



**Prepared for integrating of Adolescent Health and Development Domains into pre-service nursing curriculum at The Hong Kong Polytechnic University, World Health Organization Collaborative Centre for Community Health Services. Supported by WHO, Western Pacific Regional Office**

## **Module 1 Adolescent Growth and Development**

### **I. Introduction**

Module 1 is entitled: “**Adolescent Growth and Development**”. It offers foundational knowledge on adolescent health and development (ADH) for training health professionals. Adolescent growth and development includes identification of the developmental stages of young persons, as well as their impact on adolescent health behaviours. This module examines the biological, physical (including sexual maturation), cognitive, moral and social/emotional elements of adolescent development in the context of family and community. The physiological and developmental changes and tasks in adolescence are then linked to achievements necessary for healthy development and the transition to healthy adulthood.

### **II. Learning objectives**

Upon completion of this module, learners will be able to:

1. Define adolescence and puberty
2. Identify different stages of puberty and Tanner assessments
3. Explain and describe adolescent growth and development – biological, cognitive, emotional, social and moral.
4. Analyze how adolescent developmental stages impact behaviours, risks and health care provision (how you would assess, interact with and counsel adolescents)
5. Identify the role transitions to adulthood

Sources:

1. World Health Organization. (2009). World Health Organization: Adolescent Job Aid. World Health Organization.
2. World Health Organization. Orientation Program on Adolescent Health for Health-care Providers. Facilitator Guide - New Modules. World Health Organization.
3. World Health Organization. Orientation Program on Adolescent Health for Health-care Providers. Handout - New Modules. World Health Organization.
4. The Hong Kong Polytechnic University (2009). Foundational Modules for Adolescent Health and Development Workshop. School of Nursing, The Hong Kong Polytechnic University, Hong Kong

### **III. Content**

- [Define adolescence and puberty](#)
- [Identify different stages of puberty and Tanner assessments](#)
- [Explain and describe adolescent growth and development – biological, cognitive, emotional, social and moral.](#)
- [Analyze how adolescent developmental stages impact behaviours, risks and health care provision \(how you would assess, interact with and counsel adolescents\)](#)
- [Identify the role transitions to adulthood](#)

## Objective 1: Define adolescence and puberty

**Activities – What is adolescence? (Write the answer and compare the answer with the materials given below.)**

Activity 1.1: Begin with a brainstorming exercise by writing words at the top of a flipchart – “What I remember about my adolescence”.

Please think about your own experience, and what makes adolescence such a unique and special phase of an individual’s life.

Activity 1.2: “Are the experiences of adolescents today different from those of adolescents 10-20 years ago?”

Please give reasons to support your answer.

Refer to World Health Organization (WHO) Orientation Program (OP) on Adolescent Health for Health-care Providers, Facilitator Guide – New Modules. p. B-5.



### Adolescence <[Definition](#)>

The World Health Organization (WHO) has defined adolescence as the progression from the appearance of secondary sex characteristics (puberty) to sexual and reproductive maturity, the development of mental processes and adult identity, and the transitions from total socio-economic dependence to relative independence. Physical growth is accompanied by sexual maturation, often leading to intimate relationships. [More](#)

Adolescence is a period of transition between childhood and adulthood, from immaturity to maturity. Adolescence has been described as the period in life when an individual is no longer a child, but not yet a young adult. It is a period in which the individual undergoes enormous physical and psychological changes. [More](#)

### **Definition**

- Adolescents defined by WHO as 10-19 years
- Youths defined by United Nations as 15-24 years
- Young people defined as 10-24 years old
- In local context or in different cultures, how to define adolescence???
- WHO & Adolescent Health Care divides adolescence into three psychosocial developmental phases:
  - Early adolescence: age 10-13 years
  - Middle adolescence: age 14-16 years
  - Late adolescence: age 17-19 years

### **Adolescence**

The most important organizing event of adolescence is puberty, and because puberty occurs and progresses across a wide range of chronologic ages and differs between the sexes, attempts at chronologic categorization are troubled with boundary problems. Accordingly, it is reasonable to define early, middle, and late adolescence in terms of stages of pubertal development, since these follow a consistent pattern for individuals regardless of chronologic age. (Adapted from Behrman & Vaughan, 2002.)

### **Adolescence (Cont'd)**

In addition, the adolescent experiences changes in social expectations and social perceptions. The individual's capacity for abstract and critical thought also develops, along with a heightened sense of self-awareness and emotional independence.

It is important to keep this in mind for further understanding of adolescents' behaviour as you proceed with your reading through this module.

Refer to the slides of PowerPoint Module 1 from The Hong Kong Polytechnic University (2009). Manual for Adolescent Health and Development Workshop.

## **Objective 2: Identify different stages of puberty and Tanner assessments**

### **Activities**

Activity 1.3: “Those were the days” – Going through the time tunnel back to your puberty.

Make a list of questions that they would like to ask the opposite sex group about the physical and emotional changes that they experienced in their own puberty. Possible questions include:

- What did you like best about being age 10-15?
- What did you like least about being age 10-15?
- Did you have any worries about your bodily changes? What was your greatest concern?
- What emotional changes did you experience during puberty? How did you feel about yourself?
- What were the changes in your relationship with your parents?
- What were the changes in your friendships and feelings of love?
- Where did you get information about pubertal changes? Who did you go to with your questions and problems?

Groups of opposite sexes then pair up and use the list to interview each other. Discuss the results of the interviews.

### **Puberty** <[Definition](#)>

Puberty is a period of time that involves a predictable sequence of [hormonal](#) and [physical](#) changes, including both sexual maturation and physical growth (Hockenberry et al. 2007).

Adolescence is characterized by changes associated with pubertal development that typically take place during the early adolescent years.

Physical maturation and timing affect the general adolescent adjustment, and such effects are different for boys and girls. [More](#)

### **Activities**

Activity 1.4: Are there any differences between boys' and girls' sex characteristics during their puberty development?

Make a list of the changes experienced by males and females, and note the similarities and differences.

## Pubertal sexual maturation

As with general growth, the development of secondary sexual characteristics occurs in a predictable sequence. This sequence has been divided into a series of five phases termed the Tanner stages (Tanner, 1973). [More](#)

- Tanner (1969): **Classification of Sex Maturity Rating (SMR) in [Girls](#)**

SMR Stage	Pubic Hair	Breasts
1	Preadolescent	Preadolescent
2	Sparse, lightly pigmented, straight, medial border of labia	Breast and papilla elevated as small mound, areola diameter increased
3	Darker, beginning to curl, increased amount	Breast and areola enlarged, no contour separation
4	Coarse, curly, abundant but amount less than in adulthood	Areola and papilla form secondary mound
5	Adult feminine triangle, spread to medial surface of thighs	Mature, nipple projects, areola part of general breast contour

- Tanner (1969): **Classification of Sex Maturity Rating (SMR) in [Boys](#)**

SMR Stage	Pubic Hair	Penis	Testes
1	None	Preadolescent	Preadolescent
2	Scant, slightly pigmented	Slight enlargement	Enlarged scrotum, pink texture altered
3	Darker, starts to curl, small amount	Longer	Larger
4	Resembles adult type, but less in quantity; coarse, curly	Larger, glands and breadth increase in size	Larger, scrotum dark
5	Adult distribution, spread to medial surface of thighs	Adult size	Adult size

### Definition

Puberty is considered as a defined period of time during which adolescents experience biological changes.

### Hormonal changes

Physical changes accompany changes in the hypothalamic–pituitary–gonadal (HPG) axis and occur in an orderly sequence over a definite time during normal puberty (Becker, 2001). Puberty is triggered by hormonal influences and is controlled by the anterior pituitary gland in response to a stimulus from the hypothalamus.

The production of gonadotropin-releasing hormone, follicle stimulating hormone, luteinizing hormone and sex steroids (known as estrogens, androgens, progesterone and testosterone) affect the biological changes of adolescents and initiate the beginning of puberty.

