

The early detection guide of disability for health workers in primary health care

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Introduction

Within the joint of cooperation between the Ministry of Public Health and Population and Resource Center for Early Childhood Development, The Higher Council for Motherhood and Childhood and the Social Fund for Development give this guide to promote the achievement of national strategy for childhood and youth. This guide is a well-arranged with the National Disability Strategy and the Early Intervention Program, which expected to be issued about an imminent.

This guide is designed to create a basic of sufficient awareness to the health service providers in the importance of early detection and intervention, and its a very important impact in reducing and mitigating the effects of disability on the child if the discovery of late developmental stage is not complete because of the disability which comes at early age for the child. It is working as a definition methodology to the worker's healthy in the primary care of health centers, at a natural growth stages to the normal child at age-related tests, periodic vaccination schedule, which make a health worker can meet with children on a regular basis during the periods of successive vaccination, then the monitoring and periodic follow-up to see how the child managed to reach to the development features which required according to the stage time-compatible, so to get the worker a needed skills by using the practical and specific training which is a basic rule to identify the existence of a disability, Disability is working to reduce the natural stages of growth and influence, thereby hindering the natural process of gradual growth in accordance with the stages of age-related of this manifestations. Whereas, all the children have grow according to the standard developmental average. Scientists agreed to called it, the natural gradual development of the child, and every specific age are committing to the development features group which related to dynamics,, cognitive, and learning aspects of growth. This guide has considered all of these appearances in the age stage

of (0 - 1) year so as to identify the development features which related to each stage and link these features with concrete pointers, which make a worker of health of observation the natural growth for the child and therefore to be sensitive to the presence of a specific problem. Here we confirm on the practical knowledge which had expected teaching them for a worker of health through this guide, which will enable to discover the disability or allergy to its existence and through it he can take the decision to transfer the right in the early age of the child.

The early detection of disability is the basic approach to early intervention, which is itself a continuous process, the roles of therapeutic and educational are integrates, to produce all the services for children who are refer to the centers that have provided intervention services as a physical therapy centers and specialized educational centers.

Obligations under the Charter are pleased to extend our sincere thanks and appreciation to the expert / Roberta, who have prepared a guide, for her initiative in supporting the preparation of a guide that is the first of its kind in the area of early detection and intervention for the disability. Also thanks for everyone who participated in the enrichment to the guide as experts, academics and specialists from every aspects which are relevant to. We wish further of joint cooperation for the transition into practice effectively who contribute to national development Perhaps in this guide, the materials which had used with some of act were extracting from the book of Professor, Werner "Disabled Village Children" that, published in 1987 in the United States. (Note: The book that has been used by Dr. Nafisa Nylson should be remember)

(Footnotes)

1 Disabled Village Children, D. Werner, 1987, The Hesperian Foundation, Palo Alto, Ca., USA.

CHAPTER 1:

DEFINITIONS

1.1 PREVENTION.

Prevention measures can be addressed at reducing or eliminating factors that cause impairments. For instance, better pre and peri natal care (before and during labor and delivery), immunization, promotion of breast feeding, use of oral rehydration in case of diarrhea, are all practices that can tackle the most common causes of childhood disability.(see the table peg). This is referred to as 'primary prevention'.

Prevention can target the onset of impairment through, for instance, treatment of meningitis, ear and eye diseases and care of a premature baby. This is referred to as 'secondary prevention'.

Finally, prevention will target the impairment at its initial stage, when much can still be done to reduce the consequences; measures in this regard include early detection and intervention through screening tests and practices, as well as awareness at community level. This is referred to as 'tertiary prevention'.

This booklet addresses specifically the latter, providing primary health care workers with practical screening and diagnostic tools.

1.2 EARLY DETECTION and INTERVENTION

Scientific research as well as empirical data have clearly shown that an impairment detected and treated at an early stage has a much better prognosis; that is, Early Detection and Early Intervention will minimize and/or prevent the consequences of an impairment, ultimately preventing the impairment from becoming a disability.

Based on the ICF definition of impairment and disability provided in the box, an example of impairment is, for instance, the limitation in movement caused by paralysis. The limitation will become a disability if measures, like appropriate treatment and social and environmental adjustments, are not put in place at individual, family, community level.

