



## FROM THE CHANCELLOR

We are bringing you another informative and  
endowing issue of the UP Manila Healthscape!

With the continuing surge in COVID-19  
cases of which a considerable number are  
caused by the highly infectious Delta variant,  
this issue features updated expert-guided  
recommendations and policies on vaccination,  
prevention, and management of COVID-19  
cases that were driven by the said variant.  
The requirements for home care isolation  
for adults and children are also included.

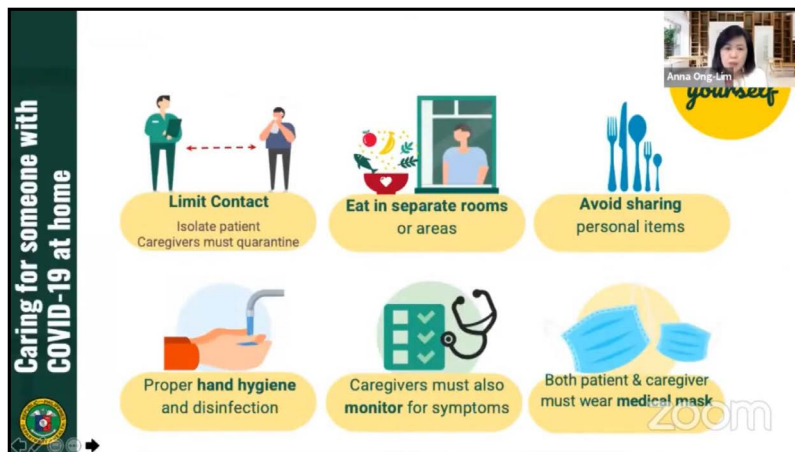
The recommendations were presented by  
Health Undersecretary and spokesperson Dr.  
Rosario Vergeire, infections disease specialist Dr.  
Anna Lisa Ong-Lim, and health social scientist  
Dr. Nina Castillo-Carandang during a townhall  
meeting conducted by the Department of Health.

A welcome and encouraging development for  
hearing-impaired patients is the full restoration  
of the services of the PGH Ear Unit effective  
January 2021. To ensure protection and in  
compliance with guidelines, services are now  
strictly by appointment and transactions  
are done through the window. Observing  
strict protocols on wearing mask and face  
shield, hand hygiene and physical distancing  
is required while disinfectable engineering  
controls were installed for added protection.

No words are enough to capture the legacies  
and contributions of UP Regent Nelia Gonzales  
to the country and UP during the past 70 years.  
Being a steadfast ally and supporter of UP Manila  
and most of its officials, the tribute to “Tita”  
Nelia rekindled her generosity, remarkability,  
and multi-faceted qualities as a woman, UP  
alumna, and agriculturist/social entrepreneur.

Completing this issue are the articles on the  
UP Manila Ugnayan ng Pahinungod-St Paul  
Manila University Community Pantry that  
benefitted 3,500 beneficiaries from several  
barangays, including the families of PGH patients,  
and the first virtual teambuilding of the UP  
Manila Central Administration employees.

The article on the risks from the inhalable ash  
from the Mayon Volcanic eruption in 2018 urges  
us to be vigilant and prepared for the hazards  
of the eruption activities of Taal Volcano.



## Delta variant-driven vaccination and other policy updates presented in town hall meeting

Wearing preferably surgical masks  
even for non-healthcare workers in  
high-risk settings and vaccination for  
the companion of senior citizens (A2+  
1) and pregnant and lactating women  
were among the policy updates  
and recommendations presented  
during an Aug. 18 [Department  
of Health townhall meeting.](#)

The presenters were DOH  
Undersecretary and Spokesperson  
Dr. Rosario Vergeire; UP College  
of Medicine professor, pediatric  
infectious disease specialist, and  
DOH Technical Advisory Group  
member Dr. Anna Lisa Ong Lim,  
and health social scientist and DOH  
interim National Immunization  
Technical Advisory Group member  
Dr. Nina Castillo-Carandang  
who discussed the latest expert-  
guided recommendations for  
adults, children, and pregnant  
and lactating women.

