheusedsyringecorrectly,preferablyintoa"sharps"container.
13. Returnthevialofvaccinetothethermosorrefrigerator.
14. Washhandsthoroughly.
15. Inform mother about:

a. Possible adverse effects of immunization
b. Date of next vaccination

Table2.RecommendedImmunizationSchedule

Age	Vaccine
New born	BCG, OPV 0, Hepatitis B (within 24 hours from birth)
2 months	Penta Vaccine (Diphtheria, Pertussis, Tetanus, Hepatitis B,hemophilus influenza (HiB), and Rota Virus 1st dose, OPV1
4 months	Tetra Vaccine (DPT,Hepatitis B), Rota Virus 2nd dose, OPV2
6 months	Penta Vaccine (Diphtheria, Pertussis, Tetanus, Hepatitis B HIB) Rota Virus 3rd dose, OPV3
9 months	Measles, Vitamin A 100,000 IU
15 months	MMR (Measles, Mumps, Rubella)
18 months	Tetra Vaccine (DPT and Hepatitis B),OPV Booster dose, Vitamin A 200,000 IU
4-6 years	DPT booster dose, OPV booster dose, MMR 2nd dose

3.2 Administering Tetanus vaccine to women

Objective:

Toprotectwomenandtheirfetusfromtetanus.The first dose of TT1is given ideally during the fourth month of pregnancy.

Equipmentandsupplies

- Anti-tetanusvaccine
- Syringes
- Cottonswabs(moistenedwithsaline)
- Drycottonswabs
- Acontainerforusedswabs
- Record book
- Safety box

ProcedureofAdministeringTetanusvaccine

1. Welcomethemotherandaskherthereasonforhervisit.
2. Washhandsthoroughly.
3. Prepareequipment andsupplies.
4. Explaintheproceduretothewoman.
5. Preparetherightdoseoftetanusvaccine(0.5ml).Checktomakesureit hasnotexpired.

6. Rubthe injection site(theexternalupperpartofthearm)with acotton swabmoistened withnormalsaline.
7. Useyourlefthandtostretchthemusclesofthearm.
8. Insertthenedleintothemuscle.
9. Injectthevaccineintothemuscle.
10. Drawtheneedlebackandpresstheinjectionsitewithadrycottonswab.
11. Educatethewomanabouttheimportanceofthetetanusvaccine,the dosessheshouldreceiveandwhen.
12. Washhandsthoroughly.
13. Recordthedateofthevaccinationintherecordbookandonthe vaccinationcardwritesthedateofthe vaccinationanddateofthenextdose.

Table 3: dose and schedule for tetanus toxoid to pregnant women

Dose	Schedule
TT1	4th month of pregnancy
TT2	5th month of pregnancy
TT3	After 6 months of the 2nd dose
TT4	After 1 year from the 3rd dose
TT5	After 1 year from the 4th dose

Table 4: dose and schedule for women in reproductive age

Dose	Schedule
TT1	**At the 1st visit to the PHC Clinic**
TT2	**After 1 month from the 1st dose**
TT3	**After 6 months from the 2nd dose**
TT4	**After 1 year from the 3rd dose**
TT5	**After 1 year from the 4th dose**

3.3 Tasks and Duties

1. **Type of Facility _____PHCCenter**
2. **Type of Work/Program: ☐MCH☐ NCD/Chronic Illness Management ☐Other**
3. **Supervision and Report (Reports to Whom)**
4. **Communication (Horizontal and vertical) e.g. QI Team**
5. **Tasks and Duties related to Job:**

- Preparethevaccine(makesureithas notexpired)andnecessarysupplies forimmunization.
- Administercorrectdoseofthevaccine
  - Assesses and evaluates the immunization status and needs of clients through the knowledge of current vaccination schedules.
  - Completes immunizationrecords of client appropriately and clinic records to ensure correct vaccinesare administeredanddocumented.
  - Educates clientsabouttheimportanceofimmunization, following recommendedimmunization schedules, possible side effects of immunizations, andaftercare.
  - Drawsupvaccinesaccordingtomanufacturer'sinstructionsandadministersthemusingsafe and proper techniques and a system of double checks to ensure accuracy.
  - Administers and evaluatestuberculin skin testand refers clients as needed perprotocol.
  - Participatesincommunityeventssuchashealth campaigns topromoteincreasedrates ofimmunization.
  - Respondsintheclinictovaccinereactions.
  - Follow up the immunization defaulters.
  - Participatesin the national immunizationcampaigns.
  - Keep the instruments in clean, good and sterile shape. And ready for use

6. **Requirements:**

Education: BSc.Diploma,Secondary school/Nursing or Midwifery _____

Years of Experience: 2 years after graduationYes ____ No ____

Other Training courses on immunization: _____

Approved by: __MOH_____

3.3 Immunization Performance Checklists

PerformanceChecklist6: AdministeringChildhoodVaccines

Instructions

This performance checklist is used with the relevant guideline to give feedback on the health care provider's performance.

The checklist contains a list of items to be observed:

★ Rate the performance each step or task using the following rating scale:

Scoring scale:
2 = Performs the step or task completely and correctly.
1 = Performance of Step or task could be performed better (needs improvement)
0 = is unable to perform the step or task completely or correctly or the step/task was not observed.

The finding and comments are analyzed and discussed with the providers supervised. Any immediate corrective action(s) taken and further action(s) needed must be entered in the spaces provided.

Participant Name: _____ **Date:** _____

Task	Score			Comments
	0	1	2	
1. Greetstheclientandinquiresabout hischild'shealth.				
2. Asksmotherifinfanthasreceived thespecificvaccinebeforeand comparesinformationwith immunizationcard.				
3.Explainstomothertheimportanceofthevaccinescheduleandpurpose of the vaccine to be given.				
4.Asksmotherifshehas anyquestions.				
5.Washeshands.				
6.Takesthechild'stemperatureand informsthephysicianifthe temperatureexceeds38°C.				
7.Asksmotherifchild hashadreactions topreviousimmunizationsandrefers tophysicianifanswerisyes.				
8.Preparesthevaccineandchecksthe expirationdate.				
9.Asksmothertoholdherchild.				

Task	Score			Comments
	0	1	2	
10.Smilesandtalkssoothinglytothe childwhileuncoveringthe injectionsite.				
11.Cleanstheinjectionsite				
12. Administersandrecords theimmunization.				
13.Disposestheusedsyringecorrectly.				

PerformanceChecklist7: AdministeringTetanustoWomen

Instructions

This performance checklist is used with the relevant guideline to give feedback on the health care provider's performance.

The checklist contains a list of items to be observed:

★ Rate the performance each step or task using the following rating scale:

Scoring scale:
2 = Performs the step or task completely and correctly.
1 = Performance of Step or task could be performed better (needs improvement)
0 = is unable to perform the step or task completely or correctly or the step/task was not observed.

The finding and comments are analyzed and discussed with the providers supervised. Any immediate corrective action(s) taken and further action(s) needed must be entered in the spaces provided.

Participant Name: _____ **Date:** _____

Task	Score			Comments
	0	1	2	
1.Greetsthewomanandconfirmsthe purposeofthevisit.				
2.Reviewsclient'srecord.				
3.Explainsthepurposeof thevaccination andthedoseschedule.				
4.Asksthewomanifshehas anyquestions.				
5.Washeshands.				
6.Checksthevaccineexpirationdate andpreparestheinjection.				
7.Cleanstheinjectionsite(the external upperpartofthearm).				
8.Administersandrecords thevaccination.				

Task	Score			Comments
	0	1	2	
9.Informstheclientwhenshe shouldreturnforhernextdoseor follow-upvisit.				
10. Ask the clientifshehasanyquestions.				
11.Asks theclientaboutherown generalandreproductivehealth andrefersherforfollow-upif necessary.				

4. PROCEDURES

4.1 MeasuringTemperatureinInfantsandChildren

Objectives

1. Acquire a baseline measurement on registration in order to compare with previous readings.
2. Detect an increase/change in temperature (high or low) that may signal health problems.

Equipment and supplies

- Rectal thermometer (glass thermometer with a short, rounded bulb)
- Electronic thermometer
- Soft tissues (dry cotton to wipe glass thermometer before and after insertion)
- Lubricant (Vaseline to ease insertion of the thermometer)
- Watch with a second hand
- Pen & file record (to document infant or child's temperature)

NOTE:Thermometers with long, slender tipsareoral thermometer sand should notbeinsertedinto therectum.

Procedures for Measuring Temperature

1. Welcome the mother and explain the procedure
2. Smile at and talk reassuringly to the infant or child
3. Remove thermometer from solution and clean with a cotton swab or soft tissue with soap and water. Rinse thermometer under cold water. Clean and wipe dry from the mercury bulb to the end.
4. Check level of mercury in thermometer. Shake mercury down, if necessary by holding the thermometer between thumb and forefinger and flicking wrist sharply downward be sure to be away from hard surface so not to break the thermometers. Repeat this motion until mercury level is below 35°C.
5. Apply lubricant (Vaseline) on a swab and lubricate thermometer: 2.5 cm for a child; 1.5 cm for an infant.
6. For an infant, lay the infant on his or her back, hold both ankles with one hand, and raise legs to expose the anus.
7. With a child, lay the child on his or her left side, with the right leg flexed in a rectangle.
8. Use a dry cotton swab to clean the anus is clean.
9. Gently and slowly insert the thermometer into the anus: l cm for infants; 1.5 cm for children under one year and 2.5 cm for older children. Do not force the insertion of thermometer or attempt to insert it if the infant/child is unable or unwilling to hold still.
10. Hold the thermometer in place for at least 2 minutes.
11. Remove the thermometer gently and wipe it to remove lubricant and facilitate reading; clean the anus to remove excess lubricant.

12. Help the infant or child assume a comfortable position and have the mother redress the infant.
13. To read the temperature, hold the thermometer between thumb and index finger at eye-level and rotate it until the column of mercury comes into view.
14. Clean the thermometer with a cotton swab and soap and water and then rinse with water from tip to bulb end.
15. Shake the thermometer as described above until the mercury falls below 35°C, and put the thermometer back in the disinfectant solution.
16. Record temperature reading.
17. Inform the mother about her child's temperature.
18. If temperature is above normal, initiate procedures to lower it.
19. Washhandsthoroughly.

Educational Messages

- Askwhatthemotherdoeswhenherchildhasafeverandtake theopportunitytoeducate heraboutappropriatemeasuresfor treatingachildwithafever.
- Explain to the mother why the elevation of temperature is a defense mechanism on the part of the child's body.
- Ask the mother about her own health and what method of family planning she uses. Answer any questions she has and refer her for follow-up, if necessary.

4.2 Measuring Adult Body Temperature:

Objectives:
To ensure accurate measurement and monitoring of a patient's body temperature.

Equipment and supplies
A tray with:

- Rectal or oral thermometer
- A container with cotton swab moistened with water
- Dry cotton swabs
- A container with cotton swabs, moistened with alcohol or soap and water
- Kidney shape dish for used swabs
- Hand watch with second hand
- Lubricant and gauze
- A pen and sheet of paper to record temperature

Procedures for Measuring AdultTemperature:

1. Wash your hands.
2. Prepare the necessary equipment and supplies.
3. Assure the patient and explain what you are going to do.
4. Assist the patient to get into a comfortable position.
5. Before use, clean the rectal thermometer from mercury bulb towards the end and after use clean it from the end towards the mercury bulb.

6. Read the temperature while you hold the thermometer between your fingers horizontally at your sight level. Roll it slowly until you can see the mercury line clearly.
7. Hold the thermometer tightly between your thumb and index finger and shake it quickly until the mercury goes back into the bulb, showing a reading of less than 35°C.

By Mouth

- Make sure that the patient did not have a hot drink or smoked for at least 15 minutes.
- Ask the patient to open his/her mouth and to put the thermometer under their tongue.
- Ask the patient to hold the thermometer with their lips, not teeth.
- Leave the thermometer for 3-4 minutes.
- Under the Armpit
- Put the bulb of the thermometer under the armpit, lower the patient's arm and have them keep their arm close to their chest.
- Leave the thermometer there for 3-4 minutes.

In the Rectum

- Lay the patient on his/her side, with the upper leg slightly in the flexion position.
- Place some lubricant on a piece of gauze and apply a thin film to the rectal thermometer.
- Ask the patient to breathe deeply to relax, separate their buttocks to expose opening of the anus and insert the thermometer gently to 3.5 cm.
- Let the buttocks return to their position and keep the thermometer in place for three minutes.
- Draw the thermometer from the anus
- Clean the area

Reading the Thermometer

- Read the temperature while you hold the thermometer between your fingers horizontally at your sight level. Roll it slowly until you can see the mercury line clearly.
- Washthethermometerwithalcoholandsoapandputitback initsplace.
- Tell the patient what their temperature was and ask them if they have any questions.
- Provide appropriate health education.
- Record the result, time and site of measurement.
- Wash your hands.
- Inform the physician if the temperature exceeds 38°C.

