

PHILIPPINE GENERAL HOSPITAL NURSING SERVICES

Newborn Screening Program In Philippine General Hospital

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I. NEWBORN SCREENING PROGRAM IN PHILIPPINE GENERAL HOSPITAL

A. HISTORY

The Birth of Newborn Screening Program in PGH

The Philippine General Hospital (PGH) has been a part of the successful journey of Newborn Screening (NBS) in our country since its birth in 1996. PGH was one of the twenty four pioneer hospitals, of which six are government hospitals and the rest are private hospitals, where NBS was first introduced. Since then, PGH has been actively participating and collaborating with the National Institute of Health (NIH) to improve the outcome and health status of the Filipino children admitted to PGH. This is in line with the Department of Health's goal to screen all Filipino newborns and properly manage rare and congenital disorders by the year 2030.

Just like the humble beginnings of NBS in our country, PGH had encountered several challenges through the years before the NBS Program became fully operational. According to Dr. Lorna R. Abad, the overall PGH NBS Coordinator who is a Pediatric Endocrinologist and the present Chair of UP-PGH Department of Pediatrics, since PGH mostly takes care of indigent patients, funding for the project was a primary concern at the beginning. Obstetricians were encouraged to help introduce NBS to pregnant mothers during their pre-natal visits, but their efforts seemed insufficient. Another issue involved the appropriate handling of the collection of NBS payments. Pediatric residents were responsible for handling the money which they reused to purchase more filter cards from NIH. In certain cases, the collection was lost and the money was not well protected. Unaccounted debts were reflected according to a memorandum sent by the NIH despite sending regular payments. Moreover, the specimen collection from the patient using the Heel Prick Method was the responsibility of pediatric residents, in addition to their work at the hospital, which resulted to a lengthy wait.

In 2002, during the term of the former Deputy Director for Nursing of PGH, Ms. Deogracia M. Valderama, there was a major breakthrough that contributed to the success of the NBS Program in PGH. A group of PGH nurses were chosen to participate in a basic training course on NBS conducted by the NIH. This led to the creation of a specialized group of nurses called PGH NBS Nurses' Core Group by the PGH Nursing Services - Division of Nursing Education and Training (DNET), with Chief of DNET Ms. Imelda A. Mangaser and Nurse Educator Ms. Maria Elena M. Mariano as the overall in charge of the operation of the group. All participants in the 1st Basic Course for PGH Nurses' Newborn Screeners were selected Chief Nurses and senior staff nurses of PGH. This program was conducted at NIH and included activities are seminar workshops, clinical immersions on heel pricking and counseling regarding NBS. Those who successfully completed the training program officially became the first members of the PGH Nurses' Newborn Screening Core Group. Following the success of the first batch of trained nurses in NBS, subsequent training courses were conducted by DNET, mostly under Nurse Educator Ms. Ma. Salve K. Sibulo, who took over the place of Ms. Mariano at DNET and assumed the overall responsibility for the Core Group from 2005 to 2019. Since 2002 to present, this core group became the main responsible for managing the NBS Program implementation in PGH.

For the first few years of the NBS in PGH, it was difficult to achieve the required coverage of 80%. In 2002, the coverage rate of NBS was even below 20%, far behind a desired target. Barriers were identified, including issues related to parents' financial capacity, PhilHealth

procedures, administrative system, and availability of filter cards. Despite these issues, the newborn screening in PGH thrived through the years because DNET and the core group members took their responsibility to this program seriously. Since the creation of the core group, scheduling of a centralized Newborn (NB) Screener on duty for each day has been observed. The screener would be in charge of all the screening for the day in the entire hospital, be it inpatient or out patient. This practice went on for years until 2016 when Dr. Gerardo D. Legaspi became the new PGH Director and Ms. Cecile G. Peña became the Deputy Director for Nursing. Under Dr. Legaspi's term, Ms. Peña gave a new direction to all the PGH Core Groups to focus on nurse specialization. Thus, the NBS Nurses' Core Group members became concentrated to nurses assigned at the clinical areas catering to obstetric and pediatric patients. With this, some changes had to be implemented. NBS Satellites had to be empowered so that they could provide their own NB Screener on duty for each day who would screen their own babies, recall patients with urgent results and release results done in their own satellites.

Despite the commitment of the core group members, there were still barriers to increase the NBS coverage for PGH patients such as financial capacity of patients, poor PhilHealth practice and availability of filter cards. To address these issues and increase NBS coverage rate, several interventions have been performed. These included fundraising and asking for donations (from the PGH Bayanihan Multipurpose Cooperative, PGH Medical Social Service and Manila Center for Health Development) to be able to do free NBS to indigent patients of PGH. Conduction of various meetings with the Newborn Screening Reference Center office staff to raise issues and concerns regarding NBS coverage, coordinating with PGH Budget Officers and Accounting staff to discuss budget allocations were also part of the concerted effort. However, despite all these interventions, PGH continued to have a below desired coverage target and funding problems remained prevalent.