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As such, Early Detection and Intervention play a fundamental role. For example, early stages of cerebral palsy can be detected and appropriately treated, preventing the development of problems (muscular, skeletal, behavioral, mental) that will have far less chances to be overcome at a later stage. Early Detection and Intervention will generally and often result in more affordable treatment and environmental adjustments at all levels, enabling the child to become independent and carry out his/her life as normally as possible.

Early Detection and Early Intervention refer to the impairment itself and not necessarily to the child's age. However, as most impairments that affect the child during the first three years of age have a serious impact on the overall child's development, this booklet will provide practical tools for the detection of those impairments that might occur before, during or at early stages after the child's birth. These include, but are not limited to: cerebral palsy, mental retardation, developmental delay, hearing problems, vision problems, congenital conditions like Down Syndrome, Spina Bifida, dislocated hip. To this end, the knowledge of child's development at its early stages is of foremost importance.

1.3 CAUSES OF DISABILITIES.

To facilitate a better understanding of childhood disability it is useful to be familiar with its major causes. The table below adopts a developmental approach; that is, it illustrates causes of childhood disability according to the time/stage of development in which they occur.

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Timing Stage of development	Factor Cause	Explanation
Prenatal (before birth)	Genetic: single or multifactorial	
	Chromosomal defects	• The commonest result is Down Syndrome in child.
	• Infective agent: - Viral - Bacterial - Protozoal	For example: - Rubella in other/hepatitis hemophilia influenza - Venereal disease in mother - Toxoplasmosis in mother
	• Anoxia	- Hypotic – ischemic Encephalopathy - Intra uterine growth retardation
	Nutritional	-Anemia
	Maternal disease	- Hypertension, diabetes negative Rhesus (Rh) factor in mother
	Drugs, chemicals, physical agents	- X rays, radiation, exposure to pesticides
perinatal	• Anoxia	- from long, difficult labour, cord wrapped around the child's neck
(during birth)	Birth trauma	- Breech and other abnormal deliveries, forceps/suction cup delivery.
Neonatal (immediately after birth)	 Prematurely, jaundice, hypoglycemia, infection, anoxia 	-skin infection - Eye infection. - lack breast feeding within first hours.
Early Infancy	Complications of infectious diseases.	 Poliomyelitis, gastroenteritis with dehydration, measles, pertussis with encephalitis, inhalation of foreign body
	• Anoxia, meningitis, encephalitis, poisoning	 Lead in paints, battery acid, breathing in car exhaust Chronic Obstructive Pulmonary Disease (COPD)
	Head injuries, malnutrition	- Lack of vitamins (especially A), iodine
	Environmental	- Lack of stimulation in the environment

CHAPTER 2:

CHILD DEVELOPMENT 0-1 YEAR OLD

CHILD DEVELOPMENT 0-1 YEAR OLD

What follows is a narrative version of Child Development 0-1 year old, intended to complement the Child Development Chart attached. It is based on the method of 'Naturalistic Observation' and describes different aspects of child development based on the interaction of child with the surrounding environment.



An important aspect to always keep in mind is that children develop in different ways and may reach the 'milestones' that are described below at different times. For instance, a child might be able to walk by himself at the age of nine months, while another may reach this milestone when he's fourteen months old. Or, a child might say her first words at twelve months, while another will start few months later. Some children will skip the crawling stage and just start walking, while others might enjoy a longer crawling stage. Such variations are considered within the average of normal development.

The Primary Health Care Worker will most likely see a child for her vaccination. Based on the vaccination schedule, all children should be checked at vaccination time. Specifically, those children who might pose doubts about possible disabilities should be checked again at the following vaccination and, should doubts persist, be referred to appropriate services. Obviously, children who show clear signs of disabilities, as discusses later in the manual, should be referred immediately to the appropriate services.

NOTE: The vaccination schedule is set up with a gap of about nine months between the age of nine and eighteen months. If a child have not reached the age related milestones by the age of nine months, he/she should referred to the appropriate services.

2.1 BIRTH TO ONE MONTH OLD

Movement: While sleeping, the baby maintains a symmetrical position, arms and legs are usually kept slightly away from the body. When laying on his tummy, the head is usually turned on the side, to allow the baby to breath freely.