With the resurgence in COVID-19  
cases, of which a sizeable number  
was traced to the more infectious  
Delta variant and other variants, the  
three panelists emphasized that  
the updated policies were urged  
by experts through the Philippine  
COVID 19 Living Recommendations.

The panelists reiterated that the  
Prevent, Detect, Isolate/Quarantine,  
Treat, and Reintegrate (PDITR) plus  
Vaccination Strategy is still effective  
and works for all places, situations  
and populations. This strategy,  
according to Dr. Vergeire, also  
includes the triage system being  
followed by the local government  
units, which is dependent on the  
vital role played by the Barangay  
Emergency Response Team and  
Barangay Health Workers

The recommendation to switch  
to surgical mask for non HCWs  
whenever feasible is based on the  
capacity of such masks to provide  
increased protection. For HCWs  
not directly taking care of COVID  
patients and suspects, surgical  
masks, face shields or goggles,  
and standard PPEs are advised.

### Vaccination Updates

Meanwhile, vaccination for  
one companion of an A2 (senior  
citizen) is allowed provided he/  
she is from the same household  
and a caregiver and/or relative.

**TURN TO PAGE 3**

## PGH Ear Unit's services to hearing-impaired patients fully restored

The Ear Unit, the hearing and balance laboratory and epicenter of service and research of the Philippine National Ear Institute (PNEI) located at the second floor of the Philippine General Hospital Central Block, has resumed full operations starting January 2021.

The Ear Unit was closed from March 15, 2020 to May 15, 2020 during the first lockdown in Metro Manila in compliance with protocols and guidelines for the temporary cessation of non-emergency health services. The PGH's designation as a Covid 19 referral center was also another reason for the closure, the Ear Unit being in the middle of the PGH, less than 10 meters away from four COVI-19 wards.

The resignation of a staff member and two others' inability to report to office due to public transport shortage contributed to the decision to partly cease operations. Despite the lockdown, some patients still went to the hospital to meet their previous appointments. A staff member, Ms. Ma. Luz San Agustin, a registered nurse and clinical audiologist, continued to report to work to perform newborn hearing screening. walking several kilometers to and from office for lack of public transport

PNEI Director Dr. Maria Rina Reyes-Quintos, also Newborn Hearing Screening Reference Center (NHSRC) OIC, sent advisories to all Newborn Hearing Centers (NHCs) in the country which was consistent with the Philippine Inter-Agency Task Force for Emerging Infectious Diseases and PhilHealth Guidelines on the Provision of Special Privileges to Those Affected by a Fortuitous Event.

The first NHSRC advisory dated March 18, 2020 recommended that all NHCs defer initial screening with Oto Acoustic Emissions (OAE) or Automated Auditory Brainstem Response for up to two months after birth and that rescreening with OAE be done two weeks after initial screening. Confirmatory testing can still be done before three months and will still fall within the recommended 1-3-6-month algorithm.

During the lockdown, the NHSRC was unable to supply the Newborn Hearing Screening Registry Cards due to the unavailability of staff to process orders. The move was to ensure protection for the

hearing screening personnel, nurses and doctors who may be exposed to COVID. The risk of infecting infants as well as of further exposure of the personnel to the COVID 19 virus in the birthing facilities far outweighed the benefits of hearing screening before the infant is discharged. This was during the time when the mode of transmission of the coronavirus was not yet determined.

The second advisory dated April 15, 2020 that is still in effect and will most likely be the new normal in the next one to two years states that hearing centers follow the hospital's or institution's procedural protocols on disinfection and attire. However, the NHSRC recommended wearing at least a surgical mask, eye protection in the form of face shield or goggles, and gloves in all procedures to ensure the safety of the patients and personnel while performing hearing tests in infants.

The Ear Unit, with its soundproofing, was understandably a confined space. Administrative controls were set such as a strict appointment system through text, email and Viber, contact tracing information, and temperature checks before entering the facility. Walk-in patients were and are still no longer allowed.