To address cases of non-compliance in NBS coverage, collaboration with various agencies such as the Department of Health - Center for Health Development (DOH-CHD), Newborn Screening Reference Center (NSRC), National Institute of Health - Institute of Human Genetics (NIH-IHG), PhilHealth and PGH's Deputy Director for Nursing (DDN) & Deputy Director for Health Operations (DDHO), along with the different pediatricians and obstetricians. In 2012, PGH was called to attention because we were not achieving the target of 80% NBS coverage. Under the initiative of the DNET and the Core Group, with Ms. Gloria G. Almariego, who was then the Chief Nurse of the Department of Obstetrics and Gynecology, as the president (from 2012 to 2020), a letter of request was submitted to the then Director of PGH, Dr. Jose C. Gonzales. This letter is a request for Dr. Gonzales to include NBS filter cards in the annual PGH budget and approve the NBS official station located at Ward 15. A follow up letter was sent to Dr. Gonzales in 2013. Consequently, after a meeting conducted with Ms. Elizabeth M. Cardenas, the PGH Chief Accounting Division, a budget was finally allocated for the procurement of NBS filter cards. In that same year, PGH started to purchase filter cards for NBScreening through DNET. In addition to this, strict compliance to PhilHealth enrollment was also implemented thereby paving the way to the achievement of the desired NBS coverage for PGH. NB compliance reached 88% in 2014 and 98% in 2016. And all requests for filter cards were provided for by PGH since then.

Through these combined efforts and non-stop collaboration with the different stakeholders, NBS pioneers, and the exemplary leadership and management shown by the PGH NBS Nurses' Core Group leaders and members, under the leadership of Ms. Almariego and supervision of

DNET, the PGH NBS Program has successfully achieved its goal and continues to make an impact up to this day.

B. KEYS TO THE SUCCESSFUL NBS PROGRAM IMPLEMENTATION IN PGH

The Role of PGH Newborn Screening Nurses' Core Group

Establishing the NBS Nurses' Core Group assured the hospital wide provision of NBS services within PGH. The PGH NBS Nurses' Core Group has grown to be one of the most successful and accomplished core groups in PGH, having the greatest number of members and activities. It is considered as one of the nursing specialty in PGH and has structured learning activities for its members. It is not only a group of nurses with specialized skills, but a constantly growing family of nurses with a shared passion, commitment, and advocacy – to touch and save the lives of as many newborns as possible.

Below is a program description of this specialty group.

PGH NEWBORN SCREENING TRAINING PROGRAM

Program Title: “UP-PGH Newborn Screening Nurses' Core Group”

Description: This core group is an established nursing specialty in PGH that aims to efficiently implement the program of Newborn Screening in the hospital. Its members are nurses from the different clinical areas whose patients are either pregnant, and post-partum women, newborn babies and infants.

Background of the Program: 1996 has marked the establishment of NBS in the Philippines with 24 participating hospitals, 18 Private hospitals and 6 Government hospitals, of which the Philippine General Hospital is included. Since then, the PGH has been actively participating and collaborating with the NIH to improve the outcome and health status of the Filipino children, especially that of PGH patients. The creation of a specialized group of Nurses designated as Nurses Newborn Screeners has been spearheading the implementation of the program in PGH for many years now. Prior to becoming newborn screeners, they are provided with the complete didactic and clinical training by the Division of Nursing Education and Training of the Nursing Services which is necessary to develop their knowledge, skills and attitude in performing their roles as in the newborn screening program of PGH. These nurses will then undergo completion of cases under the preceptorship of active newborn screeners of the clinical areas. Their training will commence with a graduation where they will be awarded with certificates of training and will then be officially included in the list of active newborn screeners participating in all the program implementation of the core group.

To date, there are about 100 nurses who are actively involved in the activities and services of the Newborn Screening Program of PGH. These nurses have given their commitments to the challenge of saving more babies from mental retardation and other genetic disorders. To keep them abreast with current information and foster effective collaboration among its members that will enhance their dedication and productivity, they are provided with the necessary learning activities such as seminar updates, general assemblies, and teambuilding activities. All of this aims to continuously improve the

core group members' performance of their roles and responsibilities as newborn screeners.

