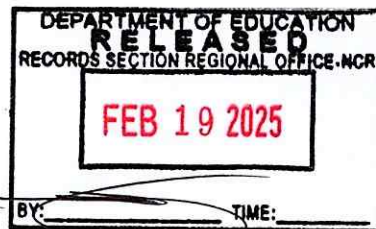




Republic of the Philippines
Department of Education
NATIONAL CAPITAL REGION



REGIONAL MEMORANDUM
ORD-2025- 161

TO : **SCHOOLS DIVISION SUPERINTENDENTS**
CHIEFS OF FUNCTIONAL DIVISIONS
ALL OTHERS CONCERNED

FROM : **OFFICE OF THE REGIONAL DIRECTOR**

SUBJECT : **CONDUCT OF THE PROPOSED RESEARCH ON HIV TESTING**
FOR SECONDARY LEARNERS IN PUBLIC AND PRIVATE
SCHOOLS IN NATIONAL CAPITAL REGION (NCR)

DATE : **February 17, 2025**

1. This is in relation to the attached reply letter to Dr. Rossana A. Ditangco, Chief of the Clinical Research Division at the Department of Parasitology, Research Institute for Tropical Medicine (RITM).
2. In line with this, the Research Institute for Tropical Medicine (RITM) is requesting to conduct a study on "LUNAS Eskwela": **L**everaging, **U**nderstanding, and **N**avigating **A**ccess to **S**chool-based HIV Testing for High School Students in the Philippines. This project seeks to deeply understand the realities on the ground-exploring what high school students, parents, and teachers know and feel about HIV and HIV testing.
3. This will employ mixed methods design. A quantitative survey on HIV and HIV services related knowledge, attitudes and practices will be conducted among learners, and parents/guardians. School facilities survey will also be conducted to identify availability of health services and resources.
4. The study population will include junior and senior high school learners, parents, teachers, school officials, Deped officials, and school-based health care workers.
5. For more information, please contact Connie P. Geganayao, MD, FPPS Medical Officer IV- School Health and Nutrition Unit through email at hnu.ncr@deped.gov.ph or cellphone number 0918-941-1154.




Address: 6 Misamis St., Bago Bantay, Quezon City
Email address: ncr@deped.gov.ph
Website: depedncr.com.ph





Republic of the Philippines
Department of Education
NATIONAL CAPITAL REGION

6. Immediate dissemination of this Memorandum is desired.


JOCELYN DR. ANDAYA
Regional Director, NCR
Concurrent Officer-In-Charge, Office of the
Assistant Secretary for Operations



Address: 6 Misamis St., Bago Bantay, Quezon City
Email address: ncr@deped.gov.ph
Website: depedncr.com.ph



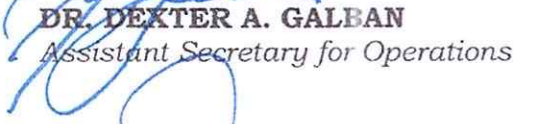
Dr. Connie

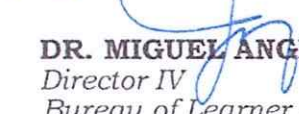


Republic of the Philippines
Department of Education
BUREAU OF LEARNER SUPPORT SERVICES

OFFICE OF THE DIRECTOR

MEMORANDUM

FOR :  **DR. DEXTER A. GALBAN**
Assistant Secretary for Operations

FROM :  **DR. MIGUEL ANGELO S. MANTARING**
Director IV
Bureau of Learner Support Services

SUBJECT : **REPLY LETTER WITH COMMENTS AND RECOMMENDATIONS AND AN ENDORSEMENT TO REGIONS III, IV-A, AND NCR ON THE PROPOSED RESEARCH ON HIV TESTING FOR SECONDARY LEARNERS IN PUBLIC AND PRIVATE SCHOOLS**

DATE : February 5, 2025

This Office respectfully submits the following documents for your approval:

- a. Reply letter to **Dr. Rossana A. Ditangco**, Chief of the Clinical Research Division at the Department of Parasitology, Research Institute for Tropical Medicine (RITM), requesting to conduct a study on "*LUNAS Eskwela*": Leveraging, Understanding, and Navigating Access to School-based HIV Testing for High School Students in the Philippines.
- b. Endorsement to the Regional Directors of Regions III, IV-A, and NCR regarding the aforementioned request.

Thank you very much.



Republic of the Philippines
Department of Education
OFFICE OF THE ASSISTANT SECRETARY FOR OPERATIONS
BUREAU OF LEARNER SUPPORT SERVICES
School Health Division | School Sports Division | Youth Formation Division

1st Endorsement
February 5, 2025

Respectfully transmitted to **JOCELYN DR. ANDAYA**, Regional Director, DepEd National Capital Region (NCR), the herein proposed Research from Dr. Rossana A. Ditangco, Chief, Clinical Research Division, Department of Parasitology, Research Institute for Tropical Medicine (RITM), requesting to conduct a study on "**LUNAS Eskwela**": **L**everaging, **U**nderstanding, and **N**avigating **A**ccess to **S**chool-based HIV testing for High School Students in the Philippines, for appropriate action.