4.3 MeasuringRadialPulse

The pulse is the pressure wave that is produced due to blood flow from the left ventricle to the aorta, and from the aorta to the arterial system. Normal adult pulse rate 60-100 beats per minute.

Objective

To correctly evaluate the rate, rhythm, and quality of patient's heart contraction.

Equipment and supplies

- Watch with a second-hand
- Stethoscope (optional)
- Vital signs recording form

Procedures for Measuring Radial Pulse

- Wash your hands.
- Assure the patient and explain what you are going to do.

- Place the patient in a comfortable position.
- Using three fingers(index, middle and ring fingers)gently press over the artery, usually the radial.
- When you feel the pulse, begin to count it for 60 seconds. Be sure not to press too hard.
- Observe the rate and regularity of the pulse.
- If necessary, place the stethoscope at the heart apex and listen for 60 seconds.
- Record the pulse rate, rhythm and type.
- Tell the patient your findings, ask if they have any questions and provide appropriate health education.
- Washyourhands.

Conditionsrequiringcareful monitoringof TheRadialPulse

•Patients with cardiovascular *disease*
•Patients receiving*IV*fluids
•Patients with localized or general inflammation
•*Patients* who *have experienced trauma*

4.4 MeasuringRespirations

Respiration is the process by which the body is supplied by oxygen and expels carbon dioxide**.**

Average respiratory rates, by age[3]:

- Newborns: Average 44 breaths per minute
- Infants: 40-60 breaths per minute
- Preschool children: 20–30 breaths per minute
- Older children: 16–25 breaths per minute
- Adults: 12–20 breaths per minute

Objective

To ensure the accurate reading and evaluation of the patient's rate, depth and type of respiration.

Equipment and supplies

- Watch with second hand
- Stethoscope (optional)
- Pen
- Vital signs record form

Procedures for Measuring Respirations

- Wash your hands.
- Measure respirations after measuring the patient's pulse, while fingers are still on the patient's hand**.**
- Counteverycompleteinspirationandexpiration.
- Count the patient's breaths for one complete minute.
- If appropriate, use the stethoscope to listen to and count the patient's respirations.

[3] William D. McArdle, Frank I. Katch& Victor L. Katch, *Exercise Physiology: Energy, Nutrition, and Human Physiology,* Lippincott Williams & Wilkins, 2006, ISBN 0781749905, p. 270

- If a spirometer is available, teach the patient to breathe in and out through it normally.
- Observe the respiration rate, depth, and regularity.
- Record the rate, depth, and type of respirations on the vital signs form.
- Inform the patient of the findings.
- Ask the patient if he or she has any questions, and provide appropriate health education.
- Wash hands.

ConditionsRequiringcareful Monitoringof Respirations

- Emergency care patients
- Patients receiving oxygen therapy
- Patients with conditions effecting respiration
- Newborns

4.5 Measuring Blood Pressure (BP)

Blood pressure (BP) is the force that the blood exerts against blood vessel walls as it flows through them. Blood pressure is expressed in millimeters of mercury (mm Hg). The normal blood pressure is < 120/80. Acceptable blood pressure (classified as prehypertension is 120/80 to 140/90.[4]

Objectives

1. Ensure accurate measurement of patient's BP.
2. Ensure accurate monitoring of changes in BP.
3. Provide appropriate advice to patients with hypertension and hypotension.

Equipment and supplies

- Sphygmomanometer and stethoscope
- Container with cotton swabs with alcohol
- Pen
- Vital signs recording form

Procedure for Measuring Blood Pressure

Measurement of BP at the clinic/office:

1. The auscultator method of BP measurement with a properly calibrated and validated instrument should be used.
2. Persons should stop smoking and coffee drinks for at least 30 min. before the examination, and be seated quietly for at least 5 minutes in a chair (rather than on an exam table), with feet on the floor, and arm supported at heart level (fig.1)

[4]MoH/Iraq.NCD guideline.Hypertension. 2012. p.____.

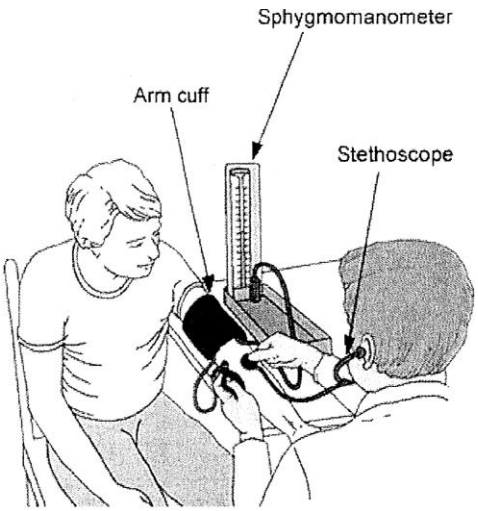


Figure1:Proper measurement of blood pressure

3. Measurement of BP in the standing position is indicated periodically, especially in those at risk for postural hypotension, diabetics and elderly.

4. An appropriate-sized cuff should be used to ensure accuracy, remember that for obese patients appropriate cuff size should be used; otherwise false high BP will be recorded.

5. Steps for proper blood pressure measurement should be followed (table 1). Systolic and diastolic blood pressure is accordingly recorded (Table 2)

6. At least two measurements should be made and take the average. BP should be measured on both right and left arm at the initial visit. The arm with the higher BP should be considered for diagnosis of hypertension and treatment decisions.

Clinicians should provide to patients, verbally and in writing, their specific BP numbers and BP goals.

Diagnosis of hypertension is not based on the first assessment. Blood pressure measurement should be taken three separate times one to several weeks from the initial assessment to confirm the diagnosis.

Steps for proper blood pressure measurement technique

- Expose the upper arm. Remove any tight or restrictive clothing from the arm
- Evaluate the patient's bare upper arm for the appropriate size cuff
- Place the cuff on the patient's bare upper arm, with the lower edge of the cuff 2.5 cm above the antecubital fossa, with the center of the cuff bladder over the brachial artery.
- Palpate brachial artery pulse
- Inflate the cuff until pulsation disappears
- Deflate the cuff
- The point of disappearance is the estimated systolic pressure
- Wait 15-30 seconds, then place the bell head of the stethoscope over the brachial artery and inflate the bladder to 30 mmHg above estimated SBP

- Allow the cuff to slowly deflate at a rate of 2-3 mmHg per second while listening for repetitive sounds
- Record the pressure at which the first of at least two repetitive sounds is heard. This is the systolic blood pressure (phase1 sounds)
- Record the pressure at which the last regular sound is heard. This is the diastolic blood pressure(phase 5 sounds)
- Continue to listen during full deflation to confirm disappearance of the heart sounds.

Auscultatory sounds in reading blood pressure

- **Phase 1** the first appearance of faint, repetitive, clear tapping sounds that gradually increase in intensity for at least two consecutive beats. This is the **systolic blood pressure**.
- **Phase 2** A brief period may follow during which the sounds soften and acquire a swishing quality
- **Auscultatory gap** in some patients sounds may disappear altogether for a short time
- **Phase3** the return of sharper sounds, may be even sharper than phase 1 sounds.
- **Phase 4** the distinct, abrupt muffling sounds, which become soft and blowing in quality
- **Phase 5** The point at which all sounds finally disappear completely is the diastolic pressure

Inaccurate blood pressure measurement:

Accurate blood measurement is essential for diagnosis and treatment of hypertensive patients. The following points need to be considered for inaccuracy:

1. **Inaccurate manometer or improper cuff size**.

The manometer should be calibrated at regular basis and the proper cuff size should be selected.

2**. Inaccurate results from the examiner**: cuff pressure is released too fast, terminal digit bias (the examiner tends to round off the measured value so as to end in 0 or 5), examiner bias and the examiner skills.

3. **Inaccurate results from inter-arm difference**:

Pressure difference of > 10 mm hg between the arms of hypertensive patient may be present in hypertensive patient, in such a case the higher BP reading should be selected for diagnosis and treatment.

4. **Inaccuracy from physiological variation**:

Emotional situation of the patient(stress or fear) during the measurement, white coat hypertension, the patient activity prior to measurement, position during measurement(sitting , standing , seating) and ingestion of certain substances (caffeine , alcohol , nicotine orsympathomimetic drugs like nasal drops)

PatientsWhoRequireMonitoringofBP

- EmergencyPatients
- Pregnantwomen
- Obesepatients
- Diabeticpatients
- Patientsreceivingintravenous fluids

4.6 Sterile Dressing

Objective:
Topreventcontamination andprovidesterilecoveringforopenwounds.

Equipmentand supplies:
Asterilewounddressingpackagewith

- Bowl
- 2 forceps
- 2 small containers
- Cotton balls
- Gauze 5 x 5 cm
- Other supplies
- Adhesive tape
- Disinfecting solution
- Disposableandsurgicalgloves
- A pair of scissors
- Garbage basket
- Plastic bag

Sterile Dressing Procedures

Preparation

- Respect the patient's privacy by closing the door and curtains.
- Explain to the patient what you are going to do.
- Wash your hands.
- Put the patient in a comfortable position to examine the wound.
- Expose only the area around the wound and keep the rest of the body covered.
- Move the dressing trolley next to the patient so you can reach supplies easily.
- Unwrap the external cover of the sterile pack without touching its inner surface.
- Affix a trash bag at the trolley's edge with a piece of adhesive tape.

Removing an old dressing

- Wash the hands
- Put on disposable gloves and gently remove the adhesive tape.
- Take off the old dressing and throw it in the trash bag.
- Take note of wound's condition (size, smell, secretions and healing).
- Removeanddisposeofthedisposablegloves.
- Wash your hands.

Cleaning the wound

- Unwrap the dressing package by touching only the sterile side.
- Pour the disinfectant into a small container.
- Open the gauze or cotton packs without touching the inner surface.
- Wear surgical gloves.
- Wrap a gauze or cotton piece around the forceps.

- Immerse the gauze or cotton in the disinfectant and squeeze it by pressing it against the container's wall, or by using the second forceps.
- Clean the wound from the less contaminated area toward the more contaminated area (and from top to bottom).
- If the wound goes downward, clean it only once with the same gauze.
- Throw the soiled gauze into the trash, take another piece of gauze, immerse it in the disinfectant and clean around the wound. Continue in the same manner until the wound and surrounding area become clean.
- If wound edges are irregular, clean the wound from the center outward in a circular motion. Change the gauze every time.
- If the wound is infected, clean the surrounding area first, then the wound itself.
- Dry the wound in the same way you have cleaned it. If there is a drainage opening near the wound, clear around it in circular movements using another gauze. Clean the drainage opening from the bottom up.

Redressing the wound

- Cover the wound and the drainage opening with a piece of gauze proportional to the size of the wound.
- Take off the gloves correctly and throw them in to the trash
- Use the adhesive tape to fix the gauze.
- Put the instruments back after cleaning and sterilizing them.
- Wash your hands.
- document the wounds condition (size, smell, secretion and healing)

4.7Administering IM and Subcutaneous Injections

Preparation

- Introduce yourself to the patient and reassure him
- Provideprivacy
- Wash hands.
- Gather and organize the supplies and equipment needed.
- Check the label on the ampules or vial carefully against the medication card or prescription to ensure the correct medication and dosage are proposed.
- Check 6 rights: Patient, Dose, Route, Production Date, Expiration Date

Table5:Drugs Routs of Administration

Drug	Route/Site
Ephinerine	Subcutaneous
Insulin	Subcutaneous
Anti-Rabies	IM Deltoid

Drawing Medicine from an Ampule

- Flick the upper stem of the ampoule several times with a fingernail to make sure all the medication is in the lower part of the vial.

- Place a piece of sterile gauze on the far side of the neck of the ampule (to protect your fingers) and break/snap off the top by bending it outward.
- Hold the barrel of the syringe in the middle and insert the plunger while maintaining its sterility (except the upper most part which you are holding).
- Attach the needle to the barrel by holding the hub of the needle and maintaining the sterility of the rest part of the needle and tip of the syringe. Most needles have protective caps.
- Remove the cap from the needle and insert the needle into the ampoule.
- Withdraw the amount of drug required for the dosage. If using the entire amount of medication in the ampoule. Tilt it slightly on its side to withdraw all of the medication.

