

MULA KAY

Tsanselor...

Patuloy nating ikinagagalak at ipinagmamalaki ang matagumpay na pagbangon ng komunidad ng UP Manila at ng pangkalahatang komunidad pangkalusugan sa mga hamon ng COVID-19!

Sa isyung ito, tunguhan ang naging kaganapan sa Newborn Screening Convention na nakakalap ng mahigit 6,000 kalahok mula sa buong bansa. Tinalakay dito ang mga hakbang na isinagawa upang matugunan ang mga hadlang sa maayos na pagpapatakbo ng programa bunga ng *lockdown* sa iba't-ibang lugar. Sa kanyang talumpati sa pagbubukas ng programa, hinimok ng Pangalawang Pangulo ng Pilipinas, Maria Leonor Robredo, na paigtingin ang pagpapatupad ng *expanded newborn screening* sa gitna ng pandemya para sa kabutihan ng nakararaming batang Pilipino.

Kaugnay ng adhikaing maingatan ang mga pasyente sa panganib ng Inborn Errors of Metabolism (IEM), tinalakay sa isang webinar ang pangangailangang pangnutrisyon ng mga pasyenteng may IEM. Sa pamamagitan nito at mga susunod pang konsultasyon, layuning makabuo ng mga *standard reference materials* para sa ganitong kondisyon.

Sa ika-apat na Telegenetics Webinar, nagbahagi ang mga eksperto ng pananaw, pagsusuri, pagtugon, at genetics ng sakit na Retinoblastoma at ang kahalagahan ng *genetic counseling* para dito. Ang Retinoblastoma ay isang pangkaraniwang kanser na sumisira sa paningin ng bata. Ang mga komplikasyon ay maaring maiwasan sa maagang pagsusuri ng eksperto.

Ngayon lamang sa Healthscape mababasa ang tungkol sa konsepto ng *herd immunity* at ang papel nito sa pag-iwas at pagpapabagal sa pagkalat ng SARS-CoV-2 virus. Ipapaliwanag ito ni Dr. Faisal Hanif, kilalang *transplant at hepatobiliary surgeon* sa Pakistan, sa *webinar* na isinagawa ng Research Institute for Tropical Medicine.

Ang isyung ito ay kinumpleto ng parangal ng National Academy of Science and Technology sa dalawang magiging na *alumni* ng Kolehiyo ng Medisina para sa kanilang ambag sa siyensiya sa Pilipinas. Sila ay testimonio ng husay at kabuluhan ng mga pananaliksik ng UP Manila sa iba't-ibang larangang pangkalusugan, biyaya ng Diyos sa ating unibersidad na dapat nating laging ipagpasalamat at patuloy na linangin para sa kabutihan at kaunlaran ng ating bayan.



VP Robredo is keynote speaker at NB screening convention

"The pandemic has disrupted our usual protocols and systems, but the poorest and most vulnerable feel the inequalities more so than others. These are mothers who have no access to quality healthcare; babies who are born in less desirable environments," said Vice-President Maria Leonor Robredo in her keynote address during the opening of the first ever virtual national annual Newborn Screening Convention on October 14, 2020 attended by over 6,000 participants.

Robredo cited data from UNICEF stating that an estimated 116 million babies will be born under the shadow of the pandemic but this should not

stop the new families from getting support and access to primary care.

She challenged the participants to keep protocols and systems in place to protect not only mothers and their babies but also frontliners who are their primary caregivers; to continue expanding services that can cover indigent families; and to ensure that patients and their families are properly informed and supported when their test comes back positive. She believes that the tasks are daunting and encouraged everyone to continue to find ways to extend service and build together a better future for the next generation.

VINA MENDOZA

Chancellor Padilla reappointed to a third term



The University of the Philippines Board of Regents (BOR) approved the reappointment of UP Manila Chancellor Carmencita Padilla at its 1354th meeting held on September 24, 2020. Padilla is the first chancellor of the UP System's health science campus to serve for a third term effective Nov. 1, 2020 to October 31, 2023. Her first term was served from Nov. 1, 2014 to October 31, 2017, while her second term will end on Oct. 31, 2020.