Objectives: Being active members of the core group, the newborn screeners are expected to:

1. Understand the basics of the genetic disorders included in the screening program;
2. Demonstrate confidence in the performance of NBS procedure;
3. Explain the newborn screening results to parents and/or significant others;
4. Maintain the prompt recall patients with urgent results or unsatisfactory sample;
5. Coordinate with other health team members in managing and monitoring cases with positive results according to the prescribed protocol;
6. Develop passion to actively participate in the promotion and implementation of all activities of the PGH newborn screening program; and
7. Internalize their significant and critical roles and responsibilities in the implementation of PGH Newborn Screening Program.

To effectively manage the NBS Program in PGH, a decentralized type of structure was created by DNET in conjunction with the creation of the PGH NBS Nurses' Core Group. A Nurse Educator from the DNET acts as the overall NBS Nurses' Core Group Coordinator to oversee the whole operation of the NBS Program in PGH. Later on, to establish order and organization within the core group, officers were elected and satellite coordinators were appointed to preside over all its activities and members, in close coordination with DNET. Below are the present set of officers and area coordinators which will be replaced till the next General Assembly.

NBS NURSES' CORE GROUP CURRENT KEY PERSONS (2019-2020)

Officers

President: **Gloria G. Almariego, MAN, RN**
Nurse V / DEMS

Vice President: **Marissa DR. Tolentino, RN**
Nurse III, 4 RCB1

Secretary: **Rizalyn A. Lacuna**
Nurse II, Neonatal ICU

Treasurers: **Chareluck Rován L. Santos**
Nurse III, Health Service

Mary Daisy Magos Nietes
Nurse III, 4 LCB2

Area Coordinators

DNET:	Leilani P. Ipapo Nurse III / Overall Coordinator
DPPS:	Mary Jane M. Esposito Nurse III, RCB1
Neonatal ICU:	Genar T. Landicho Nurse II, Neonatal ICU
DOPS:	Alice B. De Guzman Nurse III, DOPS
Wards 9 and 11:	Ma. Milagrosa Alegria B. Sula Nurse III, Ward 9
Ward 16:	Maria Christina V. Barcelon Nurse II, Ward 16
Ward 15:	Jehrusa B. Bolivar Nurse III, Ward 15
Ward 6/PICU:	Arsolita A. De Villa Nurse III, Ward 6
OBAS:	Robina R. Madrigal Nurse III, OBAS

The PGH Nurses' Newborn Screeners

Although the core group had encountered successive challenges during the early days of NBS in PGH, without the leadership and the commitment shown by our nurse newborn screeners, in collaboration with the different pioneers of the NBS Program, the success of the NBS Program in PGH would not be possible. To date, there are about 100 nurses who are committed to the implementation of this program in PGH. As these nurses continue to give their expertise and full commitment in saving more babies from mental retardation and other genetic disorders, the NBS Program in PGH will continue to thrive and evolve.

Being a newborn screener can be seen as a challenging role but having the capability to save lives makes it so fulfilling and rewarding. In most instances, the NB Screeners perform their roles on top of their actual duties in the hospital and have to extend their services even after working hours just to facilitate the screening of their patients without extra compensation. This is the kind of dedication that the newborn screeners give. It becomes their passion to participate in the NBS program and be of service to the targeted clients.

Establishment of NBS Satellites in PGH

Aside from the unwavering dedication and specialized skills of the members of the PGH NBS Nurses' Core Group, one of the main reasons behind the success of the NBS Program in PGH is the establishment of the different NBS Satellites among clinical areas caring for newborns, infants, pregnant and postpartum women. These Satellites were created based on the clinical areas of the nurses, mostly coming from areas with pediatric and obstetric clients. Currently, there are 9 NBS Satellites available in PGH, each having an assigned Area Coordinator to supervise the implementation of NBS activities and create the schedule of NB Screeners in their respective areas. The NBS Satellites includes the following: (1) Department of Pay Patient Services (DPPS); (2) Neonatal ICU; (3) Department of Outpatient Services (DOPS); (4) Wards 9 and 11 (Pediatric Wards); (5) Ward 16 (Obstetric Ward); (6) Ward 15 (Obstetric Ward) and IMU (Intensive Maternal Unit); and (7) OB Admitting Section (OBAS). Department of Emergency Medicine Services, Ward 6 and PICU have also active newborn screeners but are not considered as satellites. These satellites have no permanent NBS kits as their monthly census is very small.

Each of the NBS Satellites have their own practices appropriate to their units and have their own schedule of NB Screeners in their area. Depending on the NBS Satellites, the NB Screener's responsibilities could vary, but mostly include the following: (1) providing health teachings regarding NBS to motivate the parents; (2) being in charge of NBS specimen collection and charging of payments; (3) proper handling of samples; (4) safekeeping and releasing of results to parents; and (5) prompt recall of patients for repeat sample collection/testing. Concerns regarding insufficient samples, having incorrect or missing information in the filter cards, contaminated samples, and having difficulty recalling patients were some of the challenges encountered and continually addressed.