The matter is being transmitted considering that the concern is in the area of your jurisdiction and may be best addressed by your Office.


DR. DEXTER A. GALBAN
Assistant Secretary for Operations

Incl: as stated

Copy Furnished:

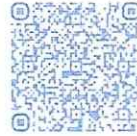
Dr. Rossana A. Ditangco
Chief, Clinical Research Division
RITM



Bureau of Learner Support Services - Office of the Director

Room 305, 3F Mabini Building
DepEd Complex, Meralco Ave., Pasig City
Tel Nos. (02) 8635-3763
Email: ops.ed@deped.gov.ph

Your feedback is important to us
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On Mon, Jan 27, 2025 at 8:01 AM Office of the Assistant Secretary for Operations
<oasops@deped.gov.ph> wrote:

Dear **Dir. Migo**:

Attn: **Doc Dumlao**

Good afternoon.

This is to respectfully refer this matter to your office for your appropriate action. Kindly facilitate the evaluation of this **school based HIV testing protocol draft** and provide comments/inputs, as may be necessary.

Thank you very much.

Sincerely,
Jen

Office of the Assistant Secretary for Operations
Bureau of Learner Support Services
SHD | SSD | LFD
Department of Education
oasops@deped.gov.ph | (08) 8632-1368 / (08) 8633-7213
DepEd Complex, Meralco Avenue, Pasig City, Philippines

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----- Forwarded message -----

From: **Rossana Ditangco** <raditangco@yahoo.com>

Date: Fri, Jan 24, 2025 at 10:32 AM

Subject: Re: school based HIV testing protocol draft

To: Marianette Inobaya <marianette.inobaya@ritm.gov.ph>, Mark Donald Reñosa <drmarkdonaldm@gmail.com>, Maureen Dungca <maureen.dungca@yahoo.com>,

Jobel Sornillo <j.sornillo@gmail.com>, Office of the Assistant Secretary for Operations
<oasops@deped.gov.ph>

Dear co-Investigators,

Attached is the latest draft of the protocol. Your comments/suggestions are highly appreciated. A gentle reminder for those who have not yet submitted their CV, GCP cert. and COI forms

Thanks

Annie

Rossana A. Ditangco, M.D.

Chief, Clinical Research Division

DEPARTMENT OF HEALTH RESEARCH INSTITUTE FOR TROPICAL MEDICINE

9002 Research Drive, FCC, Alabang, Muntinlupa City 1781, Philippines

Fax Nos.: (632) 842-2828 and (632) 842-2245 Telephone Nos.: 807-2628/30 local 611

On Tuesday 7 January 2025 at 01:31:43 pm GMT+8, Rossana Ditangco <raditangco@yahoo.com> wrote:

Dear All,

Attached is the 2024 CDC school survey which I think can adapt for our study. Since the questionnaire is not that long, I think we can adapt except the first few questions ethnic minority and US specific policy. The ones I highlighted in red are I think should be our priority questions but since the questionnaire are not that long even the green ones can be included.

Your thoughts/comments highly appreciated.

Thanks

Annie

Rossana A. Ditangco, M.D.

Chief, Clinical Research Division

DEPARTMENT OF HEALTH RESEARCH INSTITUTE FOR TROPICAL MEDICINE

9002 Research Drive, FCC, Alabang, Muntinlupa City 1781, Philippines

Fax Nos.: (632) 842-2828 and (632) 842-2245 Telephone Nos.: 807-2628/30 local 611

On Tuesday 7 January 2025 at 10:15:42 am GMT+8, Rossana Ditangco <raditangco@yahoo.com> wrote:

Dear All,

I would like to share with you the budget proposal that I prepared. Please feel free to comment.

Thanks

From: Bureau of Learner Support Services Office of the Director <blss.od@deped.gov.ph>
Sent: Monday, February 3, 2025 10:40 AM
To: Office of the Assistant Secretary for Operations <oasops@deped.gov.ph>
Cc: Miguel Angelo Mantaring <miguelangelo.mantaring@deped.gov.ph>; Gilmeri Peach Mallorca <gilmeri.mallorca@deped.gov.ph>; BLSS - School Health Division <blss.shd@deped.gov.ph>; Maria Corazon Dumlao <maria.dumlao@deped.gov.ph>; Ma. Irmina Fidelis Garcia <ma.garcia001@deped.gov.ph>; Lilibeth Gonzales <lilibeth.gonzales006@deped.gov.ph>; Phanny Ramos <phanny.ramos001@deped.gov.ph>; Dorothy Nunez <dorothy.nunez@deped.gov.ph>
Subject: Re: school based HIV testing protocol draft

Dear Dr. Dumlao:

Good day!

This is to kindly follow up on SHD's inputs about the review of the draft school-based HIV testing protocol.

The aforementioned communication was sent to SHD on January 30, 2025, with Dir. Migo's instructions: "Doc Dumlao, kindly review, assess, and provide recommendations Draft letter to be signed by ADG, with recommendations."

