PHILIPPINE INSTITUTE FOR DEVELOPMENT STUDIES
Surian sa mga Pag-aaral Pangkaunlaran ng Pilipinas

Service through policy research

18F Three Cyberpod Centris, North Tower EDSA corner Quezon Avenue, Quezon City
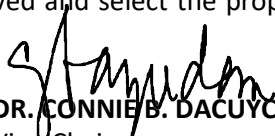Tel: (632) 372-1291 / 372-1292 ▪ http://www.pids.gov.ph

REQUEST FOR PROPOSAL

1. The Philippine Institute for Development Studies (PIDS) invites all eligible individual consultants to submit proposals for the **Machine Learning Consultant for DOH-PHIC-PIDS Technical Assistance on the UHC Provider Payment Reforms for 2024: Diagnosis-Related Groups, Comprehensive Outpatient Benefit Package, and the Center for Healthcare Finance and Economics.**

2. The Approved Budget for the Contract (ABC) is **PhP327,600.00.**

3. Interested consultants must submit the following documents using PIDS the prescribed forms:
    a) Curriculum Vitae of the proposed Consultant(s)[1]
    b) Technical Proposal Form[1]
    c) Financial Proposal Form[1]
    d) Filled out Data Privacy Notice and Personal Data Protection Form[1]
    e) Statement of Completed contracts[2]
    f) Statement of All Ongoing and Awarded But Not Yet Started Contracts[2]
    g) Notarized Omnibus Sworn Statement (for ABC above PhP50,000.00) [1]
    h) Income/Business Tax Returns (for ABC above PhP500,000.00) [1]
    i) PhilGEPS Registration Number (certificate or screenshot) [1]
    j) Valid Mayor's/Business Permit (Firm) or BIR Certificate of Registration[3] (Individual).

4. Interested consultants may obtain further information from the Procurement Management Division at telephone via email at procurement@pids.gov.ph.

5. The Institute shall adopt the Quality-Based Evaluation procedure in selecting consultants based on the attached Terms of Reference.

6. The deadline for submission of proposals is on **21 May 2025 (5:00 PM)** addressed to:

    The BAC Chairperson for Consultancy
    Services c/o The BAC Secretariat
    Procurement Management Division
    18/F Three Cyberpod Centris – North Tower, EDSA cor. Quezon Ave., Quezon City

    Proposals may also be submitted through email at procurement@pids.gov.ph .

7. PIDS reserves the right to reject any or all of the proposals, declare a failure of bidding, or not award the contract if there is evidence of collusion, including any act that restricts, suppresses, or nullifies competition, or if there is a failure to follow the prescribed bidding procedures. PIDS also reserves the right to waive any required formality in the proposals received and select the proposal it determines most advantageous to PIDS.

DR. CONNIE B. DACUYCUY
Vice-Chairperson
PIDS-BAC for Consultancy Services

Reference No.:2025-137

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[1]**Applicable for individual consultants and firms**
[2]**Applicable for firms only**
[3] **Individual consultants must issue Official Receipt (OR) during payment.**

Note: PIDS is evaluating its consultant's performance based on the quality of services rendered, timeliness of delivery, customer/after sales service and overall quality of service.

Philippine Institute for Development Studies
TERMS OF REFERENCE

<u>Machine Learning Consultant[1]</u>
for
<u>**DOH-PHIC-PIDS Technical Assistance on the UHC Provider Payment Reforms for 2024: Diagnosis-Related Groups, Comprehensive Outpatient Benefit Package, and the Center for Healthcare Finance and Economics**</u>[2]

1. **Background and Rationale**

   With the enactment of the Universal Health Care (UHC) law, the Philippine Health Insurance Corporation (PhilHealth) has been empowered to be the national strategic purchaser of individual-based health services. A critical health provider payment mechanism (PPM) reform that PhilHealth must implement under the UHC Law is the Diagnosis Related Groupings (DRGs). The DRGs are a step forward to move the current all-case rate system from retrospective payments based only on service outputs to value-based payments that incentivize quality, efficiency, and equitable care, and improve health at lower costs for the health sector and patients.