For clarity of the process flow of NBS for each satellite, a flow chart was developed by DNET. This chart, customized for each satellite, served as the guide to be used by the screeners so as to comprehensively perform the NBS and prevent missing details that might be a cause for delay of the service. All the satellites are well oriented to this flow chart.

Clear communication regarding NBS flows from the overall PGH NBS Nurses' Core Group Coordinator (from DNET) to the Area Coordinators, down to the newborn screeners in each satellite. Decisions when it comes to the operations of NBS services within the area are handled by Area Coordinators and are reported back to the NBS Coordinator (DNET) regularly.

NBS Regular Activities

The PGH NBS Nurses' Core Group is the most active core group. Hence, it is important that they be provided with the necessary learning activities such as seminar updates to enhance their knowledge, skills and attitude in performing their roles as NB Screeners. Under the DNET, it has regular activities held almost yearly.

First, to become newborn screeners and to keep the NB Screeners' population at its best number a steady number of NB Screeners has to be maintained in PGH. A program entitled "*The Nurses' Roles and Responsibilities on Newborn Screening Program: The Basic Training Course for PGH Newborn Screeners*" is held every two years. This program is a specialized

training course on how to become a NB Screener. It is a structured learning activity designed to provide a comprehensive training for a selected group of nurses whose main task is to ensure the successful implementation NBS Program at the Philippine General Hospital. It is a series of didactic and clinical training to enhance aspiring NB Screeners' knowledge, skills, and attitude so they could properly perform their roles as NB Screeners. Part of their requirement to pass the program is to complete a set of cases and to conduct Health *Teaching or Mothers' Class* in the Pedia-OB areas of Wards or Out Patient Department under the preceptorship of active and current newborn screeners. A certificate will be awarded to those who have completed the PGH NBS basic course. After participation in the basic training program, completion of required cases and graduation, these nurses officially become members of the PGH NBS Nurses 'Core Group and are expected to be active participants in all the NBS Program implementations and activities in PGH. They will join the NBS Satellites in their areas and perform the duties and responsibilities of a NB Screener. To date, it has successfully conducted 11 Basic Training Courses for PGH Newborn Screeners making way for new additions in the growing family of newborn screeners. Regular conduction of the basic course had to be done to address the concern of the limited number of nurses who can attend to the increasing census of PGH NBS, as there are some screeners who eventually would retire or resign from PGH.

Another activity is the *General Assembly* for the core group members, which is being held annually. This is where issues and concerns of all satellites are raised and addressed, best practices and innovations of each satellite are presented for sharing and members get acquainted with one another to improve camaraderie within the group. This is usually held during the 1st quarter of the year. The election of officers is also done every 2 years, during this activity.

The first week of October is the usual time for *NBS week* of PGH. This will start with a Mass Offering at PGH Chapel, followed by the attendance to the Flag Ceremony of PGH of majority of the NB Screeners wearing their official shirt with PGH NBS logo. Then all NB Screener will hold a parade within the PGH community, especially within the Pedia-OB clinical areas for NBS information dissemination. This helps in the promotion of NBS program among the patients of PGH. The NBS week culminates to the *NBS Update*. This is open only to all NB Screeners of PGH. This program keeps the PGH NB Screeners abreast with current and updated information that they could use to their advantage as nurse NB Screeners. Resource persons who are experts are invited to discuss updates on the NBS program or any disorders included in the NBS program. In the afternoon, an activity, such as Raffle, is conducted by the core group to raise funds for a cause.

Also happening in the first week of October is the *NBS Convention*. This is a nationwide and major event of the Newborn Screening Society of the Philippines that the majority of members of the core group register to attend. This is a convention that gives updated worldwide information about NBS to all medical personnel involved in Philippine program of NBS.

NBS teambuilding, as scheduled, is also provided for the core group members. This is a structured learning activity designed to foster camaraderie ("esprit de corps" among nurse newborn screeners thereby strengthening the working relationships between and/or among this

group of nurses with the utmost goal of providing quality newborn screening in their respective areas of assignment.

The PGH Newborn Screeners are also being tapped for almost 4 years now by our UP Manila Chancellor, Dr. Carmencita Padilla, to participate as *nurse volunteers* in the “UNITED FOR DOWN: Uniting to care for People with Down Syndrome” which is an annual multidisciplinary free clinic for patients diagnosed with Down Syndrome. This is a joint project of Down Syndrome Association of the Philippines, Inc. and UNILAB Foundation. It enables the NB Screeners to participate in an outreach program outside PGH and provides them a different venue where they can provide health management such as taking vital signs, providing health education and social support by connecting clients to the services available during the free clinic, thereby facilitating the flow of traffic.

