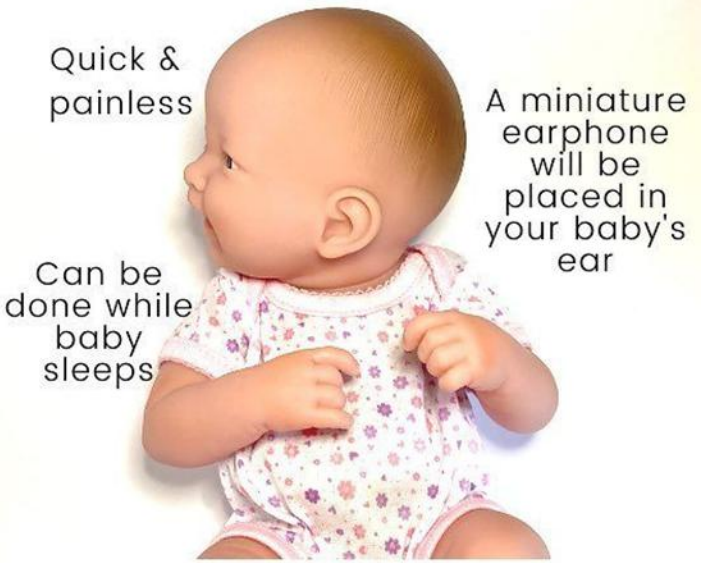
Newborn Screening

NEWBORN SCREENING TESTS

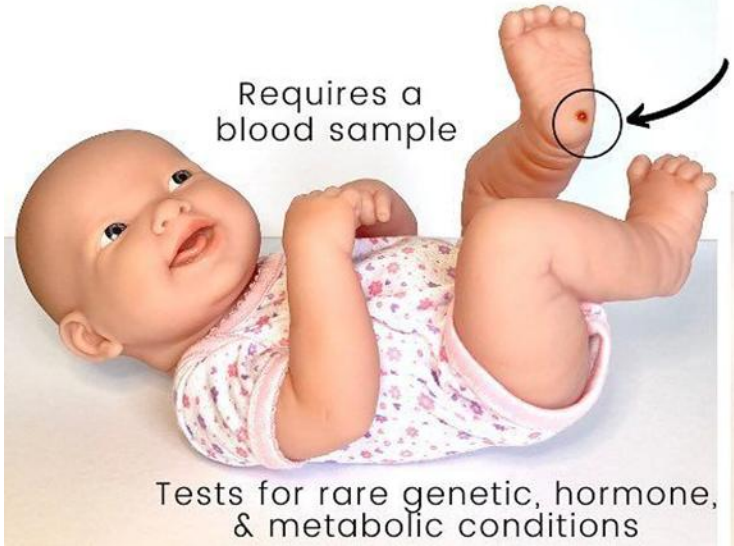
done when your baby is 24-48 hours old

@simplywellfamily

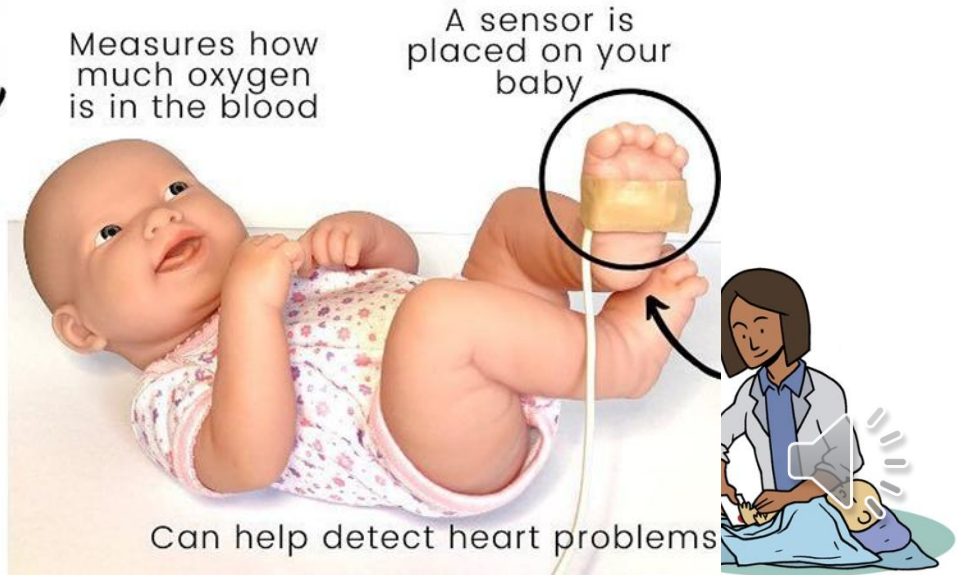
HEARING SCREEN