Padilla is recognized for her varied contributions to the founding and growth of genetics

TURN TO PAGE 5

UPM Inks Collaboration with British Embassy Manila for COVID-19 Response

As part of the national university and as the SEAMEO TROPED Regional Centre for Public Health, the UP College of Public Health (CPH) has established partnerships with global health organizations and stakeholders towards health systems strengthening. One such partner is the British Embassy Manila, with which the University of the Philippines Manila (UPM) signed a Memorandum of Understanding (MOU) last 15 September 2020. This event was hosted virtually by CPH and attended by Her Majesty's Ambassador Daniel Pruce, UPM Chancellor Carmencita Padilla, and CPH Dean Vicente Y. Belizario, Jr.

During this virtual ceremony, Dean Belizario highlighted CPH's role in shaping leaders in public health which goes back to its establishment as a training institution for executives and professionals working in the Department of Health; and which would be further strengthened as the academic partner of the British Government's Better Health Programme (BHP) in the Philippines. Chancellor Padilla highlighted the importance of, "guaranteeing that our public health workers do not lose sight of equally important health concerns, such as vaccine preventable diseases, non-communicable



Screenshots during the photo op in the Memorandum of Understanding (MOU) Virtual Ceremony between the UP College of Public Health and the British Embassy Manila held last 15 September 2020. The MOU signing is joined by UP Manila Chancellor Carmencita Padilla, CPH Dean Vicente Belizario, Dr. Katherine Reyes, Dr. Victoria Molina, and the British Embassy Manila delegates- Her Majesty's Ambassador Daniel Pruce, Ms. Rebecca Shah, Ms. Leonina Morillo, and Ms. Liz Bautista. (Photos are taken from the official British Embassy Manila FB Page)

diseases, environmental and occupational health, among others; that if left unattended, would further cripple the public health system that is already affected by the pandemic."

Ambassador Pruce remarked that the partnership between UP Manila and the British Embassy Manila is a manifestation of the United Kingdom's strong relations with the Philippines and its global commitment to facilitate knowledge sharing and improving public health through its BHP. The BHP is a set of initiatives co-

organized by the British Government and eight partner countries aimed towards inclusive economic growth and reducing poverty through improved public health.

The MOU signing ceremony also coincided with the launch of a webinar series entitled, *Public Health in the Time of COVID-19 and the New Normal: A Webinar Series for Public Health Workers*. The series aims to provide a venue for discussing public health program updates, challenges, and **TURN TO PAGE 4**

HICU UPDATE!

Effective Oct. 5, 2020, the entire PGH staff will observe **UNIVERSAL PANDEMIC PRECAUTIONS**.

"UNIVERSAL PANDEMIC PRECAUTIONS" is a new set of Infection Control Precautions whose objective is to further reduce the risk of transmission of COVID-19 in PGH.

The implementation will now be comprehensive to include all COVID and non-COVID areas.

The scope will expand to include all the operating rooms, outpatient clinics, administrative offices, laboratories, department offices, staff lounges, research areas, classrooms, chapel, dining areas, accommodations of PGH staff and the entire parking lot spaces within the gates of the PGH.

1/10

#BeatCOVID19!

HICU UPDATE!

UNIVERSAL PANDEMIC PRECAUTIONS

1. Assume that **EVERYONE** in the hospital is possibly infected with COVID-19. Everyone includes: **ALL** patients, watchers, employees, trainees, volunteers, visitors, even if asymptomatic, or with negative RT-PCR tests for SARS-CoV-2.
2. **ALL PGH STAFF** should routinely wear at least a face mask and an eye protection (Level 2) **AT ALL TIMES** except while eating or when alone in a room or vehicle. Higher Level PPE should be used according to the need and clinical situation, (eg. Level 3 or 4 in all aerosol-generating procedures or all direct COVID-19 care).
3. Practice frequent hand hygiene and surface disinfection in all areas. For patient care, the **Five Moments of Hand Hygiene** should be followed all the time.
4. Daily screening for symptoms of COVID-19 will be done for all entering patients, watchers, healthcare workers and all other employees.
5. Prompt testing of persons with signs and symptoms of COVID-19, appropriate isolation and contact tracing will be instituted in a systematic manner.

2/10

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HICU UPDATE!

UNIVERSAL PANDEMIC PRECAUTIONS

Updated Hospital Policies on Healthcare workers:

The Civil Service Commission requires government employees experiencing symptoms of COVID-19 to stay at home and not to report to work.