Drawing Medicine from a Vial

- Mixthesolution,ifnecessary, byrotatingthevialbetween thepalms.DONOTSHAKETHEVIAL.

NOTE: Some vials contain aqueous suspensions that settle when they stand and need to be mixed.

- Remove the protective metal cap and clean the top of the vial (the rubber part) using a sterile piece of gauze with antiseptic solution such as 70% alcohol, rubbing it in a rotating motion.
- Remove the cap from the needle and draw up into the syringe an amount of air equal to the volume of the medication to be withdrawn.
- Carefully insert the needle into the vial through the center of the rubber cap, maintaining the sterility of the needle.
- Inject air into the vial while the bevel of the needle is above the surface of the medication.
- Air will allow the medication to be drawn out easily. The bevel is kept above the medication to prevent bubbles, which are dangerous if injected into a vein.
- Invert (turn the vial upside down) and hold it at eye level while withdrawing the correct dosage of the drug into the syringe.
- Withdraw the needle from the vial and replace the cap over the needle to maintaining its sterility.

NOTE: ***For vials containing only a powder that requirealiquid,suchassterilewater,tobe added,follow the manufacturer's directions forpreparation. Itisimportanttoalways withdrawanequivalentvolumeofairfromthe vialbeforeadding fluid***.

IM Injection in the gluteus, deltoid or thigh

- Place a small amount of 70% alcohol on a clean cotton swab and rub the spot on the skin with the swab 2-3 times where you are going to insert the needle.
- Fix the needle firmly, holding it at its base (the end that is not pointed) and hold the syringe between the thumb and forefingers.
- Tell the patient you are going to insert the syringe and to take a deep breath.
- Insert the needle vertically 90 degree into the body at the chosen spot quickly and firmly. The needle should go at least 2 cm into the body.

- Withdraw the plunger slightly to make sure there is no blood (you have not entered a vein) and press the plunger slowly until all medicine has gone in.
- Take the syringe out quickly, holding the needle at its base.
- Wash hands

SubcutaneousInjectionin theupperarmorforearm(orabdomen or thigh)

- Pick up the skin of the forearm with the fingers of your left hand.
- Tell the patient you are going to insert the syringe.
- Push the needle into the skin that is pulled out, so that the needle goes in about 1 cm.
- Once the needle is under the skin, release the skin and press on the plunger of the syringe to insert all of the contents into the skin.
- Pull the syringe and needle out holding the needle at its base.
- Wash hands.

4.8 Administering Intravenous{IV}FluidsandMedications

Objective:

To establish an intravenous route for administration of drugs and fluids.

Equipment and supplies

- The solution, according to physician's order
- Infusion set
- Stand to hang solution
- Fluid recording form (intake and output chart)
- Clean container or tray containing:
  - *Venous solution, prepared for the patient*
  - *Alcohol*
  - *Cotton swabs*
  - *Iodine solution to clean injections site*
  - *cannula of appropriate size*
  - *Dressing package*
  - *Sterile dressing gauze 2x2 cm or a bandage with adhesive tape.*
  - *Labelforthesolutionbag*

ALWAYS** check the dose of any medication before giving it. **NEVER** give a medication without knowing what it is, what the possible side effects are, and whether or not the patient has any allergies to medications. When in doubt, **ALWAYS** check before giving medication to a patient.

Remember:

- Right patient
- Right dose
- Right route of administration
- Right time
- Right consistency
- Right expiry date

Procedures

Preparation:

- Introduce yourself to the patient and reassure him
- Check the physician instructions carefully.
- Identify the required solution for its volume and type, check the solution bag for any defect, turbidity, foreign bodies and expiration date.
- Prepare all the supplies and put them on a tray.
- Wash your hands.
- Assure the patient and explain what you are going to do.

Starting the IV

- Choose the appropriate size needle for the venous solution.
- Connect the bag/bottle to the tubes, let in the fluid to displace the air in the tubes and cover the ends. DO NOT TOUCH the ends of the tubes, nor the sterile surface of the bottle (the opening).
- Raise the head of the bed if necessary so that the patient will be comfortable.
- Wrap the rubber tourniquet around the patient's arm 10 to 15 cm above the injection site.
- Wash the hands
- Choose a suitable site for the injection; ask the patient to open and close hand, watch and check the arm for a suitable vein.
- Prepare the injection site by cleaning it with iodine solution, using a circular movement from the injection point outward, wait two minutes until it dries, then clean with alcohol to remove the iodine solution. If the patient is highly sensitive to iodine, use 70% alcohol instead.
- Fix/stabilize the IV line with your other hand by pulling the skin over it.
- Hold the needle with its opening up, at an angle of 10 45° to the skin surface and at a distance of 1 cm from the injection site. Do not puncture the vein yet.
- Reduce the angle (until the needle is almost parallel to the skin surface) then insert the needle into the vein in the injection site or directly above it.
- If the blood flows, push theneedlestraightforabout2-3cm according to the age.
- Slowly release the tourniquet and connect the needle with the tube. Open the valve so that the solution can drip.
- Apply sterile gauze beneath the needle hub.
- Fix the needle in place by using adhesive tape.
- Covertheneedlesitewithsterilegauzeoradhesivetape,but donotwrapthetapecompletelyaroundthelimb.
- Connectthesolutionto theneedleshaftandfixaloopofthe tubetotheadhesivetapeoverthedressing.

Calculate the Flow of Fluids

- Calculate the rate of dripping and adjust the flow according to the formula below. (The number of drops per minute is the volume of solution needed to be injected multiplied by the number of drops per one milliliter, divided by 60 times the number of hours.):

$$\text{\# of drops/min} = \frac{\text{(ml to be injected) x (\# of drops in 1 ml (16 drops)}}{\text{60 x times (in hours)}}$$

- Label the fluids with the name of the solution, amount, starting time, duration, date and patient's name.

Example1

900 mL of fluid is to be given intravenously to a patient over 6 hours. The IV set delivers at 16 drops/ml. Calculate the drip rate?

# of drops/min = 900 x 16 drops/ 60 x 6= 40 drops/minute

Example 2

A teenager who is badly dehydrated is to receive 1.5 L over 10 hours of re-hydration fluid by IV infusion. The giving set delivers 16 drops/ml.Calculate the drip rate?

Volume to be received = 1.5L = 1500mL

# of drops/min = 1500 x 16 drops/ 60 x 10= 40 drops/minute

Complete and Clean up

- Make sure the patient is comfortable, assure the patient and ask him if he have any questions.
- Dispose of the used materials and put the needle in the sharp container.
- Document the observation sheet the site, type of needle, time, date, solution, volume of solution, reaction if any, and flow rate. Sign the sheet.

5. Emergency cases and Basic Procedures

5.1 Cuts and Scrapes Basic Procedures

Cuts and scrapes are very common in all age groups especially in childhood and adult hood, also cuts may result during performing different works; cuts usually slice the skin and may involve the whole depth of the skin while scrapes are more superficial, more painful but it heals quicker.

Actions:

1- Control bleeding by applying pressure by by a gauze or bandage on the wound for several minutes.
2- Clean the wound by washing clean water or normal saline and soap to remove any foreign material even a tweezers can be used to remove small glass particles or any other debris. Do not try to pull things fixed in wounds that may need for surgical interventions
3- Apply antiseptics to the wound.
4- Apply dressing using sterile gauze and bandage to prevent contamination.
5- Ask the patient (victim or his family, friends, relatives) if there is any medical condition that affect his immunity and required to be seen by a physician ex: diabetes and cytotoxic therapy
6- Refer the patients if there is:

- A lot blood coming out of the wound (sever bleeding)
- The wound is very painful
- Presence of a serious medical illness
- Any numbness

- Suspicion of foreign body in the wound

5.2 Puncture Wound and **Actions**

Puncture wound is a small hole in the surface of the skin that can be limited to the skin or deeper, the depth of the puncture depends on the shape of the piercing body and the force applied.

Note: in puncture wound usually there is no excessive bleeding but still it could be dangerous and serious injuries.

Actions

1- Control the bleeding by applying a pressure with sterile gauze.
2- Clean the wound using sterile water and make sure that no debris remains inside the wound, if any foreign body noticed inside the wound consult the physician.
3- Apply local antiseptics and antibiotics to the wound.
4- Cover the wound with sterile dressing
5- If the wound is caused by dog bite send the patient, victim to revive vaccine for rabies
6- If the wound caused by dirty object send the patient victim to receive a booster dose of anti-tetanus vaccine.
7- Consult the physician if there is need for suturing

5.3 Head Injury and action

Head injury ranges from a minor injury to serious life threatening injuries that includes the brain a, usually head injuries results from road traffic accidents, falls from height, sport injuries and work injuries.

The presence of the following signs indicates the presence of a serious condition that requires a further medical care and referral to a physician:

1- Loss of consciousness.
2- Bleeding from the nose, ears or mouth.
3- Clear fluid leaks from the nose, ears, or mouth.
4- Vomiting especially if it's more than two times.
5- Presence of abnormal pattern of breathing.

Actions

1- Check the patients Airway, Breathing and Circulation and start CPR if needed immediately. and put in recovery position.
2- Control the bleeding by pressing on the wound with sterile gauze (don't press directly if there is suspicion of skull fracture).
3- If the patient is vomiting consider putting the patient in lateral position to avoid airway obstruction (it is important to roll the patient (victim) as one unit).
4- If there is any sign from above call the physician.

5- If the patient condition is well, dress the wound properly.

5.4Fractures and action

Fractures are defined as loss of continuity of the bone, usually caused by trauma as a main cause but also it can be caused by twisting injuries and due to weakened bone due to a disease, fractures generally divided into:

1- simple fracture in which there is no wound around the fracture area
2- compound fracture in which there is a wound round the fracture site with damaged skin (loss of skin integrity)

Action:

1- Bleeding control if there is bleeding.
2- Assess the presence of shock (Checking of vital signs) (hypotension, tachycardia, sweating and cold pale skin), if the patient is in a shock state start IV fluid immediately and call for the Physician.
3- Splint the fracture to minimize movement and pain.
4- Apply cold packs to reduce pain and swelling.
5- Give the patient analgesics.(be given by order of physician)

Special attention for spinal column fractures especially those fractures in cervical or thoracic areas in respect of turning and transfer the victim

6- Nothing by mouth
7- Do not try to re-broken bone to normal

5.5Bites Action

Bites can be results from animals like dogs and cats, insects and human, usually bites carry a risk of infection and rabies if it`s caused by non- immunized or wild animal.

Cats bites are less in incidence than dogs bites but carries higher risk of infection, also human bites carries risk of infection due to the presence of bacteria in the saliva.

Insects (stings),Bites can cause death to the human in case of the presence of hypersensitivity reaction from the insect venom.

Bites and stings **action**

1- Control the bleeding by applying pressure by sterile gauze
2- Clean the wound with sterile water
3- Look for signs of infection ex: redness, swelling and discharge if infection is present consult the physician.
4- Apply antiseptic solution and local antibiotics.
5- If the wound is deep and caused by an animal consult the physician or send the patient for anti-rabies vaccine.
6- Cover the wound with sterile gauze and bandage.

5.6 Snakes Bites and Scorpion stings Action

Only two species of scorpions can inflict bites which result in death of normal healthy humans so sting use instead of bite in all insects

Snake bites and Scorpion stings usually described as a puncture wound, mostly in the limbs of the victims and because of the fact that there is no practical way to identify the specious of the snake, victims should seek professional medical care immediately.

Signs and symptoms of snake bites

a. Local signs and symptoms :
   - Pain
   - Tenderness
   - Swelling
   - Blisters

b. General signs and symptoms:
   - Nausea
   - Vomiting
   - Diarrhea
   - Vertigo
   - Fainting
   - hypotension

The snake bites outcome depends on:

1- The specious of the snake.
2- The amount of venom injected.
3- The area of the body bitten.
4- The health condition of the victim.

First aid actions for Snake Bites:

1- Calm the victim and prevent acute stress reaction.
2- Arrange transport to the nearest emergency department where anti-venom is available.
3- Remove any clothing and items that will constrict the limb if swelling occur like rings, bracelets and watches.
4- Splint the limb to prevent mobilization make sure that the dressing is not tight.
5- Put the limb below the level of the heart to minimize venous return.
6- Do not use tourniquet.
7- Do not give pain killers unless ordered by the physician. (some of medics use xylocaine as a local pain killer)
8- Do not incise the bite site.

5.7 Kerosene Poisoning

Kerosene poisoning usually results from accidental drinking of kerosene especially in winter, the severity of the poisoning depends on amount of kerosene ingested.