NEWBORN SCREEN
heel stick



PULSE OXIMETRY



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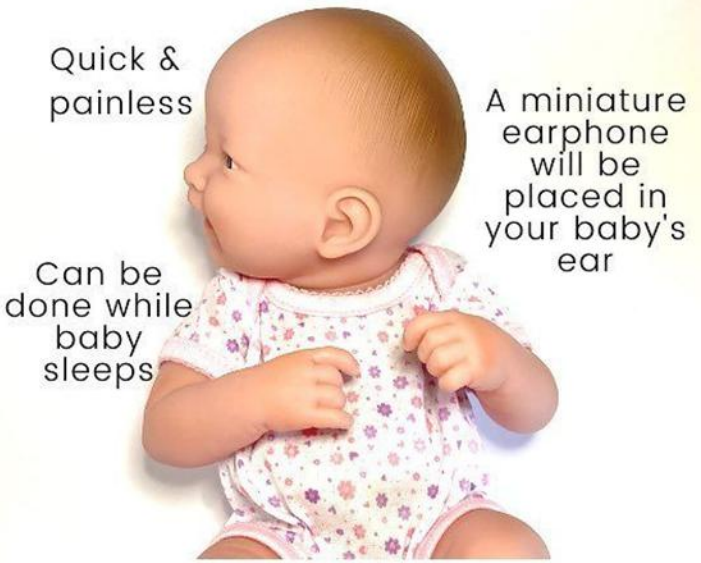

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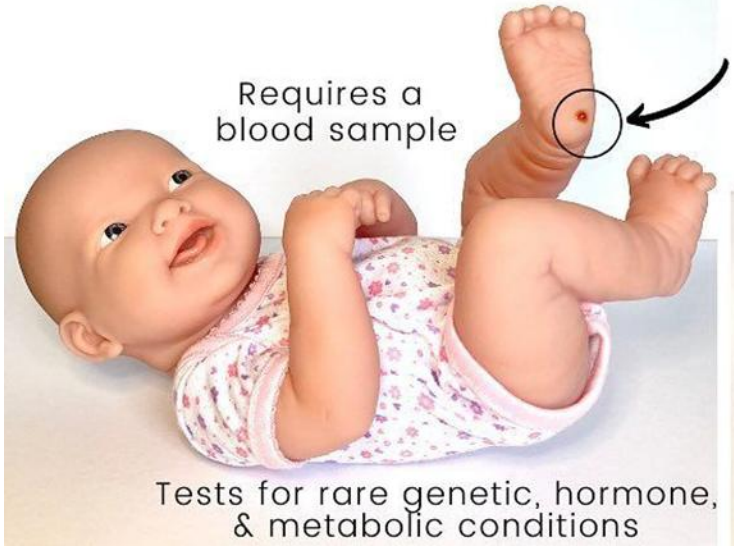

