



Global adolescent & child health

Objectives :

1- Understand the adolescent and child health issues globally and the burden of diseases in this age group

2- Discuss major global interventions that are to address mortality and morbidity in adolescent and children.

3- Discuss and understand what preventive services for adolescent, and child health are delivered in KSA

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Resources : Slides. Doctor's notes.

[Colors index : Important | Notes | Note | Slides | Extra] [Editing file | Share note]

What do we mean by the term 'adolescents'?

- the terms that are commonly used in the literature: adolescents, youth and young people, are listed alongside age bands.
- WHO defines adolescents as individuals who are going through a very special phase in their lives adolescence. A
 phase during which enormous
- physical and psychological changes occur, as do changes in social perceptions and expectations. A phase when an individual is no longer a child, but not yet an adult.
- Although according to WHO's definition, adolescents are aged between 10-19, WHO is conscious that adolescence is a phase in an individual's life, rather than a fixed time period.

Lost population?

- no one wants to care for them?
- Healthy?
- Difficult to deal with?
- Developmentally challenging?
- Physiology of puberty



- intervening at this age is far better as compare to intervening and change health habit and behavior.
- behavior & attitude of adolescent a hard problem to deal with.

The second decade: No longer children, not yet adults!

- -CDC immunization schedule: 7th till 19th birthday
- -Society of adolescent medicine: 10-25
- -Saudi Arabia, Middle East?

-youth (defined by the United Nations as 15–24 years) *-young people* (10–24 years), a term used by WHO and others to combine adolescents and youth.

Adolescents are a diverse population group

- Different needsChanging needs
- 00
- Adolescents are a very diverse group.
- A boy of 12 is very different from a young man of 19.
- A boy of 12 is also very different physically but also psychologically from a girl of the same age.
- A boy of 12 who is part of a caring and financially secure family is growing up in very different circumstances from another of the same age who has run away from home to escape physical violence.
- Two boys of 12 who are growing up in very similar conditions may develop in very different ways.
- All these categories of adolescents have different needs; different but also changing needs.



What is special about adolescence? (What makes it different from childhood & adulthood?)

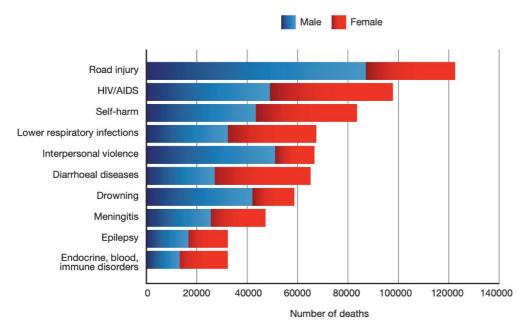
Intervening at this age is far better because human behaviour and attitude are difficult to change later

• A time of rapid physical and psychological (cognitive and emotional) growth and development.

Hormones comes to the body thus changes happen in appearance

- A time in which new capacities are developed.
- A time of changing social relationships, expectations, roles and responsibilities.
 - Adolescence is a time of rapid physical and psychological growth and development, and one in which individuals develop new capacities. It is also a time of changing social relationships, expectations, roles and responsibilities.

What are the main health problems of adolescents?



RTA, HIV and self-harm are all due to risky behavior.

Figure. 1. Top 10 causes of death among adolescents by sex

Self-harm including suicide (depression and anxiety) Why interpersonal violence? Bc they want their way to be done and implanted

Key health problems in adolescence:

Top causes of illness and disability

Anemia is overlooked problem and it

is due to malnutrition.

- 1. Depression
- 2. Road traffic injuries
- 3. Anaemia
- 4. HIV/AIDS
- 5. Self-harm
- 6. Back and neck pain
- Diarrhoea
- 8. Anxiety disorders
- 9. Asthma
- Lower respiratory infections

Why depression is num. 1 here? Bc it doesn't cause people to die straight forward unless there's sever form of depression. Mental disorder very high prevalent issue in this population

