Introduction to pediatric Nursing

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Objectives

- At the end, learners are expected to;
  - Define pediatrics
  - Explain perspectives of pediatric nursing
  - Discuss the role of nurse in pediatrics nursing

Introduction

- Pediatrics is the branch of medicine that deals with the **assessment, diagnosis and treatment** of infants, children, and adolescents.
- It was derived from two Greek words: ***(pais = child)*** and ***(iatros = doctor or healer).***
- Means **“healer of children or child cure’’.**

Intr…

- **Pediatric nursing or <u>child health nursing</u>** is the specialty of nursing care of babies, children and adolescents.
- A Nurse who specializes in this area is usually referred to as a pediatric nurse.
- It mainly deals with **health promotion, disease prevention and treatment.**

Intr…

- A child is not a small adult, but is
  - A developing human being who changes from a new born through infancy, toddlerhood and early school years in to adolescent and finally a mature adult

Short history of pediatrics

- In England in 1769, Dr. George Armstrong established a dispensary for the poor children of London in the impoverished Red Lion Square district.
- Dr. Armstrong, a role model for today's socially conscious pediatricians, authored one of the first pediatric textbooks***, Essay on Diseases Most Fatal to Infants***.

History…

- The first formal medical student **courses** about children's health were at **Yale College** (1813-1852).
- The first children's **hospital** in the English-speaking world was the Hospital for Sick Children on Great Ormond St. (GOS), London (1852).

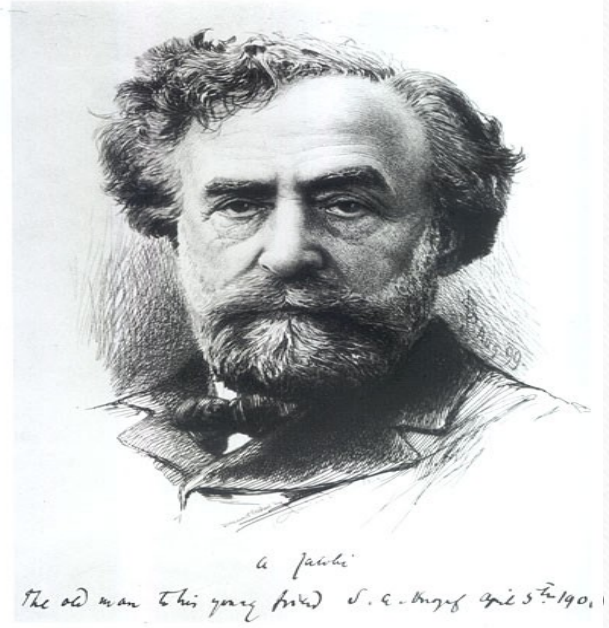
history …

- The first children's hospital in the U.S. was founded by Dr. Francis W. Lewis, who visited GOS and then established the Children's Hospital of Philadelphia (1855).

- Dr. Abraham Jacobi was the founder of American pediatrics. He established the first children's clinic in the

  in New York City. He was known as

  the father of pediatrics



…history …

- The next two children's hospitals were
- Boston Children's Hospital (1869) and
- The Children's Hospital National Medical Center, Washington, D.C. (1870).

PERSPECTIVES ON PEDIATRIC NURSING

1. **Family-centered care**
   - centrality of the family in the child's life and inclusion of the family's contribution and involvement in the plan for care and its delivery.
2. **Atraumatic care**
   - providing care that minimizes or eliminates physical and psychological distress

Cont…

- Three principles provide the basis for atraumatic care:

  (1) identifying stressors for the child and family,

  (2) minimizing separation of the child from caregivers, and

  (3) minimizing or preventing pain.