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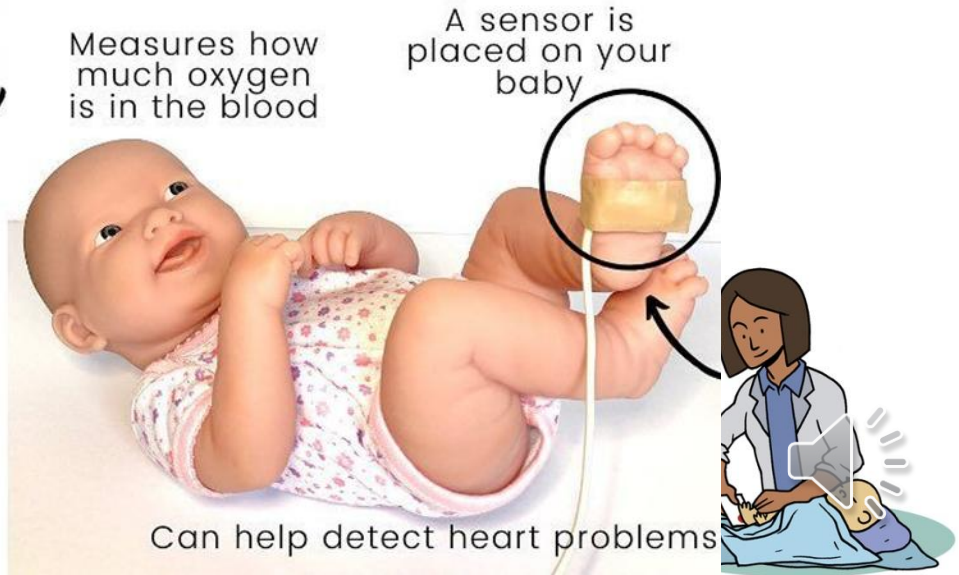


Rationale of Newborn Screening Procedure

- Mandated by law—R.A 9288
- Heritable disorders can be detected and prevented
- Factors to be considered in NBS procedure:
  - An understanding of the newborn condition's natural history
  - An acceptable treatment protocol that changes the outcome for the patients diagnosed early w/ the disease
  - An understanding of who will be treated as a patient

Detected diseases

- Newborn screening program in the Philippines currently includes screening of 6 disorders: congenital hypothyroidism (CH), congenital adrenal hyperplasia (CAH), phenylketonuria (PKU), glucose-6- phosphate dehydrogenase (G6PD) deficiency, galactosemia (GAL) and maple syrup urine disease (MSUD).

* 6-Test: Option 1

- ENBS-Expanded Newborn Screening Test
- DOH AO no. 2014-0045 “Guidelines on the implementation of the Expanded NBS Program”
- November 19, 2014
- Detects a total of 28 newborn disorders (hemoglobinopathies, amino acid disorders, organic acidurias, disorders of fatty acid oxidation, disorders of carbohydrate metabolism, cystic fibrosis, and endocrine disorders)
- Option 2

*AO No. 2014-0045-A states that effective May 1, 2019, all infants born in accredited facilities shall be tested for option 2 (ENBS) only.

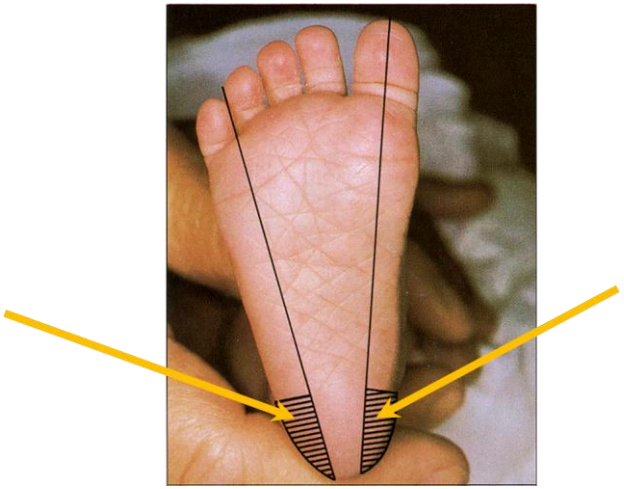
Laboratory Procedures

Guidelines Prior to Test Procedures

- Provide parents or legal guardians an information brochure
- Explain the NBS procedure
- Discuss the reasons for the collection of samples
- Advice parents/legal guardians to arrange further testing if needed
- Document informed consent from the parents or legal guardians