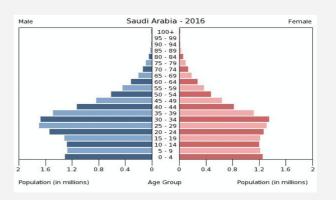
Sexual & reproductive	Other issues
health	- Injuries from
-Too early pregnancy	accidents &
• risks to mother	intentional violence
• risks to baby	- Mental health
- Health problems during	problems
pregnancy & child birth	- Substance use
(including unsafe abortion) -Sexually Transmitted Infections including HIV -Harmful traditional practices e.g. female genital mutilation -Sexual coercion	problems Eg. Tobacco - Endemic diseases: malaria, schistosomiasis, tuberculosis - Under/over-nutrition

- 1/4th of global population has their marriage at early age and this can cause high risk to the mother. Why mothers die? Bc of hemorrhage (in maternal lecture) and the mother become anemic so when the mother is not healthy the baby gonna have risk.
- HIV now it's the second cause of death in Adolescence.
- electronic cigarette initially said it's safer than nicotine cigarette but now new evidence said it's equal if it's not more dangerous. 25% is smokers and it's a huge number!!

Unfortunately, many other adolescents do not do so. The main health problems affecting adolescents are listed here. These problems vary both between and within countries.

Youth bulge in Saudi Arabia

Adolescents account for 24% of KSA population



she want to explain that most of the population is adolescent and young

Male is more than female

Health problems of adolescents in Saudi Arabia

Sexual practices of young educated men: implications for further research and health education in Kingdom of Saudi Arabia (KSA) @

Hafsa Raheel ጁ, Muhammad Afzal Mahmood, Abdulaziz BinSaeed

Journal of Public Health, Volume 35, Issue 1, March 2013, Pages 21–26, https://doi.org/10.1093/pubmed/fds055 **Published:** 01 August 2012

Knowledge, attitudes, and resources of sex education among female adolescents in public and private schools in Central Saudi Arabia.

Aljoharah M. AlQuaiz, Maha A. Almuneef, Hafsa R Minhas • Published in Saudi medical journal 2012



10.14456/apjcp.2016.179/APJCP.2016.17.8.3839 Prevalence of Cigarette Smoking Usage among Adolescent Students in Northern Saudi Arabia

RESEARCH ARTICLE

Prevalence of Cigarette Smoking Usage among Adolescent Students in Northern Saudi Arabia

"Malnutrition doesn't only mean being thin, obesity is another face of malnutrition"



Nutrition Research

Volume 30, Issue 8, August 2010, Pages 527-534



PMCID: PMC4825248

PMID: 24576364

Poor diet quality and food habits are related to impaired nutritional status in 13- to 18-year-old adolescents in Jeddah

Sidiga A. Washi 으 쯔, Maha B. Ageib

Time for an Adolescent Health Surveillance System in Saudi Arabia: Findings From "Jeeluna"

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F.S. AlBuhairan et al. / Journal of Adolescent Health 57 (2015) 263-269