We would appreciate receiving comments/inputs by **Wednesday, February 5, 2025**.

Thank you!

Para sa Bansaang Makabata at Batang Makabanso



Bureau of Learner Support Services - Office of the Director

Room 305 3rd Mabini Building
DepEd Complex Meralco Ave Pasig City
Tel Nos. (02) 8635-3763
Email: blss.od@deped.gov.ph

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Thank you very much.

Sincerely,
Jen

Office of the Assistant Secretary for Operations
Bureau of Learner Support Services
SHD I SSD I LFD
Department of Education
casops@deped.gov.ph | (08) 8632-1368 / (08) 8633-7213
DepEd Complex, Meralco Avenue, Pasig City, Philippines

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----- Forwarded message -----

From: **Rossana Ditangco** <raditangco@yahoo.com>

Date: Fri, Jan 24, 2025 at 10:32 AM

Subject: Re: school based HIV testing protocol draft

To: Marianette Inobaya <marianette.inobaya@ritm.gov.ph>, Mark Donald Reñosa <drmarkdonaldrn@gmail.com>, Maureen Dungca <maureen.dungca@yahoo.com>, Jobel Sornillo <j.sornillo@gmail.com>, Office of the Assistant Secretary for Operations <casops@deped.gov.ph>

Dear co-Investigators,

Attached is the latest draft of the protocol. Your comments/suggestions are highly appreciated. A gentle reminder for those who have not yet submitted their CV, GCP cert. and COI forms

Thanks

Annie

Rossana A. Ditangco, M.D.

Chief, Clinical Research Division

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Fax Nos.: (632) 842-2828 and (632) 842-2245 Telephone Nos.: 807-2628/30 local 611

On Tuesday 7 January 2025 at 01:31:43 pm GMT +8, Rossana Ditangco <raditangco@yahoo.com> wrote:



Republic of the Philippines
Department of Education

ROUTING SLIP

This document has been encoded in the DepEd - Document Management System and routed to the appropriate office/s with the following information:

Sender: **BLSS J.Liquigan**
Subject: **Reply Letter with comments and recommendations and an endorsement to Region III, IV-A and NCR on the Proposed research on HIV Testing for Secondary Learners in Public and Privet Schools.**
Document Code: **CO-BLSS1-2025-02-1697**
Date and Time Added: **2025-FEB-06 08:59:47 AM**
Created by: **BLSS - School Health Division**



To ensure the traceability and continuity of the document, kindly update all actions taken using the same document code.

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25-2-13	SHD	DASOPS	F. A. A	

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Republic of the Philippines
Department of Education

ROUTING SLIP

This document has been encoded in the DepEd - Document Management System and routed to the appropriate office/s with the following information:

Sender: **BLSS J.Liquigan**
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DATE (y-m-d)	FROM (Please indicate Name, Position and Office)	FOR (Please indicate Name, Position and Office)	NOTES / RECOMMENDATION / INSTRUCTION	RECEIVED BY (Please indicate Name, Office, Date and Time)
25-2-5	SHD	BLSS-OD	FOR APPROVAL	Anna Rocamora Date/Time: 02-06-25 9:09 AM
25-2-6	BLSS-OD	BLSS-SHD	W/ Note	
25-2-6	SHD	BLSS-OD	FOR COMPLIANCE FOR APPROVAL	Anna Rocamora Date/Time: 02-06-25 1:53 PM
25-2-10	BLSS-OD	BLSS-SHD	FAA	Jh 2/10/25 12:10 am
25-2-10	SHD	BLSS-OD	COMPLETED REVISION FOR APPROVAL	GAB 2/10/2025
25-2-11	BLSS-OD	CA POPS	FOR APPROVAL	Angeles 2/11/25 10:09am

D3877

"Lunas Eskwela": Leveraging, Understanding, and Navigating Access to School-based HIV testing for High School Students in the Philippines

"Lunas" is a Filipino term that embodies the creation of solutions and interventions for pressing social issues. Guided by this concept, our project seeks to deeply understand the realities on the ground—exploring what high school students, parents, and teachers know and feel about HIV and HIV testing. By leveraging existing guidelines and identifying what strategies work and what don't, we aim to navigate prevailing sentiments and stigma surrounding HIV testing. Through this process, we will socially and culturally shape an approach to introduce school-based HIV testing in a way that is acceptable and empowering for Filipino youth. In doing so, we strive to offer a meaningful 'lunas'—a solution—to the growing HIV epidemic that disproportionately impacts adolescents and young people in the Philippines.