### Major physical changes

	Female	Male	Key message
Skin	Skin becomes oily, sometimes with pimples or acne.		This lasts through your teen years and then usually ends. Wash your face daily with soap and water.
Hair	Hair increases on legs, underarms and in pubic area.	Hair increases on legs, chest, face, underarms and in public areas.	The amount of new body hair that grows is different for each young man and woman.
Breasts	Breasts grow, swell and hurt just a little.	Breasts may swell.	Both breasts may not grow at the same rate or to the same size. It is normal for one breast to be a bit smaller than the other one.
Body size	Hips broaden, breasts enlarge, weight and height increase.	Shoulders and chest broaden, weight and height increase.	Girls reach their full height before boys. However, by the end of puberty, young men are often taller and weigh more.
Sweat	Sweat increases and body odor may appear.		This is normal. Daily washing or bathing can help to control it.
Voice	Voice deepens slightly.	Voice deepens and may crack.	Male voice may go suddenly from high to low and from low to high. This cracking can be embarrassing at times. In time, it will stop.
Female sexual organs	Menstruation begins and there is vaginal discharge.		It is normal for the vaginal discharge to increase in mid-cycle and before the period.
Male sexual organs		Erections and wet dreams occur. Penis and testicles enlarge.	Erections and wet dreams are completely normal.

### Early Maturation

Early maturing boys are more relaxed, more self-assured, better adjusted, and less dependent than early maturing girls.

Early maturing girls may engage in adult behaviours (smoking, drinking, sexual activities, rebellion).

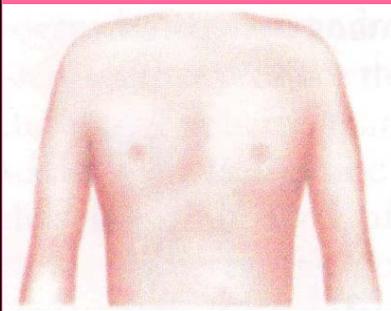
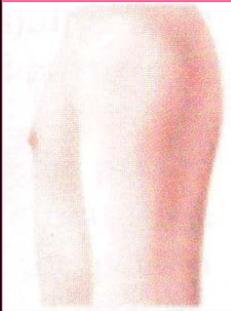
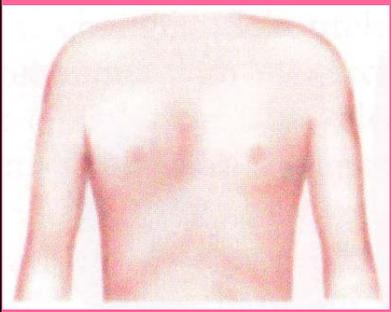
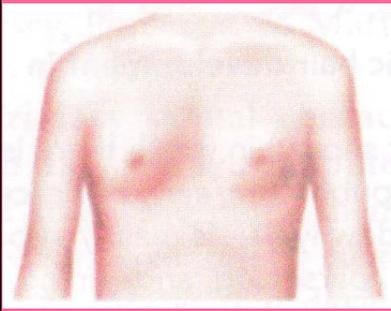
Girls are more open than boys about sex, with more girls stating that casual sex is acceptable.

### Pubertal Sexual Maturation

Increases in the reproductive hormones are responsible for the dramatic changes in secondary sexual characteristics that occur during puberty.

### Girls

#### <Breast Staging>

Stage	Anterior View	Lateral View	Description
I			<ul style="list-style-type: none"> <li>• pre-pubertal state</li> <li>• no breast tissue is palpable</li> <li>• areola are generally &lt; 2 cm in diameter</li> <li>• nipples are only a few millimetres in diameter and may be relatively flat, inverted, or raised</li> </ul>
II			<ul style="list-style-type: none"> <li>• recognizable by the appearance of a visible and palpable mound of breast and papillae with increased areola diameter</li> <li>• skin of the areola becomes thinner</li> <li>• nipple may be developed to various degrees</li> </ul>
III			<ul style="list-style-type: none"> <li>• further growth and elevation of the entire breast</li> </ul>

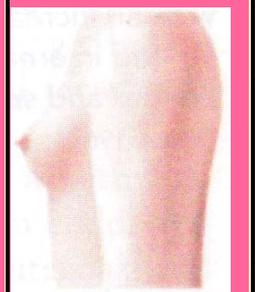
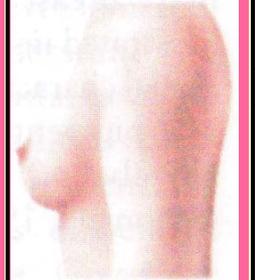
IV			<ul style="list-style-type: none"> <li>• further but incomplete growth</li> <li>• often includes a secondary mound formed by a projection of the areola and papilla above the general breast contour</li> <li>• the secondary mound may never appear</li> </ul>
V			<ul style="list-style-type: none"> <li>• represents the adult breast showing mature contour and proportions and considerable variation in size</li> </ul>

Figure adapted from Lerner R.M. (2002) Adolescence: Development, diversity, context, and application. New Jersey: Prentice Hall; description adapted from McMillian J.A., DeAngelis C.D., Feigin R.D., & Warshaw J.B. (1999) Oski's paediatrics: principles and practice.(3rd ed). Philadelphia: Lippincott Williams and Wilkins)

The duration of the developmental stages varies as it is related to the consistency of the pattern and the extent of estrogen secretion. Girls with early, but not rapid, progression of initial pubertal changes may take longer than average to complete puberty. Those with robust hormone secretion appear to complete puberty in a shorter than average duration, regardless of the age of onset. (Becker, 2001)

**<Pubic Hair Staging>**

Stage	Figure	Description
I	Not Shown	<ul style="list-style-type: none"> <li>• nonsexual general body hair</li> <li>• more concentrated in the pubic area</li> <li>• may be present throughout childhood</li> <li>• no long, coarse, or heavily pigmented hair is present</li> </ul>
II		<ul style="list-style-type: none"> <li>• pigmented, straight or slightly curled hair</li> <li>• is noticeably longer than the fine pre-pubertal hair</li> <li>• usually appears first along the labia major</li> </ul>

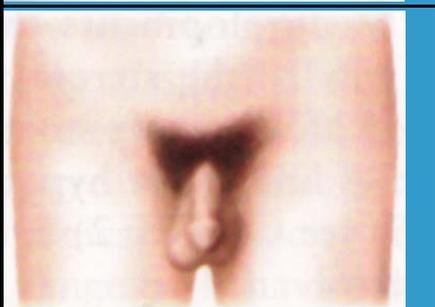
III		<ul style="list-style-type: none"> <li>• greater concentration of dark, coarse, curly hair is seen that extends onto the mons pubis</li> </ul>
IV		<ul style="list-style-type: none"> <li>• hair is adult in texture and thickness</li> <li>• not yet distributed in the full typical adult manner</li> </ul>

(Figure adapted from Lerner R.M. (2002) Adolescence: Development, diversity, context, and application. New Jersey: Prentice Hall; description adapted from McMillian J.A., DeAngelis C.D., Feigin R.D., & Warshaw J.B. (1999) Oski's paediatrics: principles and practice (3rd ed). Philadelphia: Lippincott Williams and Wilkins)

## Boys

### <Genital Size Staging>

Stage	Figure	Description
I		<ul style="list-style-type: none"> <li>• pre-pubertal size of testes and penis look like that in early childhood</li> </ul>
II		<ul style="list-style-type: none"> <li>• genital growth begins</li> <li>• testicular enlargement is recognizable</li> <li>• a visible increase in the size of the penis, scrotum, and testes</li> <li>• length of the longitudinal axis ranges from 2.5 to 3.2 cm</li> </ul>

III		<ul style="list-style-type: none"> <li>• subsequent to further genital growth</li> <li>• penis has increased in diameter as well as length</li> <li>• scrotum is further developed</li> <li>• testes have increased in length to 3.3 to 4.0 cm</li> </ul>
IV		<ul style="list-style-type: none"> <li>• further growth of the genitalia</li> <li>• penis becomes broader</li> <li>• long axis of the testes reaches 4.0 to 4.5 cm</li> <li>• prostate is palpable by rectal examination</li> </ul>
V		<ul style="list-style-type: none"> <li>• genitalia are within the adult range in size</li> </ul>

(Figure adapted from Lerner R.M. (2002) Adolescence: Development, diversity, context, and application. New Jersey: Prentice Hall; description adapted from McMillian J.A., DeAngelis C.D., Feigin R.D., & Warshaw J.B. (1999) Oski's paediatrics: principles and practice (3rd ed). Philadelphia: Lippincott Williams and Wilkins)

<Pubic Hair Staging>

Stage	Figure	Description
I		<ul style="list-style-type: none"> <li>• fine, pre-pubertal hair around the genitalia</li> </ul>
II		<ul style="list-style-type: none"> <li>• pigmented pubic hair around the base of the penis</li> </ul>

III		<ul style="list-style-type: none"> <li>• thicker hair, pigmented and curly</li> <li>• extends above the penis</li> </ul>
IV		<ul style="list-style-type: none"> <li>• extension of hair over the genital area in less than adult distribution</li> </ul>
V		<ul style="list-style-type: none"> <li>• spread of hair laterally onto the medial thighs</li> <li>• hair may or may not extend from the pubic area toward the umbilicus and anus</li> </ul>

(Figure adapted from Lerner R.M. (2002) Adolescence: Development, diversity, context, and application. New Jersey: Prentice Hall; description adapted from McMillian J.A., DeAngelis C.D., Feigin R.D., & Warshaw J.B. (1999) Oski's paediatrics: principles and practice (3rd ed). Philadelphia: Lippincott Williams and Wilkins)

## Adolescent delayed puberty: Male and female adolescents

Puberty is accompanied by physical, psychological and emotional changes adapted to ensure reproductive and parenting success. According to Patton (2009), the effect of puberty on health and well-being were profound and paradoxical. He further stated Physical maturation propels an individual into a life phase where strength, speed and fitness peak and yet many new problems emerge. It marks a transition in risks for depression and other common mental disorders, psychosomatic syndromes, substances abuse, eating disorders and antisocial behaviours.