Concerns of children in hospital

- separation from family and friends
- being in an unfamiliar environment
- receiving investigations and treatments; and
- loss of self-determination
- *Safety*

PEDIATRIC ASSESSMENT

PEDIATRIC HISTORY

- At all times the care giver must show genuine concern and interest when speaking with parents
- Considerable tact and discretion are required when taking the history especially in the presence of the child:
- Useful information may be obtained by observing the infant and young child during the history-taking.
- The older child should be given an opportunity to talk

HISTORY…

- The simple act of offering a toy, picture book or pen-torch is often an effective step toward establishing rapport.
- Useful information may be obtained by observing the infant and young child during the history-taking.
- It is important to understand the milestones for normal development for children at any age.
- Normal for a 2-year-old may be abnormal for a 10-year-old.

HISTORY…

- ***Identification***
- ***Source of Hx***
- **Chief Complaints**
  - It is stating of the reason why the patient is brought to the health institution.
- **History of Present Condition(Illness):**
  - Directive enquiry like onset, character, location etc of sign and symptoms are important issues
  - ***Symptomatic Enquiry***

HISTORY…

- **PAST MEDICAL HISTORY**
  - An enquiry should be made of any drug or other sensitivity which should always be prominently recorded.
- **MOTHER'S PREGNANCY, LABOUR, DELIVERY AND THE NEONATAL PERIOD**
  - pregnancy includes obstetric complications during the pregnancy; history of illness, infection or injury and social habits

HISTORY…

- **DIETARY HISTORY**
  - The duration of breastfeeding should be recorded or the type of artificial feed and any weaning problems.
- **DEVELOPMENTALHISTORY**
  - major developmental milestones in infancy and early childhood
- **FAMILY AND SOCIAL HISTORY**
  - Medical, financial and social stresses within the family sometimes have a direct or indirect bearing on the child’s presenting problem.

HISTORY…

- ***IMMUNIZATION HISTORY***
  - Type of Vaccination, Age, Number of Doses, Boosters, Any Undesirable Reactions.

PHYSICAL EXAMINATION

- Be truthful with the child regarding what is going to be done.
- The child should never be made to face sudden unexpected maneuvers
- Should be allowed to play with objects such as the stethoscope, auriscope, ophthalmoscope and other tools
- The care giver should ensure that his hands and instruments used to examine the child are suitably warmed.
- It is not always mandatory to remove all the child’s

P/E…

1. ***GENERAL APPEARANCE***:

   - small children better examined on mother’s lap.

2. **VITAL SIGN**

- the physiologic status of the body is reflected by these indicators of body function.
- fall within certain normal ranges.

P/E…VITAL SIGNS…

A. Temperature

Rectal – is used in infants and young children.

- is accurate.

❖ contraindicated in diarrhea, rectal bleeding and neonates

Oral – taken as soon as the child is able to cooperate, usually above **3-5 yrs** old.

VITAL SIGNS…

- **Axillary** – is used in anxious and fearful children and for whom other methods are contraindicated.
- Average normal body Temp. = 36.5 – 37.2^{o}C.
- Oral temp. is about 0.5^{o}C greater than that of axillary and rectal is about 1^{o}C greater than axillary.

B. Pulse

Normal pulse rates

Age	range	average
- newborn -1 month	120-160	140
- 1-12 month	80-140	120
- 12m – 2yrs	80-130	110
- 2 – 6yrs	75-120	100
- 6 – 12 yrs	75-110	95
- Adolescence to adult	60-100	80

c. Respiration

Normal RR

< 2 months	**= < 60/min**	* not < 40
2 month – 12m	**= < 50/min**	* not < 20
> 12 months	**= < 40/min**	* not < 20

D. Blood pressure

Age	**range (mm Hg)**	
	Systolic	**diastolic**
• Neonate	50-51	25-30
• 3 yrs	78-114	46-78
• 10 yrs	90-132	56-86
• 16 yrs	104-108	60-92

❖Average of the newly born baby is 60/40 mm Hg

3. ANTHROPOMETRY

- *Wt*
- *Ht/Length*
- *Head Circumference* (Compare with the standard)
- *MUAC*

- **There are simplified formulas to calculate the approximate expected height and weights at different ages as follows.**