Version 1.0 January 23, 2025

Principal investigator

Rossana A. Ditangco, MD, FPCP, FPSMID
Research Institute for Tropical Medicine

Co-investigator

Anna Maureen Dungca-Lorilla, MD
Research Institute for Tropical Medicine

Marianette T. Inobaya, PhD
Research Institute for Tropical Medicine

Mark Donald C. Renosa, RN, MSN, MSCiH, DNS, PHD
Research Institute for Tropical Medicine

Johanna Beulah T. Sornillo, RMT, MPH
Research Institute for Tropical Medicine

Study Sponsor: To be identified

1. INTRODUCTION

While the Asia Pacific Region had 13% decrease in new HIV infections and 51% decrease in AIDS-related death (UNAIDS epidemiological estimates 2024 <https://aidsinfo.unaids.org/>) since 2010, the Philippines had been experiencing 418% increase in new HIV infections and 538% increase in HIV related death (UNAIDS epidemiological estimates 2023 <https://aidsinfo.unaids.org/>). As early as 2011 to 2015, newly diagnosed cases among the young key affected population had increased by 230% of which male to male sex and males who have sex with both male and female (MSM) were the two predominant modes of transmission (Department of Health Epidemiology Bureau, The growing epidemic HIV epidemic

among adolescents in the Philippines). AIDS Epidemic Modeling estimates using the 2013-2015 IHBSS data show that seven of ten (68%) of new HIV infections are among young MSM who are 15 to 24 years old (Department of Health Epidemiology Bureau, The State of the Philippine HIV Epidemic 2016 chrome-extension://efaldnbmnnnibpcajpcglcdefindmkaj/https://www.aidsdatahub.org/sites/default/files/resource/philippines-state-phi-epidemic-2016.pdf). Factors that contribute to a higher likelihood of contracting HIV include inadequate HIV knowledge, substance abuse and lack of proper access to preventive measures (Epidemiology Bureau Department of Health, Philippines . 2018 Integrated HIV Behavioral & Serologic Surveillance (IHBSS))

From January 1984 to June 2024, 20% of the reported deaths were among 15 to 20 years old and 47% were in the advanced stage of the disease at the time of HIV testing. The proportion of newly diagnosed cases with advanced HIV disease has been increasing in the past ten years comprising almost one third of new cases (Department of Health Epidemiology Bureau. HIV and AIDS Surveillance of the Philippines July-September 2024). It is common knowledge that HIV acquisition precedes HIV testing for several years and deaths were highly underreported.

As of June 2024, the estimated number of Filipinos with HIV was 215, 400 of whom only 59% were tested. Most cases were from the National Capital Region (33%) and contiguous regions Region 4A (17%) and Region 3 (10%). Majority were male (94%) and 87% were men who have sex with men. From the estimated 11, 300 aged 10-19 years old and 50,700 aged 15-24 years old persons with HIV (PwHIV), only 12% and 24 %, respectively, were tested for HIV (Department of Health Epidemiology Bureau. HIV and AIDS Surveillance of the Philippines July-September 2024).

HIV testing is a very important intervention for both treatment and prevention. Positive cases could be immediately linked to care services and started on life saving antiretroviral therapy. Individuals who are on effective treatment and virally suppressed could not transmit HIV to sexual partners. Since HIV testing is accompanied with pre and posttest counseling, those who are uninfected would have access to education, counseling and preventive services to maintain their HIV negative status.

In order to achieve the global 95-95-95 target (95% of PwHIV are tested and know their result, 95% of tested are started on treatment and 95% of those on treatment are virally suppressed), the Philippines promulgated policies that would facilitate HIV testing. Parental consent is no longer required for HIV testing among 15 to less than 18 years old. Young individuals below 15 years of age can undergo HIV testing even without parental consent if they are at risk for HIV acquisition and under the guidance of a professional health care worker (Republic Act 11166 The Philippine HIV and AIDS Policy Act). Furthermore, point of care rapid test can already be done outside the laboratory such as in clinics, office or outreach activities by non-medical technologists such as other professional health care workers or trained lay persons (Department of Health Administrative Order No. 2022-0035 Guidelines on the Implementation of HIV Testing Services).

As of 2022 Philippine census 97.6% of the 4,429,000 13- to 14-year-old, 96% of the 4,092,000 15-16-year-old and 83% of the 6,254,000 17 to 18 year old are enrolled in school (Philippine Statistics Authority 2022 Annual Poverty Indicators Survey). Schools may have the potential to reach in-school adolescents as they educate many youths. In South Africa, HIV testing in high schools have been studied to increase access and reach of HIV testing among students such as through mobile testing with health care workers

providing HIV testing. The level of acceptability was high at 76% and from 64% to 72% of the students expressed their willingness to undergo screening at school. However, 10% of students expressed concerns regarding privacy and confidentiality (Madiba S, Mokgatle M. "Students want HIV testing in schools" a formative evaluation of the acceptability of HIV testing and counselling at schools in Gauteng and North West provinces in South Africa. BMC Public Health. 2015;15(1):388.) (Morris E, Topete P, Raspberry CN, Lesesne CA, Kroupa E, Carver L. School-Based HIV/STD Testing Behaviors and Motivations Among Black and Hispanic Teen MSM: Results From a Formative Evaluation. J Sch Health. 2016;86(12):888-97). Parents also supported the intervention with 93% acceptability and 88% indicating willingness to allow their children to undergo HIV testing at school. (Madiba S, Mokgatle M. Parents Support Implementation of HIV Testing and Counseling at School: Cross-Sectional Study with Parents of Adolescent Attending High School in Gauteng and North West Provinces, South Africa. AIDS Res Treat. 2016;2016:4842814). Reasons for high acceptability included accessibility and convenience compared to a health facility.