Request for NBS Core Group Clerk (Office Assistant)

With the dedication of the members of the core group and the consistent availability of NBS filter cards, the census of newborn screened babies began to increase. This posed another challenge to the core group. The duties and responsibilities and the bulk of work of a clerk has always been covered by a nurse trainer from DNET. With the increasing census and commitment to safe and efficient NBS, it is inevitable to seek additional help. The DNET initially submitted a letter of request for a job order clerk in October 2015 to the PGH director. Included in the letter is the justification for the request. This request was forwarded to Institutional Research Planning and Development (IRPD) who then conducted an Evaluation of the Validity of the Request. Findings were positive and was given favorable endorsement. Budget clearance was also granted in 2017 but the actual hiring of the clerk did not happen due to the “Moratorium on Hiring Non-UP and UP Contractuals.” It was in later part of 2019 that the request for a clerk was finally granted and on June 1, 2020, an Office Assistant reported for work. Presently, while she is being trained by the nurse trainer of DNET and until such time that the “new normal” is implemented in PGH, the office assistant is stationed at the DNET office.

C. FUTURE OF NEWBORN SCREENING NURSES’ CORE GROUP

As the members of the core group are dedicated to continue the program, the success of its implementation in PGH is their main goal. Despite continuous challenges met by the nurses, they have all taken it to themselves to overcome these challenges no matter what because saving babies’ lives from mental retardation and death is their ultimate passion.

Despite these challenges, the PGH NBS Nurses’ Core Group still remains to be the top performing core group in PGH. It has the highest number of members, currently with 100 nurses actively involved in the implementation and sustainability of the NBS Program in PGH. Aside from the significant contribution of the Core Group in establishing a successful NBS Program in PGH, the group also recognizes the importance of Newborn Hearing Screening and helps in facilitating the test in every newborn patient in PGH.

II. BEST PRACTICES OF CORE GROUP

A. OVER ALL

1. Almost all the head nurses of Pedia-OB areas are members of the core group.
2. All NBS Satellites in PGH have assigned NBS Area Coordinators. This helps in easier facilitation of the program. Each Area Coordinator is responsible for the monthly schedule of the NB Screeners such that there is screener on duty each day.
3. Each NBS satellite has a filing system for NBS results, NBS logbooks, a drying rack for the specimens and an NBS Tackle Box, which contains NBS filter cards, lancets, cotton balls, transactions slips, claim slips, slips for schedule for repeat collection due to prematurity and low birth weight, and NBS leaflets. These are all in the care of the Area Coordinator and the NB Screener on duty.
4. A Facebook group page and Messenger Chat Group for each satellite that is exclusive for the PGH NB Screeners, has also been created for special announcements and update posts.
5. The core group members are spending their own cell phone loads to recall babies with urgent results since the majority of the contact numbers of the parents were cell phone numbers and not landline numbers.
6. The NB Screeners' dedication is shown in their willingness to extend time beyond their working hours just to be able to perform the screener's duties and responsibilities.
7. Part of the Basic Course for PGH NBScreeners is a *Lakbay Aral* at NIH Technohub to give the new NB Screeners an orientation on the processes of the screening tests and see in actual what makes a blood sample in the filter cards used for the NBS unfit for test.
8. The DNET is the overall responsible for the program of NBS of PGH and all its activities. This is where all the satellites submit their daily specimens to be picked up by the courier, for sending to NIH Technohub. All communications regarding NBS, from NIH, are cascaded to PGH satellites by DNET. It is also DNET that is responsible for the distribution of filter cards and other materials for NBS to all the NBS satellites and conduction of training programs such as Basic Course, Update and General Assembly.

PANDEMIC ADJUSTMENTS (SINCE MARCH 2020):

1. The DNET is still the overall responsible for the NBS program in PGH.
2. One of the major challenges is scheduling NB Screeners on duty for each clinical area. Since there was a major change in the duty schedules, especially for the Covid areas, of the nursing personnel, scheduling of NB Screeners was difficult. However, with the commitment of the members of the core group for each NBS Satellite, they found ways to attend to all the NBS procedures. Each satellite took care of their own responsibilities to keep the NBS program continuous. There was even an instance when repeat NBS was done inside the car at the PGH parking lot to prevent the baby from hospital exposure.
3. Courier service was temporarily stopped but the core group's commitment to the NBS program cannot be affected. Hence, the DNET nurse trainer personally delivered the specimen to NIH laboratory at Technohub, either on official time or on day off, at her own expense.
4. Since contactless is encouraged within PGH, communications such as urgent results and recalls, were mostly relayed to NBS satellites by DNET and/or NBS office assistant through persistent messages in the chat group of each satellite until duly acknowledged or noted by the recipients.