Table 1

Health risk behaviors among adolescents in Saudi Arabia and gender differences

Health risk behaviors	Prevalence Prevale			Prevalence by gend	lence by gender				
	n = 12,575 (%)	95% CI		Male n = 6,444 (%)	95% CI		Female n = 6,131 (%)	95% CI	
		Lower Upper			Lower	Upper		Lower	Upper
Dietary behaviors (daily)									
Breakfast intake (sometimes/daily) ^a	54.8	50.8	58.7	62.3	60.7	64.0	46.3	44.6	48.0
Fruit intake (\geq 1 servings)	38.1	34.0	42.1	43.6	41.5	45.7	31.8	29.7	33.9
Vegetable intake (\geq 1 servings)	54.3	50.7	58.0	55.7	53.8	57.7	52.8	50.8	54.8
Carbonated beverage consumption (≥ 2 drinks)	37.5	34.0	41.1	43.9	41.9	45.9	30.4	28.3	32.5
Energy drinks consumption (≥ 1 drinks)	21.8	19.7	23.9	25.5	23.8	27.2	17.7	16.1	19.3
Activity									
Physical exercise (daily)	13.7	10.4	16.9	19.0	17.4	20.6	7.7	6.9	8.5
Television viewing (≥ 2 hours/day)	42.4	41.0	43.9	40.4	38.8	42.1	44.7	42.8	46.6
Video game playing (yes)	55.6	47.7	63.4	68.0	66.4	69.6	41.6	39.3	43.9
Internet use (≥ 2 hours/day)	30.1	26.8	33.4	26.0	24.3	27.8	34.6	32.5	36.8
Cellular phone (>1 hour/day)	14.8	13.2	16.3	13.2	12.0	14.4	16.6	14.8	18.3
Traffic safety									
Seat belt using (sometimes/always)	13.8	11.4	16.3	17.0	15.3	18.7	10.2	9.0	11.4
Car taking without permission (yes)	17.9	11.7	24.2	28.6	26.8	30.4	5.9	5.1	6.7
Bullying and violence									
Exposure to bullying ^a	25.0	23.0	27.0	27.1	25.1	29.0	22.7	21.3	24.2
Exposure to violence at school ^b	20.8	15.8	25.7	28.9	26.3	31.5	11.7	10.4	12.9
Exposure to violence in community ^b	19.7	17.6	21.8	22.9	21.3	24.5	16.1	14.6	17.6
Tobacco and substance (ever use)									
Cigarette smoking	16.2	12.5	19.9	22.1	20.0	24.2	9.6	8.2	10.9
Sheesha smoking	10.5	8.4	12.5	13.5	11.8	15.3	7.1	5.7	8.4
Solvents sniffing	16.2	12.7	19.6	11.5	10.3	12.6	21.4	19.7	23.0
Prescription medication use for nonmedical purpose	7.2	5.7	8.7	6.0	5.3	6.8	8.5	7.4	9.6
Alcohol consumption	1.4	1.1	1.8	2.1	1.7	2.5	.7	.5	1.0
Stimulants use	1.5	1.1	1.9	1.6	1.3	1.9	1.4	1.0	1.8
Marijuana use	1.0	.6	1.5	1.6	1.2	2.0	.4	.2	.6

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Table 2

Health status among adolescents in Saudi Arabia and gender differences

	Prevalence			Prevalence by gender					
	n = 12,575 (%)	95% CI		Male n = 6,444 (%)	95% CI		Female n = 6,131 (%)	95% CI	
		Lower	Upper		Lower	Upper		Lower	Upper
Self-reported health status									
Chronic illness									
Bronchial asthma	8.4	7.1	9.8	10.8	9.6	11.9	5.8	5.1	6.5
Allergies (not asthma)	4.9	3.5	6.2	4.2	3.5	4.9	5.6	4.7	6.5
Hematological disorder	3.7	2.9	4.6	3.1	2.5	3.7	4.5	3.7	5.2
Skin disorders	3.6	2.6	4.6	3.1	2.6	3.6	4.2	3.4	5.0
Musculoskeletal	1.5	1.0	1.9	1.5	1.0	2.0	1.4	1.0	1.8
Genitourinary	1.2	.7	1.6	.9	.6	1.2	1.4	.9	1.8
Diabetes	.7	.5	1.0	.9	.7	1.2	.6	.3	.8
Others	4.6	3.8	5.4	5.0	4.0	6.0	4.2	3.3	5.0
Mental health									
Sadness/depression	14.3	11.0	17.6	10.1	9.3	11.0	19.0	17.6	20.4
Anxiety	6.7	5.2	8.3	4.6	3.9	5.3	9.1	8.0	10.2
Measured indicators of health	n status								
BMI ^a									
Underweight	15.2	13.7	16.7	17.2	15.3	19.0	13.0	11.8	14.2
Healthy weight	54.8	51.2	58.4	48.8	47.2	50.3	61.5	60.0	63.1
Overweight	14.1	13.4	14.9	13.9	12.8	15.0	14.5	13.4	15.5
Obese	15.9	12.6	19.1	20.2	18.7	21.7	11.0	9.8	12.3

RMI – hody mass index: CI – confidence interval

Why should we invest in the health and development of adolescents?



If there's evidence that health care promotion and early intervention will decrease the morbidity and mortality it's better to act now. There's a hug gap!! In health care promotion in this category so we have to find it and take action against it .

What adolescents need to grow & why and are we providing them?

Information & skills

(they are still developing)

 Safe & supportive environment

They are so sensitive, specially when it comes down to **Hygiene and health** issues, so a safe ar supportive environment is needed.