In the Philippines, schools' roles in the HIV epidemic remains to be provision of HIV/AIDS education since 2012. (Department of Education. Republic of the Philippines. Implementation of the School-based HIV and AIDS Education Program of the Department of Education [Available from: <https://www.deped.gov.ph/2012/06/13/do-47-s-2012-implementation-of-the-school-based-hiv-and-aids-education-program-sbhaep-of-the-department-of-education/>]) While mobile HIV testing, HIV awareness lectures with HIV counseling and testing and peer education training on HIV for students, have been initiated by some schools in collaboration with non-government organizations or local health departments, school-based HIV testing has not yet been integrated into the national HIV program to better reach in-school adolescents. In one of the mobile HIV testing's done in high schools in the province of South Cotabato in the Philippines, at least 13 new cases of HIV infection among senior high school students were identified and properly linked to care in their local HIV clinic. (Republic of the Philippines. Department of Education. Schools Division Office-Valenzuela. Conduct Of Sexually Transmitted Infection (STI) And Human Papillomavirus (HIV) Awareness Lecture With Free HIV Testing And Monitoring Activity Of Adolescent Reproductive Health Program In All Public Secondary School February 2023 [Available from: <https://sdovalenzuelacity.deped.gov.ph/conduct-of-sexually-transmitted-infection-sti-and-human-papillomavirus-hiv-awareness-lecture-with-free-hiv-testing-and-monitoring-activity-of-adolescent-reproductive-health-program-in-all-public-s/>]) (Republic of the Philippines. Department of Health. CaLaBaRZon Center for Health Developmeny. DOH, DepEd Conducts Peer Education Training on HIV for Students of Bacoor City July 2019 [Available from: <https://ro4a.doh.gov.ph/health-facilities/140-featured-article/596-doh-deped-conducts-peer-education-training-on-hiv-for-students-of-bacoor-city>]. Philippine News Agency. 13 SoCot Senior high students test positive for HIV December 2018 [Available from: <https://www.pna.gov.ph/articles/1055925>].)

If school-based HIV testing is to be rolled out in ^{secondary} high schools in the Philippines understanding students' acceptability, knowledge, attitudes and practice on HIV services, is essential to be locally acceptable to adolescent students who will utilize these services. These will inform the design of a youth-friendly, confidential HIV service needed for the uptake and success of the intervention. In addition, acceptability and implementation success will also depend on the perspective and support of important stakeholders, including parents or guardians, ^{teaching & non-teaching personnel} teachers, school officials, policy makers, and school-based healthcare ~~workers~~ ^{health personnel} hence this study will explore the acceptability, barriers, facilitators and strategies of

implementing a school-based HIV testing services and linkage to care or prevention in schools in the Philippines.

1.1. Study Rationale

The effective implementation of school-based HIV services can help address low testing rate among young people in the country. It could facilitate early HIV detection and immediate linkage to treatment and prevention services. Hence this first part of a research on school-based HIV testing services will determine barriers and facilitators in establishing HIV services within the school.

1.2. Study Objectives

General Objectives:

- To determine the barriers and facilitators in implementing school-based HIV testing services for high school students in the Philippines

Specific Objectives:

- To determine the knowledge, attitudes, and practices around HIV and HIV services in high school students and their parents
- To identify students, parents and other stakeholders level barriers and facilitators to the implementation of school-based testing services for high school students
- To identify school facility and resources required to institutionalize school-based HIV testing for high school students
secondary learners

2. Materials and Methods

2.1. Study Design

This will employ mixed methods design. A quantitative survey on HIV and HIV services related knowledge, attitudes and practices will be conducted among students and parents. School facility survey will also be conducted to identify availability of health services and resources. In depth interviews of students, teachers, school officials, school based healthcare workers and policy makers will be conducted to identify barriers, facilitators and resources required to institutionalize school-based HIV testing services.
F.S. not personnel *health personnel* *ward and*

2.2. Study Site

The study will be conducted in the 3 regions with highest reported HIV cases (NCR, Region 4A and Region 3) in varied school types (public, private non-sectarian, private sectarian/Catholic)

2.3. Study Duration

The study duration, including the data collection and analysis focused on addressing the study objective, will be over a 6-month period following IRB approval.