5. Observed strict compliance to Hospital Infection Control Unit (HICU) guidelines in performing the screening (use of PPE level 2 or 2.5 for the screener and limit contact with the Covid -19 confirmed patient).
6. Specimens taken from Covid 19 suspect or confirmed cases were wrapped and labeled separately from the other specimen. It is also treated with utmost precaution so as to protect anyone who handles it.

B. BEST PRACTICES PER NBS SATELLITE

1. WARDS 15 AND 16 (OBSTETRIC WARDS)

Regular Schedule and Duty:

1. All NB Screeners are identified by the head nurses of the wards who are most often the NBS Area Coordinators.
2. A newborn screener on duty is assigned every day from 8:00AM to 4:30PM. The head nurses of each area make the monthly schedule of the newborn screeners.
3. The on-duty newborn screener's responsibilities are the following:
 - Double checks the blood samples that were collected, packed, and logged in on the NBS communication logbook the previous day by the night shift on duty prior to sending to the DNET office. This is done early in the morning
 - Identifies newborns who are not yet screened during the morning rounds.
 - Conducts ward class regarding newborn screening (newborn hearing screening and breastfeeding included) using visual aids (video presentations and posters). PhilHealth coverage for the NBS/ENBS is also discussed
 - Collects and documents blood samples of newborns who were screened
 - Receives and properly file results from DNET. Recall patients who are either for immediate referral or repeat collection of blood samples
 - Releases and explains the results to parent/s or relative/s
 - Refers patient to OPD or other NIH-affiliated facilities if patient is for repeat collection of blood samples or if patient needs a specialist
4. In case the assigned newborn screener for the day is absent, another screener who is on duty will assume the aforementioned responsibilities.

Pandemic Adjustments:

1. Ward 15 became a COVID area and an extension of OBAS. Technically, it was dissolved as a ward and their staff were assigned at the different areas of the Department of Obstetrics and Gynecology and at the different COVID and Non Covid areas of the hospital as well.
2. There is no assigned newborn screener for the day anymore at Ward 16 due to the transition from regular staffing to skeletal staffing and the diminished number of OB-GYN patients.
3. A staff on duty who is also a newborn screener assumes the responsibilities of a newborn screener for each shift, depending on the needs of the area.
4. The newborn screener dons at least a level 2 personal protective equipment (PPE) during specimen collection (heel-pricking).

2. OBSTETRIC ADMITTING SECTION (OBAS)

Regular Schedule and Duty:

1. All newborn screeners are identified by the head nurse at OBAS, who is also a newborn screener.
2. Newborn screening is only conducted at OBAS if both the mother and the newborn are already for discharge and they cannot still be transferred at Ward 15 and Ward 16 due to non-vacancy.
3. A staff on duty who is also a newborn screener collects and documents blood samples of newborns who were screened.
4. Additional responsibilities of the head nurse of the area are the following:
 - Packs the blood samples that was collected the previous day, logs them on the NBS communication logbook prior to sending to the DNET office. This is done early in the morning
 - Collects and documents blood samples of newborns who were screened if there is no available staff who is also a newborn screener
 - Receives and properly file results from DNET. Sends text message to patients who need immediate referral and who need repeat collection of blood samples
 - Releases and explains the results to parent/s or relative/s
 - Refers patient to OPD or other NIH-affiliated facilities if patient is for repeat collection of blood samples or if patient needs a specialist
5. In case the head nurse is not around, one of the staff on duty who is also a newborn screener will assume the aforementioned responsibilities.

Pandemic Adjustments:

1. All newborns are transferred to the Neonatal Intensive Care Unit (Neo ICU) if the mother is tested to be COVID -19 positive or still waiting for her Reverse Transcriptase Polymerase Chain Reaction (RT PCR) test result. In the cases of mothers who tested COVID -19 negative, the mothers will be transferred to Ward 16, together with their newborns.
2. If the mother's RT PCR test result turned out to be negative, the newborn will be roomed in with his or her mother at the ward. Either the NBS will be conducted at Neo ICU or at the ward, upon rooming in.
3. Due to the diminished number of patients in general, there is no issue of no vacancy at the ward and at Neo ICU, so there is no NBS being conducted at OBAS.