\*Adopted from the WHO, Adolescent Job Aid (AJA) (2009) on delayed puberty – male and female adolescents.

### Information to be given to adolescents and accompanying adults

#### 1. What is the condition?

*What do we mean by puberty?*

As a child becomes an adolescent, the body starts preparing for adulthood. This stage, which lasts from two to five years, is called puberty. Chemicals produced by the body, called hormones, trigger these changes. During puberty, there is an increase in height and weight, and in the musculature. There is also marked growth and development of the sexual organs. During puberty one also develops facial and body hair as well as acne.

*When does puberty normally occur?*

There is significant variation in the timing of puberty between individuals. Puberty usually begins in boys when they are around ten years old and lasts until they are 15 or 16 years of age. However, for many boys, puberty does not start until after they are ten years old.

*When do we say that puberty is later than normal?*

We say that puberty is later than normal (or is delayed) in a boy when certain changes have not started to occur by a certain age; for example, if the penis has not started to increase in size by the age of 14 years, the testes have not started to enlarge by the age of 14 years, or hair on or near the genital area has not started to appear by the age of 15 years.

#### 2. What are the causes of this condition?

The most common cause of delayed puberty is the normal variation in the age at which boys start puberty. Such variation often runs in the family, for example, the father of a boy who is starting puberty late may have himself started his puberty late. This normal variation needs no treatment. However, sometimes undernutrition can cause delays in puberty. Sometimes, chronic illnesses can cause delays in puberty as well.

#### 3. What are the effects of this condition on your body?

Boys with delayed puberty tend to be shorter than other boys of the same age. However, as their bodies go through puberty their height tends to catch up with that of their peers. In addition, there are psychological and social effects associated with delayed puberty. Boys may feel anxious and isolated if their peers are taller and stronger than them.

#### 4. What treatments are we proposing and why?

If your puberty is delayed we would want to refer you to a specialist to confirm that the delay is due to the normal variation in the age when boys start puberty.

## Delayed puberty: Male

Ask	Look/Feel/Listen	Symptoms & signs
<p> <i>TIP for health worker:</i> Say that you are now going to ask him some personal questions and reassure him that the information will be kept confidential.</p> <ul style="list-style-type: none"> <li>• How old are you?</li> </ul> <p><b>Penis</b></p> <ul style="list-style-type: none"> <li>• Has your penis increased in size since you were a small boy? <i>If the size has increased:</i> – How old were you when you first noticed this?</li> </ul> <p><b>Testes</b></p> <ul style="list-style-type: none"> <li>• Have your testicles increased in size from when were you a small boy? <i>If the size has increased:</i> – How old were you when you first noticed this?</li> </ul> <p><b>Pubic hair</b></p> <ul style="list-style-type: none"> <li>• Have you developed any hair on or near your genital area? <i>If he has pubic hair:</i> – How old were you when you first noticed this hair?</li> </ul> <p><b>Chronic illness</b></p> <ul style="list-style-type: none"> <li>• Do you have any long-standing illnesses? <i>(Note: Probe if there are symptoms of long-standing fever, cough, diarrhoea, loss of weight etc.).</i></li> </ul> <p>Do a sexual reproductive health assessment</p> <p>Do a HEADS assessment</p> <div data-bbox="236 1731 592 1883" style="background-color: black; color: white; padding: 5px;"> <p><b>ALERT</b> If any anatomical abnormality of the testes or penis are found on examination, refer</p> </div>	<p> <i>TIP for health worker:</i> Ensure privacy of the examination setting.</p> <p>Check:</p> <ul style="list-style-type: none"> <li>• Weight</li> <li>• Height</li> </ul> <p>Calculate:</p> <ul style="list-style-type: none"> <li>• BMI (Body mass index) = <math>\text{weight}/\text{height}^2</math> (or use BMI tabulation charts)</li> </ul> <p>Plot BMI Z score on BMI for age centile chart</p> <p>Check:</p> <p><b>Penis</b></p> <ul style="list-style-type: none"> <li>• Size (if obese, retract the pubic fat pad to obtain an accurate estimation of size)</li> <li>• Whether there are any anatomical variants (e.g. the opening of urethra is not at the tip of the penis)</li> </ul> <p><b>Testes</b></p> <ul style="list-style-type: none"> <li>• Size</li> <li>• Lump on testes</li> <li>• Swelling of testes</li> </ul> <p><b>Pubic hair</b></p> <ul style="list-style-type: none"> <li>• Presence of pubic hair</li> </ul> <p>Do a general physical examination</p> <p>Check for signs of chronic illness</p>	<ul style="list-style-type: none"> <li>• No enlargement of penis by age 14 years <i>or</i></li> <li>• No enlargement of testes by age 14 years <i>or</i></li> <li>• No pubic hair by age 15 years <i>and</i></li> <li>• Underweight (BMI less than -2Z score for age) <i>or</i></li> <li>• Signs or symptoms of chronic illness</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• No enlargement of penis by age 14 years <i>or</i></li> <li>• No enlargement of testes by age 14 years <i>or</i></li> <li>• No pubic hair by age 15 years <i>and</i></li> <li>• Not undernourished (BMI more than -2Z score for age) <i>and</i></li> <li>• No signs or symptoms of chronic illness</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• He is 13 years of age or younger <i>or</i></li> <li>• If 14 years of age or older, enlargement of penis has started <i>or</i></li> <li>• If 14 years of age or older, testicular enlargement has started <i>and</i></li> <li>• If 15 years of age or older, pubic hair is present</li> </ul>

**Adolescent:** My penis seems small compared to those of my friends.

- My testicles are small.
- I do not have any hair on my body.

**Parent:** My son's penis seems too small for his age. • My son's testicles seem very small. My son does not have body hair yet.

**DEVELOPMENTAL 17**

Classify	Manage	Follow-up
<p><b>Delayed puberty possibly due to chronic illness or undernutrition</b></p>	<ul style="list-style-type: none"> <li>• Treat or refer underlying medical condition</li> <li>• Address the nutritional problems using the algorithm "I am too fat/too thin"</li> <li>• Advise him that pubertal development can be delayed due to chronic illness or undernutrition and that a health worker will need to reassess him once the chronic illness and/or nutritional issues have been treated</li> </ul>	<p>Follow up chronic illness as needed</p> <p>Follow up nutritional problems as needed</p> <p>Review pubertal development in six months</p>
<p><b>Delayed puberty unlikely to be due to chronic illness or undernutrition</b></p>	<ul style="list-style-type: none"> <li>• Advise him that pubertal development is delayed for his age</li> <li>• Reassure him that even though puberty is delayed, most boys will eventually develop and go through puberty. Stress that a small number do not do so and that is why he needs to be checked further</li> <li>• Refer to an endocrinologist if possible</li> </ul> <p>If also short, use the algorithm "I am too short"</p>	<p>Review him in six months if referral to an endocrinologist is not possible</p>
<p><b>Normal puberty</b></p>	<ul style="list-style-type: none"> <li>• If he is 13 years of age or younger, even if the signs of pubertal development have not appeared, he is within normal limits for age</li> <li>• Reassure him that most boys will eventually develop and go through puberty</li> </ul>	

## Frequently asked questions

### **Why is it that I have so little hair on my face and body?**

*Understanding the reason for the question:*

The adolescent may feel inadequate when compared to his peers.

