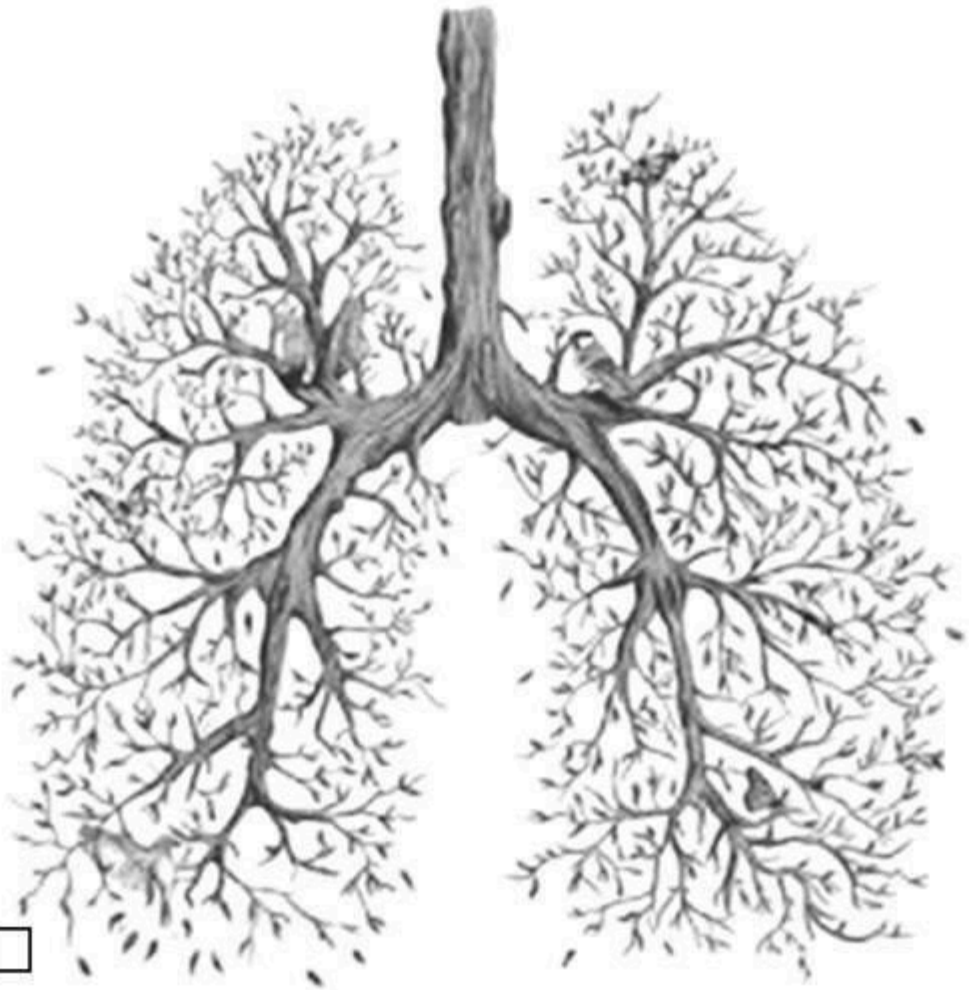


By Mohamed F. Abu Alia



Medical Committee
The University of Jordan

Community Medicine



Slides

Sheet

Lecture # 11

Doctor: **Samar alSharif**

Done By: **Huda Abo alShamat**

Child and Infant health care

This lecture is about child and infant morbidity and mortality, and the most important services that are given since birth, or even since the last week of pregnancy, because the perinatal (a week before and after delivery) is the most period when we may get newborn loss.

So we can start these services with the mother a week before delivery to take care of the coming baby.

As mentioned, the highest rate for newborns mortality is during the first week (perinatal), then during the first month (neonatal), then during first year (infant).

And here in Jordan we go for the infant's mortality.

In the developed country, they may consider the neonatal mortality, because the infant's mortality rate there is really low.

NOTE:

Perinatal: week before and week after delivery.

Early neonatal: first week old.

Neonatal: one month old.

So if we are reducing the neonatal mortality we are reducing as well the infant mortality dramatically.

Approximately 7.1 million infants die each year in the developing countries, two thirds of them die in the first 28 days which is the neonatal period.

75% of those who die in the first year, they actually die in their first month.

And 75% of the neonatal mortality, are actually early neonatal, which is the most sensitive and serious period.

So again if we can improve the survival of babies in this period, we are dramatically decreasing the infant mortality rate.

98% of all neonatal death occurs in the developing countries.