A. To prevent future COVID outbreaks within PGH, there are designated **Safety Officers (SO)** in each of the departments and offices.

B. SOs are tasked to screen the employees. SOs can send to UPHS / report to HICU / send to ER or Ambulatory individuals who report to work if they have any of the COVID symptoms:

- i. Fever / temperature >37.6
- ii. Chills
- iii. Shortness of breath / cough
- iv. Diarrhea
- v. Loss of taste and/or smell
- vi. Sore throat / colds
- vii. Feeling unwell, muscle pain, headache

b. The screening form (PGH Form No. Q-69007) should be used by all SOs for all duty shifts, and these are periodically submitted to the HICU.

8/10

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HICU UPDATE!

UNIVERSAL PANDEMIC PRECAUTIONS

Updated Hospital Policies on Healthcare workers:

Breaks, meals and other eating activities are high risk periods for possible COVID-19 transmission. To decrease the HICU risk related to meals, the following changes will take place:

- COVID-assigned staff will be served their post duty meals by the Dietary Department only at **designated open areas**.
- Meals should preferably be taken at the Dining Hall using a **staggered schedule** where the staff can be seated that allow a 2-meter distance between persons.
- Eating will **ONLY** be allowed at the lounges, pantry areas, offices, clinics and nurses rooms if:
 - o 2-meter spacing between persons can be assured.
 - o (if space is not available) a **staggered schedule** with staff taking turns to eat is enforced.
- Meals should be taken for **15 minutes only**.

9/10

#BeatCOVID19!

HICU UPDATE!

UNIVERSAL PANDEMIC PRECAUTIONS

Updated Hospital Policies on Healthcare workers:

A. Reporting back to work after any COVID-like illness requires clearance from UPHS or HICU.

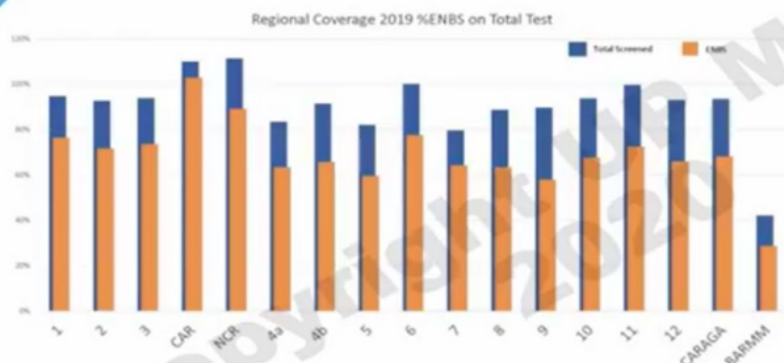
B. Reporting to work while sick will **NOT** be tolerated and subject to administrative sanction.

C. Non-work-related activities which may increase risk for transmission for COVID-19 will NOT be permitted anymore:

- Selling goods
- Staying in lounges >15 minutes.
- Staying overnight in offices.
- Cooking in respective areas.

10/10

#BeatCOVID19!



NB screening program implementers rising to the challenge of COVID-19

The 18th convention held last October 14, 2020, organized by the Newborn Screening Society of the Philippines (NSSPI) and UP Manila Newborn Screening Reference Center (NSRC) attracted over 6,000 health professionals, program implementers, partners, and advocates of newborn screening. The theme, “Navigating the Path Towards a Successful Expanded Newborn Screening Amidst Challenges,” was inspired by the exemplary response of the program stakeholders to the COVID-19 pandemic.

Through this virtual event, the NSSPI still aimed to provide education, technical updates, and best practices on newborn screening operations. This year’s convention also honored the life and strong leadership of NSSPI President Dr. Ephraim Neal Orteza, who passed away last April 8 due to COVID-19.

Overall Program Chair and NSRC Director Noel Juban presented the status of the expanded program that now screens 29 disorders and the continuing challenges and efforts to address them. “With the COVID-19 pandemic, we, newborn screening advocates, have continued giving our services towards our goal of saving every Filipino child from mental retardation and death,” he said.

UP Manila Chancellor Dr. Carmencita Padilla, a convener of the newborn screening program in the Philippines, presented the framework for the Expanded Newborn Screening (ENBS) in the country, the strategies to be undertaken to attain the targets, and the roles of the different stakeholders.