*Points to make in responding to this question:*

The amount of hair on the face and body changes as a boy grows older, and varies from individual to another, and from boys in one family to another. You may have less body hair because your puberty may be delayed. When puberty occurs, your body hair is likely to increase as well. If you have already gone through puberty and still do not have much body hair, you will need to accept this. (Many completely healthy and well men have little facial and body hair).

### **My penis seems small when compared to those of my friends. Am I normal?**

*Understanding the reason for this question:*

This question may come from the belief that the size of the penis determines the “maleness” of the person. The boy may be anxious about not being normal.

*Points to make in responding to this question:*

- Two boys of the same age may have differences in the sizes of their penises depending on their family traits. This has nothing to do with your maleness or sexual function.
- If you are still in your early years of your pubertal development there is still time for your penis size to increase.

## Delayed puberty: Female

Ask	Look/Feel/Listen	Symptoms & signs
<p> <i>TIP for health worker:</i> Say that you are now going to ask her some personal questions and reassure her that the information will be kept confidential.</p> <ul style="list-style-type: none"> <li>How old are you?</li> </ul> <p><b>Breast development</b></p> <ul style="list-style-type: none"> <li>Have you noticed any change in the size of your breasts or any change in the size or colour of the area around your nipples?</li> </ul> <p><i>If breast development has started:</i></p> <ul style="list-style-type: none"> <li>How old were you when you first noticed these changes?</li> </ul> <p><b>Pubic hair</b></p> <ul style="list-style-type: none"> <li>Have you developed any hair on or near your genital area?</li> </ul> <p><i>If she has pubic hair:</i></p> <ul style="list-style-type: none"> <li>How old were you when you first noticed this hair?</li> </ul> <p><b>Menstrual periods</b></p> <ul style="list-style-type: none"> <li>Have your periods started?</li> </ul> <p><i>If her periods have started:</i></p> <ul style="list-style-type: none"> <li>How old were you when you had your first period?</li> </ul> <p><b>Chronic illness</b></p> <ul style="list-style-type: none"> <li>Do you have any long-standing illnesses? <i>(Note: Probe if there are symptoms of long-standing fever, cough, diarrhoea, loss of weight etc.).</i></li> </ul> <p><b>Do a sexual reproductive health assessment</b></p> <p><b>Do a HEADS assessment</b></p>	<p> <i>TIP for health worker:</i> Ensure privacy of the examination setting. Have a female colleague present if necessary.</p> <p>Check:</p> <ul style="list-style-type: none"> <li>Weight</li> <li>Height</li> </ul> <p>Calculate:</p> <ul style="list-style-type: none"> <li>BMI (Body mass index) = weight/height<sup>2</sup> (or use BMI tabulation charts)</li> </ul> <p>Plot BMI Z score on BMI for age centile chart</p> <p>Check:</p> <p><b>Breasts</b></p> <ul style="list-style-type: none"> <li>Presence of breast tissue</li> <li>Colour and size of the area around the nipples</li> </ul> <p><b>Pubic hair</b></p> <ul style="list-style-type: none"> <li>Presence of pubic hair</li> </ul> <p><b>Do a general physical examination</b></p> <p><b>Check for signs of chronic illness</b></p>	<ul style="list-style-type: none"> <li>No breast development by age 14 years <i>or</i></li> <li>No pubic hair present by age 14 years <i>or</i></li> <li>Not menstruating by age 16 years <i>or</i></li> <li>It is more than five years since the first signs of breast development appeared and she has not yet had her first period <i>and</i></li> <li>Underweight (BMI less than -2Z score for age) <i>or</i></li> <li>Signs/symptoms of chronic illness</li> </ul> <hr/> <ul style="list-style-type: none"> <li>No breast development by age 14 years <i>or</i></li> <li>No pubic hair present by age 14 years <i>or</i></li> <li>Not menstruating by age 16 years <i>or</i></li> <li>It is more than five years since the first signs of breast development appeared and she has not yet had her first period <i>and</i></li> <li>Not undernourished (BMI more than -2Z score for age) <i>and</i></li> <li>No signs/symptoms of chronic illness</li> </ul> <hr/> <p>She is 13 years of age or younger <i>or</i></p> <ul style="list-style-type: none"> <li>If 14 years of age or older, breast development has started <i>and</i></li> <li>If 14 years of age or older, pubic hair is present <i>and</i></li> <li>If 16 years or older, menstruation has started <i>and</i></li> <li>Less than five years have passed since the first signs of breast development and her first period</li> </ul>

**Adolescent:** My periods have not started yet. • My breasts seem small compared to those of my friends. • Am I normal?

**Parent:** My daughter's periods have not started yet. • My daughter's breasts are too small for her age? • Is my daughter normal?

**DEVELOPMENTAL 21**

Classify	Manage	Follow-up
<b>Delayed puberty possibly due to chronic illness or undernutrition</b>	<ul style="list-style-type: none"> <li>• Treat or refer the underlying medical condition</li> <li>• Address the nutritional problems using the algorithm "I am too fat/ too thin"</li> <li>• Advise her that pubertal development can be delayed due to chronic illness or undernutrition, and that a health worker will need to reassess her once the chronic illness and/or nutritional problems have been addressed</li> </ul>	<p>Follow up chronic illness as needed</p> <p>Follow up nutritional problems as needed</p> <p>Review pubertal development in six months</p>
<b>Delayed puberty unlikely to be due to chronic illness or undernutrition</b>	<ul style="list-style-type: none"> <li>• Advise her that pubertal development is delayed for her age</li> <li>• Reassure her that even though puberty is delayed, most girls will eventually go through puberty. Stress that a small number do not do so and that is why she needs to be checked further</li> <li>• Refer to a gynaecologist or endocrinologist if possible</li> </ul> <p>If also short, use the algorithm "I am too short"</p>	<p>Review her in six months if referral to an endocrinologist or a gynaecologist is not possible</p>
<b>Normal</b>	<ul style="list-style-type: none"> <li>• If she is 13 years of age or younger even if the signs of pubertal development have not appeared, she is within normal limits for age</li> <li>• Reassure her that most girls will eventually develop and go through puberty</li> </ul>	

## Information to be given to adolescents and accompanying adults

### 1. What is the condition?

#### *What do we mean by puberty?*

As children grow and develop, there comes a stage when their bodies start preparing for adulthood. This stage, called "puberty", can last from two to five years. Chemicals produced by the body called hormones trigger these changes. As girls go through puberty, there is an increase in height and weight and there is a broadening of the hips. There are also associated changes such as the enlargement of the breasts and the appearance of body hair on or near the genital area and in the armpits, and acne on the face and elsewhere. There is also marked growth and development of the sexual organs, in preparation for adulthood.

#### *When does puberty normally occur?*

There is significant variation in the timing of puberty between individuals. For most girls, puberty usually begins at around 9 years of age and is usually complete by the age of 14 to 16 years. However, for many girls, puberty does not start until after they are 9 years of age.

#### *When do we say that puberty is later than normal?*

We say that puberty is later than normal (or delayed) in a girl when certain changes have not started to occur by a certain age. For example we say puberty is delayed if her breasts have not started to increase in size before the age of 14 years; there is no appearance of hair on or near the genital area by the age of 14 years, or her periods have not started by the age of 16 years.

### 2. What are the causes of this condition?

The most common cause of delayed

puberty is the normal variation in the age at which girls start puberty. Such variation often runs in the family, for example, the mother of a girl who is late in starting her puberty may herself have started her puberty late. This normal variation needs no treatment. However, sometimes poor nutrition can cause a delay in puberty. Sometimes chronic illnesses can cause delays in puberty as well. It is important that the nutritional problems and chronic illnesses are assessed and dealt with.

### 3. What are the effects of this condition on your body?

A girl with delayed puberty is likely to be shorter than other girls of the same age. However, as she goes through puberty her height is likely to catch up with that of her peers. Almost all girls with delayed puberty eventually develop normally and are able to live normal lives (including having children if they wish to).

### 4. What treatments are we proposing and why?

#### *Delayed puberty possibly due to chronic illness or undernutrition*

If your puberty has been delayed because of an underlying chronic illness or undernutrition, it is important that they be assessed and dealt with.

#### *Delayed puberty not related to chronic illness or undernutrition*

If your puberty is delayed we would want to refer you to a specialist who will examine you and carry out tests to confirm whether the delay is due to the normal variation in the age when girls start puberty or where there is an underlying condition which is causing it.

## Frequently asked questions

**Why have my periods not yet started?  
Why are my breasts smaller than those of  
my friends?**

*Understanding the reason for the questions:*

All adolescents – boys and girls – are concerned about whether what is happening to their bodies is normal or not.