   Moreover, such a complex reform requires that PhilHealth maintain the DRGs and other PPM systems over the long-term. This requires improving PhilHealth's data quality, and monitoring frameworks and plans to evaluate whether these reforms achieve its goals for value-based purchasing. On both these fronts, PIDS will be assisting PhilHealth in the development of DRG payment rates and the monitoring and evaluation for the DRGs and PPMs.

2. **Objectives**

   1. Monitoring and Evaluation (M&E) for: (a) trends in health care utilization across the life course, and (b) assessment of baseline trends for quality and equity of DRGs, and other PhilHealth benefits and reforms;
   2. Policy support and recommendations for DRGs and related PPM reforms in: (a) health financing policy and gaps, (b) policy decisions to use DRG for actual reimbursement, (c) health data policy standards and gaps;
   3. Charge analysis and costing methodology: (a) analysis of charge data and development of charge libraries, (b) review and revision of PhilHealth costing methodologies, policies, and forms;
   4. DRG rate-setting calculation and documentation of the development process;

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[1] The Consultant may be an individual or a firm.

[2] This engagement will be charged against the study DOH-PHIC-PIDS Technical Assistance on the UHC Provider Payment Reforms for 2024: Diagnosis-Related Groups, Comprehensive Outpatient Benefit Package, and the Center for Healthcare Finance and Economics.

5. Capacity building for PIDS, PhilHealth, DOH, providers, and other stakeholders: (a) technical capacity building for DRG implementers, (b) communication of DRG and PPM reforms to providers and the public;
6. Comprehensive Outpatient Benefit Package (COBP): classification of services according to PhilHealth COBP design and National Practice Guidelines (NPG).

3. Objectives of the Consultancy

The project involves multiple stakeholders in the implementation of DRG and requires a machine learning-driven approach to support data processing, classification, and analysis of claims into Diagnosis-Related Groups. Given the complexity and sensitivity of the project's datasets, there is a need to maintain a data pipeline for data access and security that includes a virtual machine. Moreover, a Diagnosis-Related Group Python Grouper/Algorithm is necessary for the implementation of provider purchasing mechanism reform. Given the task of processing large-scale health data and applying machine learning techniques to improve resource use analysis, there is a need to engage a **Machine Learning Consultant** to guide the development and implementation of data-driven methodologies for the project.

4. Scope of Work, Deliverables, and Schedule of Payment Releases

Under the guidance and technical oversight of a PIDS Research Fellow who serves as the Project Director, the Consultant is expected to work with the Project Team and undertake the following tasks/activities:[3]

1. Lead the processing of electronic claims (eClaims) and text processing of PhilHealth's electronic statement of account (eSOA) data:
    a. Generate processed datasets for all incoming eClaims and eSOA data
    b. Perform data quality assessments and prepare data quality reports
    c. Revise and produce written documentation of processing code as needed
2. Maintain virtual machine(s) (VM) on Google Cloud Platform:
    a. Monitor VM performance, address crashes, and adjust resources as needed
    b. Track uptime and maintain documentation of uptime logs
    c. Assist researchers in accessing and utilizing the VM
    d. Document research papers or publications that have used the VM for data analysis
3. Maintain the DRG python grouper code, applying and documenting revisions as needed
4. Write technical notes, documentation, protocols, reports, code, analysis results, and manuscripts as relevant to the stipulated scope of work above.
5. Prepare for, attend, and present at internal meetings, or client meetings with PhilHealth, DOH, and other stakeholders, as necessary.
6. Sign a Non-Disclosure Undertaking with PIDS. Any information gathered and generated in the implementation of the project shall be processed subject to the applicable provisions of the Republic Act No. 10173, known as the "Data Privacy Act of 2012" and

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[3] If the consultant needs to undertake physical/face-to-face interviews and data collection and related activities, the consultant has to ensure compliance with existing and future policies, rules, and resolutions as may be issued by concerned government agencies pertaining to health and safety.

its Implementing Rules and Regulations and relevant issuances of the National Privacy Commission (NPC).