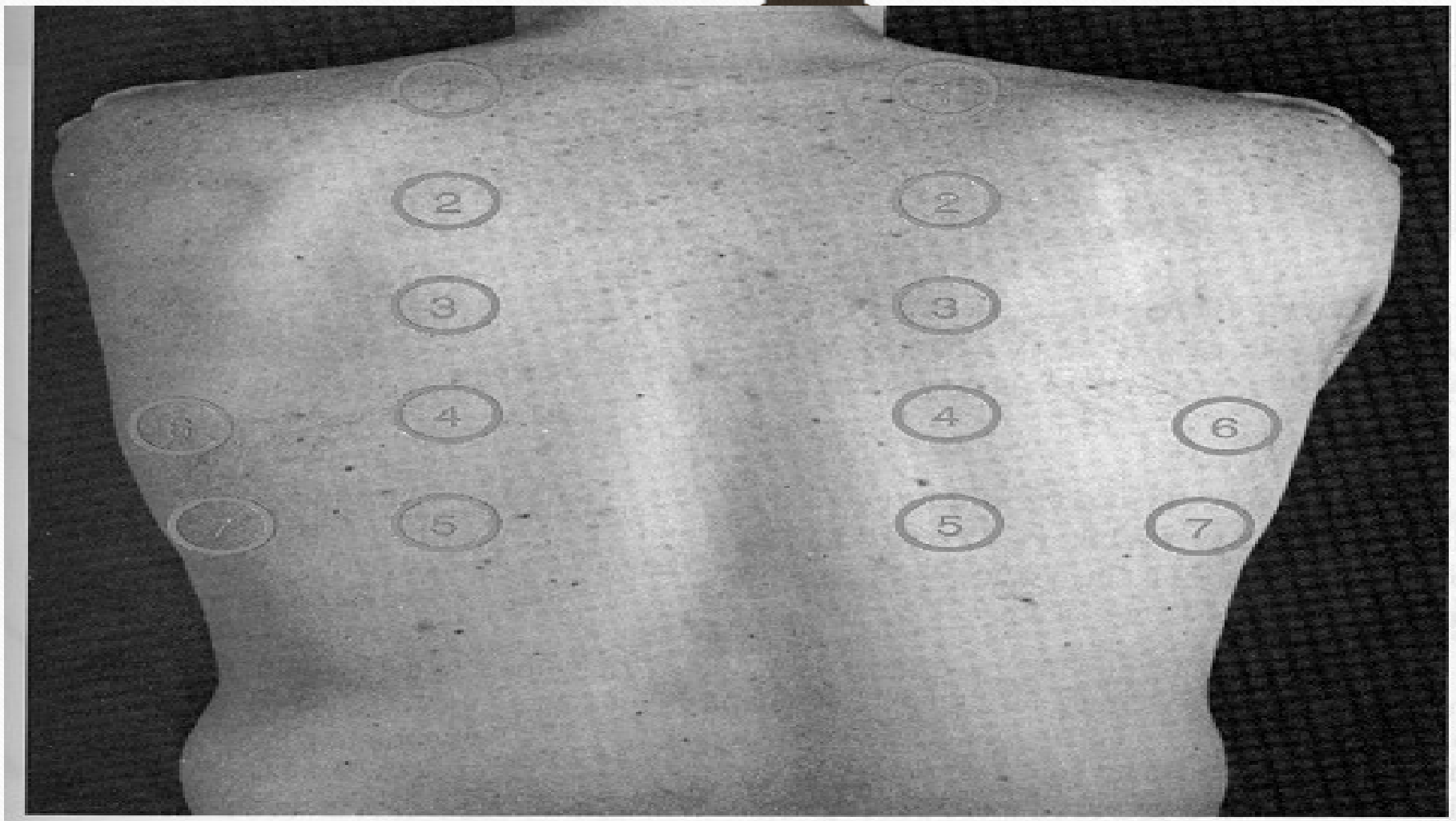
Weight	Kilograms
a) At birth	3.25
b) 3-12 months	$\frac{\text{age (mo)} + 9}{2}$
c)1-6 yr	age (yr) X 2 +8
d)7-12 yr	$\frac{\text{age (yr) X 7- 5}}{2}$
Height	**Centimeters**
a) At birth	50 cm
b) At 1 yr	75 cm
c) 2-12 yr	age (yr) X 6 + 77

