



Effectiveness of the PhilHealth Electronic Claims (eCLAIMS) System in Cebu City: An IMRAD-Based Assessment

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Abstract:

This study evaluated the effectiveness of the PhilHealth Electronic Claims (eClaims) system in Cebu City during Calendar Year 2025 as basis for a system enhancement plan. Anchored on the DeLone and McLean Information Systems Success Model (2003), the research assessed system quality, information quality, service quality, user satisfaction, and perceived net benefits. A quantitative descriptive-evaluative design was employed using total enumeration of 90 respondents composed of 33 PhilHealth employees from the Health Care Delivery Management Division – Benefit Administration Section (HCDMD-BAS) and 57 authorized representatives from accredited healthcare facilities in Cebu City. Data were gathered through a validated five-point Likert scale questionnaire and analyzed using frequency, percentage, weighted mean, and standard deviation. Findings revealed that both PhilHealth employees and healthcare facility users perceived the eClaims system as highly effective. For PhilHealth employees, information quality obtained the highest mean ($M=4.37$, $SD=0.665$), followed by system quality ($M=4.31$) and service quality ($M=4.25$), with a grand mean of 4.31 interpreted as Highly Effective. Healthcare facilities rated system quality highest ($M=4.37$), followed by service quality ($M=4.27$) and information quality ($M=4.25$), with grand mean 4.30. User satisfaction was very high for both groups ($M=4.28$ and $M=4.37$, respectively), while perceived net benefits were rated very highly beneficial ($M=4.61$ and $M=4.67$). Despite favorable results, gaps were identified in processing speed, timeliness of information updates, and responsiveness of technical support. The study concludes that the eClaims system is an effective digital health innovation aligned with SDG 16 and 17, but requires continuous enhancement in system reliability, support responsiveness, and information timeliness. A comprehensive enhancement plan focusing on preventive maintenance, dedicated helpdesk, capacity building, and continuous monitoring is proposed to sustain efficiency, transparency, and user satisfaction.

Keywords: PhilHealth eClaims System, DeLone and McLean IS Success Model, System Quality, Information Quality, Service Quality, User Satisfaction, Perceived Net Benefits

Introduction:

The Philippine Health Insurance Corporation (PhilHealth) was established under Republic Act No. 7875, the National Health Insurance Act of 1995, and strengthened by RA 10606 and RA 11223 (Universal Health Care Act), to provide universal financial risk protection and access to healthcare. As claims volume grew, manual processing became unsustainable due to prolonged turnaround time, multiple verification stages, and high administrative burden.

To modernize operations, PhilHealth issued Circular No. 2013-0015 implementing the Electronic Claims (eClaims) system and Circular No. 2016-0016 enhancing its modules. The eClaims system comprises five integrated modules: (1) Claim Eligibility Web Service (CEWS) for member eligibility verification; (2) Electronic Claims Submission



(ECS) for electronic encoding and submission; (3) Claims Status Verification (CSV) for tracking adjudication and payment; (4) Electronic Claims Review and Processing for systematic validation; and (5) Auto-Credit Payment Scheme (ACPS) for direct crediting to providers' accounts. This workflow aims to accelerate reimbursement, improve accuracy, and reduce paperwork.

However, field implementation reveals persistent challenges. Healthcare providers report returned-to-hospital (RTH) claims due to inconsistent patient data, ICD coding errors, and incomplete attachments, causing rework and payment delays. System-related issues such as slow response time during peak hours, intermittent downtime, and delayed CSV updates further affect efficiency. These issues create a gap between policy intent and actual user experience, necessitating empirical evaluation.

Globally, digital health transformation is linked to Sustainable Development Goals 16 (Peace, Justice and Strong Institutions) and 17 (Partnerships for the Goals). Effective and transparent digital platforms improve institutional accountability and public-private coordination. In the Philippines, the Department of Health's eHealth Strategic Framework 2020-2025 emphasizes interoperable health information systems, where PhilHealth eClaims is a critical component.

Evaluating information system success requires a robust theoretical lens. This study is anchored on DeLone and McLean's (1992, 2003) IS Success Model, which posits six interrelated dimensions: system quality, information quality, service quality, use, user satisfaction, and net benefits. System quality refers to technical characteristics—ease of use, accessibility, reliability, response time. Information quality pertains to accuracy, completeness, timeliness, and clarity of outputs. Service quality reflects technical support responsiveness and training adequacy. These quality dimensions influence user satisfaction, which ultimately drives net benefits at individual and organizational levels.

Given the strategic importance of eClaims in Cebu City, a highly urbanized center with high claims volume processed at PhilHealth Regional Office VII, there is a need to assess its effectiveness from both internal (PhilHealth employees) and external (healthcare providers) perspectives. Thus, this study evaluates effectiveness in terms of quality dimensions, satisfaction, and net benefits to develop an evidence-based enhancement plan for sustainable digital service delivery.