(they live in an adult world)

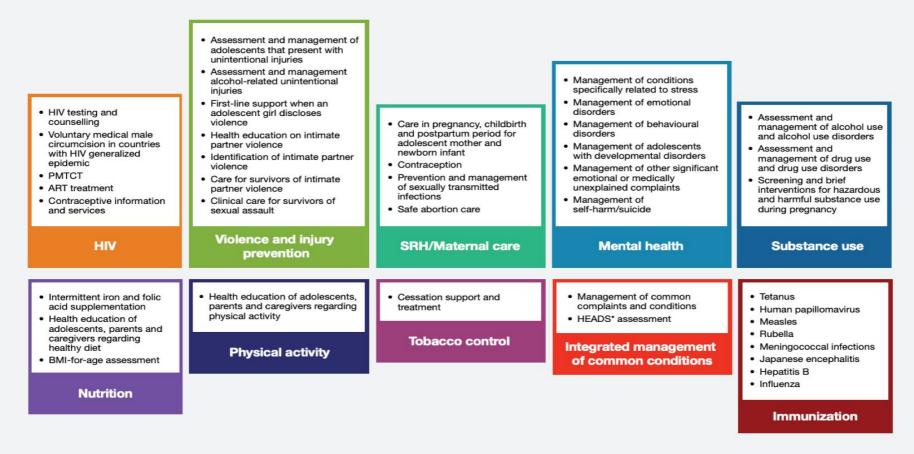
Health & counselling services

(they need a safety net)

- The Common Agenda for Adolescent Health and Development endorsed by UNFPA, UNICEF and WHO in 1995 lists what adolescents need to grow and develop in good health, and why they need these things.
- A useful analogy is that of an 8 year old girl who needs to cross the road every day to get to school.
- She needs information & skills: where to look, what to look for, when to walk across, when not to do so.
- She needs a safe & supportive environment: a zebra crossing, traffic lights that work or a traffic warden in position, drivers who respect traffic rules or are punished if they do not do so.
- She may also need health & counselling services, if she stumbles and falls, or is struck down by a vehicle.
- One problem with this analogy is that it presents health services in a curative context alone. Health workers and health services have important roles to play in promotive and preventive health as well.

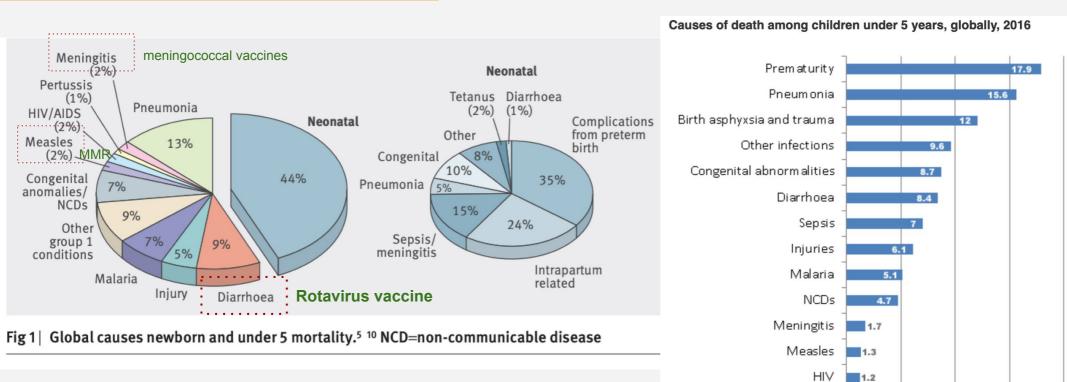
UNFPA : <u>United Nations Population Fund</u> UNICEF ;<u>United Nations</u> International Children's Emergency Fund

MCH lecture and this lecture it is going to be presented in OSCE, spec. The tutorial so try to rev. them!



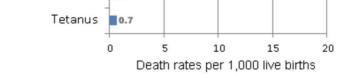
*HEADS is an acronym for Home, Education/Employment, Eating, Activity, Drugs, Sexuality, Safety, Suicide/Depressi

Figure 4. Health services and interventions addressed in WHO guidelines



Child health

In Saudi, the most prevalent cause of child mortality and morbidity is Vaccine Preventable Diseases.



When sticking to the vaccination schedule, we are preventing 60% of these death causes.