In the session on endocrinology, Dr. Lorna Abad, Chair of the PGH Department of Pediatrics, tackled the basic facts on Congenital Hypothyroidism, differentiated transient from permanent

congenital hypothyroidism, and enumerated the diagnostics used.

Dr. Sylvia Estrada, Chair of the Newborn Screening Expert and Advisory Committee for Endocrine Disorders, shared the prevalence and importance of early detection and treatment of Congenital Adrenal Hyperplasia (CAH), the hindrances in CAH care, and current reduction efforts such as holding regional newborn screening clinics in collaboration with the Philippine Society of Pediatric Metabolism and Endocrinology.

Geneticists, Dr. Leniza de Castro-Hamoy and Dr. Mary Ann Abacan, presented Tyrosinemia Type 1 and Glutaric aciduria Type 1, respectively. They also talked about the importance of early detection, proper management to prevent life-long complications, and the need to continue advocating for patients with rare diseases to ensure that they get more access to treatment and medications.

For the plenary session on Hemoglobinopathies, Drs. Maria Beatriz Gepte and Reynaldo de Castro, hematologists from the Philippine Children’s Medical Center, presented the prevalence of Alpha Thalassemia in areas endemic to malaria where the more severe forms occur and the challenges of blood transfusion in Beta Thalassemia.

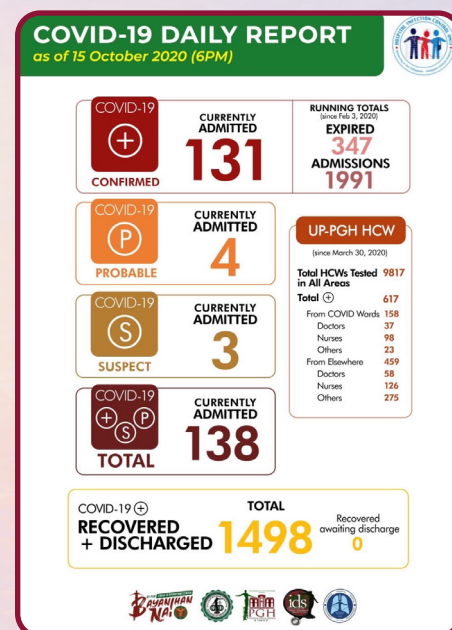
Day 2’s plenary session on the importance of evaluating and understanding a family’s risk of an inherited medical condition through genetic counseling had Dr. Ma-am Joy Tumulak, Angela Pascua, and Peter James Abad emphasize the value of information and support to families affected by or at risk of a genetic disorder. Tumulak stressed the importance of a multidisciplinary team of doctors, nurses, social workers, therapists,

and genetic counselors in the holistic management of patients. Pascua cited that genetic counseling will help replace misconceptions about the causes of genetic diseases and promote psychological well-being and adaptation to the genetic condition or risk. Abad tackled the crucial aspect of disclosing the bad news and how primary care providers can best approach this task to families in a respectful and empathic manner.

The plenary session on nutrition featured Aster Lyn Sur, a metabolic nurse, on the history of metabolic dietetics and the critical role of dietitians in managing patients with inborn error of metabolism (IEM). She mentioned the challenges, including professional standards, development of outcome-based treatment guidelines and protocols, research and development, and local and international collaboration. Jeanne Ruth Basas, a genetics dietitian, added the challenge of IEM dietary management during the time of the pandemic and the difficulties in adhering to patients’ nutritional management, transition from face to face consultation to telemedicine, and procurement of food and medicines for patients. Developmental and behavioral pediatrician Dr. Kaye Napalinga, explained that feeding infants and young children not only ensures physical growth but shapes their emotional and social development.

In the last plenary session, four program implementers, Dr. Conchita Abarquez, Head of Newborn Screening

TURN TO PAGE 4



Webinar on Nutritional Management of Patients with Inborn Errors of Metabolism held

“The pandemic has affected everybody whether in the Philippines or other parts of the world. What is important now is to answer how we move forward. There are challenges but there are actions and solutions. This is the time for us to discuss these challenges and work together to address them. We have a role in the lives of our patients and whether we have COVID-19 or not, the responsibility remains the same,” UP Manila Professor and Chancellor Carmencita Padilla said while urging the participants to continue serving patients as she closed the last webinar session of the Inborn Errors of Metabolism (IEMs) lecture series on September 29, 2020. The last session was graced by Dr. Maureen Evans, Senior Metabolic Dietitian from the Royal Children’s Hospital in Melbourne, Australia. She shared the international professional practice in genetic metabolic dietetics.