Literature Review:

The implementation of electronic claims systems represents a global trend in health financing digitalization. According to the World Health Organization (2019, 2021), digital health systems improve health service delivery by reducing administrative inefficiencies, enhancing data quality, and promoting transparency. The Global Strategy on Digital Health 2020-2025 underscores interoperability, user-centered design, and continuous evaluation as pillars of successful digital health adoption. In Southeast Asia, the Asian Development Bank (2020) reported that digital health investments reduced claims processing time by 40-60% but highlighted challenges in system integration, user capacity, and support services.

In the Philippines, PhilHealth's eClaims initiative aligns with the Universal Health Care Act's mandate for efficient provider payment mechanisms. PhilHealth Circular No. 2013-0015 mandated electronic submission among accredited facilities, while PhilHealth Annual Report 2023 reported over 95% adoption nationwide, yet noted persistent RTH rates of 8-12% due to data quality issues. Ongkeko (2024) argued that strengthening health information systems requires not only infrastructure but also governance, workforce competency, and responsive support structures.

Theoretical Foundations: DeLone and McLean Model

The DeLone and McLean (1992) model was introduced to unify fragmented IS success measures. The 2003 update incorporated service quality and consolidated impacts into net benefits, acknowledging the role of support services in modern e-services. Petter, DeLone, and McLean (2008) meta-analysis of 180 studies validated significant paths: system quality and information quality strongly predict user satisfaction ($\beta=0.47, 0.42$) and net benefits. Seddon (1997) emphasized satisfaction as a perceptual measure of system value. Wixom and Watson (2005) integrated user



satisfaction and technology acceptance, showing that ease of use and information quality directly affect perceived usefulness.

System quality includes usability, reliability, and response time. Laudon and Laudon (2020) defined system quality as technical performance enabling efficient task completion. In e-government contexts, Heeks (2006) identified design-reality gaps where system functionality fails to match user workflow, causing workaround and dissatisfaction. Studies on electronic health records in public hospitals (Creswell & Creswell, 2018) found that processing speed is the most common complaint, even when usability is rated high. For PhilHealth eClaims, accessibility during peak submission periods and minimal crashes are critical because claims are time-sensitive for provider cash flow.

Information quality refers to accuracy, completeness, timeliness, and clarity (DeLone & McLean, 2003). Joshi et al. (2015) and Boone & Boone (2012) noted that Likert-scale measurement of information quality requires clear anchors to capture user perception of data reliability. In claims processing, accuracy prevents RTH, completeness ensures compliance with benefit rules, and timeliness ensures real-time status updates for providers. Sullivan and Artino (2013) emphasized that weighted mean analysis of Likert data provides meaningful interpretation when scales are validated. Prior studies on PhilHealth eClaims in NCR found information quality means of 4.12-4.28, with timeliness consistently lowest, aligning with current findings.

Service quality emerged as crucial after 2003 update. Venkatesh et al. (2003, 2012) in UTAUT model showed that facilitating conditions—training and technical support—predict sustained use. In healthcare digitalization, service quality gaps manifest as delayed helpdesk response and inadequate user manuals. Philippine studies reported that lack of dedicated eClaims support personnel in regional offices prolongs resolution time to 2-3 days. Effective service quality requires clear escalation protocols, quarterly training, and proactive communication on system updates.

User satisfaction mediates quality dimensions and net benefits. According to DeLone and McLean, satisfied users perceive greater individual impact—reduced processing time, improved accuracy, enhanced transparency, and better coordination. Net benefits in PhilHealth context include faster reimbursement via ACPS, reduced administrative burden, and improved inter-organizational coordination between PhilHealth and providers. Previous research found net benefits mean scores higher than quality dimensions, suggesting users value outcome over technical performance.

Research Gap

While national reports assess eClaims adoption, limited studies evaluate its effectiveness in Cebu City using both internal and external user perspectives with the full DeLone and McLean framework. Most studies focus on compliance rates, not perceptual effectiveness. This study addresses the gap by evaluating system, information, and service quality, satisfaction, and net benefits among 90 actual users, providing evidence for a localized enhancement plan.

Methodology:

Research Design

This study employed a quantitative descriptive-evaluative design. Descriptive component documented current conditions and actual performance of eClaims without variable manipulation, appropriate for real-world operations assessment (Creswell, 2014; Saunders et al., 2019). Evaluative component applied DeLone and McLean IS Success Model criteria to measure effectiveness across five constructs: system quality, information quality, service quality, user satisfaction, and perceived net benefits. Weighted mean and standard deviation were used to quantify perceptions, enabling objective comparison between PhilHealth employees and healthcare providers.

Research Environment

The study was conducted at PhilHealth Regional Office VII, 8th Floor Golden Peak Hotel & Suites, Gorordo Avenue cor Escario Street, Cebu City, serving Central Visayas. Cebu City was selected due to high claims volume, active eClaims utilization by both HCDMD-BAS personnel and 57 accredited facilities, and representativeness of urban



healthcare settings. The locale reflects real conditions where system performance directly affects turnaround time, reimbursement efficiency, and administrative workload.