P/E…

4. HEENT (Head, Ears, Eyes, Nose, Mouth And Throat)

5. LGS (Lymphoglandular System-Lymph Nodes, Thyroid, Salivary Glands, Breast Tissue, Testes)

6. Chest (Inspection, Palpation, Percussion, Auscultation)



LOCATIONS FOR PERCUSSION AND AUSCULTATION

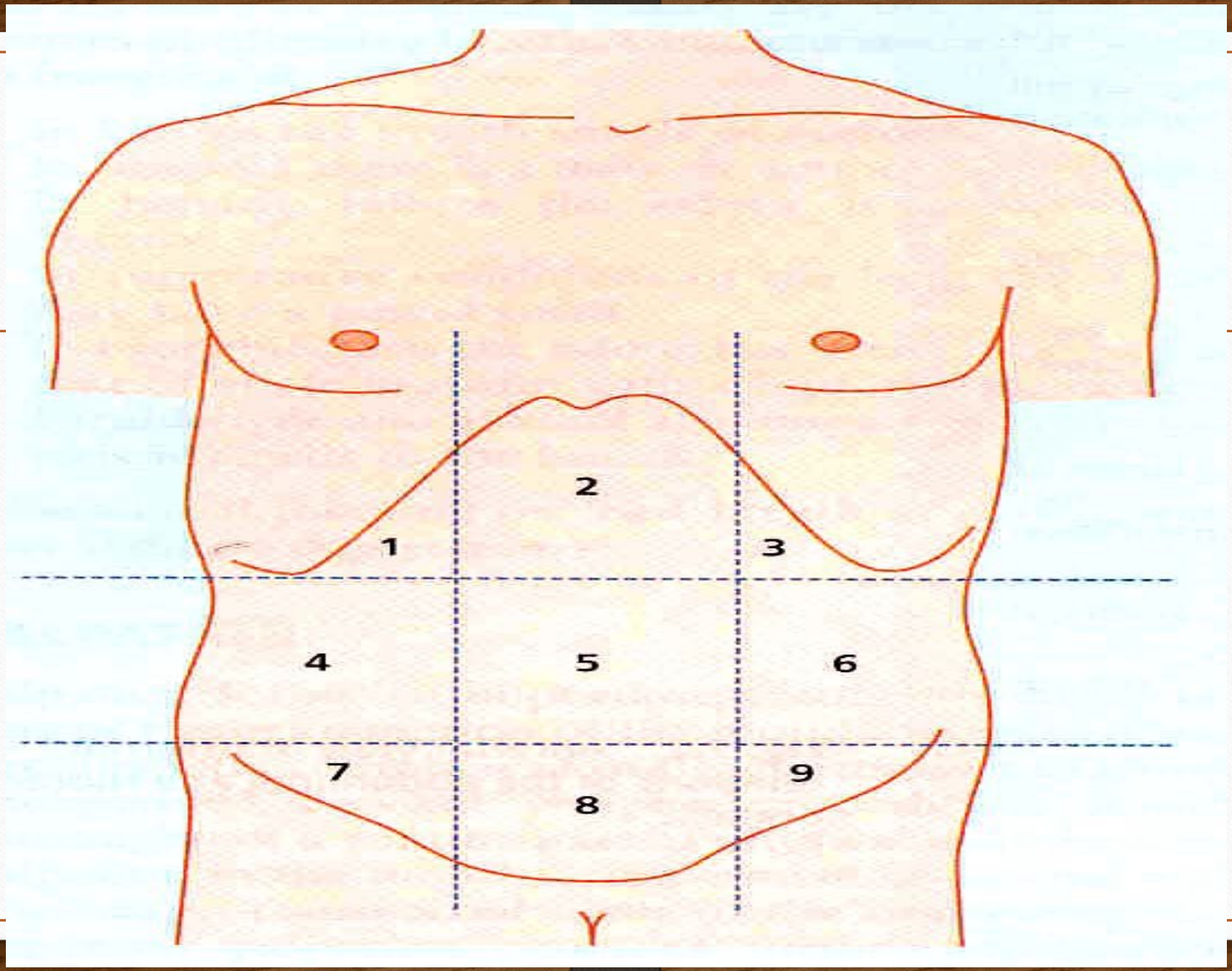
P/E…Chest Auscultation

- **CRACKLES OR RALES** are intermittent, nonmusical, and brief —like dots in time
- ***Fine crackles*** *are soft, high pitched, and very brief.*
- ***Coarse crackles*** *are somewhat louder, lower in pitch, and not quite so* brief.
- ***Wheezes*** *are relatively high pitched and have a* hissing or shrill quality.
- ***Rhonchi*** *are relatively low pitched and have a* snoring quality.

P/E…

7. CVS (Arteries; Veins; Pericardium-Inspection, Palpation, Auscultation)

8. Abdomen (Inspection, Auscultation, Palpation, Percussion, Rectal Examination-Inspection and Digital Examination)


1
2
3
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9

P/E…

9. GUS (Genitourinary System-Bladder, Kidneys, Genitalia)

10. Musculoskeletal system

- Inspection for joint symmetry, alignment, bony deformities
- Inspection and palpation of surrounding tissues for skin changes, nodules, muscle atrophy
- Assessment of inflammation or arthritis, especially **swelling, warmth, tenderness, redness**

P/E…

Muscle strength is graded on a 0 to 5 scale:

- ✓ 0—No muscular contraction detected
- ✓ 1—A barely detectable flicker or trace of contraction
- ✓ 2—Active movement of the body part with gravity eliminated
- ✓ 3—Active movement against gravity