The series of webinars and workshops started last July 28 in response to the limited number of healthcare professionals capable of handling the nutritional management of IEM patients in the Philippines. Clinical nutritionist-dietitians from newborn screening continuity clinic hospitals and regional hospitals and public health nutritionist-dietitians were invited to attend a total of 12 lectures and 5 workshops to eventually become part of the network that looks after patients with IEM. This series was designed to help nutritionist-dietitians have a deeper knowledge of genetic disorders and their corresponding nutritional restrictions. The workshops included several sessions aimed to give the participants a higher competency in computing metabolic diet prescription, including the sick-day regimen and use of different medical formulas.



IEMs are genetic disorders usually caused by a deficiency of enzymes or their cofactors resulting in the accumulation of toxic metabolites. Nutritional management of IEMs is vital to attain good metabolic control, prevent complications, and ensure proper growth and development. These genetic disorders started to be detected and diagnosed in 1996 through Newborn Screening (NBS). Five disorders were screened at that time. In 2012, Expanded Newborn Screening (ENBS) became available, allowing the detection of more than 28 disorders. With the increasing number of patients being confirmed positive for one of these disorders, additional nutritionist-dietitians are needed to handle the nutritional care of IEM patients.

Through the series of lectures, the following were discussed: Philippine Expanded Newborn Screening and its role in the prevention of mortality and development of complications; roles of nutritionist-dietitians in the system of IEM management in the Philippines (including the referral system, continuity clinics, source and allocation of medical formulas, etc.); basic genetics, pathophysiology, clinical features, and treatment of selected IEMs; nutritional care process involved in the management for in- and out- patients; strategies in conducting dietary counseling among IEM patients; and IEM dietary management in the global and local setting.

With limited resources and local reference materials in the country, the organizers together with all participants who completed the series will start a run of consultations to develop standard reference materials for specific conditions.
VINA MENDOZA

UPM INKS COLLABORATION...

good practices amid the current pandemic and beyond; in line with Universal Health Care and the Sustainable Development Goals. The inaugural webinar entitled, “COVID-19 in the Asia Pacific Region: Moving Forward Amidst Challenges in Public Health” will be on 8 October 2020. Interested attendees are encouraged to watch out for announcements on how to register for the webinar series. The webinars will also be streamed live through the CPH social media page (fb.me/upcph). The series is expected to run from September 2020 to March 2021.
DR. JAIFRED C. F. LOPEZ AND MARIA VIANCA JASMIN C. ANGLO

NB SCREENING PROGRAM...

Center-Mindanao; **Dr. Ma. Rita Anne Salve Boligao**, Follow-Up Head of Newborn Screening Continuity Clinic in Vicente Sotto Memorial Medical Center; **Dr. Monrey Isaiiah Mancilla**, Newborn Screening Program Manager in Bicol Center for Health Development; and **Dr. Maria Alejandra Narcelles**, NBS Coordinator in Pira General Hospital, Cabugao, Ilocos Sur; shared how they responded to the challenge of continuing to implement newborn screening amid the pandemic. From collection to transmission, to testing and management of positive patients; they recounted how the DOH Center for Health Development lessened the operational gap in providing newborn screening services in the region.

VINA MENDOZA

EDITORIAL BOX

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Two UPCM alumni conferred with NAST awards for scientific contributions



Two graduates of the UP Manila College of Medicine were among those conferred different awards by the National Academy of Science and Technology Philippines (NAST PHL) at its first ever virtual Awarding Ceremony last July 10, 2020 during the culminating activity of the 42nd NAST Annual Scientific Meeting.

Dr. Charlotte Chiong, UPCM Class 1985 and current UPCM dean, was one of five new Academicians conferred in the field of medical sciences during the ceremony. The membership to the Academy is given to resident Filipino scientists who have made exemplary contributions to science and technology in the Philippines.

