

# Aligning Continuing Medical Education with National Health Needs: A Qualitative Analysis of UP Med Webinar Topics and Hospital Admission Patterns in the Philippines

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## ABSTRACT

**Background.** Continuing Medical Education (CME) serves as a cornerstone for maintaining clinical competence and improving patient care. In the Philippines, CME has become increasingly digital, with the UP Med Webinars emerging as a leading platform for physician education over the past decade. Despite this growth, there has been limited evaluation of how well these webinars align with national health priorities, particularly those reflected in PhilHealth hospital admissions and claims data, which provide insights into the country's disease burden and health-care utilization patterns.

**Objectives.** This study aimed to determine the extent to which the topics and reach of UP Med Webinars correspond with the Philippine health system's most pressing clinical demands. Specifically, it aimed to analyze the trend in number of webinars by year; analyze the distribution of webinar topics by medical field; assess physician attendance as a proxy for clinical interest and engagement; evaluate the alignment between UP Med Webinar content and national health priorities based on PhilHealth's top conditions, procedures, and reimbursed claims.

**Methods.** The study used a qualitative content analysis of all Continuing Professional Development (CPD)-accredited UP Med Webinars from 2015 to 2024, supported by descriptive statistics. Webinar titles were coded thematically and categorized by topic and medical field. Attendance figures were analyzed to identify high-demand topics. These results were compared with PhilHealth Claims Reports (2020–2024), focusing on the top reimbursed medical diagnoses and procedures, to assess alignment with disease burden and health service delivery trends. These findings can help inform strategic planning for CME programs to ensure they remain responsive to the country's evolving public health needs.

**Results.** From 2015 to 2024, a total of 686 CPD-accredited UP Med Webinars were conducted, attended by 685,994 participants. The annual number of webinars and attendees steadily increased, peaking during the COVID-19 pandemic (2020–2022) with heightened demand for virtual CME and pandemic-related topics. Internal Medicine consistently emerged as the most frequently covered field, accounting for 54.1% of webinars and 48.8% of total attendance, followed by Obstetrics and Gynecology (14.4% of webinars; 19.6% of attendance) and Pharmacotherapeutics (6.0% of webinars; 6.9% of attendance). Certain fields, including COVID-19 and Psychiatry, attracted disproportionately



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high attendance despite fewer sessions, indicating strong interest during periods of public health urgency. The top 10 webinar topics included Diabetes, Pregnancy, Cancer, Hypertension, Reproductive Health, COVID-19, Heart Disease, Antimicrobial Treatment, Vertigo, and Vaccination, reflecting a mix of chronic disease management, maternal health, infectious diseases, and emergent health concerns.

Comparison with PhilHealth claims data (2020–2024) revealed a high disease burden in Internal Medicine, Obstetrics, and Pediatrics, with top medical conditions including Pneumonia, Dengue, Hypertensive emergencies, and Stroke. These findings indicate a strong alignment between the most covered webinar topics and national healthcare utilization trends, particularly in high-burden clinical areas.

**Conclusion.** Findings suggest that the UP Med Webinars have generally aligned with national health priorities, as indicated by PhilHealth claims data, particularly in high-burden fields such as Internal Medicine and Obstetrics. However, gaps in coverage for certain high-priority conditions and procedures point to opportunities for more inclusive and data-driven CME planning. Aligning CME content with evolving health system needs can enhance its relevance, support clinical practice improvements, and ultimately contribute to better population health outcomes in the Philippines.

*Keywords: webinar, continuing medical education, online, medicine, health priorities*

## INTRODUCTION

Continuing Medical Education (CME) plays a vital role in helping physicians maintain clinical competency, keep up with emerging scientific evidence, and provide care that meets both current standards and the evolving needs of the population.<sup>1</sup> In the Philippines, the UP Med Webinars, organized and started by the University of the Philippines College of Medicine (UPCM) and the UP Medical Alumni Society (UPMAS) in 2015, has emerged as a major continuing medical education (CME) initiative, especially during and after the COVID-19 pandemic.<sup>2</sup> The UP Med Webinars is a structured, topic-specific, online seminar intended for CME. These webinars are widely accessible, interdisciplinary, and offered at no cost, reaching thousands of healthcare professionals nationwide. The program has become a crucial channel for professional development, tackling a range of clinical, public health, and policy issues relevant to Filipino practitioners.