Symptoms of kerosene poisoning include:

- Gastrointestinal
    - Abdominal pain
    - Vomiting
    - Burns of the esophagus (food pipe)
    - Bleeding with vomiting or with stool
- Airways and lungs
    - Breathing difficulty
    - Throat swelling (may also cause breathing difficulty)
- Other symptoms could also present like burns, irritation and collapse

Actions

1- Decontaminate the patient by removing the clothes if it's socked with kerosene.
2- Assess the patient condition (Airway, breathing, circulation and level of consciousness)
3- Do not make the patient (victim) throw up as it will cause pneumonia.
4- Seek professional medical help from the physician.

5.8 Choking action

Choking is one of the most common emergency conditions which usually occurs when an object become dislodged in the throat or windpipe blocking the flow air, in adults choking usually due to a piece of food while in children often due to swallowing small objects and because of choking cuts of the oxygen to the brain first aid administration should be as soon as possible, the signs of chockingcan be summarized by:

- Inability to talk
- Difficulty in breathing or noisy breathing
- Inability to cough forcefully
- Skin, lips and nails turned to blue dusky color
- Loss of consciousness

When to administer take action?

Generally choking victims are presented in one of the following three presentations

1- Patient is conscious and breathing (able to move air): in such condition, there is no life threatening condition and patient should be referred for higher level of care i.e. patient should be sent to professional level.
2- Patient is conscious but not breathing (cannot move air): perform Heimlich maneuver
3- Patient is unconscious and not breathing: start CPR immediately

To perform abdominal thrusts (Heimlich maneuver) on someone else:

- Stand behind the person. Wrap your arms around the waist. Tip the person forward slightly.
- Make a fist with one hand. Position it slightly above the person's navel.
- Grasp the fist with the other hand. Press hard into the abdomen with a quick, upward thrust as if trying to lift the person up.
- Perform a total of 5 abdominal thrusts, if needed. If the blockage still isn't dislodged.

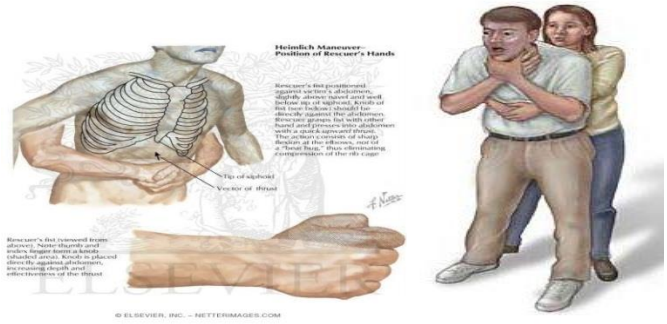


Figure 2: Heimlich maneuver

5.9 PreventingDehydrationwithOralRehydrationsolution (ORS)

All nurses should know and be able to teach mothers/parents the signs of dehydration and how to prepare OR Sathome to prevent dehydration. Dehydration results when the body loses more liquid than it takes in. This can happen with severe diarrhea and/or vomiting. Dehydration develops more quickly and is more dangerous in small children.

In very severe dehydration the pulse may be rapid and weak, breathing may be labored and fever or even convulsions may be present.

Objectives

1. Recognize the signs of dehydration and rehydrate children by using ORS.
2. Teach mothers to prepare and use oral rehydration solution to prevent dehydration.

Signs of Dehydration

- Thirst/dry mouth
- Little or no urine or urine is dark yellow
- Sudden weight loss
- Sun ken tearless eyes
- Sunkenanteriorfontanelininfantsunder15months
- Loss ofelasticityorstretchinessofskin

HomeTherapy

Home therapy is appropriate when the child has no signs of dehydration. Explain the three rules of treating diarrhea at home to the mother.

Rule1. Give the child more fluid than usual to prevent dehydration and continue to give these fluids until the diarrhea stops.

- Suitable fluids contain salt, such as ORS, salted rice water, yogurt, and chicken soup.
- Fluids that don't contain salt are unsuitable (e.g., plain water, unsalted rice water, weak tea, sweetened drinks, very sweet tea, soft drinks).
- Fluids with purgative action and stimulants such as coffee are also unsuitable.

Rule 2. Continue to feed the child to prevent malnutrition. Continue breastfeeding; if the child is not breast fed, give the usual milk. If the child is 6 months or older or already taking solid food:

- Give cereal or another starchy food mixed, if possible, with lentils, beans, vegetables, and meat or fish. Add 1,2 teaspoonful's of vegetable oil to each serving.
- Give fresh fruit juice or mashed bananas to provide potassium.
- Give freshly prepared food. Cook and mash or grind food well.
- Give the same food after diarrhea stops and give an extra meal each day for 2 weeks.

Rule 3. Take the child to a health worker if the child does not get better in 3 days or develops any of the following symptoms.

- Frequent watery stools
- Eating or drinking poorly
- Repeated vomiting
- Fever
- Marked thirst
- Bloodinstool.

NOTE: If the child will be given oral rehydration solution (ORS) athome, show the mother how to prepare and how much ORS to give. Provide her with a two days'supplyofpackets.

Making ORS at Home

ORS can be made at home by using the packages provided at the health centers or in the pharmacies (directions on the package should be followed). Usually diarrhea is best treated by ORS fluids and no medications are needed. Explain to the mother that she should treat diarrhea with liquids, ORS and frequent feedings. If the child does not improve after a few days and/or has symptoms of dehydration consult the physician.

The Handful of Danger Signs of dehydration

When visiting a home with a newborn or young infant, or when examining a baby in the health center that appears sick, there is an easy way to determine whether or not the situation is critical (whether a physician needs to examine the baby). On "The Handful of Danger Signs," each finger of the hand represents a symptom. You can teach the technique to parents as well.

5.10 Burn Care

Objective

To appropriately treat patients with burns caused by heat, electricity, or chemicals.

ImportantPoints

- The severity of a burn depends on the temperature of what ever caused the burn and the length of time the patient victim is exposed to it, the burns location on the body, the size of the burn, and the patient's age and medical condition.
- Burns are described by their cause (heat, electricity, chemicals and radiation) or by their depth.
- A burn first destroys the top layer of skin. If it continues to burn, it injures or destroys these Cond layer of skin.
- When burns break the skin, they can cause infection and loss of fluid from the body. The body's ability to control its temperature and the patient's (victim's)ability to breathe can also be affected by deep burns.
- A critical burn needs immediate medical attention and can be lifethreatening.

Bums*are*ConsideredCriticalWhenThey

- **Involvebreathingdifficulty**
- ***Covermore*than one*bodypart***
- **Involve the *head*,neck, *hands*,feetor*genitals***
- **Involve*achild*or*elderly*person(other than minor burns)**
- ***Arecaused*by*chemicals*,explosions or electricity**

Caring for Burns: 3 Basic steps

1. Stop the burning
2. Cool the bum
3. Cover the burn

Table 6. Burn classification

First Degree Burn (Superficial)	Second Degree Burn (Partial Thickness)	Third Degree Burn (Full Thickness)
Involves on the top layer of skin	Involves the top layers of skin	Destroys all layers of skin and may destroy fat, muscle, bones, and nerves underneath
Skin is red and dry	Skin is red and has blister that may open and weep clear fluid	Skin appears brown or black (charred) and tissues underneath may appear white
Usually painful	Usually painful	Extremely painful (or painless, if nerve endings are destroyed)
Burned area may swell	Burned area usually swells	Tissue too damaged to swell
Healing usually within 5-6 days	Healing usually within 3-4 weeks	Healing process is long and may take many months
No permanent scarring	Scarring may occur	Extreme, permanent scarring that may require multiple plastic surgeries to correct

Procedures for Burn Care

1. Explaintothepatientwhatyouaregoingtodoinareassuringmanner.
2. Patientswithburnsareusuallyveryscaredandinalotofpain.
3. Actquickly,butbegentleandplacethepatientinacomfortableposition, carefullyandquicklyremoveanyofthepatient's clothing(ifnecessary) inordertoinspect/treattheburnedarea.
4. Stoptheburningbyflushingtheskinwithlargeamountsofcool,clean water.Donotuseiceoricewaterotherthanonsmallsuperficialburns becauseicecausesbodyheatloss.
5. Iftheburnedareacannotbeimmersedincoolwaterthenapply soakedcleantowels,sheetsorotherwetcloths(makesurethat anythingusedisclean).
6. Keeptheclothwetandcoolbyaddingmorewaterasnecessary.
7. After youhavestoppedtheburning/cooledtheburnedarea,followthe
8. SurgicalDressingProcedureandapplya drysteriledressing (s)totheburn.
9. BesurethatthedressingisLOOSEotherwiseitcancausefurtherpain anddamageto thesensitivetissue.
10. Coveringtheburnhelpspreventinfectionandreducespain.
11. DoNOTbreakblistersif theyarepresentbecausethatcanincreasethe riskofinfection.Blistersprotecttheraw,delicateskinunderneath.
12. DoNOTuseanykindofointment onasevereburn. In general, oil-based ointments do not allow for evaporation of fluids. The usual practice is to use creams that are water-based and allow evaporation of water from the wound.

13. Provide health education to the patient and their family such as how to keep the burned area clean and dry and when to return for follow-up care.

5.11 Cardiopulmonary Resuscitation {CPR}

CPR is a combination of chest compressions and rescue breathing (breathing for the person). Rescue breathing supplies the oxygen that the patient needs into the lungs and the chest compressions circulate the oxygen to the vital organs in the body.

Objectives

1. Ensure that nurses know and use appropriate procedures in administering CPR.
2. Understand the management of airway obstruction.
3. Know the definition and priorities in CPR.

Background

Targeted education and training regarding treatment of cardiac arrest directed at emergency medical services (EMS) professionals as well as the public has significantly increased cardiac arrest survival rates, CPR consists of the use of chest compressions and artificial ventilation to maintain circulatory flow and oxygenation during cardiac arrest. A variation of CPR known as "hands-only" or "compression-only" CPR (COCPR) consists solely of chest compressions. This variant therapy is receiving growing attention as an option for lay providers (that is, nonmedical witnesses to cardiac arrest events). Several large randomized controlled and prospective cohort trials, as well as one meta-analysis, demonstrated that bystander-performed COCPR leads to improved survival in adults with out-of-hospital cardiac arrest, in comparison with standard CPR. The 2010 revisions to the American Heart Association (AHA) CPR guidelines state that untrained bystanders should perform COCPR in place of standard CPR

Indications

CPR should be performed immediately on any person who has become unconscious and is found to be pulseless. Assessment of cardiac electrical activity via rapid "rhythm strip" recording can provide a more detailed analysis of the type of cardiac arrest, as well as indicate additional treatment options.

Although prompt defibrillation has been shown to improve survival for VF and pulseless VT rhythms, CPR should be started before the rhythm is identified and should be continued while the defibrillator is being applied and charged. Additionally, CPR should be resumed immediately after a defibrillation shock until a pulsatile state is established. This is supported by studies showing that "pre-shock pauses" in CPR result in lower rates of defibrillation success and patient recovery

Preparation

I- Equipment

CPR, in its most basic form, can be performed anywhere without the need for specialized equipment but it advisable to use CPR board, mask gloves and other protections if available, an additional device employed in the treatment of cardiac arrest is an Automatic External Defibrillator(AED). This device provides an electrical shock to the heart via 2 electrodes placed on the patient's chest and can restore the heart into a normal perfusion rhythm. Regardless of the equipment available, proper technique is essential.

II-Positioning

CPR is most easily and effectively performed by laying the patient supine on a relatively hard surface, which allows effective compression of the sternum. Delivery of CPR on a mattress or other soft material is generally less effective the use of CPR board is recommended.

The health care provider giving compressions should be positioned high enough above the patient to achieve sufficient leverage, so that he or she can use body weight to adequately compress the chest.

III- Technique

In its full, standard for, cardiopulmonary resuscitation (CPR) comprises 3 steps: CA B

- Chest compressions
- Airway check
- Breathing

to be performed in that order in accordance with the 2010 American Heart Association (AHA) guidelines.

STEPS:

1. **Compression**

CPR is initiated using 30 chest compressions.

2. **Airway**

Perform the head-tilt chin-lift maneuver to open the airway and determine if the patient is breathing, rule out airway obstruction by looking in the patient's mouth for a foreign body blocking the patient's airway. CPR in the presence of an airway obstruction results in ineffective ventilation/oxygenation and may lead to worsening hypoxemia.

3. **Breathing:**

Give 2 rescue breaths.

DON'T FORGET to call for the physician if available or ACLS provider.

Check the carotid or femoral pulse.