- ✓ 4—Active movement against gravity and some resistance
- ✓ 5—Active movement against full resistance without evident fatigue.
- ✓ This is normal muscle strength.

11. Integumentary system
Descriptions of primary skin lesions

Macules: Are Flat circumscribed skin lesions with an alteration in skin color, smaller than 1cm in diameter e.g. petechiae

Patch: large flat lesions with a color different from the surrounding skin, larger than 1cm in diameter

Papule: Small, solid lesion, < 1cm in diameter, raised above the surface of the surrounding skin and hence palpable

Nodule: A larger (1-5 cm), firm lesion raised above the surface of the surrounding skin.

skin lesions…

Tumor: A solid raised growth > 5 cm in diameter

Plaque: A large (> 1 cm) flat topped, raised lesion; edges may be distinct or gradually blend with surrounding skin

Vesicle: Small, fluid filled lesion < 1cm in diameter, raised above the plane of surrounding skin. Fluid is often visible and the lesions translucent

Pustule: A vesicle filled with pus

Cyst: Soft, raised, encapsulated lesion filled with semisolid or liquid contents

12. NEUROLOGIC EXAMINATION
Components:-

1. Mental status examination
2. Cranial nerves examination
3. Motor examination including deep tendon reflexes
4. Superficial reflexes
5. Primitive reflexes
6. Motor Coordination
7. Examination of posture and gait.
8. Examination for signs of Meningeal irritation

SUMMARY

- Pediatrics?
- Prospective of pediatric nursing?
- Role of pediatric nurse?
- Components of pediatric Assessment?

Thank You!