When the baby is a wake, he moves his limbs with spontaneous movements, including fingers and toes. At this age it is possible to notice some specific reflexes, amongst which:

- Grasping reflex: When the baby's hand (palm) touches something, the hand closes tightly; the reflex will gradually disappear around the third month.



- Stepping reflex: This is present only for the first two/three weeks after birth. When baby is held up straight and her feet are slightly pressed on a surface, the baby will take few 'steps'.



- Fencing reflex: Baby laying on his back. When baby's head is turned on the side, the arm on that side will extend, while the leg will bend, similar to a fencing position. The reflex will disappear around the third month. -Alarm reflex (moro): The reflex is usually triggered by sudden

movements, loud sounds. Baby's hands will open and slightly close. The reflex will gradually disappear by around the third month.



Vision: At this age vision has not developed completely. However, the baby can react and briefly fix his gaze to objects held in front of him at an approximate distance of 20-30 cm. Usually, objects with high contrast (black and white) are easier for the baby to detect.

Hearing: Hearing is well developed.

Language: At this age the baby will express herself mostly through crying.

Social behavior: Social behavior will be mostly limited to eating and sleeping. Between the first and second month, when fed and dry, the baby will start smiling intentionally to human faces.

Attention and learning: The baby will react to loud sound, sudden movement, sudden bright light with the 'alarm reflex'. When crying, the baby will occasionally calm down at the sound of human voice or pleasant sound. The baby will be able to briefly fix his gaze to an object held in front of her.

2.2 THREE MONTHS OLD

Movement: A very important achievement at this age is head control; this is closely connected with the development of vision. As the baby's vision develops, she tends to keep and move her hands in front of her eyes; as such, her hands will often end in her mouth. The sense of touch at this stage is relevant and begins to guide the baby's movements, such as hands in her mouth. The baby is able to move her head freely and look around; the 'fencing reflex' at this age has disappeared. An additional fundamental skill achieved between the age of three and six months is intentional grasping. Baby also begins to enjoy looking at her feet.

When laying on his back, the baby no longer keeps his limbs close to his body; arms and legs are free to move. When the baby is relaxed, limbs are kept away from his body.



Vision: Baby can focus, explores the environment around her and now follows an object moving with her eyes first and, when the object moves away from her visual field, with her head.



Hearing and Language: The baby recognizes mother's/main caregiver's voice, turns his head towards the sound. He begins to express himself with sounds, 'cooing'.

Social behavior: The baby is socially more active; he responds to mother's/caregiver's voice, loves to be paid attention to and to be held, smiles intentionally and often.

Attention and learning: The baby begins to recognize people's faces, explores the environment around her through sight, hearing, touch, movement; generally spends more time awake.

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2.3 SIX MONTHS OLD

Movement: At this age voluntary movement is evident and some important skills are clearly developing:

- Hand/eye coordination: baby wants to grab whatever she sees. She does not yet have full control of all arm joints (shoulder, elbow, wrist) and approaches the object with her arm straight; her hand 'scoops' the object, thumb opposition is not developed yet.



- Hand/feet coordination: baby plays a lot with her feet; when sitting, she tries to reach for toys with her feet; when laying on her back, her feet often end in her mouth.



- Rolling over: laying on her back, baby can easily roll over on both sides. On her stomach, baby likes to hold herself up on her elbows, head free to move in different directions.



- Sitting: baby at this age is able to sit by herself or with little help, usually keeping her legs extended and spread out, to allow a broader base and stability of the body. When gently pushed on one side, a defense/protection mechanism appears and the arm on that side is extended, to protect the body from falling.



Vision: Vision has further developed and bay recognizes different faces and details on objects and pictures.

Hearing and language:.Baby can now produce different sounds, enjoys music and recognizes different voices.

Social Behavior: As baby begins to recognize different faces, he will smile at somebody and cry at someone else. He spends more time awake and increasingly enjoys company.

Attention and learning: Baby begins to enjoy solid food and tends to put in his mouth whatever he can reach for, as a way of exploring the environment. He likes to play, look, listen. Enjoys to play with his hands and feet.