Repeat the cycle pulse returns or the patient is transferred to definitive care according to the ACLS provider.

Procedures

Chest compression

The heel of one hand is placed on the patient's sternum, and the other hand is placed on top of the first, fingers interlaced. The elbows are extended, locked and the provider leans directly over the patient. The provider presses down, compressing the chest at least 2 in. The chest is released and allowed to recoil completely.

With the hands kept in place, the compressions are repeated 30 times at a rate of 100/min followed by 2 breaths. The key thing to keep in mind when doing chest compressions during CPR is to push fast and hard. Care should be taken not to lean on the patient between compressions, as this prevents chest recoil and worsens blood flow.

When done properly, CPR can be quite fatiguing for the provider. If possible, in order to give consistent, high-quality CPR and prevent provider fatigue or injury, new providers should intervene

every 2-3 minutes (i.e., providers should swap out, giving the chest compressor a rest while another rescuer continues CPR).

Ventilation

If the patient is not breathing, 2 ventilations are given via a bag-valve-mask (BVM) or if not available the provider's mouth.

The BVM or invasive airway technique is performed as follows:

- The provider ensures a tight seal between the mask and the patient's face.
- The bag is squeezed with one hand for approximately 1 second, forcing at least 500 mL of air into the patient's lungs.
- The mouth-to-mouth technique is performed as follows (see the video below):
- The nostrils of the patient are pinched closed to assist with an airtight seal
- The provider puts his mouth completely over the patient's mouth
- The provider gives a breath for approximately 1 second with enough force to make the patient's chest rise
- Effective mouth-to-mouth ventilation is determined by observation of chest rise during each exhalation. Failure to observe chest rise indicates an inadequate mouth seal or airway occlusion. As noted (see above), 2 such exhalations should be given in sequence after 30 compressions (the 30:2 cycle of CPR). When breaths are completed, compressions restarted.

Administering CPR to an Infant or Child

Infants and children usually only have respiratory arrest (stopped breathing) and may only need the A & B (Airway and Breathing). The infant or child's airway may be blocked by food, a small object such as a coin or toy or fluids such as water (in drowning), saliva, or blood.

1. Clear and open the airway.
2. If necessary, administer abdominal thrusts by straddling the child's legs, position your hands by placing the heel of one hand on the middle of the abdomen just above the umbilicus with your fingers pointing toward the child's head and the one hand on top of the other.
3. Confirm that the infant/child is unconscious: attempt to rouse by shaking and shouting.
4. Call for help if available.
5. Position the infant/child so that they are lying flat, on his or her back and on a level surface. CPR does not work as well if the infant/child is sitting up or is on a soft surface like a mattress.
6. Confirm the absence of spontaneous breathing then, tilt the infant/child's head back (to avoid getting air in the stomach),use the pediatric bag mask valve or close the infant/child's mouth and seal your mouth around the infant/child's nose. Breathe SLOWLY into the infant/child just enough to make the chest rise.
7. Give 5 initial breaths. Each breath should last about 1second.
8. Check pulse and confirm absence, and begin chest compressions. For an infant, use 2 fingertips; for a child, use the palm of one hand. Place your fingers/palm of the hand on the breast bone in the middle of the infant/ child's chest. Give 15 chest compressions.
9. The 15 chest compressions should take about 9 seconds to administer.

10. Continue this cycle of 15 compressions and 1 breath for about 1 minute, and then recheck pulse and breathing. Check every few minutes (at least every 5 minutes).
11. If pulseisabsent, continueCPRuntilhelparrivesortheinfant/childis declareddead by the physician.

5.9 Tasks and Duties

Type of Facility: PHC Center

Type of work Program: First Aid Nurse

Reports to: Senior medical Assistant

Communication: QI Team, Physician, Lab and Pharmacy personal

Tasks and Duties related to Job:

He/she does the nursing preventive, curative and first aids work that include:

1. Taking the medical history from the patients (victims) or relatives.
2. Measuring temperature, pulse rate, respiration/breathing rate, and blood pressure.(vital signs)
3. Measuring the (PFM) Peak Flow Meter for asthmatic patients.
4. Educating the diabetic patients how to self-inject insulin and where to inject insulin and how to measure blood sugar at home.
5. Organizing patient's reception to the clinic.
6. Routine measurement of the infants and children and documenting that in the healthy child file and in the family medicine file and also the weight of the pregnant woman.
7. Preparing the patients for general examination and prepare the needed tools and instruments and helping the doctor during examination.
8. Administering the medication(s) according to doctor instructions which includes:
    - Intradermal injections
    - Subcutaneous injections
    - Intramuscular injections
    - Intravenous injections
9. Treat and nursing cases of burns
10. Dressings for all types of wounds
11. Treating the asthmatic with O2 and ventolin.(inhaler)
12. Following the instructions of the doctors concerning the transfer of the referred patients quickly and correctly.
13. Sterilize and save the medical instruments, and keep them all the time.
14. First aids for medical cases that include: trauma, fractures, stings and seizures.
15. Responsible for keeping the instruments clean, good and sterile shape. And ready for use.
16. Supervising the hygiene and cleanliness of the PHC clinics. Especially where the nurse works.
17. Participating with the team of the PHC staff in health education in the PHC center, houses, schools and community and preparing for it.
18. Saving the medical records like the outpatient clinic records, dressing and injections record.

19.Taking any responsibilities in addition to what have been mentioned and within the field of work and according to the instructions of the supervisors and to be ready at any time and according to need.

20.participate in infection control team as a infection control nurse officer or as infection control nurse only.

Requirements

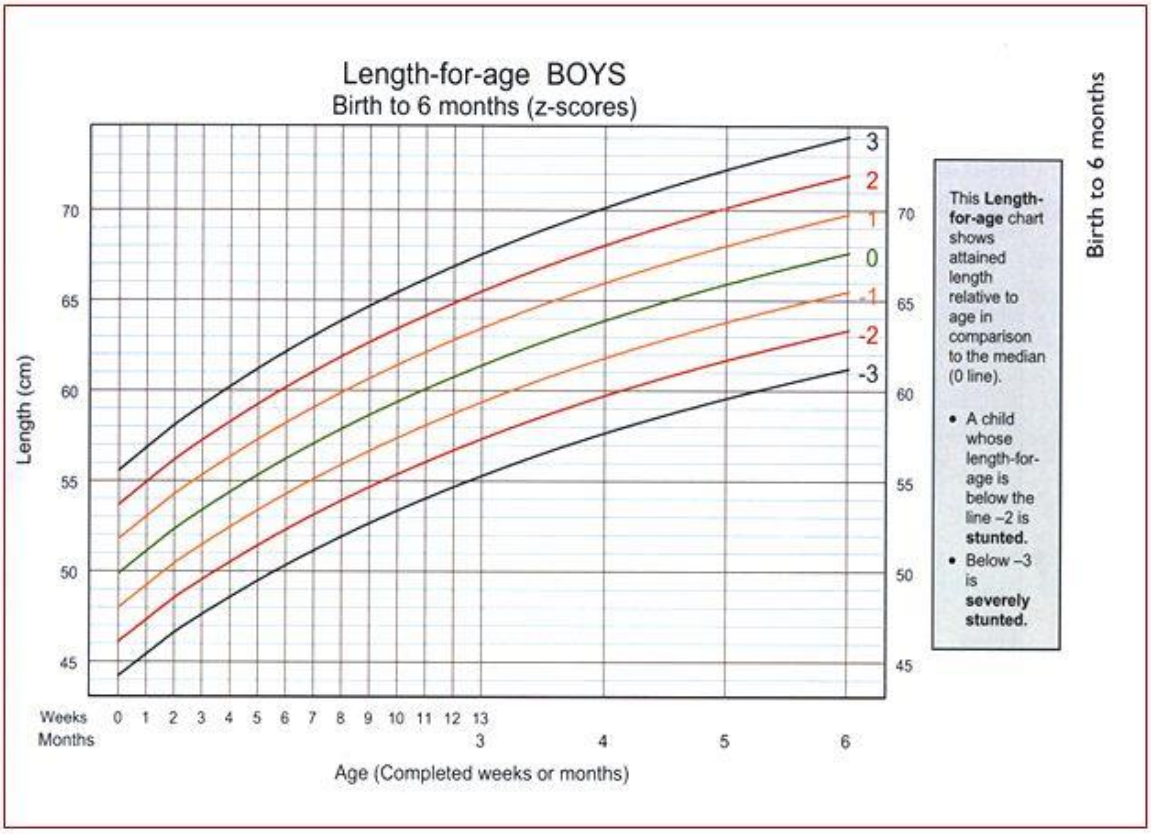
Education: Public health,nursing institution degree and higher degree (BSc..)

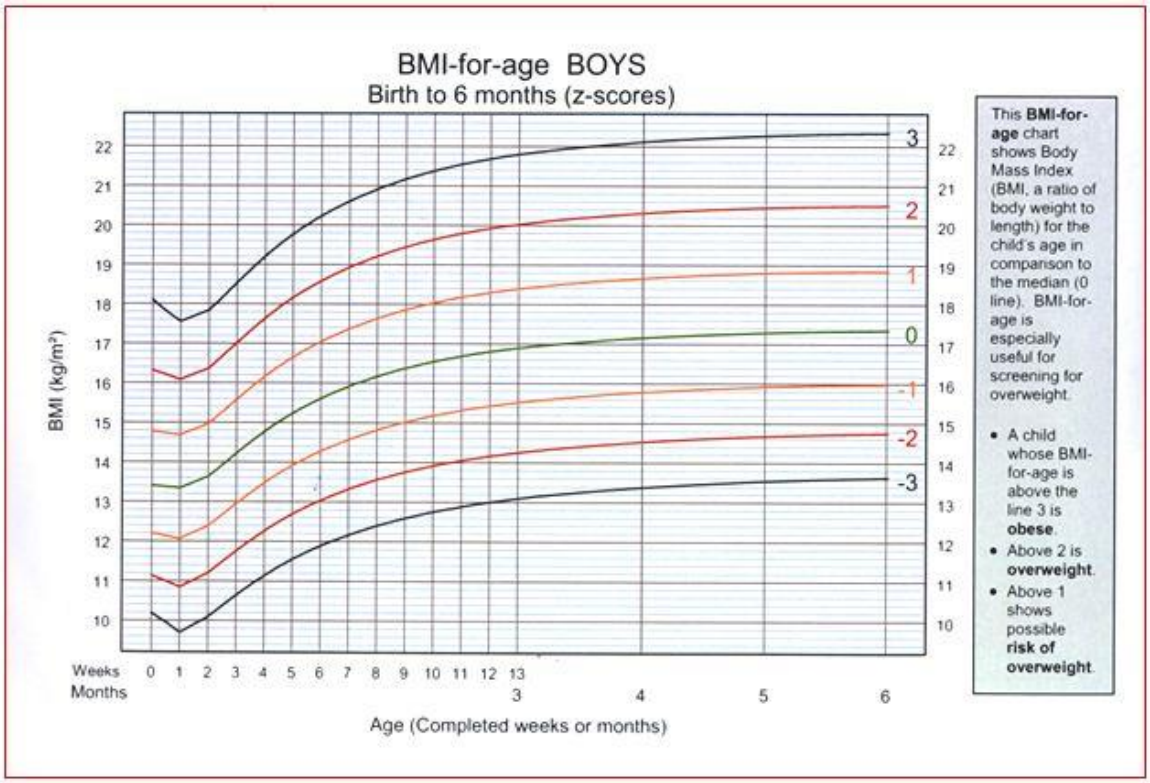
Experience: 2-3 years of work in nursing