3. DEPARTMENT OF OUTPATIENT SERVICES (DOPS)

Regular Schedule and Duty:

1. All NB Screeners are identified by the DOPS NBS Coordinator.
2. A NB Screener on duty is assigned every week. The DOPS NBS Coordinator makes the monthly schedule of the NB Screeners.
3. A copy of the monthly schedule of the NB Screeners is given to the personnel who man the information counter. A patient for repeat NBS will be directed to the information counter by the entrance guards so the patient will be subsequently directed to the clinic of the NB Screener of the week.
4. The on-duty NB Screener's responsibilities are the following:
 - Packs the blood samples that were collected the previous day, logs them on the NBS communication logbook prior to sending to the DNET office. This is done early in the morning
 - Collects and documents blood samples of newborns who were screened for repeat NBS
5. Additional responsibilities of the DOPS NBS coordinator are the following:
 - Receives and properly file results from DNET. Sends text message to patients who need immediate referral and who need repeat collection of blood samples
 - Releases and explains the results to parent/s or relative/s
 - Refers patient/s to specialist/s as needed
 - In case the assigned NB Screener on duty is absent, one of the staff on duty who must also be a NB Screener will assume the aforementioned responsibilities.

Pandemic Adjustments:

1. DOPS closed its doors in March 2020 due to the pandemic and it officially opened only this October, 2020. Urgent repeat NBS that were normally done at DOPS, prior to pandemic, were done at the satellites where the initial was performed. Upon its reopening, the DNET NBS Coordinator, the DOPS NBS coordinator and some DOPS NB Screeners are currently formulating safety guidelines for conducting NBS once again at DOPS.

4. DEPARTMENT OF PAY PATIENT SERVICES (DPPS)

Regular Schedule and Duty:

1. All DPPS wards have trained NB Screener/s.
2. The DPPS coordinator prepares the schedule of the newborn screener for the day on a monthly basis.
3. The NBS kit tackle box is under the safekeeping of the DPPS coordinator.
4. The newborn screener for the day will get the NBS tackle box from the DPPS coordinator and use it to perform the screener's duty for the day.
5. The NB Screener for the day is responsible for performing the NBS for all the rooming-in babies and other babies currently admitted in the DPPS
6. In cases that the assigned NB Screener for the day is not available, other NB Screeners from the same area will be the ones to cover for the screener for the day. If there are no other NB Screeners available from the same area, the DPPS coordinator will be the one who will look for an available newborn screener who is on duty to perform the NBS.
7. Duties and Responsibilities of NB Screener:
 - A NB Screener is expected to go on duty at least once a month and will be responsible for referrals of babies who are scheduled for NBS on that day in all the DPPS areas.
 - The NB Screener for the day is responsible for writing on the communication logbook the number for filter cards received at the start of the day, the number and details of the patients screened for the day, and other important matters that needs to be communicated to other NB Screeners.
 - Submit the specimen, from the previous day/s in the drying rack, to DNET in the morning to ensure that these are picked up by the courier and sent to NIH.
 - Give proper instructions to the parent/s and/or relatives regarding the purpose, importance and procedures involved in NBS. They give instructions regarding follow-up, repeat tests if needed, and claiming of results.
 - Release and explain NBS results that were performed in the DPPS.
 - Recall patients via SMS or voice call and give instructions on where to follow-up or where to go should there be a need for a confirmatory test.
 - Ensure that there is sufficient supply of filter cards in the NBS kit, especially during weekends and holidays. He/she can get the filter cards from DNET.
 - Ensure the safekeeping and returning of the NBS kit to the area of the DPPS NBS coordinator at the end of his/her duty.

Pandemic Adjustments:

1. As pandemic started, the regular rotation of NB Screeners was temporarily stopped. Most areas of DPPS were turned into a Covid wards, so scheduling of the screeners was difficult as some nurses would go into 14 days off after a week's duty at Covid area. NBS of babies was addressed within the area as the need arises.
2. Though there was no scheduled screener for the day, in no instance was a screening not attended to.

5. WARDS 9 AND 11 (PEDIATRIC WARDS)

Regular Schedule and Duty:

1. Wards 9 and 11 are sister wards. They share one NBS satellite. Both wards have nurses who are trained NB Screeners.
2. Both the head nurses of Ward 9 & 11 are newborn screeners.
3. A staff, who is also a newborn screener, who is on duty for the day is tasked to perform newborn screening on patients who are currently admitted in the area, on top of his/her usual tasks for the day.
4. In case that there is no NB Screener duty in either area and there is a baby due for NBS, that area will ask the NB Screener from their sister ward for assistance.
5. Duties and Responsibilities of NB Screener:
 - Answers to all referrals for NBS.
 - Writes on the communication logbook the number for filter cards received at the start of the day, the number and details of the patients screened for the day, and other important matters that needs to be communicated to other NB Screeners.
 - Performs NBS of patients currently admitted in the area.
 - Submits the specimen from the previous day/s in the drying rack to DNET in the morning to ensure that these are sent to NIH by the courier.
 - Gives proper instructions to the parent/s and/or relatives regarding the purpose, importance and procedures involved in NBS. They give instructions regarding follow-up, repeat tests if needed, and claiming of results.
 - Releases of NBS results that were performed in the ward.
 - Explains the results to the parents and or relatives.
 - Recalls patients via SMS or voice call and giving instructions on where to follow-up or where to go should there be a need for a confirmatory test.
 - Ensures that there is sufficient supply of filter cards in the NBS kit, especially during weekends and holidays. He/she can get the filter cards from DNET.
 - Ensures safekeeping of the NBS kit.