2.4 NINE MONTHS OLD

Movement: Child has achieved a much better balance. He sits by himself, with straight knees and legs slightly closer to the center of his body. Hand's movement has developed considerably: child can now grasp smaller objects with three fingers, thumb opposing; the arm's joints are all used smoothly and child enjoys passing objects from one hand to the other Picture t.b.m.. An additional major achievement is the ability to move around on four legs and, often, pull himself up on a standing position by holding on something. Some children at this age might be able to walk independently.



Vision: Child is now able to see clearly from a distance and, therefore, spot distant objects.

Hearing and language: Child expresses herself with bisyllable sounds: ba-ba, ma-ma and points at things/people.

Social behavior: Child understands the meaning of 'no' and

finds ways to attract attention.

Attention and learning: Child enjoys social playing, like peeka-boo; she looks for objects when they disappear out of her sight; enjoys, as well, to drop/throw objects out of her sight to look for them.



2.5 ONE YEAR OLD

Movement: Child is very mobile; when sitting, he can turn around very easily. He can walk with little help or independently, keeping his legs straight, like sticks; at this stage he has not reached full control of all leg joints (hip, knee, foot). He can pick up small objects with thumb and index.



Vision: Child enjoys looking at small objects and pictures, as well as far away objects.

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Hearing and language: Child begins to use simple words; pointing at objects is still a way to communicate.

Social behavior: Child understands different words and can execute simple tasks when asked to.

Attention and learning: Child is very active; she likes to put things in containers and empty them; enjoys testing her force by pulling, pushing, lifting. Imitates gestures, like clapping hands, waving bye bye, begins to point at parts of her body.



CHAPTER 3:

EARLY SIGNS OF DISABILITY

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EARLY SIGNS OF DISABILITY

As discussed above, the knowledge of child development milestones constitutes the basis for detection of possible disabilities. Should a child not reach the above listed milestones within a reasonable time frame, then there might be reason for concern and the child should be referred to appropriate services.

In addition, the child might show other signs that could be related to disability, as follows:

- generalized floppiness or stiffness.

- floppiness or stiffness on one side of the body, lower half of the body, upper half or on one limb.

- tendency to maintain an asymmetric position.

- difficulties to suck, swallow.

- quick, jerky movements of eyes and/or limbs.

-head too big, or too small, compared with head measurements reported on growth chart.

- frequent eye/ear infection.

- slow response, or lack of response, to sounds/light.

Sometimes the child will present clear deformities that may be associated with some disabilities, like:

-'bag' or dark lump on the lumbar area.

- one or both feet turned in, or back, or bend up too far.

- birth deformities, defects or missing parts (for instance, missing or extra fingers, toes).

- asymmetric/different appearance of limbs, like appearance of skin folds on child's thigh associated with hip dislocation.

In addition to generalized developmental delay, some genetic conditions are characterized by specific features, like in

Down Syndrome:

- round face
- slant eyes
- single deep crease in hand

and cretinism:

- skin dry and cool
- hair often low on forehead puffy eye lids.
- protruded tongue.

VACCINATION SCHEDULE

AT BIRTH	BCG	OPV-0
AT 6 WEEKS	PENTA-1	OPV-1
AT 10 WEEKS	PENTA-2	OPV-2
AT 14 WEEKS	PENTA-3	OPV-3
AT 9 MONTHS	MEASLES	VIT A
AT 18 MONTHS	OPV-4	PENT (BOOSTER DOSE)





ملاحظة : الصور الحاطة بخط دائري 🖆 الجدول اعلاه توضح ما يعكن للطفل فعله بجدارة ، والصور الحاطة بخط دائري متقطع توضح ما يبكن للطفل فعله وكن ليس بفاعلية قصوى وذلك عند استخدام البدول من قبل الراقب للطفل

CHILD CHECK UP: RECORD KEEPING AND CHECKLIST

The following forms will facilitate the PHCW work of record keeping and child check up. With the exception of form n.1, the forms are designed to be answered with a simple yes/no, so that the process will not take long. Forms will be neatly stored in the PHC Centre, to be easily retrieved when needed.

In addition to the forms, the PHCW will be provided with a bag containing some early detection tools:

- black and white pictures, to be used with one month old babies to test vision;

- toys that produce sound, to test hearing;

- toys of medium/small size that will attract child attention and will be used to test different stages of grasping, vision, attention and gross motor skills (body and limbs movement), based on the developmental milestones.