Steps in Sample Collection

- Properly document all information about the baby and his/her family
- Ensure complete ID of the baby
- Collect the blood sample within 24-72 hrs.
  - Capillary puncture is the preferred technique

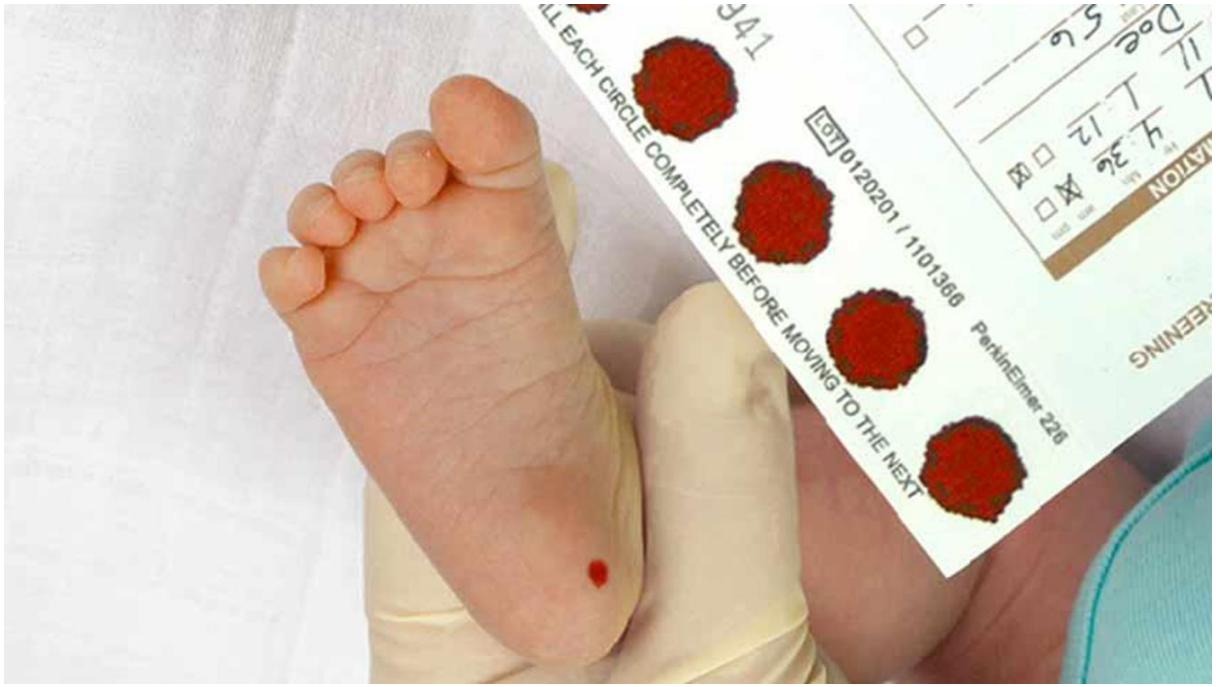


Steps in Sample Collection

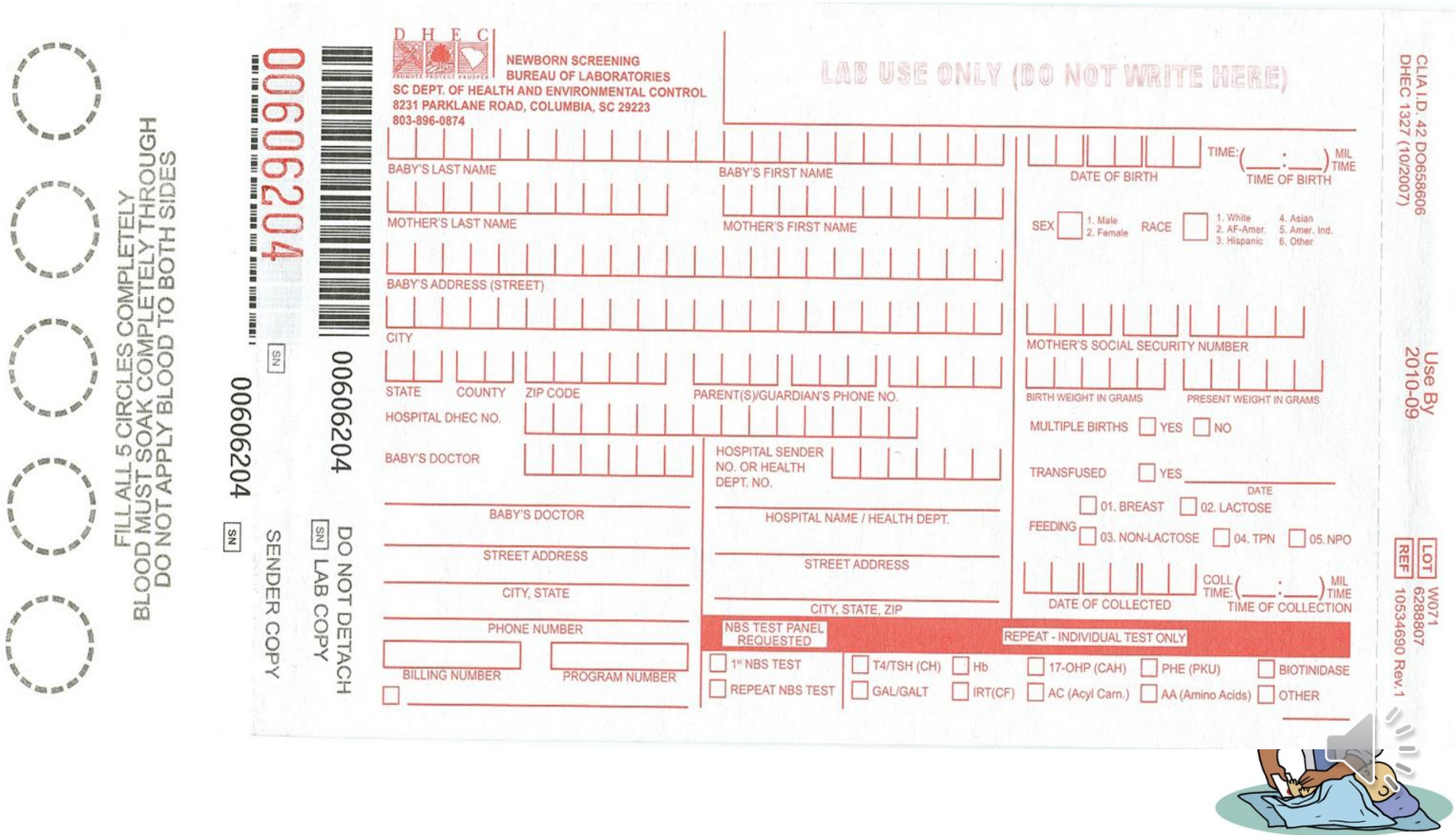
- Cleanse the baby's heel with an alcohol cotton swab. Air-dry before puncturing
- Prick the heel (slight angle) and wipe the first drop of blood.
- Wait for the spontaneous flow of blood

Steps in Sample Collection

- Lightly touch the circle of the card with the drop of blood



Sample Test Card



REPUBLIC ACT NO. 9288

AN ACT PROMULGATING A COMPREHENSIVE POLICY AND A NATIONAL SYSTEM FOR ENSURING

NEWBORN SCREENING

Also known as the "Newborn Screening Act of 2004."

Objectives

1. To ensure that every newborn has access to newborn screening for certain heritable conditions that can result in mental retardation, serious health complications or death if left undetected and untreated;

2. To establish and integrate a sustainable newborn screening system within the public health delivery system;

3. To ensure that all health practitioners are aware of the advantages of newborn screening and of their respective responsibilities in offering newborns the opportunity to undergo newborn screening;

4. To ensure that parents recognize their responsibility in promoting their child's right to health and full development, within the context of responsible parenthood, by protecting their child from preventable causes of disability and death through newborn screening.