2.4. Study Population

The study population will include Junior and Senior High School students, parents, teachers, school officials, Department of Education officials, school-based health workers

Inclusion/Exclusion Criteria

Students: in junior or high school level, male or female, with assent and parental consent for minors, and with consent if student is at least 18 years old

Parent ^{/ guardian} mother or father or legal guardian of the ^{secondary} high school student

Teachers – registered teacher, has been teaching junior or high school students for at least 6 months, in private ^{or} public school

School official – principal or school official acting in that capacity for junior or high school students for at least 6 months in public or private school

School based health care worker – doctor or nurse working on full time or part time capacity in public or private school for junior or high school level for at least 6 months

Department of Education officials – Assistant Superintendent or Superintendent of a city or municipality within NCR, Region 4A and Region 3, Dep Ed regional director or his/her designated person of NCR, Region 4A and Region 3

^{policy makers}
^{- guardians}
Sample Size and Sampling Technique

To address the objective measuring the levels of knowledge, attitudes, and practices related to HIV, we considered the study conducted by De Souza et al. on students, teachers, and parents in India and used their estimates as assumptions in calculating the target number of respondents by participant group. In their analysis, 14% of students, and 40% of parents exhibited high level of knowledge about HIV/AIDS (https://www.researchgate.net/publication/331836679_Knowledge_attitude_and_practice_toward_human_immunodeficiency_virus_acquired_immune_deficiency_syndrome_A_questionnaire_study_among_students_teachers_and_parents_in_Mangalore_India). Using these proportions with a 95% confidence level and a 3.5% margin of error, 382 high school students shall be surveyed. Similarly, with a 5% level of precision and 366 parents of these students shall be included in the study. To account for non-response, an allowance of 15% shall be factored in, thereby increasing the sample size to 440 students and 420 parents.

A multi-stage *stratified cluster/systematic* sampling technique will be utilized for this quantitative aspect of the study. In the abovementioned regions, one school representing each of the three school types (strata) per region will be randomly selected from a list of educational institutions enrolling high school students, totaling nine schools. In each chosen school, all *junior/senior high school classes/sections* shall be listed and counted as clusters. Depending on class size, clusters can be composed of more than one class, as long as the minimum number of 50 students is met per cluster. Three clusters of students shall be surveyed per school. *Parents of these students shall also be invited to participate in the study.*

Table X. Quantitative component sample size for students and teachers

School type	Region		
	NCR	4A	3
	N=school (N=student)	N=school (N=student)	N=school (N=student)
Public	1 (50)	1 (50)	1 (50)
Private sectarian	1 (50)	1 (50)	1 (50)
Private non-sectarian	1 (50)	1 (50)	1 (50)

The qualitative component of the study will employ purposive and snowball sampling techniques to gain maximum range of perspectives and depths of information. The sample size considerations follow the recommendation of Malterud and colleagues' concept of information power in qualitative interviews (<https://pubmed.ncbi.nlm.nih.gov/26613970/>). The principle of information power suggest that the sample sizes must be determined with due consideration to encompass a depth for a comprehensive description and response to the research questions. Additionally, the qualitative sample size estimate is designed to follow either data or theoretical saturation. Table X outlines the qualitative component sample size estimates. Purposive and snowball sampling will also be employed in recruiting participants for IDI including students, teachers, school officials, healthcare workers and policymakers. Students who participated in the quantitative survey will be recruited for the interview.

Table X. Qualitative component sample size estimates

Data collection technique	Target population	Sample size estimates
1. In-depth interview (IDIs)	School Officials (i.e. Principals, School Directors)	15-30 IDIs
	Healthcare workers (i.e. school physicians, school nurses)	15-30 IDIs
	Policymakers	15-30 IDIs
	students	15-30
	teachers	15-30

Table X Qualitative component sample size per target population

School type	Region		
	NCR	4A	3
	Sample size	Sample size	Sample size
Public	2-3	2-3	2-3
Private sectarian	2-3	2-3	2-3
Private non-sectarian	2-3	2-3	2-3

Study Variables and Outcomes

For the quantitative part of the study, data about knowledge on HIV mode of transmission, prevention and HIV testing and treatment services, attitude towards persons with HIV, HIV testing in school and HIV testing practices will be collected. Data about health programs and resources available in the school will also be collected.

Barriers and facilitators concerning the establishment of school-based HIV testing service are the outcomes that will be investigated in this study. Barriers are obstacles or challenges that are encountered by students when using the services and by school staff, school officials and policy makers for establishing and implementing the services. Facilitators are actions, experiences or resources that assist in the establishment and access to HIV testing services in schools.

Outcomes	Variables	Data Sources
Barriers	<ul style="list-style-type: none">• Knowledge and attitude towards HIV• Challenges encountered in addressing school-based health services• Stigma related to HIV	Survey Interview
Facilitators	<ul style="list-style-type: none">• Positive attitude towards HIV• Appropriate policy• HIV education	Survey Interview

Study Procedures

Recruitment

Quantitative study

Since the research will involve high school students and topic that may still be considered sensitive by some sectors, a recommendation letter will be solicited from the Department of Education to facilitate the conduct of the research in the selected schools. The research proposal had been presented to the Philippine National AIDS Council and to the officials of the Department of Education. The two agencies appreciated the importance of the research and expressed their support.

From each of the identified regions (NCR, region 4A and region 3), a list of schools will be generated and grouped as being public, private sectarian, private non-sectarian. Each school type per region will be arranged alphabetically. One school type per region will be randomly selected from the alphabetical list for a total of 9 schools. A letter of request to conduct the research will be sent to each school initially selected. Should a school decline to participate, the next school in the randomization list will be invited and so on.