Emerging issues in child health

- congenital anomalies
- Injuries RTA, poisoning and asphyxia (coin or stone inhalation) Unintentional injuries (road traffic accident, poisoning). The reason why these population die bc of injuries so for ex. they are drinking what they should not drink "Like bleach and other cleaning products"
- Also and this is extra, drinking these things can cause **caustic injuries** in kids which can be dangerous and need an emergent intervention.
- Non-communicable diseases (chronic respiratory diseases, acquired heart diseases, childhood cancers, diabetes, and obesity)

Global response

- Sustainable Development Goal 3
- 3.2
- By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1000 live births and under-5 mortality to at least as low as 25 per 1000 live births

Target in maternal lecture was less than 70 per 100,000

Indicators of child health

How do we compare ourselves with international markets? By these Rates

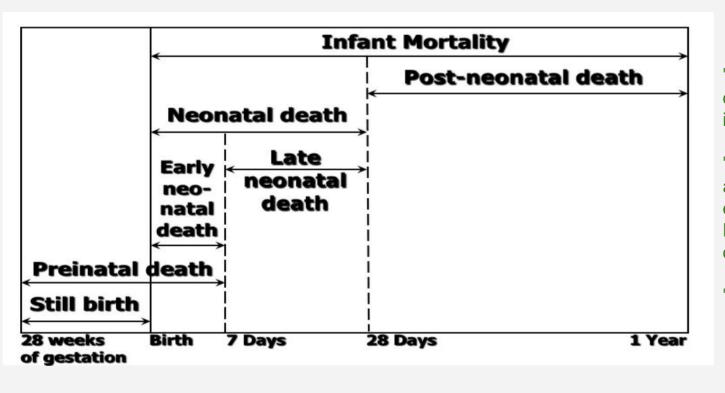
• Mortality in infancy and childhood

-Prenatal mortality rate



- -Neonatal mortality rate
- -Infant mortality rate
- -Under 5 mortality rate

Mortality in and around infancy



"Early neonatal death and stillbirth can be both considered a pre inatal death"

"Always remember this, stillbirth means they are born **dead**, any kid who is born breathing even for one min is not considered a stillbirth. It i can be difficult sometimes to classify such cases"

"Neonatal death is two types: Early and Late"

BOX 1: SUMMARY OF ESSENTIAL NEWBORN AND CHILDHOOD HEALTH INTERVENTIONS Adolescence and pre-pregnancy

- Family planning
- Preconception care*
- Pregnancy
- Appropriate care for normal and high risk pregnancies

Childbirth

- Promotion and provision of thermal care for all newborns
- · Promotion and provision of hygienic cord and skin care
- Promotion and support for early initiation and exclusive breast feeding within the first hour
- Newborn resuscitation

Postnatal period

- Antibiotics for newborns at risk and for treatment of bacterial infections
- Appropriate postnatal visits
- Extra care for small and sick babies (kangaroo mother care, treatment of infection, support for feeding, and management of respiratory complications)

Infancy and childhood

- Exclusive breast feeding for six months and continued breast feeding up to at least two years with appropriate complementary feeding from six months
- · Monitoring and care for child growth and development
- Routine immunisation for common childhood diseases, including introduction of new vaccines against Haemophilus influenzae, Pneumococcus, and rotavirus
- Micronutrient supplementation, including vitamin A from 6 months
- Prevention and management of childhood malaria
- Prevention and management of childhood pneumonia
- Prevention and management of diarrhoea
- Case management of severe acute malnutrition
- · Comprehensive care of children exposed to or infected with HIV

Health and multisector actions

- · Ensuring food security for the family (or mother and child)
- Maternal education
- Safe drinking water and sanitation
- Hand washing with soap
- Reduced household air pollution
- Health education in schools



No vaccination before date and if the mother missed this month vaccine it's okay to give later. Every mother should be breastfeeding their neonate, how soon? As soon as the baby delivered. So instead of putting the baby in the icu immediately you put him in bearskin breast of the mother and leave him for 1h.

Global intervention:

- Breast feeding promotion
- Growth monitoring
- Immunization

Breast feeding recommendations (WHO)

- Early initiation of breastfeeding within 1 hour of birth......skin to skin contact
- Exclusive breastfeeding for the first 6 months of life
- Introduction of nutritionally-adequate and safe complementary (solid) foods at 6 months together with continued breastfeeding up to 2 years of age or beyond

What do we mean by exclusive breastfeeding? No milk no water and nothing to eat for the 1st 6 months.