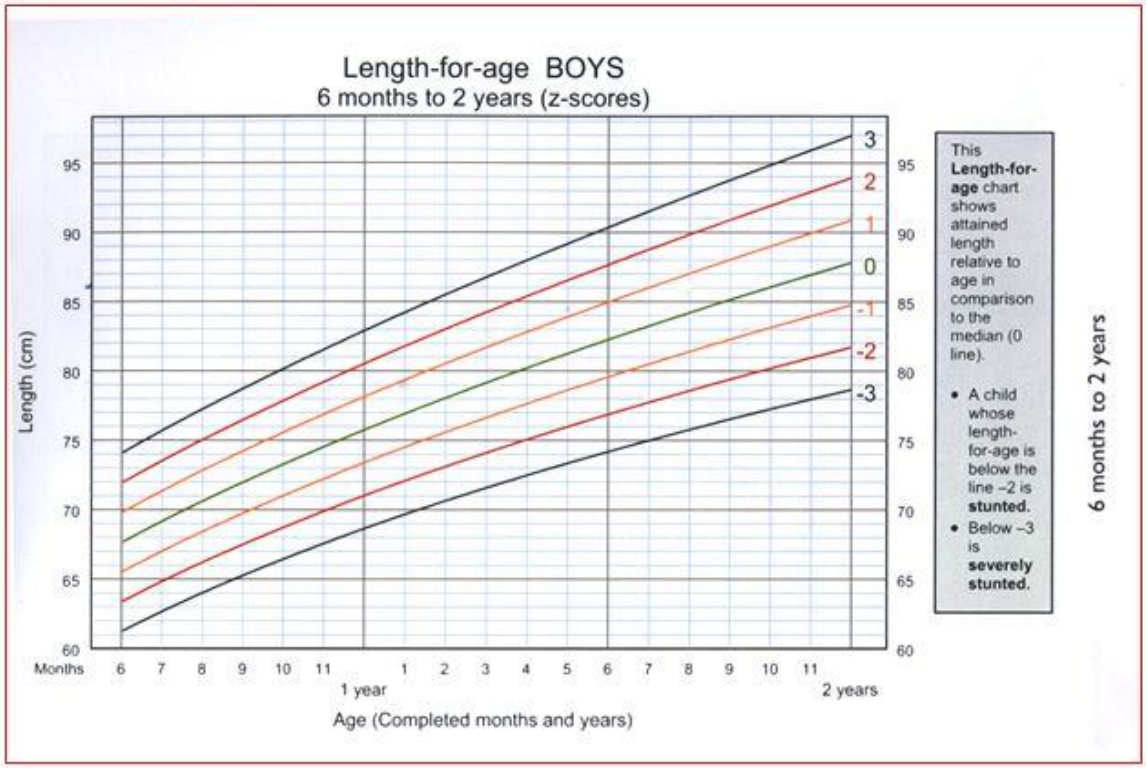
Other: Training in first aid and to be repeated every 3 years

Approved by: Ministry of Health

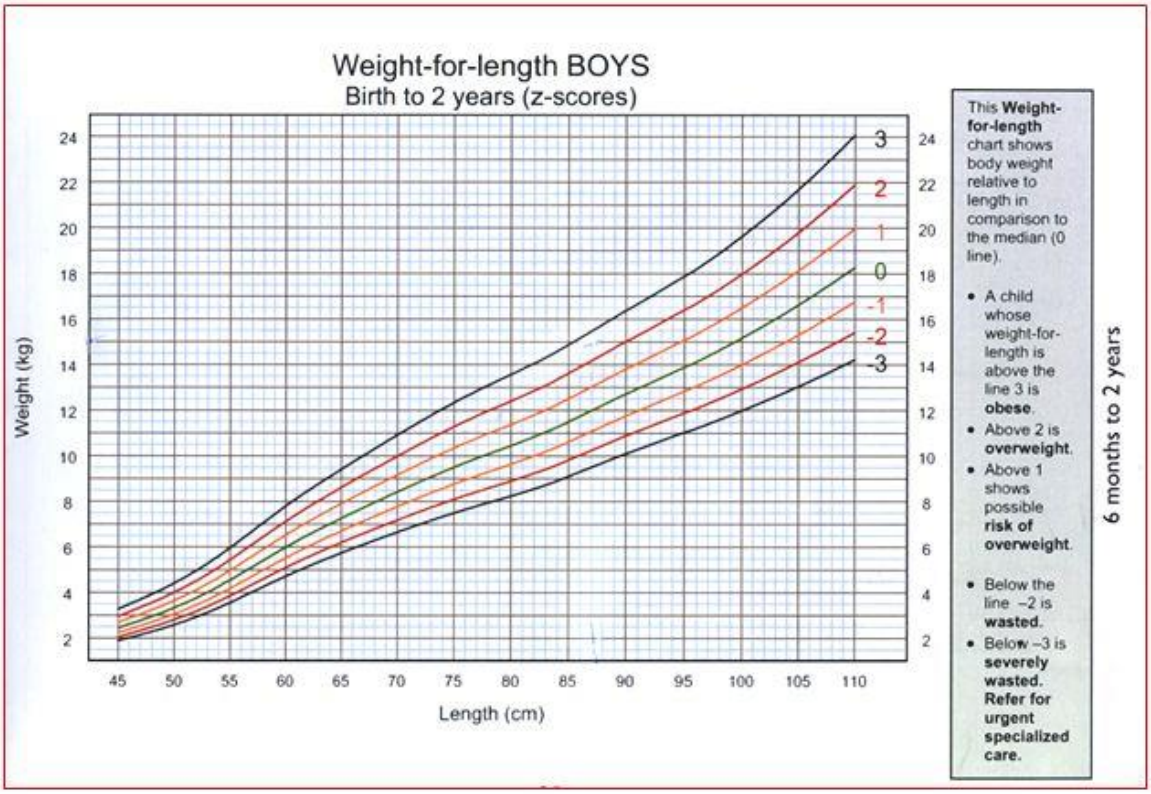
6. Appendices: Growth and Development Charts and Job Aids

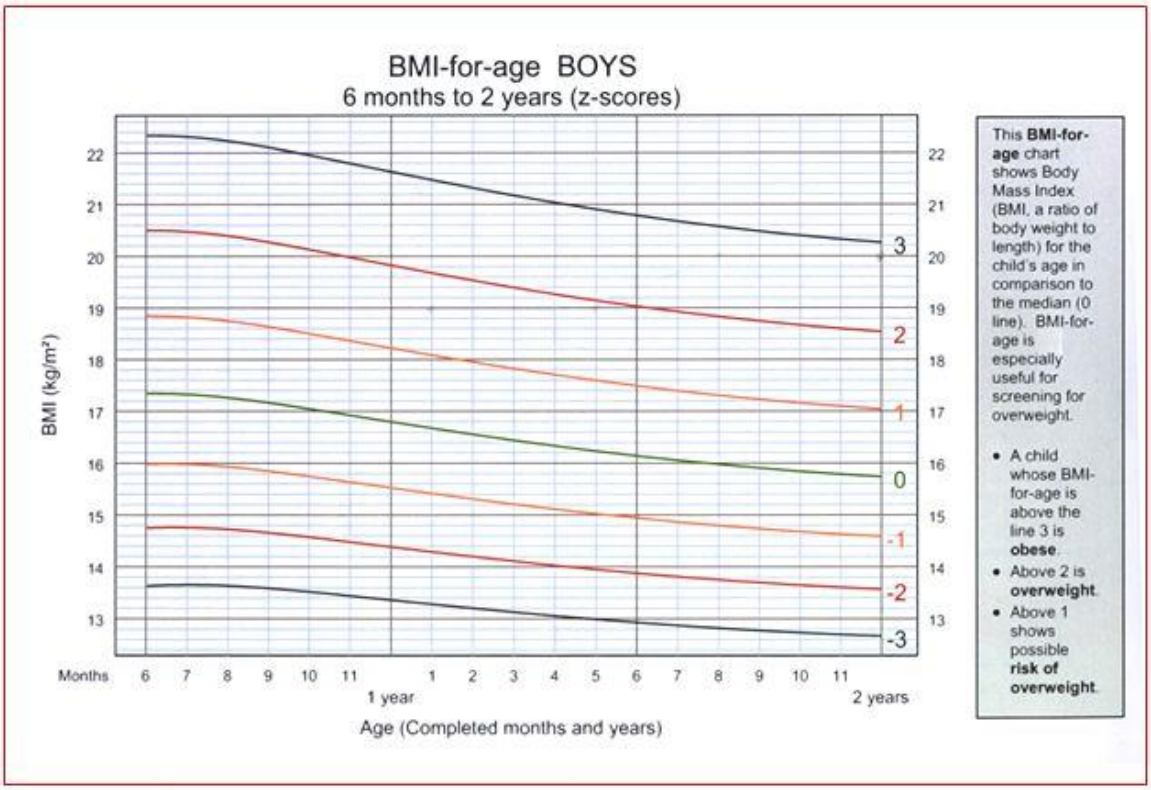


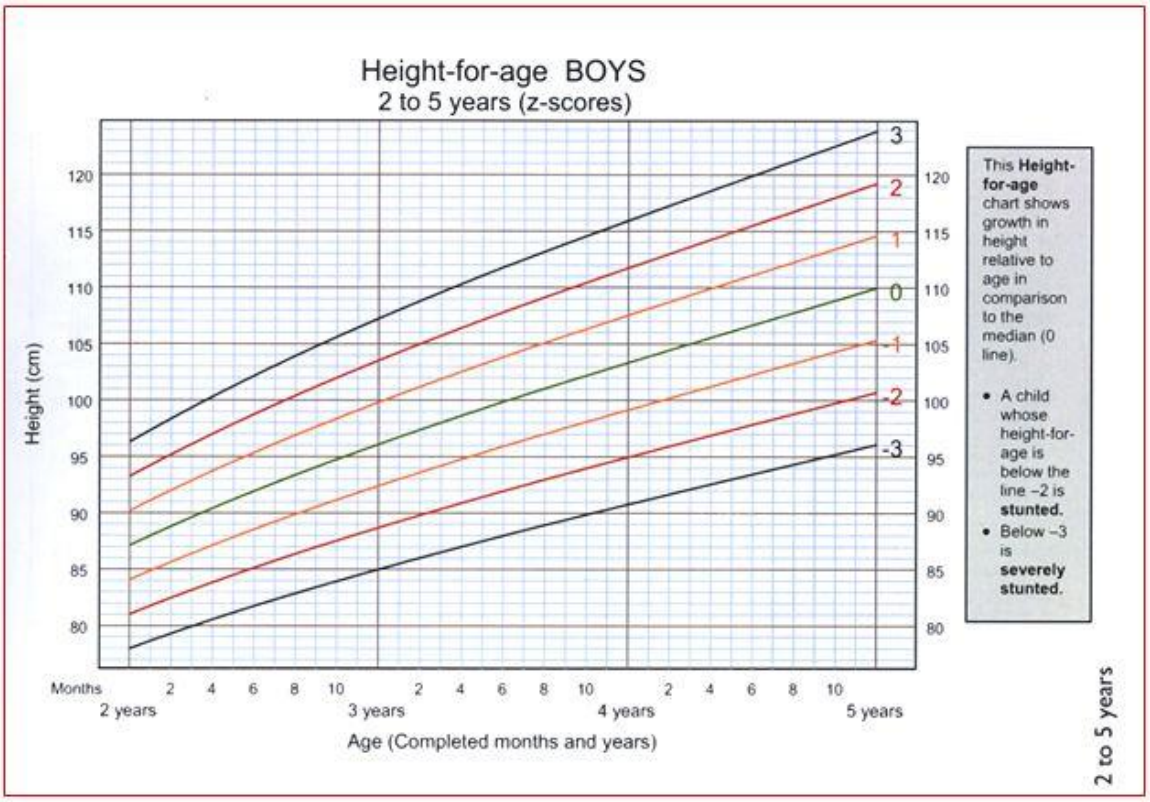

BMI-for-age BOYS
Birth to 6 months (z-scores)
BMI (kg/m²)
Weeks
Months
Age (Completed weeks or months)
This BMI-for-age chart shows Body Mass Index (BMI, a ratio of body weight to length) for the child's age in comparison to the median (0 line). BMI-for-age is especially useful for screening for overweight.
• A child whose BMI-for-age is above the line 3 is obese.
• Above 2 is overweight.
• Above 1 shows possible risk of overweight.