Despite the growing popularity of the UP Med Webinars, there has been limited assessment of whether the topics covered in these webinars align with the actual burden

of disease in the country. Hospital admission data from the Philippine Health Insurance Corporation (PhilHealth) provides a useful proxy for understanding national health needs and healthcare utilization patterns.<sup>2</sup> Comparing CME content with such epidemiological data offers insight into whether educational offerings are addressing the most pressing health challenges faced by the Filipino population. The World Health Organization (WHO) and other international organizations have emphasized the importance of aligning CME strategies with national health data, advocating for programs that directly target systemic gaps in healthcare delivery.<sup>3</sup> The UPCM has emphasized community-responsive medical education, yet formal mechanisms to directly link CME content with national health surveillance data are still limited.<sup>4</sup>

PhilHealth data on Claims Payment offers a practical and standardized way to assess the burden of disease in the Philippines.<sup>5–9</sup> These data serve as a valuable proxy for national health needs and can be used to assess whether CME programs address conditions most frequently encountered by physicians in clinical settings.

In addition to topic selection, CME attendance patterns can provide insights into the perceived interests and knowledge gaps of healthcare workers.<sup>10,11</sup> Higher attendance rates may indicate areas of clinical uncertainty, emerging challenges, or heightened relevance to daily practice. Prior studies have shown that healthcare professionals are more likely to engage in CME when the content is applicable to their scope of work, addresses current trends, or fulfills unmet learning needs.<sup>10</sup> Therefore, analyzing both topic distribution and attendance may offer a more nuanced understanding of how CME aligns, or fails to align, with both the healthcare landscape and the professional development priorities of the medical workforce.

This research assessed whether the UP Med Webinars, as a CME program in the Philippines, was responsive to both healthcare system demands and the professional development needs of its medical workforce. This study aimed to provide empirical evidence on whether institutional CME offerings, such as the UP Med Webinars, reflected or diverged from actual population health needs, as indicated by national hospital admission data. This approach allowed for a critical assessment of the UP Med Webinars' strategic alignment with the Philippine healthcare landscape, thereby contributing to ongoing efforts to reform CME into a more responsive, data-driven, and outcomes-oriented educational enterprise, and reinforcing the role of CME as a tool not just for physician development but for public health advancement.

## OBJECTIVES

This study evaluated whether the topics and attendance patterns of UP Med Webinars, a major CME initiative in the Philippines, aligned with the national disease burden, based

on PhilHealth hospital admissions and claims. It examined (1) the trend in the number of webinars by year, (2) the distribution of webinar topics by medical field, (3) physician attendance as a proxy for clinical interest, and (4) alignment between CME content and public health priorities.

## METHODS

A study protocol was submitted to University of the Philippines Manila Research Ethics Board (UPMREB) and was exempted from ethical review (UPMREB 2025-0475-EX) and may be requested from the author.

This study employed a qualitative content analysis design, complemented by descriptive statistical methods to explore the relationship between CME topics, physician attendance, and national health priorities in the Philippines. Specifically, it examined the thematic distribution of topics covered in the UP Med Webinars and correlated these with physician interest, as inferred from attendance data, and PhilHealth Claims Payment.

This study was conducted at the University of the Philippines College of Medicine (UPCM) from May 1 to July 31, 2025. This study utilized total enumeration sampling and included data from all UP Med Webinars accredited by the Postgraduate Institute of Medicine (PGIM) of the UPCM from January 1, 2015 to December 31, 2024. Webinars without PGIM accreditation or lacking verifiable documentation from PGIM were excluded from the final analysis.

### Data Collection

#### Source of UP Med Webinars Data

The Postgraduate Institute of Medicine (PGIM) of the UPCM, headed by Dr. Teresa Luisa Gloria Cruz, served as the official Continuing Professional Development (CPD) provider for the UP Med Webinars, in accordance with Republic Act No. 10912, which mandated the implementation of CPD programs for regulated professions in the Philippines.<sup>2</sup> As the accredited CPD provider recognized by the Philippine Regulation Commission (PRC) and the CPD Council of Medicine, the PGIM oversaw the submission of all documentary requirements to ensure compliance. Additionally, PGIM applied for Continuing Medical Education (CME) unit accreditation through the Philippine Medical Association (PMA), pursuant to the PMA Code for Continuing Medical Education.<sup>2</sup> The PGIM administrative staff, under the leadership of Ms. Cyrille Panaglisma-Santos, maintained and organized official records of each UP Med Webinar, including lists of registered participants and attendance.

To join a webinar, attendees were required to register with PGIM in advance. The webinars were accessible through multiple platforms: the University of the Philippines Manila (UPM) website's live streaming service, Facebook Live,

and various web conferencing tools such as Zoom, Google Meet, and GoToWebinar. Although a webinar could be viewed simultaneously through these different platforms, each registered attendee was only counted once per session, ensuring accurate participation data.

After each webinar, attendees were required to accomplish a post-webinar evaluation form as part of the PGIM's CPD compliance process. Only upon submission of this form did participants receive an electronic certificate of attendance, which included the number of CPD units (approved by the CPD Council of Medicine) and CME units (approved by the PMA) earned.