The Ear Unit had to invest on a dedicated cellphone and redundant internet providers as the UP-Manila system was not reliable due to congestion. Engineering controls such as exhaust fans, HEPA filters, barriers and UV lamps were installed. A three-month supply of PPEs such as masks, face shields, gloves, 70% ethyl alcohol, germicidal hand soaps was ensured in place of the monthly replenishment. All of these were accomplished through generous donations from the PGH Department of Otorhinolaryngology and The Ear Study Group.

Despite limited resources, personnel and the COVID restrictions, the Ear Unit rose to the challenge of serving patients albeit on a limited scale. The Philhealth Z-Package for Hearing Impaired Children was pilot launched in December 2020. The Ear Unit is the first in the country to provide hearing aids to infants and



Receiving area of The Ear Unit with staff observing strict protocols on wearing mask, face shield, hand hygiene and social distancing.



Engineering controls such as exhaust fans in all rooms, HEPA filters, UV light, sterilizers, barriers, taffeta covers for the equipment and PVC blinds that can easily be disinfected were installed.

children through the national insurance program led by Dr. Ma. Leah Tantoco an Otolaryngologist-Clinical Audiologist and Dr. Christopher Malorre Calaquian. Of 51 applicants, 19 children have been fitted with the device as of February 2021.

The National Cochlear Implant Program led by Dr. Charlotte Chiong, former PNEI and NHSRC Director and UP College of Medicine Dean, was also started amidst this crisis. Partner institutions of this program are the Corazon Locsin Montelibano Memorial Medical Center in Bacolod and Southern Philippines Medical Center in Davao that will receive cochlear implants as well as diagnostic hearing equipment necessary to function as hearing implant centers. The program is envisioned to support families with children who need further surgical intervention after undergoing hearing amplification and speech therapy with minimal benefit. This is the final component in providing complete care for hearing impaired children in the Philippines.

*\*This article was contributed by the PNEI Ear Study Group composed of Rosario Ricalde, Christopher Malorre Calaquian, Ma. Leah Tantoco, Maria Rina Reyes-Quintos, Abner Chan, Nathaniel Yang, Teresa Luisa G. Cruz, Erasmo Gonzalo Llanes, Kimberly Mae Ong, and Charlotte Chiong.*

# Home Care for Covid 19 Patients and Suspected Patients

Taken from the lecture of Dr. Anna Ong-Lim during the DOH Townhall meeting on August 18, 2021

**IPC advice for caregivers providing care at home**

Caregivers, household members and individuals with probable or confirmed COVID-19 should receive support from trained health workers. Caregivers and household members should receive guidance from a trained health worker on how to adhere to the IPC recommendations for health workers as well as the following additional recommendations:

- Limit the patient's movement around the house and minimize shared space. Ensure that shared spaces (e.g. kitchen, bathroom) are well ventilated (5, 15).
- Household members should avoid entering the room where the patient is located or, if that is not possible, maintain a distance of at least 1m from the patient (e.g. sleep in a separate bed) (5).
- Limit the number of caregivers. Ideally, assign one person who is in good health and has no underlying chronic conditions (4, 5).

- Visitors should not be allowed in the home until the person has completely recovered, shows no signs or symptoms of COVID-19 and has been released from isolation.
- Perform hand hygiene according to the WHO 5 moments (18). Hand hygiene should also be performed before and after preparing food, before eating, after using the toilet, and whenever hands look dirty. If hands are not visibly soiled, an alcohol-based hand rub can be used. For visibly soiled hands, always use soap and water.

**COVID-19 Home Care Kit**

- Face masks and shields
- Alcohol sanitizers
- Disinfection supplies
- BP apparatus
- Thermometer
- Vitamins and common medications
- Pulse oximeter
- Monitoring instructions, information materials, etc.
- Information on hospitals, emergency services, etc.