7. Perform other professional, highly technical, and confidential duties and responsibilities as the Research Fellow may assign from time to time.

The consultant will prepare the following outputs based on the schedule below:

Activities and Deliverables	Due Dates	Payment Tranches
Inception Report following PIDS template including: overall work plan for SOW items #1 to #4	1 month after signing	10%
Progress Report 1, including: • Accomplishments for items #1 to #3 • Processing code for eClaims and accompanying documentation • Log of activities related to VM maintenance	June 30, 2025	20%
Progress Report 2, including: • Accomplishments for items #1 to #3 • Processed dataset as of submission • Processing code for eClaims and accompanying documentation • Log of activities related to VM maintenance	July 31, 2025	20%
Progress Report 3, including: • Accomplishments for items #1 to #3 • Processed dataset as of submission • Processing code for eClaims and accompanying documentation • Log of activities related to VM maintenance	September 30, 2025	20%
Progress Report 4, including: • Accomplishments for items #1 to #3 • Processed dataset as of submission • Final processing code for eClaims and accompanying documentation • Log of activities related to VM maintenance **Data Quality Assessment Report** on eClaims extract	October 31, 2025	20%
Technical Inputs to Final Report[4], including: Final versions of all outputs including PhilHealth data quality report and eClaims datasets **Terminal Report** **Turnover of draft and materials used** together with Certification indicating the turnover of as well as the	December 15, 2025	10%

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[4] For applicable outputs, the draft and final reports submitted by the consultants should be aligned with the following guidelines: PIDS' Guide in the Preparation of Manuscript for Publication and General Guidelines in Preparing and Formatting a PIDS Discussion Paper, Guidelines in the preparation of Policy Notes.

deletion of such data and that it will allow PIDS to verify if the data is complete		

NOTE: Payments will be based on the acceptance and approval by PIDS of the corresponding outputs.

5. Qualifications of the Consultant

Education	At least a bachelor's degree in **biostatistics, health economics, health science, computational science, or related fields**
Experience	At least 1 year experience in data science or data analysis
Competencies	• Basic level core competencies: deliverability/ results-oriented, professionalism, adaptability, and communication skills • Basic level functional competencies: problem-solving and analysis; dissemination; project/research implementation and management; research conceptualization; and technical writing.

6. Project Duration

The engagement will commence upon the signing of the contract until **December 31, 2025**, on a part-time basis. The consultant's work must be completed within this period, and no man-days will be chargeable after this date.

7. Approved Budget for the Contract

The approved budget for this consulting service is up to **PHP ₱327,600.00**, depending on the qualifications.

This amount does not include travel and accommodation during fieldwork. PIDS will shoulder the cost of fieldwork (if any). PIDS shall not cover hospitalization and other COVID-related health expenses of the consultant as no employer-employee relationship exists between the PIDS and the consultant.

8. Evaluation Criteria

a. Evaluation Criteria

Applicants for the consultant position will be evaluated based on the following criteria:

Consultant Qualifications Education • **At least a Bachelor's Degree** in biostatistics, health economics, health science, computational science, or related fields	

Training and experience At least 1 year experience in data science or data analysisCompetencies • Basic level core competencies: deliverability/ results-oriented, professionalism, adaptability, and communication skills • Basic level functional competencies: problem-solving and analysis; dissemination; project/research implementation and management; research conceptualization; and technical writing	50%
Plan of approach and methodology; • Clarity, feasibility, innovativeness, and comprehensiveness of the approach • Incisive interpretation of problems and reflection on suggested solutions	50%
Total	100%

b. Detailed rating sheet (see attached file)

Prepared by: **VALERIE GILBERT T. ULEP**
                 Project Director

Reviewed and Approved by:

CHRISTINE RUTH P. SALAZAR
Officer-In-Charge, Research Services Department