*Points to make in responding to this question:*

There is significant variation in the size of the breast between individuals. The size of your breast can depend on a number of things including, how far you are through the process of puberty (your development),

and the normal variation in girls in the amount of fat deposited in their breasts. Breast development is one of the early signs of puberty, and usually starts to occur a few years before the periods start. You will need to eat a healthy and nutritious diet, have adequate exercise and wait for your breasts to develop with time as you go through puberty.

Different girls go through puberty at different rates depending on their family traits and their nutrition. Almost all girls go through the process of puberty with no problems.

**Objective 3: Explain and describe adolescent growth and development – biological, cognitive, emotional, social and moral**

**Activities**

Activity 1.5: Would you consider the following situations within physiological limits in your country?

- A girl with pubic hair beginning to develop at 7.5 yrs
- A girl with breast development starting at 8.5 yrs
- A girl with menarche at 9.5 yrs
- A girl with primary amenorrhea at 15.5 yrs
- A boy with a pre-pubertal penis at 14 yrs

**Adolescent growth and development**

Each adolescent responds to life's demands and opportunities in a unique and personal way. This special stage of life can be conceptualized by dividing it into three psychosocial developmental phases: (adapted from the WHO, OP)

1. Early adolescence: age 10-13 years
2. Middle adolescence: age 14-16 years
3. Late adolescence: age 17-19 years

**Adolescent growth and development – biological, cognitive, emotional, social and moral aspects**

Age (Years)	Early Adolescence (11-13) to (14-15)	Middle Adolescence (14-15) to (17)	Late Adolescence (18-21) Varies
Growth	<ul style="list-style-type: none"> <li>• Secondary sexual characteristics appear</li> <li>• Growth accelerates and reaches a peak</li> </ul>	<ul style="list-style-type: none"> <li>• Secondary sexual characteristics advance</li> <li>• Growth slows down, approximately 95% of adult stature attained</li> </ul>	<ul style="list-style-type: none"> <li>• Physically mature</li> </ul>
Cognition	<ul style="list-style-type: none"> <li>• Concrete thinking</li> <li>• Existential orientation</li> <li>• Long-range implications of actions</li> </ul>	<ul style="list-style-type: none"> <li>• Thinking more abstract; capable of long-range thinking</li> <li>• Reverts to concrete thinking when stressed</li> </ul>	<ul style="list-style-type: none"> <li>• Establishes abstract thinking</li> <li>• Future oriented</li> <li>• Perceives long-range options</li> </ul>
Psychological	<ul style="list-style-type: none"> <li>• Preoccupied with</li> <li>• Rapid physical growth</li> <li>• Body image</li> <li>• Disrupted change</li> </ul>	<ul style="list-style-type: none"> <li>• Re-establishes body image</li> <li>• Preoccupation with fantasy and idealism</li> <li>• Sense of omnipotence</li> </ul>	<ul style="list-style-type: none"> <li>• Intellectual and functional identity established</li> </ul>
Family	<ul style="list-style-type: none"> <li>• Defining boundaries</li> </ul>	<ul style="list-style-type: none"> <li>• Conflicts over control</li> </ul>	<ul style="list-style-type: none"> <li>• Transposition of</li> </ul>

	of independence / dependence		child-parent relationship to adult-adult relationships
Peer group	<ul style="list-style-type: none"> <li>Seeks affiliation to counter instability</li> </ul>	<ul style="list-style-type: none"> <li>Needs identification to affirm self image</li> <li>Peer group defines behavioural code</li> </ul>	<ul style="list-style-type: none"> <li>Peer group recedes in favour of individual friendships</li> </ul>
Sexuality	<ul style="list-style-type: none"> <li>Self exploration and evaluation</li> </ul>	<ul style="list-style-type: none"> <li>Preoccupation with romantic fantasy</li> <li>Testing ability to attract opposite sex</li> </ul>	<ul style="list-style-type: none"> <li>Forms stable relationships</li> <li>Mutuality and reciprocity</li> <li>Plans for future</li> </ul>

### Adolescent emotional changes

- Struggling with a sense of identity and questions about oneself
- Moodiness, anger and depression
- Need for more independence and privacy
- Relationships with friends and opinions of others become more important
- More concerned or worried about appearance and body
- Worry about future (school, family, job)
- New “crushes” on movie stars, pop artists
- Curiosity about sexual organs
- Feeling sexually attracted to people [More](#)

### Adolescent Psychosocial Development

These stages overlap among different adolescents. As teens progress through early, middle, and late adolescence, self-esteem, mood, body image, cognitive development, family relationships, interactions at school and with peers, and participation in health-risk behaviours are critical developmental considerations.

### Adolescent Emotional Change

All of these feelings and emotions are normal. Feeling anxious about growing up is normal. Having sexual feelings is normal and is nothing to feel guilty about.

Acting on such feelings, however, is a big responsibility. All people are sexual beings. Talking to parents and trusted adults about sexuality is helpful.

**Objective 4: Analyze how adolescent developmental stages impact behaviours, risks and health care provision (how you would assess, interact with and counsel adolescents)**

**Activities**

Activity 1.6: A 15-year-old type 1 diabetic girl's parents are afraid that she misses insulin shots. The girl complains of excess supervision and of not being able to socialize as much she would wish; she says her parents look after her as if she was 9 years old.

How would you assess, interact with and counsel her with regard to her health and family issues?

**Adolescent developmental stages**

Adolescent maturation is a personal phase of development where children have to establish their own beliefs, values, and what they want to accomplish out of life.

Because adolescents constantly and realistically appraise themselves, they are often characterized as being extremely self-conscious.

However, the self-evaluation process leads to the beginning of long-range goal setting, emotional and social independence, and the making of a mature adult.

**Early adolescence (10-13 years old)**

Dramatic physical changes are the hallmark of early adolescence. The profound biological and hormonal changes of puberty engender feelings of vulnerability and sensitivity to physical appearance. During this stage, development usually centres on developing a new self-image due to their physiological changes. Adolescents need to make use of their newly acquired skills of logical thinking and ability to make judgments rationally. [More](#)

**Middle adolescence (14-16 years old)**

Middle adolescence is filled with challenging new experiences such as dating and driving, and, for most teens, it is a time of unparalleled potential and creative energy. Middle adolescents begin to probe more deeply to discover their individual identity, as they sort out values and beliefs in their quest for a clearer sense of self. [More](#)

**Late adolescence (17-19 years old)**

Having reached “the age of majority,” older adolescents are now legally responsible for themselves. Key developmental tasks include focusing on achieving independence, creating an adult sense of self, and developing a capacity for mature emotional intimacy, while maintaining emotional ties to their family. [More](#)

### Ten Major Tasks of Adolescents

- I. Adjust to sexually maturing bodies and feelings
- II. Develop and apply abstract thinking skills
- III. Develop and apply a more complex level of perspective taking
- IV. Develop and apply new coping skills in areas such as decision making, problem solving and conflict resolution
- V. Identify meaningful moral standards, values and belief systems
- VI. Understand and express more complex emotional experiences
- VII. Form friendships that are mutually close and supportive
- VIII. Establish key aspects of identity
- IX. Meet the demands of increasingly mature roles and responsibilities
- X. Renegotiate relationships with adults in parenting roles

Simpson, A. Rae (2001). Raising Teens: A Synthesis of Research and a Foundation for Action. Boston: Centre for Health Communication, Harvard School of Public Health.