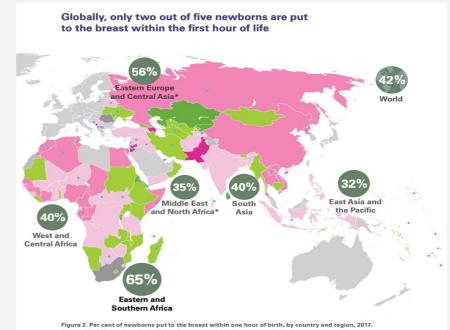




Figure 1. Visualization of the evidence about the importance of initiating breastfeeding within the first hour of life. Source: Smith Emily R, et al. 'Delayed breastfeeding initiation and infant survival: A systematic review and meta-analysis.' PLoS ONE, vol. 12, no. 7, 25 July 2017.

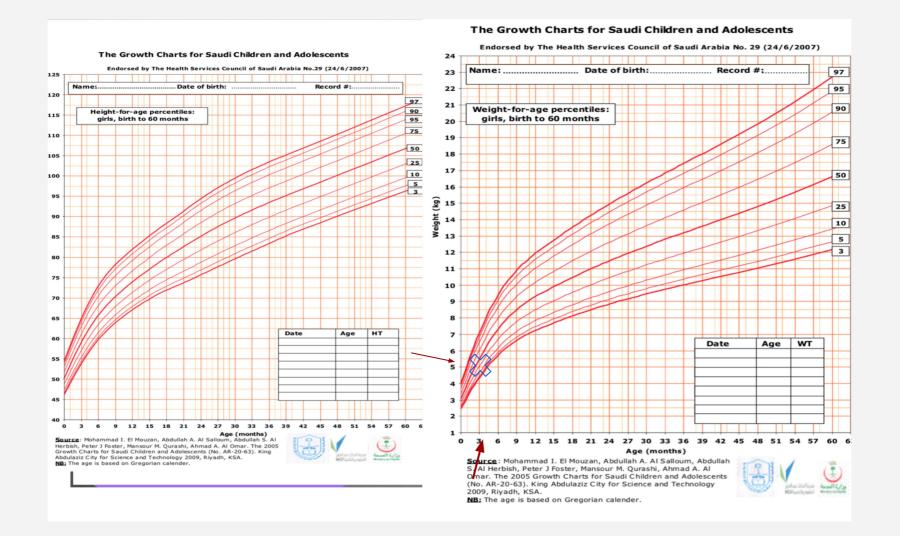
rce: UNICEF global databases, 2018. For notes on the data, see Annex 3

Breast feeding

Benefits to the infant	Benefits to the mother	INIPE
 bacteremia diarrhea respiratory tract infection necrotizing enterocolitis otitis media urinary tract infection late-onset sepsis in preterm infants type 1 and type 2 diabetes lymphoma, leukemia, and Hodgkins disease childhood overweight and obesity 	 decreased postpartum bleeding and more rapid uterine involution decreased menstrual blood loss and increased child spacing (lactational amenorrhea) earlier return to pre-pregnancy weight decreased risk of breast and ovarian cancers 	

Growth monitoring

Very essential part in the physical and mental health of a child





 لو كان مستوى الطفل تحت طبيعي في البداية فهذا غير مقلق بس مع المتابعة لو ما تحسن هنا راح يكون مقلق ولازم نشوف المشكلة .

- لو كان فوق المستوى الطبيعي بيكون شيء كويس.
- طبعًا كيف تقرأ التشارت عن طريق (العمر و الوزن) ، (العمر والطول).
- مثال : طفل عمره ٣ شهور وزنه ٥ كجم يعتبر تحت الوزن الطبيعي (ولكن ممكن في المتابعات الجاية يتحسن ويصبح في المعدل الطبيعي)

Summary

1. Adolescence:

- Adolescence is a period with specific health and developmental needs. It is a period lacksquareof rapid hormonal, physical and emotional changes. It represents the transition into puberty.
- Between ages **7-19** according to the CDC immunization schedule.
- Intervening at this age is far better than adulthood if we want to change health habits lacksquareand healthy behaviors.