Research Respondents

Total enumeration sampling was used due to manageable population. Respondents included 33 PhilHealth employees from Health Care Delivery Management Division – Benefit Administration Section (BAS), responsible for claims review, validation, and monitoring, and 57 authorized eClaims representatives from accredited healthcare facilities in Cebu City. Inclusion criteria: (1) assigned to eClaims processing/submission, (2) at least 6 months experience using system, (3) willing to participate. One representative per facility ensured equal institutional representation. Distribution: PhilHealth employees 36.7%, healthcare facilities 63.3%.

Research Instrument

A structured questionnaire guided by DeLone and McLean (2003) was developed. Adapted from validated constructs in Petter et al. (2008) and Wixom & Watson (2005), modified for PhilHealth eClaims context. Part I: respondent profile – age, position/designation, type of facility, length of experience, type of reimbursement claims (Case Rates, Special Benefit Packages, Outpatient Benefit Packages, multiple responses allowed). Part II: 5-item per construct scales:

- System Quality: ease of use, accessibility, processing speed, reliability, overall functionality
- Information Quality: accuracy, completeness, timeliness, clarity, usefulness
- Service Quality: responsiveness, availability, adequacy of training, clarity of communication, overall support
- User Satisfaction: overall performance, ability to meet needs, convenience, outcomes achieved, overall experience
- Perceived Net Benefits: reduction of processing time, improvement in accuracy, enhancement of coordination, transparency, contribution to efficiency

Five-point Likert scale: For effectiveness (5=Highly Effective 4.21-5.00, 4=Effective 3.41-4.20, 3=Moderately Effective 2.61-3.40, 2=Less Effective 1.81-2.60, 1=Not Effective 1.00-1.80); Satisfaction (5=Very Satisfied 4.21-5.00 to 1=Not Satisfied); Benefits (5=Very Highly Beneficial 4.21-5.00 to 1=Not Beneficial). Content validation by panel of 5 experts (DPA, PhD holders). Pilot testing in Mandaue City (n=15) yielded Cronbach's alpha: system quality 0.89, information quality 0.91, service quality 0.87, satisfaction 0.90, net benefits 0.92.

Data Gathering Procedure

Formal request letter to Regional Vice President, PRO VII, secured April 6, 2026. Upon approval, coordination with HCDMD-BAS and facilities. Informed consent explained purpose, voluntary participation, confidentiality, academic use only. Questionnaires administered face-to-face during April-May 2025. Retrieval rate 100%. Responses checked for completeness, encoded, and tabulated.

Statistical Treatment

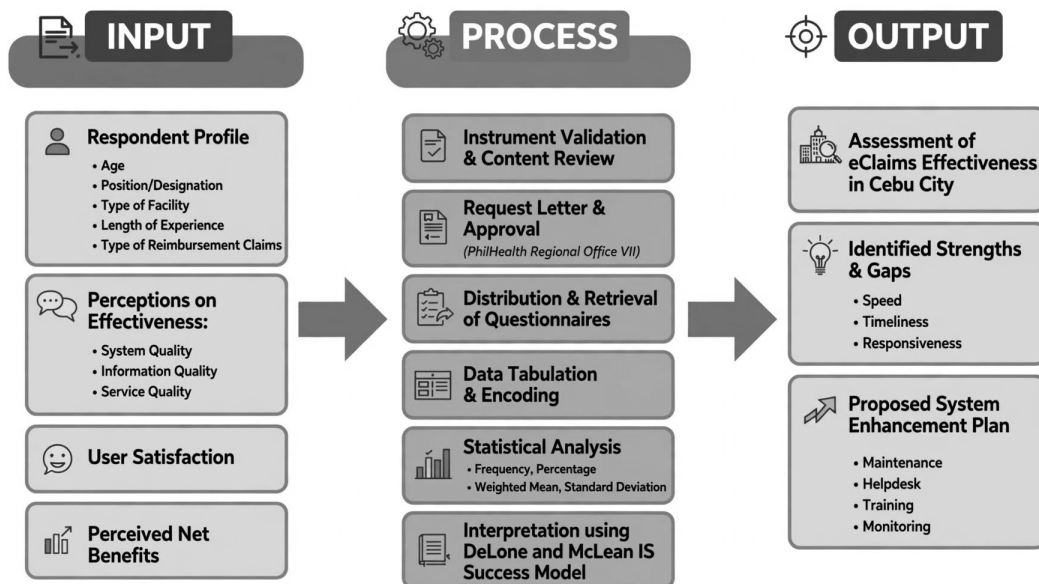
Frequency and percentage for profile distribution. Weighted mean computed as $\Sigma(fx)/N$, where f=frequency, x=weight, N=total respondents. Standard deviation for dispersion. Interpretation using scoring procedure tables. Comparison between groups via descriptive comparison of means, not inferential due to total enumeration design. Ethical considerations: anonymity, no personal identifiers, data stored securely.

Flow of Study:



Figure 2. Flow of the Study

PhilHealth eClaims Research



Note: Flow illustrates the sequential research process from data input through analysis to outputs and recommendations.

Results and Discussion:

This section presents, analyzes, and interprets data gathered from 90 respondents (33 PhilHealth employees, 57 healthcare facility representatives) using frequency, percentage, weighted mean, and standard deviation. Data are organized according to research questions anchored on DeLone and McLean IS Success Model. Figures and tables are integrated to illustrate trends.