Dr. Chiong is internationally recognized in otolaryngology, a pioneer in cochlear implantation surgery, lead researcher and advocate for the enactment of Republic Act. 9709 that established a National Universal Newborn Hearing Screening Program in the Philippines. She is Principal Investigator for researches on the genetics of hearing loss as well as biomedical device and teleaudiology applications for improving hearing health care delivery in the country.

She pursued her Residency in Otolaryngology at UP-PGH (1987-1990), Research Fellowship in Otolaryngology, Harvard Medical School-Massachusetts Eye and Ear Infirmary, Clinical Fellowship in Neurotology-Skull Base Surgery University of Toronto-Sunnybrook Health Sciences Center, and PhD in Medical Sciences from Radboud University Nijmegen in the Netherlands (2011-2013). She is Research Professor and Director of

the Philippine National Ear Institute and Director of the Newborn Hearing Reference Center at the UP Manila National Institutes of Health.

Another UPCM alumnus, **Dr. Ramon B. Gustilo** (UPCM 1957), was conferred the **Corresponding Member award** in the field of Orthopedics with three others in different fields. The Corresponding Member award is conferred on non-resident Filipino scientists who have made exemplary contributions to the advancement of science and technology and must have continuing connections and contributions to Philippine science.

Dr. Gustilo's international reputation as a leader in the field of orthopaedic surgery was first gained due to his painstaking work classifying open fractures, and recommending treatment based on classification. His classification system was instrumental in improving the care and outcome of severe fractures throughout the world, and he continues to update his recommendations. His leadership in the care of patients with orthopaedic injuries resulted in his establishment of the Orthopaedic Trauma Hospital Association and the Orthopaedic Trauma Association. He was founding President of both these organizations.

Along with his work on open fractures, Dr. Gustilo established a rare expertise in musculoskeletal infections, and established a Musculoskeletal Sepsis research unit that remains pre-eminent in the world for basic research and for recommending optimal clinical treatments.

(With reports from the NAST website)

CHANCELLOR PADILLA REAPPOINTED TO A THIRD TERM...

and newborn screening in the Philippines. She was conferred the title of Academician of the National Academy of Science and Technology in 2008. She is Professor of the Department of Pediatrics at the UP Manila College of Medicine. Padilla is also the executive director of the Philippine Genome Center from 2011-2016, Interim Director of the Institute of Health Innovation and Translation Medicine from 2013-2014, Director of the Newborn Screening Reference Center of the UP Manila National Institutes of Health (NIH) from 2006 to 2014, and Director of the NIH's Institute of Human Genetics from 2000 to 2010.

Since 2014 when she first assumed the chancellorship, Padilla has been transforming UP Manila into a vibrant and modern setting for teaching, learning, and working. She ventured into a comprehensive program of infrastructure development and facilities upgrading, excellence in academics and research, operational efficiency for enhanced services and protection of human assets, and heightened individual and institutional extension services. She has been overseeing UP Manila's and the UP Philippine General Hospital's critical and timely responses to the COVID-19 pandemic since the beginning of the quarantine.

When she presented her vision for a third term as UP Manila chancellor, she closed by saying, "I envision UP to be a haven of **Excellence, Scholarship, Collegiality, and Service**. My administration will be known for **Protecting** the rights of the students, faculty, and administrative personnel. It will be known for **Partnerships and Professionalized Services**. It will be an administration that puts premium on **People** because they remain our greatest asset and beneficiary of everything that we are doing."

CYNTHIA VILLAMOR

4th Telegenetics Cancer Counseling webinar focused on Retinoblastoma

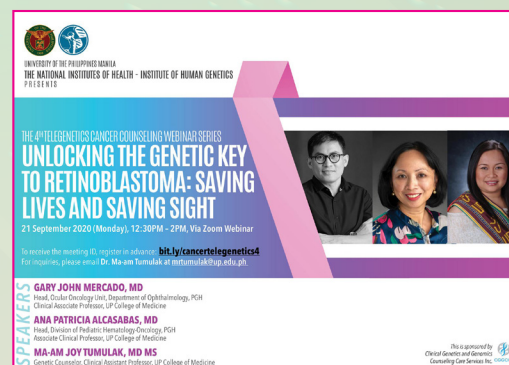
Last 21 September 2020, the Institute of Human Genetics-National Institutes of Health (IHG-NIH) held the 4th cancer telegenetics webinar entitled, “Unlocking the Genetic Key to Retinoblastoma: Saving Lives and Saving Sight”. A panel of experts gave their insights on the diagnosis, management, and genetics of retinoblastoma and the value of genetic counseling for these cases. They were **Dr. Gary John Mercado**, an ophthalmologist; **Dr. Ana Patricia Alcasabas**, a pediatric oncologist; and **Dr. Ma-Am Joy Tumalak**, a genetic counselor.