Length-for-age BOYS
6 months to 2 years (z-scores)
Length (cm)
Months
1 year
2 years
Age (Completed months and years)
This Length-for-age chart shows attained length relative to age in comparison to the median (0 line).
• A child whose length-for-age is below the line –2 is stunted.
• Below –3 is severely stunted.
6 months to 2 years

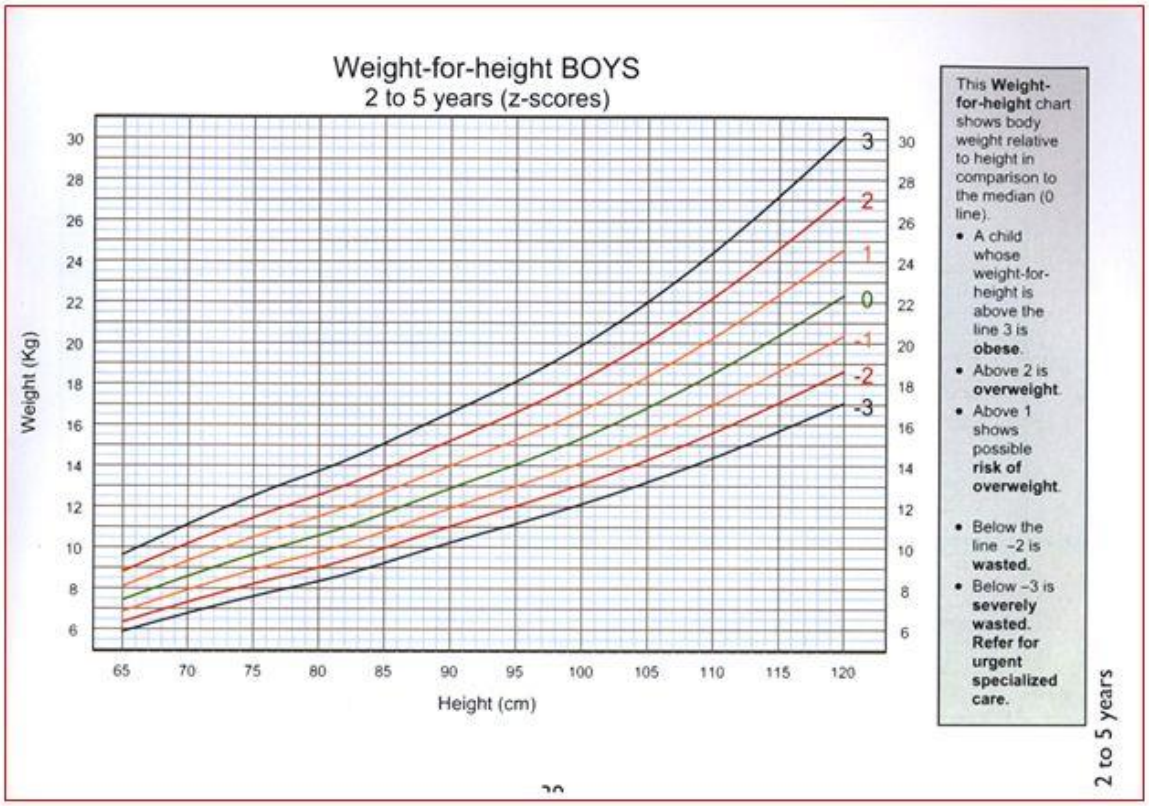
Weight-for-age BOYS
6 months to 2 years (z-scores)
Weight (kg)
Months
1 year
2 years
Age (Completed months and years)
This Weight-for-age chart shows body weight relative to age in comparison to the median (0 line).
• A child whose weight-for-age is below the line −2 is underweight.
• Below −3 is severely underweight. Clinical signs of marasmus or kwashiorkor may be observed.

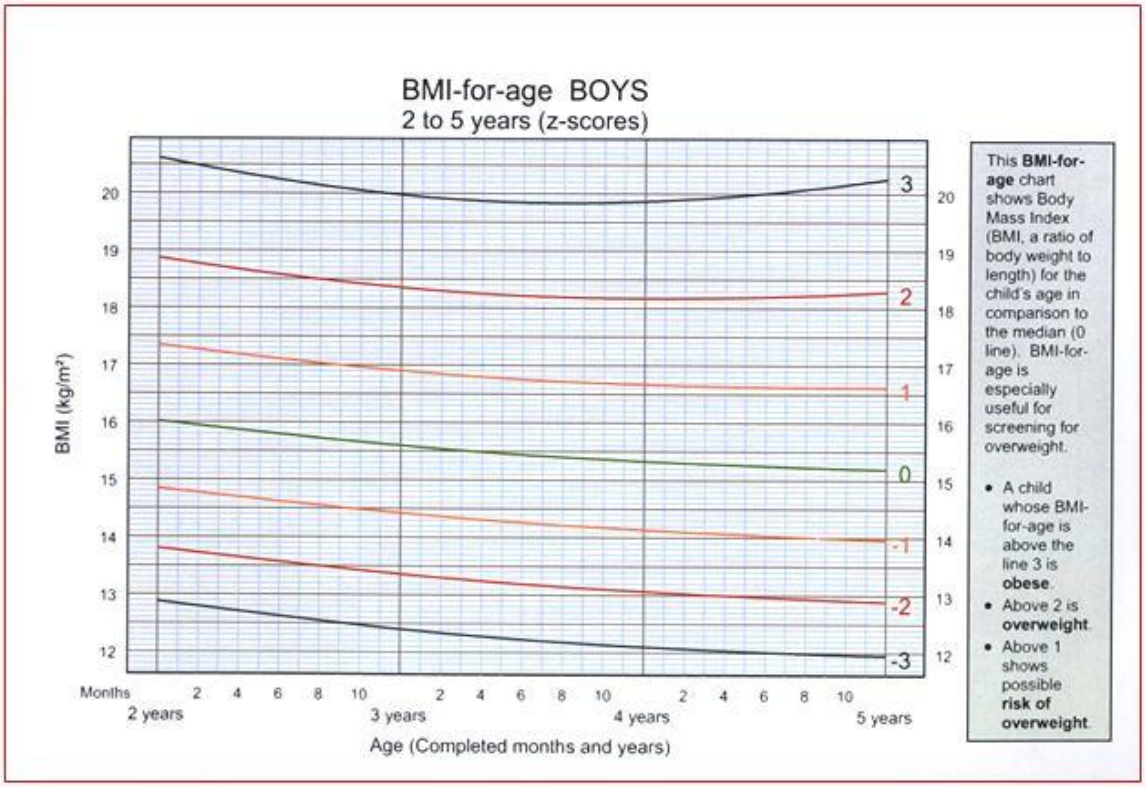

Weight-for-length BOYS
Birth to 2 years (z-scores)
Weight (kg)
Length (cm)
This Weight-for-length chart shows body weight relative to length in comparison to the median (0 line).
• A child whose weight-for-length is above the line 3 is obese.
• Above 2 is overweight.
• Above 1 shows possible risk of overweight.
• Below the line −2 is wasted.
• Below −3 is severely wasted. Refer for urgent specialized care.
6 months to 2 years


BMI-for-age BOYS
6 months to 2 years (z-scores)
BMI (kg/m²)
Months
1 year
2 years
Age (Completed months and years)
This BMI-for-age chart shows Body Mass Index (BMI, a ratio of body weight to length) for the child's age in comparison to the median (0 line). BMI-for-age is especially useful for screening for overweight.
• A child whose BMI-for-age is above the line 3 is obese.
• Above 2 is overweight.
• Above 1 shows possible risk of overweight.


Height-for-age BOYS
2 to 5 years (z-scores)
Height (cm)
Months
2 years
3 years
4 years
5 years
Age (Completed months and years)
This Height-for-age chart shows growth in height relative to age in comparison to the median (0 line).
• A child whose height-for-age is below the line −2 is stunted.
• Below −3 is severely stunted.
2 to 5 years

Weight-for-age BOYS
2 to 5 years (z-scores)
Weight (Kg)
Months
2 years
3 years
4 years
5 years
Age (Completed months and years)
3
2
1
0
-1
-2
-3
This Weight-for-age chart shows body weight relative to age in comparison to the median (0 line).
• A child whose weight-for-age is below the line –2 is underweight.
• Below –3 is severely underweight. Clinical signs of marasmus or kwashiorkor may be observed.


Weight-for-height BOYS
2 to 5 years (z-scores)
Weight (Kg)
Height (cm)
3
2
1
0
-1
-2
-3
This Weight-for-height chart shows body weight relative to height in comparison to the median (0 line).
• A child whose weight-for-height is above the line 3 is obese.
• Above 2 is overweight.
• Above 1 shows possible risk of overweight.
• Below the line –2 is wasted.
• Below –3 is severely wasted. Refer for urgent specialized care.
2 to 5 years

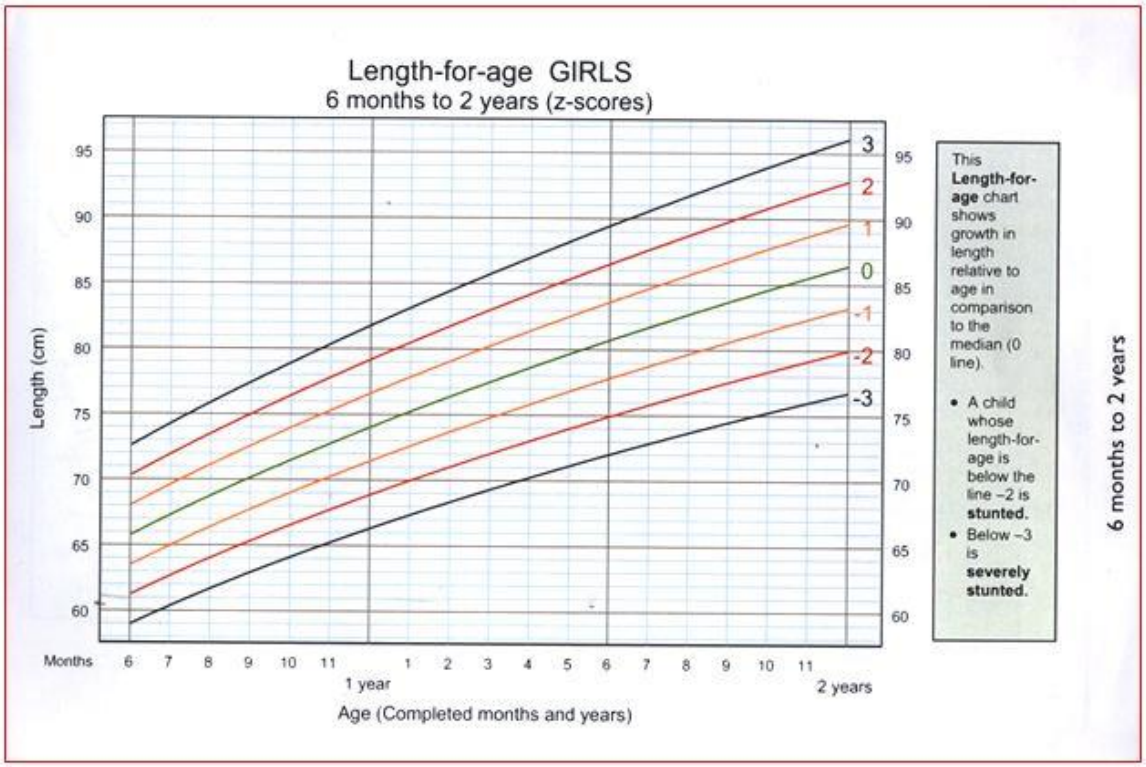

BMI-for-age BOYS
2 to 5 years (z-scores)
BMI (kg/m²)
Months
2 years
3 years
4 years
5 years
Age (Completed months and years)
This BMI-for-age chart shows Body Mass Index (BMI, a ratio of body weight to length) for the child's age in comparison to the median (0 line). BMI-for-age is especially useful for screening for overweight.
• A child whose BMI-for-age is above the line 3 is obese.
• Above 2 is overweight.
• Above 1 shows possible risk of overweight.

Length-for-age GIRLS
Birth to 6 months (z-scores)
Length (cm)
Weeks
Months
Age (Completed weeks or months)
This Length-for-age chart shows attained length relative to age in comparison to the median (0 line).
• A child whose length-for-age is below the line −2 is stunted.
• Below −3 is severely stunted.
Birth to 6 months

Weight-for-age GIRLS
Birth to 6 months (z-scores)
Weight (kg)
Weeks 0 1 2 3 4 5 6 7 8 9 10 11 12 13
Months 3 4 5 6
Age (Completed weeks or months)
3
2
1
0
-1
-2
-3
This Weight-for-age chart shows body weight relative to age in comparison to the median (0 line).
• A child whose weight-for-age is below the line −2 is underweight.
• Below −3 is severely underweight. Clinical signs of marasmus or kwashiorkor may be observed.

Weight-for-length GIRLS
Birth to 6 months (z-scores)
Weight (kg)
Length (cm)
3
2
1
0
-1
-2
-3
This Weight-for-length chart shows body weight relative to length in comparison to the median (0 line).
• A child whose weight-for-length is above the line 3 is obese.
• Above 2 is overweight.
• Above 1 shows possible risk of overweight.
• Below the line −2 is wasted.
• Below −3 is severely wasted. Refer for urgent specialized care.
Birth to 6 months

BMI-for-age GIRLS
Birth to 6 months (z-scores)
BMI (kg/m²)
Weeks
Months
Age (Completed weeks or months)
This BMI-for-age chart shows Body Mass Index (BMI, a ratio of body weight to length) for the child's age in comparison to the median (0 line). BMI-for-age is especially useful for screening for overweight.
• A child whose BMI-for-age is above the line 3 is obese.
• Above 2 is overweight.
• Above 1 shows possible risk of overweight.