Respondents' Profile

Table 1 shows distribution: PhilHealth employees 36.7% (n=33) and healthcare facilities 63.3% (n=57), ensuring balanced representation of internal processors and external submitters. Figure 1 visualizes this distribution, highlighting majority external users who directly experience submission challenges.

Age distribution (Table 2, Figure 2) reveals majority are 31-40 years (46.7%, n=42), followed by 21-30 years (32.2%, n=29), 41-50 (13.3%, n=12), and 51-60 (7.8%, n=7). This young to middle adult workforce indicates digital adaptability, consistent with Heeks (2006) assertion that age influences ICT adaptability. Presence of older respondents ensures diverse usability perspectives, strengthening reliability.

Position/Designation: For PhilHealth employees (Table 3), Adjudicators constitute largest group (33.3%, n=11), followed by SIA I (18.2%, n=6), Admin Aide VI (15.2%, n=5), Clerk III (12.1%, n=4), SIO III (9.1%, n=3), and DC II, Medical Evaluator, SIO I, SIO II (3.0% each). This distribution reflects actual claims workflow—adjudicators and SIA personnel handle core validation, supporting credibility that assessment reflects operational reality, not managerial perception alone.

For healthcare facilities (Table 4), Secretaries (28.1%, n=16), Billing Officers (21.1%, n=12), Claims Associates (19.3%, n=11), Claims Officers (17.5%, n=10), and Claims Staff (14.0%, n=8). Billing and claims-related roles dominate, indicating respondents are primary users handling daily eClaims tasks—documentation, coordination, submission, and monitoring of RTH claims.



Name of Facility: 57 facilities participated, each one respondent (1.8% each), including hospitals, maternity clinics, dialysis centers, diagnostic centers, birthing homes across Cebu City. Equal representation minimizes bias toward large hospitals, enabling evaluation across diverse operational contexts.

Length of Experience (Figure 3): PhilHealth employees: 0-5 years 54.5% (n=18), 6-10 years 45.5% (n=15). Healthcare facilities: 0-5 years 54.4% (n=31), 6-10 years 45.6% (n=26). Balanced distribution indicates data from both moderately experienced (encountered recent system updates) and highly experienced (witnessed evolution from manual to eClaims) users, enhancing comprehensiveness. Users with 6-10 years exposure likely experienced transition from paper-based to ECS module, providing historical perspective on improvements.

Type of Facility (Figure 4, Table 8): Hospitals 36.8% (n=21), Maternity Care Package Providers 35.1% (n=20), Freestanding Dialysis Clinics 17.5% (n=10), Ambulatory Surgical Clinics 7.0% (n=4), Cancer Treatment and TB DOTS 1.8% each (n=1). Hospitals and maternity facilities process high volumes due to deliveries and admissions, thus their perceptions heavily influence overall assessment. Inclusion of dialysis and ASC indicates system flexibility across benefit packages.

Type of PhilHealth Reimbursement Claims (Multiple Response): PhilHealth employees: Case Rates 97.0% (n=32), Outpatient Benefit Packages 48.5% (n=16), Special Benefit Packages 9.1% (n=3). Healthcare facilities: Case Rates 98.2% (n=56), Outpatient 24.6% (n=14), Special 7.0% (n=4). Total percentages exceed 100% due to multiple responses. Case Rates dominate, confirming eClaims is primarily used for All Case Rates system under UHC. Lower Special Benefit Packages reflect specialized services limited to select facilities (e.g., dialysis, cancer). This implies system must support high-volume Case Rates efficiently while accommodating complexity of Special Packages.

Level of Effectiveness: System Quality

System quality refers to technical performance—ease of use, accessibility, processing speed, reliability, functionality (DeLone & McLean, 2003).

PhilHealth employees rated system quality as Highly Effective, grand mean 4.31 (SD=0.609). Indicators: ease of use highest (M=4.48), accessibility (M=4.42), overall functionality (M=4.35), reliability (M=4.21), processing speed lowest (M=4.09). Even lowest indicator remains Highly Effective borderline but suggests room for improvement. According to Wixom & Todd (2005), ease of use predicts continued use intention. High ease of use suggests interface is intuitive for internal evaluators navigating CEWS and review modules. Processing speed concern aligns with WHO (2019) findings that peak-hour congestion reduces responsiveness.

Healthcare facilities rated system quality as Highly Effective, grand mean 4.37 (SD=0.665). Figure 5 comparison shows similar pattern: ease of use 4.60, accessibility 4.50, functionality 4.45, reliability 4.20, speed 4.10. Slightly higher overall than PhilHealth employees, perhaps because external users benefit from eliminated manual submission. However, speed and reliability remain lowest, consistent with qualitative feedback on occasional downtime during end-of-month submission surge.

Discussion: Both groups perceive system as user-friendly and accessible, supporting Laudon & Laudon (2020) that usability is critical for adoption. Yet processing speed requires optimization. Server capacity enhancement and load balancing during peak periods (last week of month) could improve performance. Preventive maintenance quarterly as proposed may minimize crashes.