Definition of Terms

- Newborn Screening - the process of collecting a few drops of blood from the newborn onto an appropriate collection card and performing biochemical testing for determining if the newborn has a heritable condition.
- Newborn - a child from the time of complete delivery to 30 days old.

- Heritable condition - any condition that can result in mental retardation, physical deformity or death if left undetected and untreated and which is usually inherited from the genes of either or both biological parents of the newborn.
- Newborn Screening Reference Center - NIH

- Recall - a procedure for locating a newborn with a possible heritable condition for purposes of providing the newborn with appropriate laboratory to confirm the diagnosis and, as appropriate, provide treatment.
- Follow-up - the monitoring of a newborn with a heritable condition for the purpose of ensuring that the newborn patient complies fully with the medicine of dietary prescriptions.

- Any health practitioner who delivers, or assists in the delivery, of a newborn in the Philippines shall, prior to delivery, inform the parents or legal guardian of the newborn of the availability, nature and benefits of newborn screening. Appropriate notification and education regarding this obligation shall be the responsibility of the Department of Health (DOH).

Performance of Newborn Screening.

- After twenty-four (24) hours of life but not later than three (3) days from complete delivery of the newborn.
- A newborn placed in ICU may be exempted from the 3-day requirement but must be tested by seven (7) days of age.

- It shall be the joint responsibility of the parent(s) and the practitioner or other person delivering the newborn to ensure that newborn screening is performed.

Refusal to be Tested

- A parent or legal guardian may refuse testing on the grounds of religious beliefs, but shall acknowledge in writing their understanding that refusal for testing places their newborn at risk for undiagnosed heritable conditions. A copy of this refusal documentation shall be made part of the newborn's medical record and refusal shall be indicated in the national newborn screening database.

Licensing and Accreditation

- The DOH and the Philippine Health Insurance Corporation (PHIC) shall require health institutions to provide newborn screening services as a condition for licensure or accreditation.

Advisory Committee on Newborn Screening

- 8 members of the Committee:
  - Secretary of Health- Chairman.
  - Executive Director of the NIH-Vice Chairperson;
  - Undersecretary of the DILG
  - Executive Director of the Council for the Welfare of Children
  - Director of the Newborn Screening Reference Center
  - three (3) representatives appointed by the Secretary of Health who shall be a pediatrician, obstetrician, endocrinologist, family physician, nurse or midwife, from either the public or private sector.

- The three (3) representatives shall be appointed for a term of three (3) years, subject to their being reappointed for additional three (3) years period for each extension.

- The Committee shall meet at least twice a year. The NIH shall serve as the Secretariat of the Committee.

Establishment of a Newborn Screening Reference Center

- The NIH shall establish a Newborn Screening Reference Center (NSRC), which shall be responsible for the national testing database and case registries, training, technical assistance and continuing education for laboratory staff in all Newborn Screening Centers.

Database

- All Newborn Screening Centers shall coordinate with the NIH Newborn Screening Reference Center for consolidation of patient databases. The NIH Newborn Screening Reference Center shall maintain a national database of patients tested and a registry for each condition. It shall submit reports annually to the Committee and to the DOH on the status of and relevant health information derived from the database.

Newborn Screening Fees

- The PHIC shall include cost of newborn screening in its benefits package. The newborn screening fee shall be applied to, among others, testing costs, education, sample transport, follow-up and reasonable overhead expenses.
- Currently, PHIC is funding the basic screening of six disorders for P550 for its members. The expanded newborn screening costs P1500 and remains as an option to parents, wherein PhP 550 is covered by PHIC and the remaining PhP 950 as an out of pocket expense of the family. Discussions with PHIC for possible full coverage of expanded newborn screening is ongoing.

- *Approved:* April 07, 2004

Psalm 127:3

Children are a heritage from the Lord, offspring a reward from him.