→ There are basic needs of newborn that can help to ensure a healthy start of life especially during the first hour/day:

* During labor and delivery, mothers and newborns need:

- 1- Skilled attendance to provide safe management of normal delivery (like the presence of neonatologist: a Pediatrician specialized in babies during the breastfeeding period, and he is there if the pregnancy is risky and the baby may need incubation) and especially if the pregnancy has complications such as: (retardation of growth, problem in the uterus, premature).
- 2- Family Support and care: they need special spiritual and psychological care, because we are not dealing with a case, we are dealing with humans.
- 3- Infection control: because the immunity of the newborn is really low, it was transmitted to him through the placenta from the mother during pregnancy, so the baby needs hygienic and sterilized environment and we need to ensure having clean delivery especially for the blades, cord tie ... etc. which may cause tetanus.

4- Management of complications like respiratory distress syndrome, cognitive abnormalities that they can't survive outside the uterus, so they need special needs and care. so we should be ready and expect receiving these risky newborn especially if the mother is complaining from late admission (00:06:30) or the baby came out after a long labor (anything longer than 24 hours is considered a long labor which is usually associated with fetal distress and if that took longer time then caesarian section is needed) (the normal labor for the first baby is about 12 hours)

* Following Birth, the baby needs:

5- Healthy environment:

-Air: stimulation to resuscitate infants who are not breathing at birth

They do suction when the lungs are not functioning like in the case of a premature baby and may cause a problem like respiratory distress.

(The baby's respiration is one of the important things that we look at birth, the others are: his color, movement and crying)

-Warmth: keep him in moderate room temperature

-Breastfeeding: should be started from the first hour after birth, the baby should be put on the breast of the mother and this is recommended by the WHO, and it's recommended to continue exclusive breastfeeding for 6 months and we should make sure that the baby is getting colostrum (mother's milk in the first week) because it provides immunity for him.

-Keep the newborn close to the mother; keep the mother healthy, infection control for the mother and for the baby.

- Management of complications

- Prophylactic eye care (eye drops so we should clean the eye).

After going out of the hospital, it is the Well-baby clinic role to take care of the baby, whose main objective is to prevent and decrease infant morbidity and mortality.

So:

Well-baby clinic. is specialized clinic in medical supervision, and offering services to keep healthy infants.

So the main role is not objected only to sick babies, but for preventive services to maintain good health for babies.

Why do we need such clinics?

The baby is at the time of rapid growth and change and he needs to be monitored for the detection of any problem like some cognitive abnormalities at birth are not detected, so it's time for it to be detected, whether it's cardiac abnormalities or dislocation, so this can be detected by the follow-up in well-baby clinic during the first year.

So it's mainly a preventive, screening and follow-up clinic.

The expectations of this clinic.

- 1- A routine physical examinations from head to toe, after the first examination in the first 3 days of life, the baby comes in the first month when he has to be examined again from head to toe to make sure that we didn't miss any cognitive abnormality at birth

2- Follow growth interval: we have to examine the growth index, which are the height, the weight, and head circumference

And their development of skills (مراحل النمو) like smiling, to see if he meets normal developmental milestones [for example: he is supposed to start smile and respond to external stimuli like the mother from a month to 3 months, if it exceeds 4 months we have to see where is the problem, or start saying few words by 9 months of age.

2 months of age: should be sitting with support

4 months of age: should be standing with support

9 months of age: walking few steps.

So if these ranges are exceeded we have to screen the child

The health care provider will record the child's height and weight and other important information, like hearing, vision and other screening tests that will be part of some visits.

3- Give the mother good health education because she is the main person that takes care of the baby especially if she's a mother for the first time, and the mother should write down important questions and concerns to be prepared for the visit to the well-baby clinic whether it's about breastfeeding or bathing of the child or his sleep habits, because half of the well-baby clinic is for counseling.

4- Special attention is done for the growth chart: they make a chart for the baby at the first visit. The height, weight, and head circumference of a child can be compared to the expected parameters of children of the same age and sex to determine whether the child is growing appropriately.

- 10th percentile of his weight : means the baby is under-weight (because there is 10% of the same age babies share this result with him or lower and 90% of the babies of his age are above this weight)
- 90th percentile of his weight: means he is overweight.
- 50th percentile: that means he falls right in the middle and is average weight for babies in his age.

The higher the percentile number, the bigger your baby is compared to other babies with same age

It's like a linear increase of the weight according to the normal standards of the country.

Normal weight is about 2.5–3.5 kg and the baby should be double his weight in 6 months, and triple his weight in a year.

Obesity in children is important issue also in the developed world like the United States because when we have an obese infant (they called him sugar baby) that means most probably we have an obese adult.

So there must be a weight body mass index to fit 50 percentile.