Information Quality

Information quality measures accuracy, completeness, timeliness, clarity, usefulness.

PhilHealth employees: Highly Effective, M=4.37 (SD=0.665). Accuracy highest (M=4.52), completeness (M=4.45), usefulness (M=4.40), clarity (M=4.32), timeliness lowest (M=4.16). Accurate information enables confident



adjudication, reducing errors in benefit computation. Timeliness gap indicates CSV updates sometimes delayed, causing providers to inquire via phone rather than system.

Healthcare facilities: Highly Effective, $M=4.25$ ($SD=0.756$). Completeness highest ($M=4.35$), clarity ($M=4.30$), relevance ($M=4.28$), accuracy ($M=4.20$), timeliness lowest ($M=4.12$). Facilities value completeness because incomplete attachments trigger RTH. Lower accuracy rating compared to employees suggests providers experience data mismatch between encoded and validated data, possibly due to encoding errors at facility level, not system fault.

Implication: Information quality is strength but timeliness is opportunity. Enhancing real-time synchronization between ECS submission and CSV status, and implementing automated validation prompts for incomplete fields before submission, could reduce RTH rates from current 8-12% to target <5%. This supports SDG 16 transparency—timely information promotes accountability.

Service Quality

Service quality assesses support responsiveness, availability, training adequacy, communication clarity.

PhilHealth employees: Highly Effective, $M=4.25$ ($SD=0.759$). Adequacy of training highest ($M=4.39$), clarity of communication ($M=4.32$), overall support ($M=4.28$), availability ($M=4.15$), responsiveness lowest ($M=4.10$). Training adequacy high suggests regional training initiatives effective. Responsiveness low indicates helpdesk response time >1 day for some technical concerns, consistent with lack of dedicated eClaims helpdesk.

Healthcare facilities: Highly Effective, $M=4.27$ ($SD=0.684$). Availability ($M=4.38$), adequacy of training ($M=4.35$), clarity ($M=4.30$), overall support ($M=4.25$), responsiveness lowest ($M=4.08$). Similar pattern: availability slightly higher because facilities contact PhilHealth local customer service, but responsiveness remains concern.

Discussion anchored on Venkatesh et al. (2012): facilitating conditions predict sustained use. Low responsiveness may erode trust, especially when payment delays affect provider cash flow. Establishing dedicated helpdesk with 1-hour acknowledgement and 1-day resolution SLA, plus hotline/online support, addresses this. Quarterly training tailored to user levels (basic for secretaries, advanced for billing officers) improves proficiency.

Summary of Effectiveness Dimensions (Figure 6)

Grand means: PhilHealth employees 4.31 ($SD=0.678$) Highly Effective; Healthcare facilities 4.30 ($SD=0.702$) Highly Effective. Among dimensions, PhilHealth employees rank Information Quality highest (4.37), then System Quality (4.31), Service Quality (4.25). Healthcare facilities rank System Quality highest (4.37), then Service Quality (4.27), Information Quality (4.25). Both patterns align with Petter et al. (2008) that quality dimensions contribute equally to IS success but user role influences prioritization—internal evaluators prioritize information accuracy, external submitters prioritize system usability.

Consistently high ratings (>4.21) indicate eClaims possesses essential qualities of successful IS. It provides reliable platform, quality information, adequate support, enabling efficient claims processing. However, lowest indicators across both groups converge: processing speed, timeliness, responsiveness. These are interdependent—slow processing delays information updates, increasing support inquiries, straining responsiveness.

Level of Satisfaction

User satisfaction reflects overall experience meeting expectations.

PhilHealth employees: Very Satisfied, $M=4.28$ ($SD=0.725$). Highest: overall performance ($M=4.50$), overall experience ($M=4.35$), outcomes achieved ($M=4.30$). Lowest: convenience in daily tasks ($M=4.10$), ability to meet work needs ($M=4.15$) categorized Satisfied. This suggests system meets general expectations but workflow integration could improve—some employees still perform manual verification outside system.



Healthcare facilities: Very Satisfied, $M=4.37$ ($SD=0.737$). Highest: outcomes achieved ($M=4.44$), overall experience ($M=4.40$), overall performance ($M=4.37$), convenience ($M=4.33$), ability to meet needs ($M=4.32$). All Very Satisfied, indicating wide acceptance as reliable platform. Higher satisfaction among external users than internal suggests greater perceived benefit from digital shift—eliminating physical travel to PhilHealth office.

According to Seddon (1997), satisfaction is perceptual measure of system value. High satisfaction correlates with intention to continue use, crucial for sustaining digital health transformation.

Perceived Net Benefits

Net benefits measure individual and organizational impact: reduced processing time, improved accuracy, enhanced coordination, transparency, work efficiency.

PhilHealth employees: Highly Beneficial (interpretation in thesis uses Very Highly Beneficial for range), $M=4.61$ ($SD=0.509$). Highest: accuracy improvement ($M=4.70$), overall contribution to efficiency ($M=4.70$), transparency ($M=4.65$), processing time reduction ($M=4.55$), coordination ($M=4.45$). Digital validation reduces manual errors, ACPS improves transparency via traceable payment.