Home care may be considered for an adult or child with confirmed or suspected COVID-19 when inpatient care is unavailable or unsafe (e.g. when capacity is insufficient to meet the demand for health-care services). Such patients who have been discharged from hospital may also be cared for at home, if necessary.

**Requirements for Home Care**

For asymptomatic, mild or moderate COVID-19, individuals can isolate at home or in a Temporary Treatment and Monitoring Facility (TTMF)

INFRASTRUCTURE	ACCOMMODATIONS
<ul style="list-style-type: none"> <li>Line of communication for family and health workers</li> <li>Electricity, portable water, cooking source</li> <li>Bathroom with toilet and sink, if possible, separate from family (if none, disinfect bathroom after use)</li> <li>Solid waste and sewage disposal</li> </ul>	<ul style="list-style-type: none"> <li>Separate bedroom - no vulnerable person in the household</li> <li>Accessible bathroom in the residence</li> </ul>

**Requirements for Home Care**

**RESOURCES FOR PATIENT CARE AND SUPPORT**

- ✓ Primary caregiver who will remain in the residence (not high risk for complications and educated on proper precautions)
- ✓ Medications for pre-existing conditions, as needed
- ✓ Digital thermometer (disinfected before/ after use)
- ✓ Meal preparation
- ✓ Masks, tissues, hand hygiene products
- ✓ Household cleaning products
- ✓ Coordination with local government

## DELTA VARIANT FROM PAGE 1...

In addition, a companion of the A3 (with co-morbidities) may be allowed for vaccination if they are immunocompromised, such as cancer patients, transplant recipients and those undergoing immunotherapy. Dr. Vergeire announced that these recommendations will soon be adopted as a national policy.

Drs. Vergeire and Ong-Lim stated that except for the Sputnik V and Gamaleya vaccines which are not recommended for pregnant and breastfeeding women, all other vaccines can be given for breastfeeding women, women in the 2nd or 3rd trimester of pregnancy, and for the first trimester for high-risk pregnancies after appropriate counselling. However, it was explained that booster shots are not yet advised because they are still being studied, and due to the high percentage of Filipinos who have yet to be vaccinated.

For children, both said that only Pfizer has an Emergency Use Authorization for ages 12 and above. In the Philippines, utilizing the ring or cocoon strategy to vaccinate qualified

adults in households will also lead to protection for children.

Dr. Ong - Lim pointed out that home isolation is advised for asymptomatic and mildly ill children with clearance by doctors and with their and the local government unit's monitoring. In instances where home isolation is not possible, children should be accompanied by family members if there is a need for facility-based quarantine.

## Ventilation Guidelines

For workers, Dr. Vergeire urged that all activities be held in open air spaces and in other places with proper ventilation that allow for 6-8 air changes per hour. She added that the use of exhaust fans can be helpful. Inside public transport, there should be no recirculated air and with open windows of at least three inches opening.

She cited the experts' recommendations against the use of air purifiers, ionizing air filters, foot baths, misting tents disinfection chambers and UV lamps. She cautioned against the use of wand-

like UV lamps that are bought in online stores because these don't give protection and that UV lamps used in hospitals and clinics are the only ones authorized for use.

Dr. Vergeire also announced the suspension of the shortened seven-day quarantine and testing protocols for asymptomatic fully vaccinated close contacts.

## Good information hygiene

Dr. Nina Castillo Carandang repeated the need for vaccine equity, to counter and not contribute to vaccine misinformation, rely on trusted sources, such as WHO, DOH, and health experts/health professionals, and conduct fact checks, that are necessary for practice of good information hygiene.

"Fake news spreads faster than COVID, we need to be proactive, think of what to like and share as we have a duty to have a positive impact to others and a responsibility as creators and shares of accurate information," she intoned. Cynthia M. Villamor



## UP Manila – St. Paul Community Pantry serves 3,500 beneficiaries

For the past 10 weeks every Thursday, people fell in line along Pedro Gil Street as early as 3 am to be sure to bring home food items and other goods from the community pantry inside the St. Paul University Manila (SPUM) compound. While in the long queues, they were given loaves of bread for breakfast.