### Tips for counselling

Early adolescence	Middle adolescence	Late adolescence
<ul style="list-style-type: none"> <li>• Effective communication tools must be very specific</li> <li>• Use materials with pictures rather than tables and graphs</li> <li>• Focus on issues that most concern these teens (weight gain, acne, physical changes, peer acceptance)</li> <li>• Early and late maturation can lead to difficulties</li> <li>• Parents will welcome guidance on discipline, rules and communication</li> </ul>	<ul style="list-style-type: none"> <li>• Healthcare providers perceived as “friends” rather than authority figures help to develop trust with teens</li> <li>• Teens must identify with the healthcare message to ensure follow-through and success</li> <li>• Peer counselling, if carefully selected, can be effective with this age group</li> <li>• Focus on supportive adult connections, health promotion and harm reduction is key during this stage</li> </ul>	<ul style="list-style-type: none"> <li>• More abstract reasoning allows for more traditional counselling approaches that rely on knowing consequences of behaviours</li> <li>• Paediatric practices need to assist in transition to adult healthcare providers</li> <li>• Provide the option to include close friends and/or partners for office visits</li> </ul>

## **Early Adolescence (10-13 years)**

### **Physical Development**

Typically, girls show signs of puberty two years earlier than boys. During early adolescence, most girls experience a rapid growth spurt, changes in fat distribution, and development of secondary sexual characteristics such as pubic hair and breasts. For most boys, the early adolescent period marks the beginning of the biological changes of puberty, including testicular growth, voice changes, and development of acne, pubic hair, and nocturnal emissions. Many young adolescents are unaware that the onset of puberty and rate of sexual development can vary greatly; teens can benefit from learning about the progression of physiological changes and should be given reassurance that their own growth and development are normal. Because of their sensitivity and modesty about their bodies, young teens have an increased need for privacy, so families must learn to respect a “closed-door policy”. Many young people, preoccupied with their attractiveness, will attempt to change their appearance through dieting or lifting weights. Eating disorders may develop during this period, especially among females. Some teens engage in physical activity regularly and develop bodies that are extremely fit; others choose sedentary behaviours such as watching television or playing video games. Because these behaviours are often predictors of adult lifestyles, helping sedentary adolescents develop an individualized plan to refocus their energies on healthier pursuits, such as participating in physical activities at school or after school, may have lifelong consequences for their well-being.

### **Cognitive and Moral Development**

In addition to adolescents' changing physiology and heightened perceptions of body image during this period, their cognitive abilities are continuing to develop. Young adolescents have increasing potential for abstract, complex thinking, although their cognition still focuses primarily on the concrete and the present — the “here and now”.

Their sense of morality, like their cognition, tends to be concrete and governed by conventional standards or rules. Young teens tend to see individuals and their behaviours in somewhat rigid terms as good or bad, right or wrong, and have not yet developed an understanding of complex interrelationships or long-term consequences.

### **Social/Emotional Development**

Puberty is a time not only of increased risks but also of intense changes in emotions. Young adolescents may display erratic or moody behaviour, especially with the stresses of academic achievement, sports performance, peer pressure, and changing family relationships. Young teens may be very opinionated, challenging family rules, values, and behaviours. Families need to continue supervising the adolescent and setting appropriate limits. At the same time, they need to affirm their adolescent's growing self-efficacy and promote skills and confidence in decision-making.

Parents remain important role models, serving as a consistent, stabilizing influence, especially as adolescents become exposed to a wide range of risky behaviours among peers. Family members, too, need support in dealing with feelings of confusion and anxiety as they try to negotiate new understandings with their teenager.

## **School**

As adolescents make the transition to middle school or high school and have to cope with less adult support and greater anonymity, they frequently experience anxiety. Some youth who leave the familiar community of elementary school must learn to navigate the classrooms and corridors of a larger, more impersonal institution where they encounter higher academic expectations and significantly greater peer pressures. Scholastic demands require students to be more organized and efficient; there may be a reduction in overall academic performance for males and females, as well as a gender gap in maths and science. This gap increases with age so that by 12th grade, boys significantly outscore girls in standardized maths and science tests. Truancy and school dropout rates tend to rise in early adolescence. Some adolescents find an incentive to stay in school by participating in meaningful in-school and after-school activities such as sports, music, drama, journalism, or community volunteering; others participate in cultural and religious youth groups. These activities provide both positive group recognition and adult mentoring to ease the transition to middle school or high school. School now becomes the primary setting through which peer group standards or expectations are communicated. The attraction of peer groups is a powerful phenomenon. Preparing young adolescents to deal with increasing peer pressure is an important part of health supervision. Although parents' modelling of healthy behaviours remains an important influence, schoolmates can significantly influence adolescents' perceptions of and attitudes towards healthy and risky behaviours.

## **Risky Behaviours**

Although exploration and experimentation — usually in the company of peers — serve important developmental purposes, adolescent experimentation can also have serious health consequences. Experimentation with alcohol and tobacco are significant health concerns during early adolescence. Inhalant abuse, such as the use of marijuana and cocaine, is a growing problem among young adolescents.

## **Sexuality**

Sexual exploration is a concern during early adolescence. Many young adolescents do not have accurate information about sexual development or the risks and consequences of early and unprotected sexual activity. Parents and health professionals need to talk with adolescents about issues such as the menstrual cycle, fertility, and prevention of sexually transmitted diseases; correct any misinformation; and sensitively address adolescent concerns. Adolescents should be strongly advised to delay having sexual intercourse, and should be fully supported in that decision. Young teens who are already sexually active need guidance in understanding and practising protective behaviours to minimize their risk of becoming pregnant or acquiring sexually transmitted diseases.

## **Abuse and Violence**

For a significant number of adolescents, sexual abuse is a serious problem. Some have experienced sexual victimization from an early age; many are forced to have sexual intercourse without their consent. Because sexual identity and sexual behaviour patterns are established in adolescence, it is important to understand the link between previous sexual abuse and current risky behaviours, and to conduct a thorough and sensitive assessment of the adolescent's sexual health. In addition to the risk of sexual abuse, adolescents today face an unprecedented risk of injury or death from violence in their homes, schools, and communities. Youth may experience intense pressure to join gangs or other groups, or may feel threatened by gang activities or other types of violence. Many youth grow up with guns in the home. Some carry weapons as a means of protecting themselves or intimidating others.

## **Community**

Many communities have become more transient and impersonal, offering less support and supervision to young adolescents. Many communities lack visible positive adult role models. The media tend to compound this problem, since most of the videos, music, films, and television programmes that fascinate adolescents often glamorize violence and other unhealthy behaviours. Communities also vary in their efforts to establish and enforce regulations protecting the health and safety of adolescents (e.g., restricting access to cigarette machines, alcohol, and guns; mandating helmet use).

## **Establishing a Trusting Relationship**

Although their minds and bodies are developing rapidly and becoming more capable and mature, young adolescents still lack the experience and judgment to use these new capabilities wisely. The challenge for the health professional is to establish a trusting relationship that supports the adolescent and the family, so that opportunities for exploration and continued growth are presented in a safe and nurturing context.

## Middle adolescence (14-16 years)

### Physical Development

By the age of 15, most girls have completed the physiological changes associated with puberty, and most boys are still in the process of maturing, rapidly gaining muscle mass, strength, and height, and completing the development of secondary sexual characteristics. Most middle adolescents are increasingly comfortable with their sexual identity; however, for gay and lesbian youth, a growing recognition of their sexual orientation and harassment or a lack of acceptance by others may precipitate feelings of isolation or depression, or thoughts of suicide.

### Social/Emotional Development

Youth of this age are extremely sensitive to the social norms of their peer group, including choices in dress, hairstyle, language, music, and behaviour. Friends become very important, and adolescents tend to have a small group of friends who share similar values, interests, and activities. When at home, adolescents tend to seek privacy and time alone. Although parents may be frustrated at times by their adolescent's behaviour, affection and respectful communication within the family are crucial and should be encouraged during health supervision.

### Cognitive and Moral Development

Some 15- and 16-year-olds are beginning to make the transition from concrete to formal operational thinking, becoming more adept at abstract thought, problem solving, and planning for the future. Youth in middle adolescence are better able to understand complex interrelationships and appreciate the perspectives of others. Changes in moral development also continue, as teens begin to identify with and internalize societal values. As adolescents broaden and deepen their perspective, they often become concerned about community and societal issues such as homelessness, crime, or preserving the environment.

### School

Academic life also presents challenges during adolescence. Academic performance during high school has major implications for future educational and career choices, so it is not surprising that many adolescents are concerned that their intellectual abilities are being measured "by number (grade point average and standardized test scores). Some adolescents use their capabilities to excel and to enhance their skills; however, too many youth experience serious challenges to academic success, including undiagnosed learning disabilities, attention deficit hyperactivity disorder, inadequate school resources, or lack of parental involvement. Youth facing such challenges may fail to achieve their academic potential, as witnessed by truancy and school dropouts.

**Work**

In addition to academic pressures, adolescents now face certain economic realities. Middle adolescents seek part-time or after-school jobs for a variety of reasons: some seek employment to contribute to the family income or to help earn money for further education; others work to boost their own purchasing power. Earning a salary offers adolescents the opportunity to gain experience in money management and other “real-world” skills. However, spending excessive time (more than 20 hours a week) in after-school jobs can negatively affect academic performance. Adolescents and their families need to discuss how to balance academic responsibilities and extracurricular activities, as well as goals and strategies for how to save money and guidelines for how to spend it.