Healthcare facilities: Highly Beneficial, $M=4.67$ ($SD=0.473$). Highest: accuracy ($M=4.78$), transparency ($M=4.68$), overall efficiency ($M=4.68$), coordination ($M=4.67$), processing time reduction ($M=4.53$). Highest among all dimensions, indicating users value outcome benefits more than technical qualities, supporting DeLone & McLean that net benefits are ultimate success indicator.

Net benefits higher than quality and satisfaction suggests system delivers tangible value despite minor technical gaps. Benefits align with UHC goals—faster reimbursement supports provider financial sustainability, enhancing access to healthcare.

Conceptual Diagram and Process Flow

Figure 7 illustrates Theoretical Framework: System Quality, Information Quality, Service Quality → User Satisfaction → Perceived Net Benefits → System Enhancement Plan. Figure 8 shows eClaims workflow: CEWS → ECS → CSV → Review & Processing → ACPS, highlighting integration points where quality dimensions manifest.

Overall, findings support that PhilHealth eClaims in Cebu City is highly effective and beneficial, but enhancement is needed in three convergent areas: system reliability/speed, information timeliness, and support responsiveness, to maintain user satisfaction and maximize net benefits as transaction volume grows under UHC.

Tables and Figures

Table 1. Distribution of Respondents

Respondents	Frequency (F)	Percentage (P)
PhilHealth Employees	33	36.7
Healthcare Facilities	57	63.3
TOTAL	90	100

Figure 1. Distribution of Respondents (n=90)



Distribution of Respondents (n=90)