From the selected schools, classes will be clustered into junior and senior high school. One class per year level will be randomly selected. From each class, 25 students will be randomly selected for a total of 50 students per school.

Parents/guardians – The parents or guardian of the student selected in the survey will be recruited to participate in the study.

Qualitative

Students- From each class that participated in the quantitative survey, the teacher in charge select 2 to 3 students with at least 1 from each year level to participate in the in-depth interview.

Teachers – The school principal of participating school will identify 2 to 3 teachers to participate in the in-depth interview

Principals – The school principal or school director of the 9 participating schools will be interviewed. Additional principals will be recruited from each region for each school type to complete 15 to 30 participants by randomization.

Healthcare worker – The school physician or nurse of the 9 participating schools will be interviewed. Additional physician or nurse will be recruited from each region for each school type to complete 15 to 30 participants by randomization.

School officials – One official from each of the DePED regional offices will be identified and recruited through the DePED Central Office. Five to ten school division superintendent or assistant superintendent from each of the 3 regions will be recruited through the regional or division offices.

Data Collection

Qualitative

Knowledge, attitude and practices on HIV and HIV testing of student and parents/guardians will be collected through self-administered validated survey questionnaire adopted from similar studies (ref) and translated into Filipino. Survey questionnaires will be answered at home by the parents and filled out questionnaires will be handed back to the teacher in charge through the child.

Students will answer the questionnaire in school under the supervision of a teacher and research staff.

Qualitative

One on one and face to face in depth interview of the participant will be conducted by the research staff in a room designated by the school official . After obtaining informed consent the interview will commence and will be audio-recorded.

Analysis

For the qualitative data component of the study, transcriptions will be done in verbatim using the participants' exact words (and translated in English) by trained data transcriber after every IDIs . The trained data transcribers will follow the preparation and transcription protocol and principles (REF). Following all qualitative data collection, systematic debriefings will be conducted to quickly capture qualitative data while also enhancing the skills of the data collector and the quality of the data in real-time (REF). Debriefings entail regular meetings throughout data collection to triangulate data, identify follow-up questions or future participants, and to strengthen the interviewing skills of the team. Notes

from debriefings will serve as the basis for a codebook that will be applied to transcripts and analyzed inductively at increasingly higher levels of abstraction.

Findings will be analyzed following the tenets of constructivist grounded theory (REF). The study will follow an inductive approach which consists of the following steps: (1) Formulating and refining the research data collection questions, (2) Collecting and coding the data, (3) Creating initial memos to establish preliminary categories, (4) Conducting focused coding, (5) Developing advanced memos, (6) Organizing memos, (7) Integrating memos and constructing conceptual diagrams, and (8) Composing the initial drafts of findings. The utilization of this analytical approach in this study is expected to enable the development of theories that clarify the factors that impact the implementation, or absence thereof, of school-based HIV testing. This comprehensive approach will explore the overall perceptions held by students, teachers school officials, healthcare workers, and policymakers. Moreover, it aims to provide valuable insights that might enhance the creation of solutions focused on strengthening current HIV programs. The study intends to thoroughly examine the structures and fundamental processes involved in participants' perceptions by implementing this grounded theory approach. This detailed examination will allow for the execution of well-informed and contextually appropriate strategies, customized to tackle the main concerns expressed by participants. The research team will actively engage in the triangulation of findings across various data sources, ensuring a comprehensive and multifaceted understanding. Qualitative analysis will be facilitated through the utilization of NVivo Pro 12 (QSR International Pty Ltd. Version 12, 2018).

For the quantitative aspect of the study, the characteristics of the study population (i.e., high school students, parents, and teachers) will be reported using appropriate summary statistics (i.e., mean, standard deviation, median, and range) in quantitative variables, while categorical variables will be expressed as proportions with their respective 95% confidence interval estimates. To crudely measure the association between the outcomes (levels of knowledge, attitudes, and reported practices individually assessed) and participant characteristics, chi-square test of independence (and their nonparametric counterparts, whichever are appropriate) will be used.

Logistic regression will be employed to ascertain the magnitude and direction of the association between these outcomes and possible predictors to the model, while controlling for measured confounders. Covariates with a p-value of <0.20 in the univariate regression analysis will be included in the final model which will then only retain covariates with a p-value of <0.05. The final model with the adjusted ORs will then be reported with their 95% confidence intervals. STATA SE 17 will be used to run these tests and visualize using graphs, whenever applicable.

Limitations of the Study

The study will be conducted only in the top 3 region with the highest reported cases of HIV in the country. The facilitators and barriers and the requirement to successfully implement a school-based HIV testing for high school students far from the national capital region, rural areas may be different.

Ethical Concerns

Human Subjects

This research will adhere to local and international ethical standards for research in human subjects. It will be conducted in accordance with all applicable regulatory requirements, and in accordance with good clinical practice (GCP).