The community pantry was organized and conducted by the **Ugnayan ng Pahinungod** of UP Manila in partnership with its neighbor, SPUM; and started operating last May 4, 2021.

UP Manila Chancellor Carmencita Padilla, SPUM President Sr. Evangelina Anastacio, SPC, and UPM Pahinungod Director Dr. Eric Talens were present on the first day of the pantry, when it served around 200 beneficiaries from Barangay 697 Malate, Manila. Barangay Captain Garphil Andrey R. Lee and his councilors saw to the peace, order, and security on each day of the activity. The Pahinungod staff and volunteers, assisted by the SPUM staff, were on the frontlines; handing out the packs of fresh vegetables, groceries, hygiene

kits, eggs, and hot meals. Most of the goods were prepared by the volunteers and staff days before to facilitate the distribution on pantry day Thursday.

The second day of the pantry a week after had 275 beneficiaries, 75 of whom were from the Philippine General Hospital (PGH). With the assistance of PGH Chaplain Fr. Marlito Ocon, the pantry reached out to include the “bantays” or the watchers of PGH patients and the PGH Philcare maintenance personnel on the 3rd and 4th days.

In all, the UPM-SPUM community pantry was successful in having been held 10 times and serving roughly 350 beneficiaries each pantry day or a total of 3,500. The pantry served not only the people of Barangay 697 but also residents of San Andres, Sta. Ana, Paco, and as far as the Baseco Compound in Manila.

“Making a difference because the Charity of Christ urges us” is a motto reflective of this community pantry, combining the mottos of partners **Ugnayan ng Pahinungod** of UP Manila and SPUM.

## Bridging the Distance: UP Manila Central Administration holds 1st virtual teambuilding

In an effort to “bring the community together” this pandemic, the UP Manila Central Administration (CAD) held its first online teambuilding program through varied activities on July 22-23, 28 and 30, 2021. With the theme “UP: Rising to the Challenge” the activities aimed to strengthen the intra- and interrelationship of the CAD offices/units and UP Manila’s distant units, the School of Health Sciences, during the pandemic. All three SHS campuses – Palo, Leyte, Baler, Aurora; Koronadal, South Cotabato, and joined the activities. A fourth SHS campus will open in Tarlac to admit midwifery students in September.

During the “Kamustahan” that opened the program, Chancellor Carmencita Padilla not only updated the community

on the status of the different programs and projects but also shared insights on how to make the hybrid working environment more productive and meaningful.

This was followed by two webinars to help constituents cope with the challenges of the pandemic. Dr. Johann Kim T. Mañez, the First International Fellow, American College of Lifestyle Medicine, talked about Lifestyle Medicine on the 23rd while Dr. Rowena R. Antemano, a Postdoctoral Fellow Marine Science Institute, University of the Philippines-Diliman, spoke on “Moringa Para sa Corona” on the 28th.

To cap the activities, Prof. Buenalyn Teresita M. Ramos-Mortel, professor of public health administration at the UP Manila College of Public Health, talked about the impact of communication challenges in the hybrid workplace. The trivia quiz on UP Manila and the CAD offices and other games participated by the staff added fun and enhanced the goodwill and camaraderie among the members

A committee headed by Human Resource and Development Office Director Richard S. Javier, organized the teambuilding program. January Kanindot



The UP Manila community offered a heartfelt send-off to a longtime ally and UP Board of Regents member **Dr. Nelia Teodoro-Gonzalez** who served the university and country in various capacities for more than 70 years.

Regent Gonzalez led a multifaceted life pioneering in agribusiness and social entrepreneurship, engaging in public service duties, and advocating for gender equality among others.\* She was a holder of a UP Doctor of Laws degree, *honoris causa*, and one of the UPAA Lifetime Distinguished Achievements awardees in 2013 that recognized her accomplishments as one of the country's first top female executives and for inspiring generations of women across Southeast Asia.