In addition, an examination bed will be provided.

Ideally, child examination should take place in a quiet environment, in the presence of child's parent/caretaker: this will help the child to feel less agitated. PHCW will explain parent/caretaker the aim of examination. Should child come to PHC Centre for vaccination, examination will take place before vaccination.

4.1 CHILD RECORD SHEET (first check up)



4.2 CHECKLIST 1 SIGNS OF DISABILITY

1. Does baby show any of these signs?

-generalized floppiness or stiffness:



- floppiness or stiffness on one side of the body,

lower half of the body, upper half or on one limb:



- tendency to maintain an asymmetric position:



- difficulties to suck, swallow:



- quick, jerky movements of eyes and/or limbs:

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- head too big, or too small, compared with head

measurements reported on growth chart:



- frequent eye infection:



- frequent ear infection:



- slow response, or lack of response, to sounds/light





- 'bag' or dark lump on the lumbar area:



- one or both feet turned in, or back, or bend up too far:



- birth deformities, defects or missing parts

(for instance, missing or extra fingers, toes):



- asymmetric/different appearance of limbs, as appearance of skin folds associated with hip dislocation.

2. Does baby show the following signs combined?



- 3. Does baby show any of the following signs combined?
 - skin dry and cool
 hair often low on forehead
 puffy eyelids.
 protruded tongue
 jaundice

IF THE ANSWER IS YES TO ANY OF THE ABOVE, THEN BABY SHOULD BE REFERRED TO APPROPRIATE SERVICES AS SOON AS POSSIBLE.

4.3 CHECKLIST 2 .DEVELOPMENTAL MILESTONES

BIRTH TO 1 MONTH.

MOVEMENT

Does baby:

a. Keep head on the side when lying on his tummy?



VISION

a. Does baby briefly fix gaze to object held in front of him (20-30 cm.)





IF THE ANSWER IS NO TO ANY OF THE ABOVE, THEN BABY SHOULD BE CHECKED AGAIN IN ONE MONTH. SHOULD DOUBT PERSIST, THEN BABY SHOULD BE REFERRED TO APPROPRIATE SERVICES.

THREE MONTHS OLD

MOVEMENT

a. when relaxed, lying on her back, does baby keep a symmetric position?





ATTENTION AND LEARNING

a. does baby recognize familiar faces?



IF THE ANSWER IS NO TO ANY OF THE ABOVE, THEN BABY SHOULD BE CHECKED AGAIN IN ONE MONTH. SHOULD DOUBT PERSIST, THEN BABY SHOULD BE REFERRED TO APPROPRIATE SERVICES.

SIX MONTH OLD

MOVEMENT

a. does baby grab objects ?

Y N

b. when lying on her stomach, does baby play with her feet?



c. when lying on her stomach, does baby roll on both sides?



d. on her stomach, does baby hold himself up on his elbows?



a. can baby recognize different faces?



HEARING

a. does baby respond to different sounds in different ways (alarm/cry at loud sound, smiles/enjoys music and familiar voices)?



b. does baby make different sounds?



SOCIAL BEHAVIOUR

a. does baby recognize familiar and non familiar faces?



ATTENTION AND LEARNING

a. does baby put everything in his mouth?



b. does baby enjoy to play with her hands/feet?



IF THE ANSWER IS NO TO ANY OF THE ABOVE, THEN BABY SHOULD BE CHECKED AGAIN IN ONE MONTH. SHOULD DOUBT PERSIST, THEN BABY SHOULD BE REFERRED TO APPROPRIATE SERVICES.

NINE MONTHS OLD

MOVEMENT

a. does baby grasp objects with first three fingers?



VISION

APPROPRIATE SERVICES.

a. does baby look at interesting objects at a distance?



ONE YEAR OLD

MOVEMENT

a. does child walk with little help or independently?





ATTENTION AND LEARNING

a. does child imitate gestures?



IF THE ANSWER IS NO TO ANY OF THE ABOVE, THEN BABY SHOULD BE CHECKED AGAIN IN ONE MONTH. SHOULD DOUBT PERSIST, THEN BABY SHOULD BE REFERRED TO APPROPRIATE SERVICES.



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