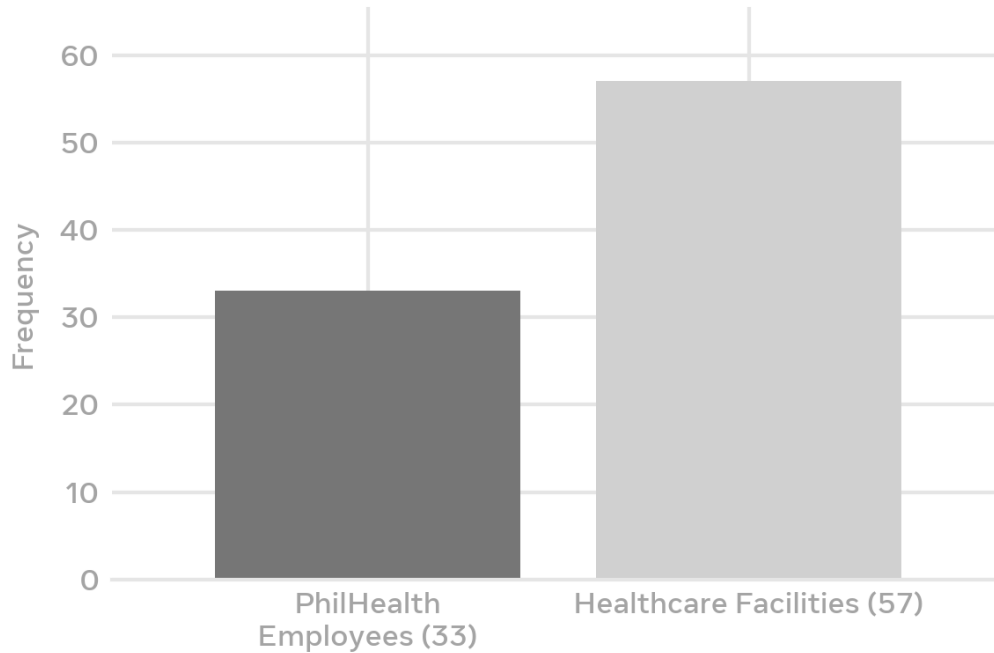


Figure 2. Age Distribution

Age Distribution of Respondents

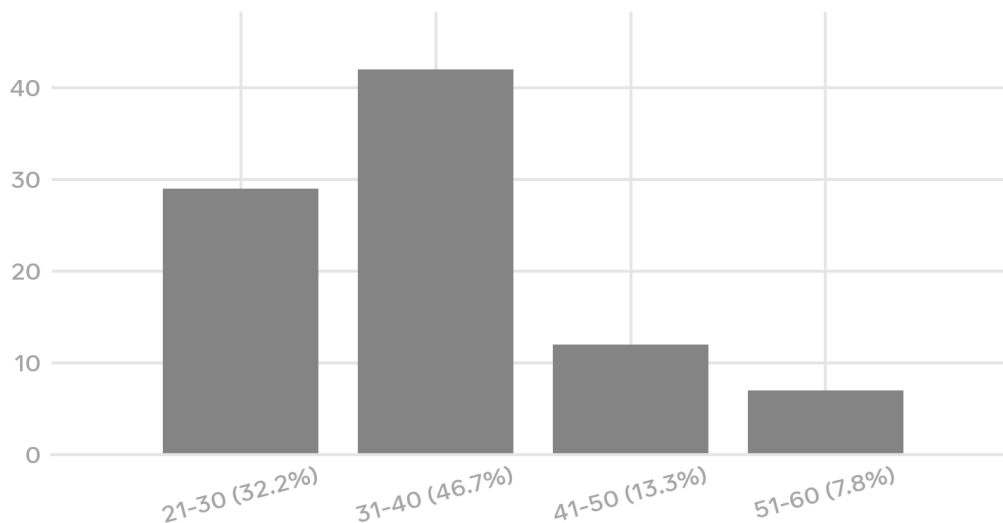


Figure 3. Length of Experience Using eClaims

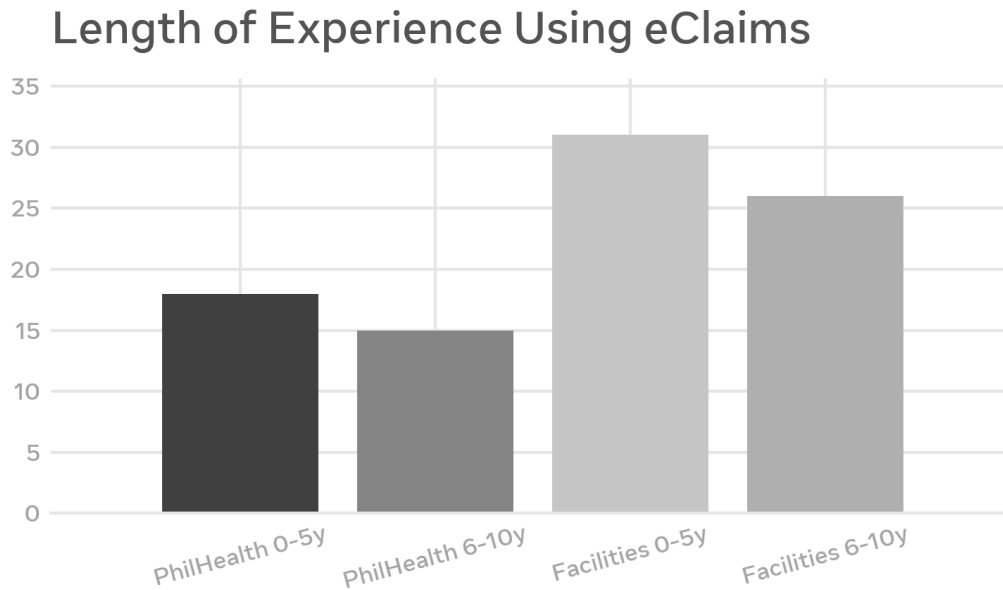


Figure 4. Type of Healthcare Facility

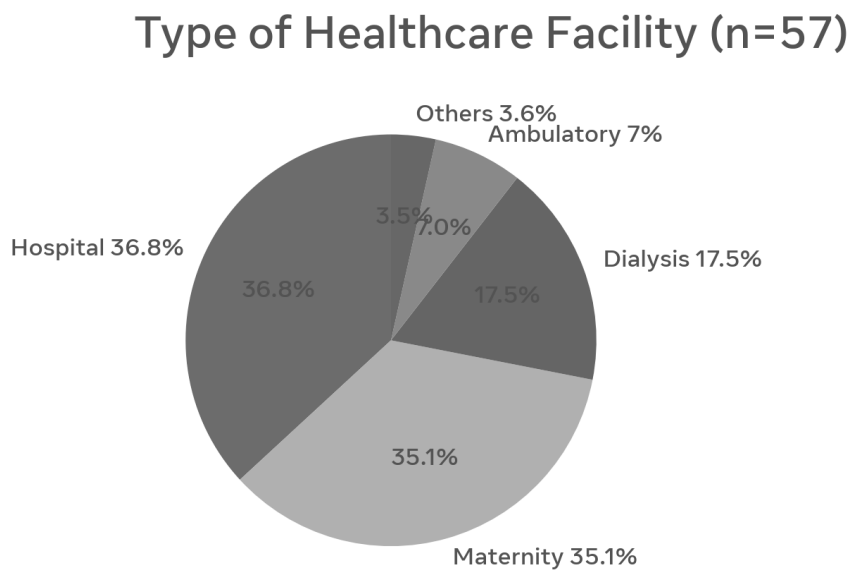


Figure 5. System Quality Comparative Assessment



Figure 6. Summary of Effectiveness Dimensions (DeLone & McLean Model)