Sharing personal vignettes of Regent Gonzalez's influence in her life, Chancellor Carmencita Padilla shared how "Tita Nelia", as she was fondly called, was keen to learn developments in her personal life and career at every opportunity. "She stayed connected with people and was always updated with their lives. She attended activities, big or small. *Basta't inimbilihan mo, darating siya.*"

For Chancellor Padilla, Tita Nelia had a fully lived life that must be shared. Her stories, advice, and wisdom must be listened to and learned from. She recounted how Tita Nelia was there to support her during the challenging times of her career when she was lobbying for the Newborn Screening Law and fighting for the creation of the Philippine Genome Center. In their last long conversation, Regent Gonzalez reminded Chancellor Padilla that serving the people is a responsibility and that nobody is ever too old to serve. "She said to me, if you can serve beyond the university, go ahead. So long as the heart and mind are willing to serve, continue to serve."

Other UP Manila officials and alumni who were close to Regent Gonzalez reflected on her remarkable life and how she touched not only their careers but also their lives. Vice Chancellor Arlene Samaniego wrote: "Ma'am Nelia was a very remarkable lady! An accomplished person with so many great achievements, but very down-to-earth and "chill" mommy to all. *Walang mataas o mababang tao sa kanya.* She treats everyone equally and nicely." [She



was] very inspiring to listen to not only because of the wisdom she interjects in the discussion but also of the calm soft-spoken person that she is, she added.

Food and Drug Administration Director-General and UPCM alumnus Rolando Enrique Domingo wrote: "The instant that you get to know her, she instantly became your "Tita" because of her warmth and love for everything and everyone around her... She was the Tita that we all wanted; the one who spoils us, encourages us, and supports us no matter what."

As a leader, Tita Nelia had a strong personality beneath her feminine charm. This was according to former Vice Chancellor for Administration and PGH Director Napoleon Apolinario who wrote that she could be sweet when the situation calls for it and fought with toughness when it was the only way to get things done. "At the time when agriculture was dominated by men, Tita Nelia was the only female graduate in 1944 at the height of World War II. She taught us the meaning of fortitude and *lakas ng loob.*"

Former UP Manila Chancellor Ramon Arcadio wrote that Regent Nelia was a God-loving lady. "She showed this divine love by her many projects in various socio-civic organizations that benefitted the poor. Even in her senior years, she had the energy, interest, and involvement in university activities practically in all campuses of UP."

Dean Charlotte Chiong of the UP College of Medicine recognized Regent Gonzalez's numerous achievements and contributions that shaped the University in the past 70 years. The college prepared a short video in her honor.

Even in her 90s, Regent Gonzalez made use of her linkages to boost her public service duties.\* Regent Nelia was truly one of the University's most outstanding alumni and an icon in the UP community. Her life's work may be read in *Nelia T. Gonzalez: An Entrepreneur's Journey* (UPLBAA, 2015) and in *Nelia T. Gonzalez: The Woman, Her Life, Her Legacy* (SEAMEO-SEARCA, 2002). **Anne Marie D. Alto**

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## BAYANIHAN NA!

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Collection sites in (A) Ligao City, (B) Guinobatan, and (C) Legazpi City.

## Study shows high levels of inhalable ash from 2018 Mt. Mayon eruption

The health dangers of volcanic eruptions form part of the research thrust of UP Manila College of Arts and Sciences Committee on Planetary Health. The thrust seeks to assess the cost of disasters to humans whether from forced movement of people or the harmful effects to safety and health. Issues in sharing information and collection of samples and measurements to characterize disasters are being studied. Such studies would create and enhance knowledge that would be instrumental in planning for future disasters like volcanic eruptions.

The proximity of the 24 active volcanoes in the Philippines to several cities, towns, and communities exposes their residents and environment to the hazards and risks of volcano eruptions; as in the case of Mt. Mayon and Taal Volcano.