Institutional Review

The study protocol and associated documents including informed consent documents, as well as any subsequent modifications of these, will be reviewed and approved by the Research Institute for Tropical Medicine (RITM) Institutional Review Board, Muntinlupa City, the Philippines with respect to scientific content and compliance with applicable research and human subject's regulations.

Compliance with the Declaration of Helsinki

The authors and co-investigators of this study stand together in upholding the highest standards for ethical principles for medical research involving human subjects. All procedures have been formulated considering the principles stated in the declaration of Helsinki, 64th WMA General Assembly, Fortaleza, Brazil, October 2013.

Confidentiality

Names and other information that can be used to identify participants will be kept private and confidential at study sites. All local electronic databases used to enter study data will be secured with password-protected access systems. No names will be entered into the site study electronic database and data will be anonymized by assigning unique codes to each participant. Principal Investigators would be responsible for data protection and storage. Participants will not be personally identified in published results or in presentations.

Risk and Risk Minimization

The risk associated in participating in this research is minimal. Students may experience discomfort answering survey questions related to HIV test experience. Questions regarding HIV will be limited to knowledge, attitudes/perception and on HIV testing and will not ask about sexual practices. They will be assured that no personal information will be collected in the questionnaire and data will be anonymized. They will be provided contact information in case they feel the need to discuss any concern regarding the topic of the study.

Benefits to Participants

No potential direct benefits to study participants are anticipated. However, indirect benefit may derive from the study informing improved HIV services in school which could have subsequent benefits to students.

Cost and Compensation

There is no cost for joining this study. Students and Parents will receive Php 500 for time taken to answer the survey questionnaire. Students will receive PhP 1500 for time taken to participate

in FGDs. Teachers, school health staff, school official and policy makers will not be compensated for time taken to participate in KIs.

Informed Consent

Students – For students below 18 years old, assent and parental consent will be obtained. Students will bring the letter to their parents/guardian requesting for the student's participation in the study through the survey and/or in depth interview. The letter will include information regarding this study especially on the importance, objectives and the procedures i.e. what and how information will be obtained, handled and processed. Anonymity and confidentiality will be emphasized. The parents/guardians will be assured that the teacher or school representative will be present during the conduct of the study. Both the parent/guardian will sign and date the consent form and will be returned to the school. Students 18 years old and above can sign without parental consent.

Parents - Students will bring the letter to their parents/guardian requesting for their participation in the study by answering the survey questionnaire. The letter will include information regarding this study especially on the importance, objectives and the procedures i.e. what and how information will be obtained, handled and processed. Anonymity and confidentiality will be emphasized. The parent/guardian will sign and date the consent form and will be returned with the filled-out questionnaire to the school.

Teachers/school health care staff/school officials/ policy makers -- An endorsement letter will be requested from the Department of Education before the conduct of the study. Informed consent will be obtained from the participants before the interview.

Reports of Protocol Violations and Deviations

Any deviation from the study protocol will be reported to the study and site principal investigator. Any deviations from the study protocol deemed serious by the site principal investigator will be promptly reported to the local IRB and study sponsor, including their details and measures taken to address them.

Adverse Event Reporting

We do not anticipate any adverse events occurring given the nature of risks associated with this study. Students will not be asked any sensitive questions such as sexual orientation or sexual practices. The interview will elicit more insights from the students based on the quantitative questionnaire concerning HIV testing in school. The interviewer will emphasize that the student should feel free to say if they do not want to answer a particular question during the interview and if he/she would not want to continue the interview for any reason.

Study Discontinuation

The study may be stopped at any time by the sponsor or local IRB as part of their duties to ensure that research participants are protected. The study will be discontinued if study team does not adhere to the approved protocol or applicable regulatory guidelines in conducting the study

Study Work Plan

Year	2025			
	Q 1	Q2	Q3	Q4
IRB protocol submission and approval	X			
Other study preparations	X			
KAP survey		X		
In depth interview		X		
Data analysis		X	X	
Abstract and manuscript development			X	X

Support and Management

The study investigators will be responsible for designing the study protocol, developing study tools, preparing Ethics Committee submissions, securing study approvals, and managing overall project implementation. They will also be responsible for other tasks including training, revising data collection tools, supervising data collection, data management, analysis, and manuscript development. Additional data collection, entry, management, coding, analysis, translation, transcription support might be provided other internal or external staff.

Funding and Conflict of Interest

Funding to support the study is to be identified. None of the investigators have known conflicts of interest to report in relation to the study.

Publication and Dissemination of Research Findings

Study findings will be presented in the form of academic abstracts or manuscripts submitted to appropriate conferences or peer-reviewed journals. Data from this study may also be presented to regional, national or local stakeholders with interest in the study and the issues it assesses. Data used in related publications or presentations will be de-identified

References

By doing a quantitative study, students' and parents' HIV knowledge, attitudes and practices will be assessed to inform possible barriers and facilitators and implementation strategies. Acceptability and implementation strategies will also be inquired in the survey and will be further explored by doing a qualitative inquiry employing focus group discussions and interviews with students and other key stakeholders such as parents, school staff and administrators, healthcare providers and policy makers.

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