**Risky Behaviours**

Alcohol and other drugs are major factors in adolescent deaths, contributing to motor vehicle crashes, homicides, and suicides. Substance use increases with each successive year of high school. Use of marijuana and cocaine has become significantly worse among high school students. Tobacco use among adolescents is another behaviour that is of concern. Many frequent smokers report failed efforts to quit. The use of chewing or smokeless tobacco, which is a popular practice among some student athletes, increases the risk of developing oral cancer.

**Sexual Behaviours**

Sexual activity also increases with each successive year of high school. In the CDC survey, nearly two thirds of 12th-grade students reported having had sexual intercourse at least once. One fifth of students reported having had sex with four or more partners during their lifetime. Less than half of them had used a condom during their last sexual intercourse. Risky sexual behaviours present critical issues for health supervision. It is imperative that health professionals reinforce the importance of delaying sexual intercourse. If the adolescent is already sexually active, health professionals need to reinforce the necessity of practising safer sex and the health consequences of having unprotected sex, especially unplanned pregnancies and sexually transmitted diseases (including HIV/AIDS). In addition, the potential for physical and sexual victimization is a major concern.

**Emotional Health Risks**

Risky or violent behaviours can sometimes be an indicator of emotional distress, and the health professional should carefully assess the adolescent’s emotional health. Mood swings are a common characteristic of adolescence, but persistent feelings of sadness and depression should not be dismissed as “normal” moodiness. Losses during this period — including problems with girlfriends or boyfriends, school failure, and parental divorce or death — can lead to depression and even suicide. Suicide is a leading cause of death among adolescents. Gay, lesbian, and bisexual youth are at particular risk.

### **Family**

Middle adolescence can present both challenges and rewards for families, as teens frequently test rules and question authority. Teens can be opinionated, and this can result in family conflict, especially over issues such as dress, music, curfews, and behaviour. Activities such as driving and dating may require negotiating family rules.

Yet the family is still the home base in the changing world of middle adolescence, and core family values continue to exert a significant and stabilizing influence. With their increasingly sophisticated cognitive, moral, and social capabilities, adolescents are forming attitudes and values that will have a lasting impact on the quality of their lives, as well as those of their family and the larger community. Sharing the family's love, affection, and support with the adolescent is critical during this stage of development.

### **Community**

Communities can support adolescents by providing resources, programmes, and meaningful work and volunteer opportunities to involve youth in community life and enhance their skills and confidence. Recreational programmes geared specifically to middle adolescents are needed in communities, especially in low-income and rural areas; such programmes are an important means of channelling adolescent energies constructively. Shopping malls, fast-food restaurants, and parks are popular teen gathering places that can become innovative settings for community-sponsored adolescent health promotion programmes.

### **Strengthening the Relationship**

Adolescents need family members, educators, health professionals, and other caring adults to take their problems and concerns seriously, to listen attentively, to respect their confidentiality, and to respond without judging them. Health professionals may need to develop innovative approaches to engage adolescents in health care. Some health professionals use positive peer influence effectively in adolescent health promotion. Health supervision plays a major role in strengthening the partnership between the health professional, family, and adolescent in key ways: providing accurate information about a range of adolescent health issues, encouraging efforts to develop healthy habits, and recognizing the unique strengths of the adolescent and the family.

## Late adolescence (17-19 years old)

### Cognitive and Moral Development

Most older adolescents have developed the potential for formal operational thinking, although they may not use it consistently in their daily life. They can draw upon broader life experiences to evaluate options and make decisions. Many older adolescents have sophisticated moral reasoning and can formulate and follow abstract ethical principles.

### Choices and Challenges

Personal, vocational, and educational options are paramount in late adolescence. Many older adolescents live apart from their families. Some live at college, on their own, with a roommate, or in a group setting; others live with a partner; and some have started their own families. Most older adolescents have decided whether they will go on to college, seek vocational training, join the workforce, or enter the military. While late adolescence should be a time of choice and empowerment, it can also bring intense frustration to youth with restricted options. Some may be expected to begin working to help to provide for their families financially; some may already have families of their own to support. For others, the cost of college tuition may place higher educational opportunities out of reach. Adolescents whose academic performance in high school was substandard may now confront severely curtailed choices. Youth who have not developed marketable skills or sought vocational training find that employment options are very limited. This harsh reality diminishes a young person's sense of hope for the future unless some positive intervention is offered. For many young adults, interventions such as family support and school-based services are no longer available. For older adolescents with special needs, the transition to adulthood precipitates a range of complex new issues, such as whether independent living is a realistic option.

### Risky Behaviours

Lack of family and social support systems, coupled with greater personal freedom, can increase risky behaviours, and some high-risk behaviours tend to peak during this time. Increased sexual activity and exposure to sexually transmitted diseases; greater access to tobacco, alcohol, and other drugs; and greater independence with fewer family or school supports or constraints — all contribute to high risk during late adolescence. Injury and violence have replaced illness as the leading causes of death in this age group, with risky behaviours as the critical link to adolescent mortality. Suicide remains a leading cause of death for youth from ages 18–21, and health professionals should carefully assess the emotional health of the adolescent or young adult and evaluate for risk factors and behavioural warning signs of depression or suicide.

### Access to Health Care

As adolescents' and young adults' risky behaviours tend to increase, their participation in health supervision tends to decrease. Youth from ages 18–24 use health care services less frequently than any other age group and are less likely to have health insurance than other age groups. Access to health care is a major concern for older adolescents and young adults, who often encounter physical, psychological, financial, and/or cultural barriers to obtaining care. Families, communities, and health professionals all play key roles in helping older adolescents participate in health-promoting services and complete the transition to adulthood successfully.

**Family**

As older adolescents become more comfortable with themselves and their emotional independence, their relationships with family members become more accepting and harmonious. Families continue to have a major impact in helping older adolescents become healthy young adults by providing a stable and supportive home environment and by maintaining a trusting and open relationship in which the young person feels cared for and comfortable in sharing new challenges and concerns. Parents can exert significant influence on the well-being of older adolescents by consistently modelling preventive and health-promoting practices such as driving safely, avoiding or moderating the use of alcohol, and scheduling regular health visits.

**Community**

Communities can provide outreach, promote access to local health and social services through resource centres and innovative programmes for youth, and facilitate school-to-work programmes and other specialized training and employment opportunities. The media can highlight the positive contributions of healthy young people and encourage all youth to strive for optimal health and well-being.

**Health Partnerships and Life Planning**

Health professionals can be both influential and supportive in minimizing risky behaviours and easing the transition to adulthood. This is especially important as older adolescents strive to negotiate the complexities of the adult health care system. When providing care for youth who are becoming young adults, health professionals should use the visits as opportunities to discuss life planning skills, including pre-conceptional planning. Healthy behaviours and practices learned and/or reinforced at this age will prepare adolescents and young adult women for their future roles as adults and parents. Of equal importance, health care visits with young adult males should include frank discussions about life planning (including family planning and parenting), as well as strong and supportive guidance in injury prevention and health promotion. For both males and females, avoiding risks and integrating safe and healthy habits are critical in making a successful transition to adulthood. By encouraging older adolescents to become active participants in their own health care and focusing on their strengths and capabilities, health supervision helps prepare them for the opportunities that await.

**Emotional Health Risks**

Risky or violent behaviours can sometimes be an indicator of emotional distress, and the health professional should carefully assess the adolescent's emotional health. Mood swings are a common characteristic of adolescence, but persistent feelings of sadness and depression should not be dismissed as “normal” moodiness. Losses during this period—including problems with girlfriends or boyfriends, school failure, and parental divorce or death—can lead to depression and even suicide. Suicide is a leading cause of death among adolescents. Gay, lesbian, and bisexual youth are at particular risk.

### **Family**

Middle adolescence can present both challenges and rewards for families, as teens frequently test rules and question authority. Teens can be opinionated, and this can result in family conflict, especially over issues such as dress, music, curfews, and behaviour. Activities such as driving and dating may require negotiating family rules.

Yet the family is still the home base in the changing world of middle adolescence, and core family values continue to exert a significant and stabilizing influence. With their increasingly sophisticated cognitive, moral, and social abilities, adolescents are forming attitudes and values that will have a lasting impact on the quality of their lives, as well as those of their family and the larger community. Sharing the family's love, affection, and support with the adolescent is critical during this stage of development.

### **Community**

Communities can support adolescents by providing resources, programmes, and meaningful work and volunteer opportunities to involve youth in community life and enhance their skills and confidence. Recreational programmes geared specifically to middle adolescents are needed in communities, especially in low-income and rural areas; such programmes are an important means of channelling adolescent energies constructively. Shopping malls, fast-food restaurants, and parks are popular teen gathering places that can become innovative settings for community-sponsored adolescent health promotion programmes.