Two years after and similar to Mt. Mayon's eruption in 2018, the Taal Volcano eruption in January 2020 spewed ash that put the safety and respiratory health of the surrounding communities at risk. Ashfall was even observed in the National Capital Region and adjacent provinces such as Laguna that jeopardized the health of the residents.

The ashfall damaged human and animal lives, agriculture, properties, and even affected the fish—mainly tilapia and milkfish—being raised in thousands of aquaculture pens in Taal Lake.

One reason for the massive destruction was the lack of LGU disaster response plan in some areas. This plan should address evacuation planning for the residents, displacement of thousands of residents, issues on information dissemination between Phivolcs and LGUs, and lack of appropriate face masks for the vulnerable population in the affected communities.

Recently, it was reported in <https://cleanairasia.org> that as of 1 July 2021, an alert level status 3 was declared around Taal volcano. Evacuation among residents in surrounding towns such as Laurel and Agoncillo has been taking place. In terms of air quality, Clean Air Asia suggests that another inhalable hazardous element, sulfur dioxide, was released from the volcano. Sulfur dioxide would form sulfates that are the precursor of secondary particle formation leading to higher levels of pollution. Collection of particulate matter samples in surrounding areas would allow profiling the sources of air pollution from such a volcanic eruption.

The Committee on Planetary Health would like to present the study conducted by **Ms. Jelle Ayz Beo**, a UPM-CAS alumna. The study involved the collection of inhalable ash samples during the Mt. Mayon eruption in 2018 and the characterization of the samples based on its mass concentration, size distribution, and elemental composition. The characterization and categorization will help in the conduct of proper respiratory risk assessment.

The study revealed the magnitude of volcanic ash emitted by Mayon Volcano during a series of volcanic events in January 2018 and its impact on health. Volcanic ash (VA) was defined in the study as fragmented pyroclastic material < 2 mm in size. Inhalation of these particles can cause adverse health effects due to potentially toxic components and adsorbed bio-toxic compounds from volcanic fumes. Susceptibility to respiratory diseases increases if an individual is exposed to high concentration of particles that are small enough to penetrate the lungs. Particles < 10 µm in size (PM10) are called the inhalable fraction whereas particles < 2.5 µm in size (PM2.5) are called the

respirable fraction. PM10 may enter the bronchioles and can cause lung irritation, inflammation, asthma, and bronchitis. On the other hand, PM2.5 has the ability to enter the alveolar region of the lungs, increasing the risk of acquiring chronic respiratory diseases such as silicosis.

Based on her collected samples from Guinobatan, Ligao City, and Legazpi City in Albay, the levels of particulate matter PM2.5, were 745.54 µg/m<sup>3</sup>, 177.04 µg/m<sup>3</sup>, and 42.79 µg/m<sup>3</sup>, respectively; which were all above the cut-off of 25 µg/m<sup>3</sup> set by the World Health Organization (WHO). The differences in the levels of particulate matter can be partly attributed to wind patterns during the eruption. The bulk of the collected inhalable samples were also in the 0.5-1.0 µm range in terms of particle size. The collected ash samples were fine enough to pass through the respiratory tract and readily settle at the alveoli, potentially causing adverse effects on the health of the concerned persons.

The study also showed that the mean silica content was above the limits set by the International Volcanic and Health Hazards Network for the samples collected in Guinobatan and in Legazpi City. A respiratory deposition dose was also estimated based on the mass concentration of the collected inhalable ash.

The high levels of inhalable silica and fine particles measured during the eruption of Mt. Mayon gave an idea of their impact on the respiratory health of the residents in the nearby communities. Collected data combined with wind patterns were also seen to determine the distribution of inhalable ash. **Migel Antonio Catalig**

*\*This article is from a series of features created by the UP Manila College of Arts and Sciences Committee on Planetary Health of UP Manila and is a follow-up to an earlier article on Planetary Health published in a previous issue. Representing various fields from the social sciences and the natural and physical sciences, the committee embodies the interdisciplinary nature of planetary health research and is working to raise awareness and interest on planetary health through research, publication, and public forums.*