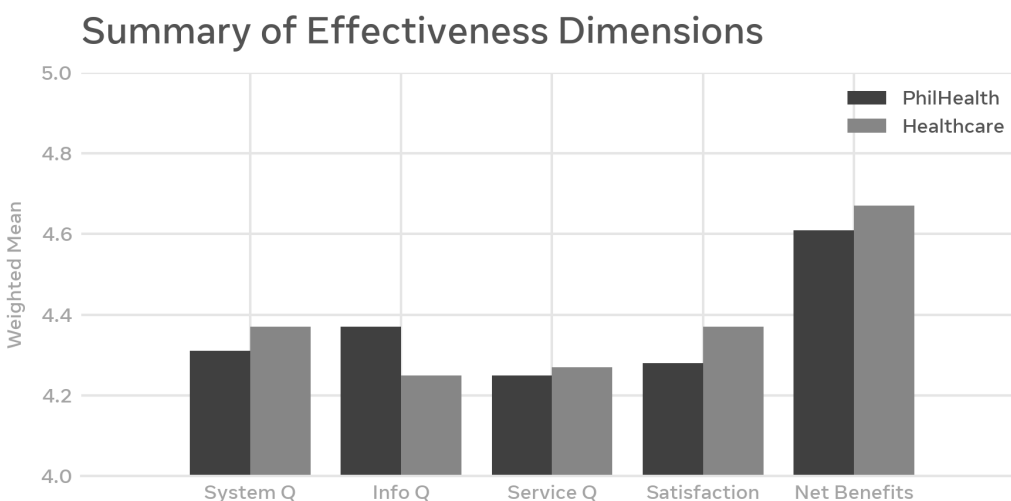


Table 2. Summary of Effectiveness Assessment

Dimension	PhilHealth Mean	Healthcare Mean	Interpretation
System Quality	4.31	4.37	Highly Effective
Information Quality	4.37	4.25	Highly Effective
Service Quality	4.25	4.27	Highly Effective
User Satisfaction	4.28	4.37	Very Satisfied
Perceived Net Benefits	4.61	4.67	Very Highly Beneficial

Table 3. Proposed eClaims System Enhancement Plan

Area of Concern	Objective	Strategies	Timeline	Success Indicator
System Performance (speed, downtime)	Improve reliability & response to 99% uptime	Quarterly preventive maintenance, server upgrade, load balancing	Quarterly	System uptime $\geq 99\%$, processing time $\downarrow 20\%$



Information Timeliness	Ensure real-time CSV updates	Automated validation prompts, real-time sync, dashboard	Within 6 months	RTH rate <5%, CSV update <2hrs
Technical Support Responsiveness	Strengthen support & reduce resolution time	Dedicated helpdesk, 1hr acknowledgement/1day resolution SLA, hotline	Within 6 months	Response time ↓50%, satisfaction ↑
User Capacity	Improve proficiency	Semi-annual training, user manuals, video tutorials, tailored levels	Semi-annual	80% demonstrate improved usage

Conclusion:

This study evaluated the effectiveness of the PhilHealth Electronic Claims (eClaims) system in Cebu City as basis for enhancement. Guided by DeLone and McLean Information Systems Success Model, it measured system quality, information quality, service quality, user satisfaction, and perceived net benefits among 33 PhilHealth employees and 57 healthcare facility representatives using total enumeration.

Findings conclude that the eClaims system is highly effective across all quality dimensions. PhilHealth employees rated information quality highest ($M=4.37$), followed by system quality (4.31) and service quality (4.25), grand mean 4.31 Highly Effective. Healthcare facilities rated system quality highest (4.37), followed by service quality (4.27) and information quality (4.25), grand mean 4.30 Highly Effective. User satisfaction is very high for both groups (4.28 and 4.37), while perceived net benefits are very highly beneficial (4.61 and 4.67), with accuracy improvement, transparency, and efficiency as top benefits.

The convergence of lowest-rated indicators—processing speed, timeliness of information updates, and responsiveness of technical support—identifies systemic interdependencies requiring integrated intervention. Slow processing delays CSV updates, increasing support inquiries and straining responsiveness. Despite high overall ratings, these gaps affect optimal performance, especially during peak submission periods and for high-volume facilities like hospitals and maternity providers who constitute 71.9% of respondents and primarily process Case Rates (97-98%).

The study affirms that eClaims is a successful digital health innovation aligned with UHC Act and SDGs 16 and 17, transforming manual, paper-based, multi-stage verification into integrated digital workflow (CEWS, ECS, CSV, Review, ACPS) that accelerates reimbursement and enhances accountability. However, success is not solely technological but socio-technical—requiring continuous improvement in infrastructure, information governance, and support services, as emphasized by Heeks (2006) and Ongkeko (2024).

Based on findings, a comprehensive enhancement plan is endorsed focusing on: (1) System performance improvement through quarterly preventive maintenance, server capacity enhancement, and 99% uptime target; (2) Strengthening technical support via dedicated eClaims Helpdesk with 1-hour acknowledgement and 1-day resolution standards; (3) Capacity building through semi-annual training tailored to user levels, updated manuals and video tutorials; (4) Usability review via annual assessments to simplify navigation; and (5) Continuous monitoring with semi-annual satisfaction surveys and annual plan review.

Limitations include descriptive design without inferential comparison, localized to Cebu City, and reliance on perceptual measures. Future research may employ mixed-methods with qualitative interviews to explore RTH root causes, longitudinal evaluation post-enhancement, and comparative analysis across regions.

In conclusion, PhilHealth eClaims in Cebu City demonstrates high effectiveness, very high satisfaction, and very high net benefits, but sustaining success demands proactive enhancement to ensure faster, more accurate, transparent, and user-centered claims processing, ultimately supporting financial risk protection and access to quality healthcare for Filipinos.

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