### **Strengthening the Relationship**

Adolescents need family members, educators, health professionals, and other caring adults to take their problems and concerns seriously, to listen attentively, to respect their confidentiality, and to respond without judging them. Health professionals may need to develop innovative approaches to engage adolescents in health care. Some health professionals use positive peer influence effectively in adolescent health promotion. Health supervision plays a major role in strengthening the partnership between the health professional, family, and adolescent in key ways: providing accurate information about a range of adolescent health issues, encouraging efforts to develop healthy habits, and recognizing the unique strengths of the adolescent and the family.

## **Objective 5: Identify role transitions to adulthood**

### **The Young Adult Years: Multiple transitions**

- Different transitions and life spheres not separate from each other; influencing the life course in complex ways, e.g. becoming pregnant, involvement in postsecondary schooling
- Sequencing and interrelations of various activities may also differ by gender and other important social attributes
- Transition may vary for different generations of young adults, depending on socio-political context and economic opportunities

### **Life Course: Normative pattern in adulthood**

- Earlier research has suggested that this transition involved events that are ordered in a normative manner: leaving formal schooling, becoming employed full-time, and marrying.
- Deviation from the normative pattern resulted in negative outcomes because social institutions had been arranged primarily to accommodate the 'natural' pattern
- Findings have shown that life course 'disorders' led to higher rates of marital disruption for men
- Research findings have shown that educational, work and family spheres are all changing in advanced industrial societies so as to encourage greater diversity among individuals and expansion of a given individual's choices in life.
  - Educational system – "ideology of individualized identity patterns"
  - Work – "demands greater flexibility of individuals and greater adaptability to changing tasks and professional qualifications"
- Traditional family is dissolving, further encouraging individual independence and exploration

### **Transitions: 'emerging adulthood'**

- Change in all these spheres of life therefore creates and reinforces greater individualization and flexibility of life course trajectories, called "human plasticity".
- College students' perceptions of adulthood demonstrate that role transitions, such as leaving school or entering marriage or parenthood, are infrequently identified as necessary for the assumption of adult status.
- All these transitions mean that the process has become increasingly lengthy and individualized over time. This lengthening and variable occurrence and ordering of role transitions in modern Western society results in ambiguity in the transition to adulthood. Nearly two thirds of college students were uncertain about their adult status.
- With increased dispersion of actual trajectories diminishes the likelihood of more or less identical career paths among individuals endowed with similar social attributes (i.e. social class, sex, age). As a consequence, the objective possibility of comparing various life trajectories declines, i.e. pathways to adulthood become less based on social backgrounds, and attributes as choices grow for individuals of all backgrounds.

- Thus, de-standardisation implies greater difficulties for researchers in predicting trajectories. Because of the greater number of choices and possible pathways throughout the life course, predictability becomes more difficult for the person as well. People become more able to change earlier choices at a later date as new situations or information become available to them.

### **Life career**

- ‘Life career’ implies that certain events set up a chain of future events or life changes.
- Thus, despite the multitude of pathways available to young people today, early choices still narrow the field of later choices to some extent, and therefore early plans can importantly define later outcomes.
  - E.g. the complexities of the occupational system often require an early commitment (physician)
  - Early plans may constrict the range of future opportunities available to a young person by determining the scope of actions taken in the present.
- Gatekeepers may use their knowledge of a young person’s life history (e.g. academic record) in making critically important decisions.
  - E.g. college admissions officers
- Transitions to adulthood involve major adult roles, therefore:
  1. Anticipations about family (leaving home, marriage, and children) and
  2. Achievement (education and work) are likely ignored.
- Tentative ideas and goals regarding these arenas almost certainly begin to be formulated before they are actually confronted.
- Difference in adult roles by sex: Girls’ orientation toward boys and dating in high school may prompt them to think more seriously and at an earlier life stage than boys do about issues of marriage and parenthood.
- Although young adults might further explore and change their preferences when they actually face the implications of those plans, early plans should not be discounted. Outcomes of the transition to adulthood depend to a large extent on resources differentially available to young people from an early age. Timing of transition events may be constricted by socioeconomic circumstances.
- Therefore, family of origin is extremely important in determining the level of resources available to successfully complete the adult transition and in setting the context that influences the pathways young adults find most attractive.

#### IV. Case Studies

Classify	Manage	Follow-up
<p><b>Delayed puberty possibly due to chronic illness or undernutrition</b></p>	<ul style="list-style-type: none"> <li>• Treat or refer underlying medical condition</li> <li>• Address the nutritional problems using the algorithm "I am too fat/too thin"</li> <li>• Advise him that pubertal development can be delayed due to chronic illness or undernutrition and that a health worker will need to reassess him once the chronic illness and/or nutritional issues have been treated</li> </ul>	<p>Follow up chronic illness as needed</p> <p>Follow up nutritional problems as needed</p> <p>Review pubertal development in six months</p>
<p><b>Delayed puberty unlikely to be due to chronic illness or undernutrition</b></p>	<ul style="list-style-type: none"> <li>• Advise him that pubertal development is delayed for his age</li> <li>• Reassure him that even though puberty is delayed, most boys will eventually develop and go through puberty. Stress that a small number do not do so and that is why he needs to be checked further</li> <li>• Refer to an endocrinologist if possible</li> </ul> <p>If also short, use the algorithm "I am too short"</p>	<p>Review him in six months if referral to an endocrinologist is not possible</p>
<p><b>Normal puberty</b></p>	<ul style="list-style-type: none"> <li>• If he is 13 years of age or younger, even if the signs of pubertal development have not appeared, he is within normal limits for age</li> <li>• Reassure him that most boys will eventually develop and go through puberty</li> </ul>	

### Case study 1

Jeremy, age 17, will be graduating from high school in the spring. His mother, a single parent, tells you that she is concerned because graduation is quickly approaching and Jeremy has made no plans for what he will do with his life after graduation. Whenever Jeremy mentions the topic, his mother tells him, this is what you must do, and begins to outline the steps he must take. Jeremy just walks away. Jeremy's mother comes to the clinic to seek help from the nurse. She asks, 'What should I do?'

Discuss the nursing response and interventions for Jeremy and his mother.

### Case study 2

John, a 17-year-old adolescent, comes into the school-based clinic and tells the nurse practitioner that he thinks he is gay.

Discuss the nursing response and interventions for John.

### Case study 3

Jasmine S., a 17-year-old, arrives with her mother for a routine history and physical examination for college entrance. As you are taking Jasmine to the examination room, her mother whispers to you, 'I need to speak with you in private'.

Discuss the nursing response and interventions for Jasmine's mother.

### Case study 4

Shawna, a 16-year-old, visits the nurse practitioner for a routine check-up. Shawna is an A and B student in school and a member of the girls' drill team. She matured early and started to menstruate at the age of 10. Her menses are now regular. She has a boyfriend and has been dating since the age of 13. Shawna tells the nurse she has no specific concerns.

Discuss the nursing response and interventions for Shawna.

### Case study 5

Julie, 12 years old, is brought to the nurse practitioner's clinic by her mother. Julie has started to develop breast tissue and some pubic hair. Both the mother and daughter are concerned because Julie has been having increased vaginal discharge. Julie tells the nurse, 'I wash my private area every day, but there is still fluid coming out'.

Discuss the nursing response and interventions for Julie.

### Case study 6

Susan, age 15 years, comes to the school-based clinic and complains to the nurse practitioner about a vaginal discharge. After the nurse has established a trusting and confidential relationship, Susan confides that she has been sexually active with three different partners within the past 6 months. She thinks they used condoms every time, but she is not sure. Susan's last period was 3 weeks ago and she had a Pap test a little over 2 months ago.

Discuss the nursing response and interventions for Susan.

## **V. Summary**

This module has examined the biological, physical (including sexual maturation), cognitive, moral and social / emotional elements of adolescent development, in the context of family and community.

The impact and significance of the biological, physical, cognitive, moral and social/emotional growth and developmental changes in each stage of adolescence have also been discussed.

The physiological and developmental changes and tasks have also then been linked to achievements necessary for the healthy development of adolescence and adulthood.

Throughout this module, the health care professionals are able to explain how physical and developmental changes during adolescence influence their family and peer relationships.

Measures to promote healthy adolescent development have been discussed within the context of family and community, taking into account developmental changes and adolescents' need to achieve a sense of identity.

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