This webinar emphasized that retinoblastoma (RB) is the most common intraocular malignancy in children. The earliest sign of this disease is leucocoria, or “white pupil”. Recognition of those with a hereditary RB1 gene mutation is important because they have a greater risk for secondary cancers such as osteosarcoma, soft tissue sarcoma, epithelial cancers, and melanoma which significantly increases as the patients

age. The speakers also emphasized that RB is potentially fatal, but 90% can be cured by early detection. Awareness of the disease is crucial in saving a life and saving the vision.

Telegenetics as a modality in providing genetic risk assessment and genetic counseling services given the current pandemic situation was reiterated. It was further emphasized that oncology physicians, nurses, and other health care providers have the essential role to identify red flags in patients; to provide patients and their families an opportunity to seek genetic counseling; and to engage in earlier screening and surveillance along with other interventions that would lead to better outcomes.

There were 120 attendees, mostly physicians, nurses, and other health workers with a few lay persons. The webinar was sponsored by the Clinical Genetics and



Genomics Counseling Care Services Inc., a group of medical geneticists and genetic counselors in the Philippines. The group was formed to support individuals and families in navigating the complexities of genetic and genomic testing methodologies and to translate relevant genetic information necessary for their care. For further information about their services, please feel free to visit their website: cggccs.com or send an email to: info@cggccs.com.

Dr. MA-AM JOY TUMALAK



Webinar addresses implications of herd immunity on COVID-19

Will herd immunity slow the spread of the current pandemic? Will you be among the immune or susceptible populations? Session 15 of the Biosafety X Change webinar entitled, “Understanding COVID-19 Herd Immunity and Serology for HCWs” explained the basic concepts of herd immunity and discussed its implications in the context of COVID-19.

Produced by the Biorisk Management Office of the Research Institute for Tropical Medicine, the webinar’s guest speaker, **Dr. Faisal Hanif**, discussed how immunity to viruses can be gained naturally or artificially. Natural immunity is developed after being exposed to pathogen or, for infants, by receiving antibodies from the mother through

breast milk; whereas artificial immunity is gained either by vaccination or injecting antibodies.

Herd immunity is a key concept for mitigating an epidemic. Dr. Hanif, a consultant pathologist and clinical microbiologist, noted that herd immunity is achieved when a large portion of a community becomes immune to a disease which makes the spread of the disease from person to person unlikely. Individuals who are immune to the disease will act as barriers so that those who are immunocompromised will be protected. As a result, this breaks the chain of infection and the community becomes protected.

According to him, 66% percent of a community needs to be immune in order to reach the herd immunity threshold. The path to COVID-19 herd immunity is either through **vaccination** or **natural infection**. Herd immunity created via vaccination is the better way. History shows how vaccines successfully controlled deadly contagious diseases such as smallpox, polio, rubella, and many others. Vaccines provide immunity without causing illness or resulting complications.

Through natural infection, herd immunity can be achieved when a large

number of people have recovered from the disease and developed antibodies against future infection. Individuals who recovered from COVID-19 could create immunity; however, building a herd through this manner would require exposing a huge population to the virus which could also yield different outcomes such as serious complications, overwhelmed hospitals, or millions of deaths.

As it is not clear yet if infection with the COVID-19 virus makes a person immune to future infection, Dr. Hanif reiterates the observance of precautionary measures at all times. He emphasized that herd immunity does not protect every person; there would still be the 34% who are immunocompromised and can contract the virus. Until a COVID-19 vaccine is developed, it is important to follow safety protocols to reduce the risk of infection. Dr. Hanif concludes that in a time of crisis, we decrease our fear by having a better and right understanding. The more we know about the disease, the more changes we can effect in our existing risk assessments, biorisk management mitigation control, or biosafety standards in laboratories handling emerging and reemerging infectious diseases.

A full recording of the webinar may be viewed [here](#). **ANNE MARIE ALTO**