Pandemic Adjustments:

1. Not much is different in the practice of NBS at this satellite because they are not assigned as Covid ward.
2. NBS services remained the same.
3. A separate room was created for Covid 19 confirmed cases of Pediatric Service Wards. This is located at the 5th floor of the Pay Wards and is manned by nursing staff who were mostly from Wards 9 & 11, but may sometimes be coming from Pay Wards. Performing the NBS may be a challenge because there is no official NB Screener duty for the day. Proper endorsement of the NBS is done so as not to miss the screening when a NB Screener is on duty.

6. NEONATAL ICU (Neo ICU)

Regular Schedule and Duty:

1. The Neo ICU has currently 23 certified NB Screeners out of 44 nurses.
2. A certified NB Screener of the unit is assigned by the Head Nurse every Monday, Wednesday, and Friday. The screener will report for duty from 7:30 AM to 4:00PM wearing his/her official NBS uniform.
3. If there is no scheduled NB Screener for the day, a trained NB Screener who is on duty is tasked to perform screening on patients requiring immediate screening, on top of his/her duty.
4. Duties and Responsibilities of NB Screener:
 - Reviews and properly packs all specimens received and fills out transmittal form to be sent to DNET.
 - Checks and records the number of filter cards on hand and ensures adequate supply of filter cards especially during weekend and holidays.
 - Identifies all the babies to be screened during rounds.
 - Performs NBS to all currently admitted and patients that have been discharged and recalled for urgent repeat screening as identified by the NIH.
 - Documents all necessary data from the filter card of newborns who were screened and instructs parents or significant others for the schedule of repeat screening.
 - Provides health teachings to parents about NBS and other metabolic disorders.
 - Receives and properly files result from DNET. Recalls patients via SMS or voice call who need immediate referral and who need repeat collection of blood samples.
 - Releases and explains result to the parents or relatives. Refers patients to other facilities for confirmatory tests and to medical specialists if needed.
 - Performs monthly census report and sends to DNET.
 - Writes all important matters in the communication logbook to be used by the next screener.
 - Ensures safekeeping of the NBS kit.

Pandemic Adjustments:

1. Availability of screener in daily schedule to avoid disruption of NBS despite quarantine.
2. Strict compliance in following NIH guidelines in handling and transporting specimens of infants of Covid -19 confirmed mothers.
3. Observe proper coordination with DNET in sending/transporting specimens during lockdown due to unavailability of courier.
4. Created an electronic communication dedicated for Neo ICU screeners and NBS Coordinators for recalling patients, issues and concerns related only to NBS.
5. Proper coordination in recalling patients. Immediate actions were observed/taken as recommended by NIH. (Referral to Resident in charge if still admitted and to Fellow on duty if discharged)
6. For repeat screening, parents were immediately informed through calls and SMS. Due to quarantine, parents were instructed to look for NBS Facility near their area and refer to NIH personnel for proper coordination with the facility.

7. During Modified Enhanced Community Quarantine (MECQ), repeat screening is performed in the Neo ICU for those patients who live nearby PGH.
8. Observed strict compliance to HICU guidelines in performing the screening.

III. REFERENCES:

1. David-Padilla, C. M. & Gutierrez-Tayag, J. P. (Eds.). (2016). Celebrating 20 Years of Newborn Screening: Challenges and Successes. New Associated Printing Press.
2. Narration of Selected Newborn Screeners
3. Division of Nursing Education and Training (DNET) files

NEWBORN SCREENING NURSES' CORE GROUP PICTURES

Newborn Screening Week (Mass at PGH Chapel)



Newborn Screening Week (Flag Ceremony at PGH Atrium)



Newborn Screening Week (Parade)



Newborn Screening Week (Fun Activity – ZUMBA)



Newborn Screening Update



Newborn Screening Week (Fun Activity – Raffle)



Newborn Screening Convention









Newborn Screening General Assembly



Newborn Screening General Assembly





Free Clinic (United for Down)



The Basic Training Course for PGH Newborn Screeners



Technical Working Group Members' Meetings