The main health problems in adolescence are:

1-Road injuries 2-HIV/AIDS 3-Self harm (reflects depression and can lead to suicide)

But *depression is the leading cause of morbidity & disability* in this age group.

Another health problem is too early pregnancy which poses many risks to mother and risks to child eg. HIV, maternal death, inability to care for baby at this age.

Why should we invest in the health and development of adolescents?

Because adolescence are a large group of the population (24% in KSA) and because health promotion and early intervention at this age can decrease morbidity and mortality in adulthood.

2. Child Health:

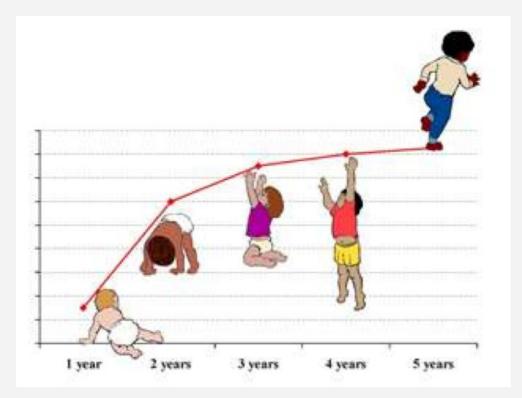
- Prematurity is the leading cause of death in children under 5.
- Vaccine preventable causes are still among the leading causes of death worldwide & in KSA. ۲
- The **sustainable development goal** globally is to reduce under-5 mortality to as low as 25 per lacksquare1000 live births by 2030.

Neonatal Health 3.

- The sustainable development goal globally is to reduce neonatal mortality to as low ۲ as 12 per 1000 live births by 2030.
- What do we mean by perinatal death? Death between 28 gestational weeks and 7 • days after birth.
- Breastfeeding is a hallmark intervention that can significantly reduce mortality in this age group. Likewise. Immunization and monitoring child growth are important.

Case: If you see that baby is not growing at normal rate what do you do? first take history from mother: how often is she breastfeeding, & for how long, is baby suckling well. ask about vaccination & socioeconomic status. Also you should support and encourage mother if she is doing well.

CHILD DEVELOPMENTAL MILESTONES



2 Months	Smiles at the sound of your voice and follows you with their eyes as you move around a room
3 Months	Raises head and chest when lying on stomach
	Grasps objects
	Smiles at other people
4 Months	Babbles, laughs, and tries to imitate sounds; holds head steady
6 Months	Rolls from back to stomach and stomach to back
	Moves objects from hand to hand
7 Months	Responds to own name
	Finds partially hidden objects
9 Months	Sits without support, crawls, babbles "mama" and "dada"
12 Months	Walks with or without support
	Says at least one word
	Enjoys imitating people
18 Months	Walks independently, drinks from a cup, says at least 15 words, points to body parts
2 Years	Runs and jumps
	Speaks in two-word sentences
	Follows simple instructions
	Begins make-believe play
3 Years	Climbs well
	Speaks in multiword sentences
	Sorts objects by shape and color
4 Years	Gets along with people outside the family
	Draws circles and squares
	Rides a tricycle
5 Years	Tells name and address
	Jumps, hops, and skips
	Gets dressed
	Counts 10 or more objects



- 1-Which one of the following is an indicator of burden of non-communicable disease?
- A. Adult mortality rate.
- B. Adolescent mortality rate.
- C. Maternal mortality rate.
- D. Under 5 mortality rate.

2-Which goal in the Sustainable Development Goals (SDG) is related to maternal and child care?
A. 3rd
B. 6th
C. 10th
D. 17th

3-	Mother	and	child	passport	include?
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A. Anemia

- B. ?
- C. ?
- D. ?

4-Baby died when he became 20 days old. How can you classify him in your report?

- A. Neonate
- B. Post neonate
- C. Stillbirth
- D. Child

5-Which of the following vaccines should be given to a child who is at First year in school? (from the previous MCQs)

- A. BCG
- B. hepatitis B
- C. MMR

Q3 :

Mother and Child Health Passport (MCHP) is designed to track the patient's medical history, monitor health condition, conduct the necessary diagnostics and test, and document all within the system to be used by respective health centers as the prime reference for mother and child healthcare. https://bit.ly/2UVVoQQ