Length-for-age GIRLS
6 months to 2 years (z-scores)
Length (cm)
Months
1 year
2 years
Age (Completed months and years)
This Length-for-age chart shows growth in length relative to age in comparison to the median (0 line).
• A child whose length-for-age is below the line −2 is stunted.
• Below −3 is severely stunted.
6 months to 2 years

Weight-for-age GIRLS
6 months to 2 years (z-scores)
Weight (kg)
Months
1 year
2 years
Age (Completed months and years)
This Weight-for-age chart shows body weight relative to age in comparison to the median (0 line).
• A child whose weight-for-age is below the line −2 is underweight.
• Below −3 is severely underweight. Clinical signs of marasmus or kwashiorkor may be observed.

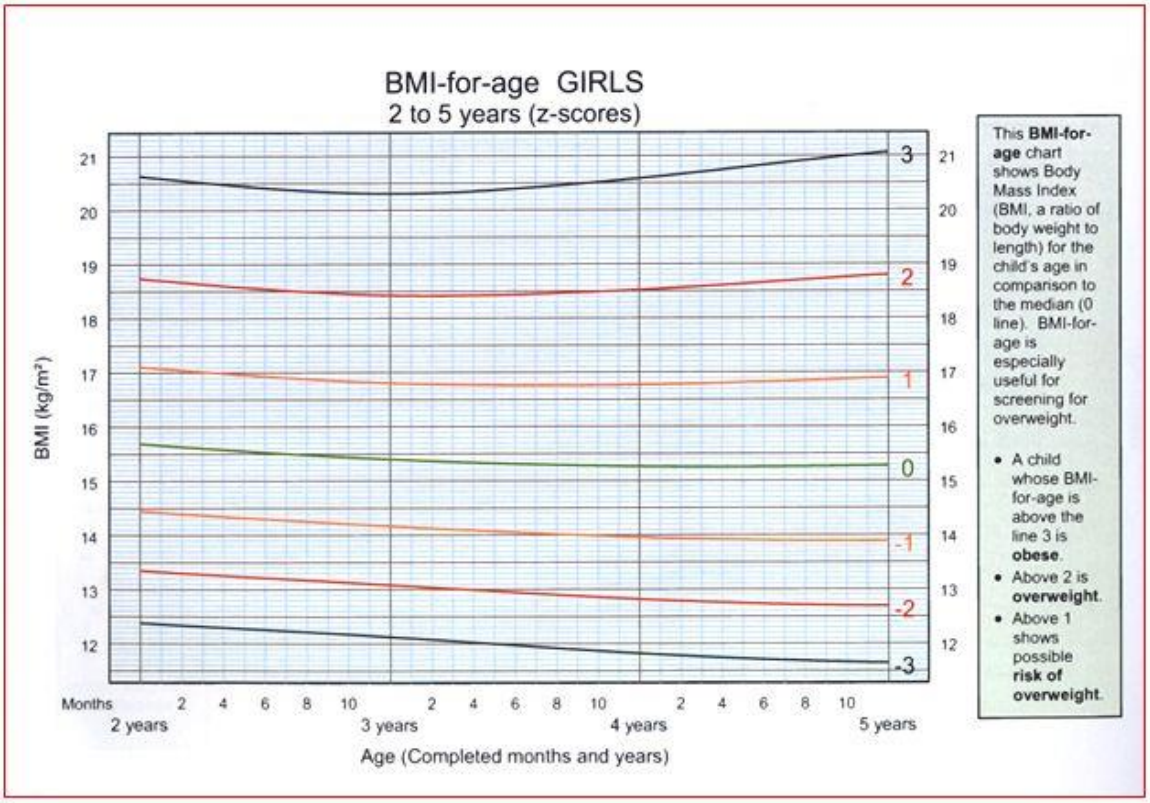
Weight-for-length GIRLS
Birth to 2 years (z-scores)
Weight (kg)
Length (cm)
This Weight-for-length chart shows body weight relative to length in comparison to the median (0 line).
• A child whose weight-for-length is above the line 3 is obese.
• Above 2 is overweight.
• Above 1 shows possible risk of overweight.
• Below the line −2 is wasted.
• Below −3 is severely wasted. Refer for urgent specialized care.
6 months to 2 years

BMI-for-age GIRLS
6 months to 2 years (z-scores)
BMI (kg/m²)
Months
1 year
2 years
Age (Completed months and years)
This BMI-for-age chart shows Body Mass Index (BMI, a ratio of body weight to length) for the child's age in comparison to the median (0 line). BMI-for-age is especially useful for screening for overweight.
• A child whose BMI-for-age is above the line 3 is obese.
• Above 2 is overweight.
• Above 1 shows possible risk of overweight.

Height-for-age GIRLS
2 to 5 years (z-scores)
Height (cm)
Months
2 years
3 years
4 years
5 years
Age (Completed months and years)
This Height-for-age chart shows growth in height relative to age in comparison to the median (0 line).
• A child whose height-for-age is below the line −2 is stunted.
• Below −3 is severely stunted.
2 to 5 years

Weight-for-age GIRLS
2 to 5 years (z-scores)
Weight (Kg)
Months
2 years
3 years
4 years
5 years
Age (Completed months and years)
This Weight-for-age chart shows body weight relative to age in comparison to the median (0 line).
• A child whose weight-for-age is below the line –2 is underweight.
• Below –3 is severely underweight. Clinical signs of marasmus or kwashiorkor may be observed.

Weight-for-height GIRLS
2 to 5 years (z-scores)
Weight (Kg)
Height (cm)
This Weight-for-height chart shows body weight relative to height in comparison to the median (0 line).
• A child whose weight-for-height is above the line 3 is obese.
• Above 2 is overweight.
• Above 1 shows possible risk of overweight.
• Below the line –2 is wasted.
• Below –3 is severely wasted. Refer for urgent specialized care.
2 to 5 years


BMI-for-age GIRLS
2 to 5 years (z-scores)
BMI (kg/m²)
21
20
19
18
17
16
15
14
13
12
3
2
1
0
-1
-2
-3
Months
2 4 6 8 10 2 4 6 8 10 2 4 6 8 10
2 years
3 years
4 years
5 years
Age (Completed months and years)
This BMI-for-age chart shows Body Mass Index (BMI, a ratio of body weight to length) for the child's age in comparison to the median (0 line). BMI-for-age is especially useful for screening for overweight.
• A child whose BMI-for-age is above the line 3 is obese.
• Above 2 is overweight.
• Above 1 shows possible risk of overweight.

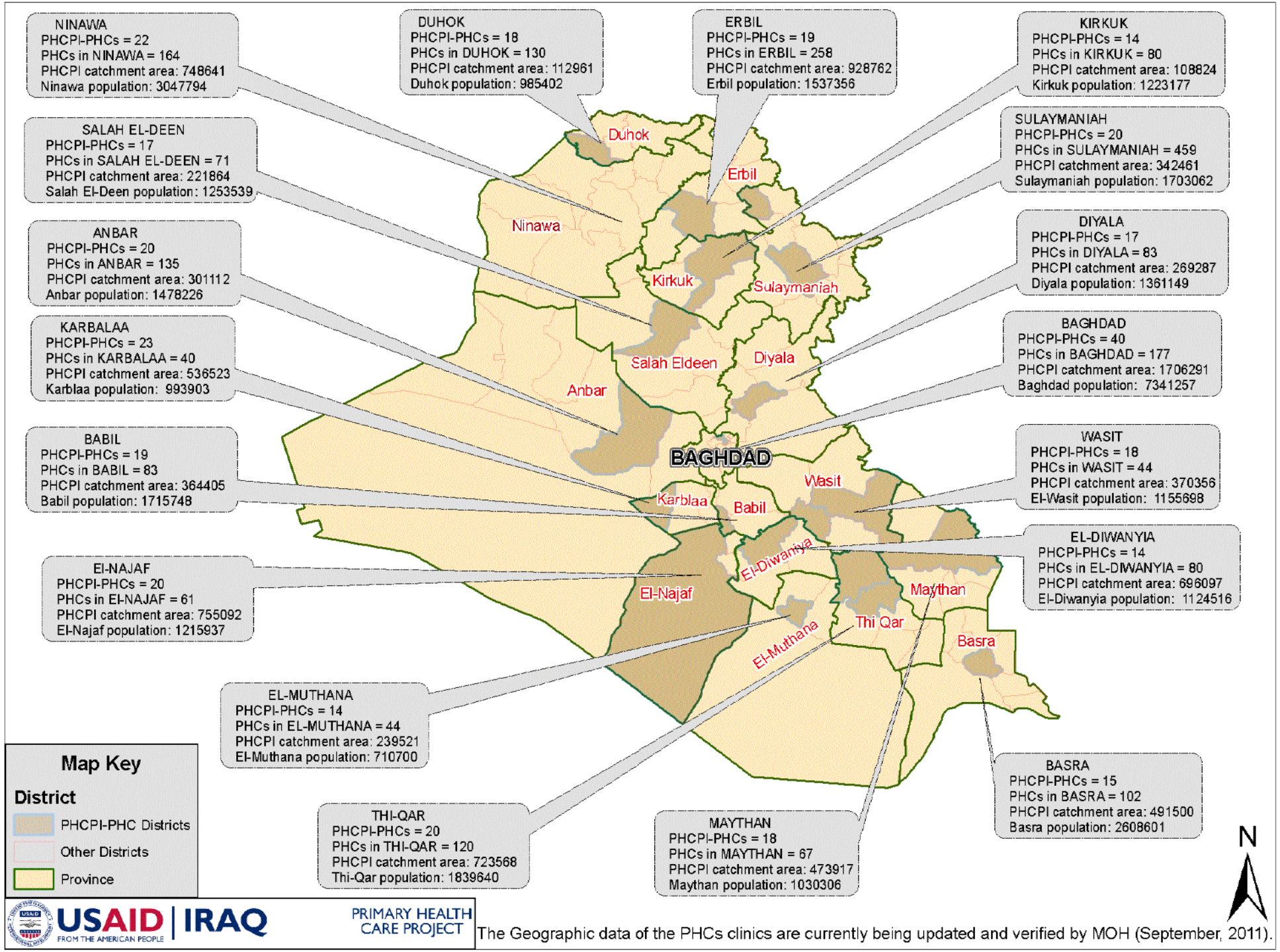
References:

1. WHO/EMRO. National strategy and plan of action for nursing and midwifery development in Iraq: 2003-2008.
2. Working draft of USAID/PHCPI: A strategy for nursing and midwifery development in Iraq. 2011.
3. William D. McArdle, Frank I. Katch& Victor L. Katch, Exercise Physiology: Energy, Nutrition, and Human Physiology, Lippincott Williams & Wilkins, 2006, ISBN 0781749905, p. 270
4. Emergency Care and First Aid for Nurses: A Practical Guide, by Philip Jevon RGN BSc(Hons), PGCE(2 Nov 2006).
5. USAID/PHCI. Nursing and First Aid. Jordan, 2002.

The committee members involved in the preparation of Nursing Standards for Primary Health Care Facilities in Iraq guideline:-

- **Mr. Imad Salal / Ministry of Health**
- **Dr. Mohammed Fahdil / Dean of nursing college**
- **Dr. Muhsen Ahmed / Ministry of Health**
- **Dr. Iqbal Ghanim / nursing college**
- **Dr Mu'utaz Mohammed Abbas / Ministry of Health**
- **Mrs. Sajad Sadoon / Ministry of Health**
- **Mr. Zaki Sabah/ Ministry of Health**
- **Mrs.Sabiha Saudi / Ministry of Health**
- **Ms. Mariam Hussein / Ministry of Health**
- **Dr. Hala AlSaadi / nursing college**
- **Mr. Mohammed Baqr / nursing college**
- **Dr. Abla Mousa / Drector of nursing institute / MOH.**
- **Dr. Natheera Husein / Technical medical institute.**
- **Dr. Hana Adel / Technical medical institute**
- **Dr. Salwa Shalash / WHO**
- **Dr. Mouyad Lutfi / WHO**
- **Ms. Maha Abdul Sattar / Ministry of Health**
- **Dr. Hussein Hadi /. nursing college**
- **Dr. Ahlam Kadhum / Primary Health Care Project**

PHCPI-PHCs population mapped to IRAQ population



USAID | IRAQ
FROM THE AMERICAN PEOPLE

PRIMARY HEALTH CARE PROJECT

The Geographic data of the PHCs clinics are currently being updated and verified by MOH (September, 2011).

U.S. Agency for International Development
Primary Health Care Project In Iraq
http://phciraq.org/
www.usaid.gov