Body mass index: 27 in children

Above 80 and 85 percentile is dangerous

- One of the advantages of breastfeeding is that it ensures that the baby won't be obese, so it prevents obesity.

* According to the American academy of pediatrics:

Some developing countries follow up the child during 5 years of age and they don't continue after that while developed countries continue until 21 years. However, the visits after 5 years will be less frequent like once in a year.

In the American academy, the child should continue to be monitored until 21 years old. However in Jordan they just go there from 1 month of age until five years old.

In the first visit many things should be discussed like breastfeeding and circumcision of the baby.

The baby should stay for 2- 3 days in hospital after birth, but for any reason he left before 2 days, he has to come for a check in a week.

According to the *American academy*, during the first year, the visits should be approximately every 2 months, so 6 visits in a year (the visits are in the first month, the second, the fourth, the sixth, the ninth and the twelfth).

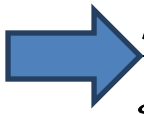
Then 3 times during the second year (15th, 18th, 2 years).

Then two times a year until the baby is 3 years old (2.5 years and 3).

And then once a year until he reaches 21.

After 5 years, it's supposed for the school to cover the health screening of the baby at least here in Jordan.

But the doctor should be visited in any worrying condition.



So the main concern of well-baby clinic is, physical examination immunization, growth and development, and nutrition.

Nutrition should be under the microscope for:

- 1- Appropriate diet to reach balance diet
- 2- Breastfeeding for the first 6 months of age, because it prevents both under and over feeding.
- 3- diet and intellectual development
- 4- fluoride in the diet is very important
- 5- Infant formulas are taken after 6 months, should be added because breastfeeding alone can't cover the baby's needs after 6 months, it lacks Iron and Vitamin C
- 6- Obesity in children (more in developed countries).

Major services provided by such clinics:

- 1- Baby measurements → growth
- 2- Vaccines.
- 3- Development → skills
- 4- Head to toe physical examination
- 5- Time to talk and ask questions

In Jordan the prevalence of well-baby growth problems is.

8% stunting (the whole weight is less than.....) (00:25:35)

13% low birth weight

2% wasting (means malnutrition)

7% overweight, in united states it could reach 15%

Other prevalences.

22% of the babies → exclusive breastfeeding less than 6 months

Up to 40% → early initiation of breastfeeding

11% → continue breastfeeding to 2 years (note that after 6 months breastfeeding alone is not enough, so the mother has to add some other nutritional resources)

Prevention or Control of Communicable disease.

- It's the cause no. 1 of disease.
- Can be transmitted from a baby to another by different means but the most common is (droplet infection) → so we have to isolate the child → we have to know the way of transmission, it's better for treatment.
- It's no more a reason of death because of vaccinations.

Steps followed to accomplish control of communicable diseases.

- 1- Reporting: like HIV virus, Polio, Typhoid ... monthly, weekly ...
- 2- Observing of coming foreigners and tourists who are going to stay in the country for more than one month Ex: Malaria, cholera
- 3- Sending teams in cases of outbreaks (أوبئة) and epidemics... Ex: Polio (in 1994).
- 4- Coordination with ministries (diseases transmitted by animals or agriculture)
- 5- Vaccinations.

How some child infectious diseases are spread?

- 1- Respiratory transmission like sneezing, droplet infections.
- 2- Direct touch, contact with infected person's skin or body fluids.
- 3- Fecal / oral transmission (orofecal transmission) (by polluted food or water): like Cholera, Polio, and Typhoid.

• Mood of transmission of each disease is important to know how to control the infection

Diseases transmitted by contact.

- 1- Chickenpox (if it's a ruptured vesicle while generally it's transmitted by droplet)
- 2- Cold sores
- 3- Conjunctivitis
- 4- Scabies (الجرب)
- 5- Head lice (القمل)
- 6- Ring worm

Diseases transmitted by respiration.

- 1- Chickenpox
- 2- Diphtheria
- 3- Influenza
- 4- Common cold
- 5- Meningitis
- 6- Measles
- 7- Mumps
- 8- Pertussis
- 9- Pneumonia (most common infectious disease that we give a vaccination against it {droplet infection})
- 10- Rubella (give the mother vaccination against it during pregnancy)



Fecal / oral transmission Diseases:

- 1- E-coli
- 2- Enteroviruses (rotaviruses → most common cause of diarrhea in newborn (less than 1 year old))
- 3- Giardia
- 4- Hepatitis A
- 5- Infectious Diarrhea
- 6- Pinworms
- 7- Polios (important).
- 8- Salmonella
- 9- Shigella (is not anymore seen lately)

Best Wishes ☺

Huda Abu Al-Shamat.