The following data were collected from the PGIM:

1. **UP Med Webinar Title.** Each webinar was given a title by the UP Medical Alumni Society (UPMAS) that reflected the subject matter to be discussed. The authors coded the title listed in the PGIM database into topic and medical field/domain.
2. **Number of Webinars (Frequency).** The frequency refers to the rate at which UP Med Webinars were conducted within a given year, as documented in the PGIM database. This measure captures the total count of online seminars held annually.
3. **Number of Attendees.** The number of attendees was the aggregate count of unique participants who registered, viewed the online webinar, and submitted a post-webinar evaluation form for a specific webinar.
4. **Topic.** A webinar topic was the classification of the subject matter of a UP Med Webinar title, based on the content descriptors in the UP Med Webinars listings and PhilHealth Payment Claims datasets to facilitate qualitative analysis.
5. **Medical Field.** A medical field was the classification used to group webinar topics or PhilHealth claims according to recognized clinical specialties (e.g., Internal Medicine, Pediatrics, Surgery), as well as other relevant domains to medical education and health service delivery (e.g., Pharmacotherapeutics, COVID-19). Category of content descriptors in both the UP Med Webinar listings and PhilHealth Payment Claims datasets enabled qualitative and comparative analysis across different areas of medical practice and health system priorities.
6. **Year (Time Variable).** Year pertains to the calendar year of observation starting from January 1 to December 31 of the same year, from 2015 to 2024. Year was used as a measure of discrete time variable for trend analysis across the 10-year study period.

#### Source of PhilHealth Data

The PhilHealth data on Claims Payment provided data on PhilHealth utilization, which became the practical framework for prioritizing educational content.<sup>5-9</sup> PhilHealth, being the national health insurer, offered a comprehensive snapshot of disease and procedural trends across the country.

1. **Top 10 Medical Cases of PhilHealth.** The Top 10 medical cases of PhilHealth referred to the ten most frequently recorded causes of hospital admissions in the Philippines, as reported by PhilHealth in its annual statistical data. These cases were identified based on the total number of inpatient claims or admissions attributed to specific medical diagnoses within a given year. Cases were categorized by PhilHealth based on the International Classification of Diseases (ICD-10) codes, and this information was used to evaluate whether UP Med Webinars aligned with national health priorities and disease burden.
2. **Top 10 RVS-based Packages and Procedures by PhilHealth.** The Top 10 RVS-based Packages referred to the ten most frequently availed medical or surgical procedures covered under PhilHealth's benefit packages, as reported in its annual utilization statistics. These procedures were coded using the Relative Value Scale (RVS), a standardized system that assigned numerical values to medical services based on the complexity, skill, and time required. This category was based on the volume of filed claims or reimbursements, as recorded by PhilHealth, and represented the most commonly performed interventions in Philippine healthcare settings. These data serve as indicators of procedural demand and were used in this research to assess whether the UP Med Webinars, as a whole, was responsive to procedural trends and clinical practice needs across specialties.
3. **Physicians as Claimants in PhilHealth Data.** The PhilHealth data on claims payment provided not only a picture of disease burden and procedural frequency but also reflected the clinical practices and service delivery of physicians nationwide. Since PhilHealth claims were filed by attending physicians and accredited healthcare providers, the patterns observed in the database mirrored the priorities, workload, and clinical encounters of doctors across different specialties. For example, high volumes of claims in conditions, such as pneumonia and hypertension, corresponded to cases managed by internists and nephrologists. Similarly, the large share of claims related to obstetric care, ranging from normal spontaneous deliveries to cesarean sections, highlighted the central role of obstetricians in maternal and perinatal health services.

### Eligibility Criteria

The researchers requested the official records of PGIM, specifically covering UP Med Webinars conducted from 2015 to 2024. These records served as the primary data source for identifying and categorizing webinar activities based on topic, medical field classification, and CPD accreditation status.

The webinars included in this study were conducted under the UP Med Webinars program between 2015 and

2024, and were accredited with CPD units by PGIM, as reflected in internal or publicly available records of PGIM.

Webinars that lacked CPD accreditation or those that could not be verified through PGIM's documentation were excluded from the analysis.

### Data Extraction

Each webinar title was reviewed and classified through thematic coding into two levels: topic and medical field, based on standard medical and clinical domains, such as Internal Medicine, Surgery, Obstetrics and Gynecology, Pediatrics, Psychiatry, and Pharmacotherapeutics. Webinar topics were derived from recurring themes in clinical discussions (e.g., diabetes, hypertension, reproductive health), while medical fields were based on conventional domains and fields of medical practice.

The frequency of webinars per topic and per field for each year, as well as their respective attendance figures, were tallied. For each field, the total number of webinars and the cumulative attendance were computed. Fields were then ranked both by frequency and by total attendance, and the percentage share of each field in the overall 10-year dataset were calculated. Similarly, the Top 10 webinar topics were identified and ranked for each year and across the entire 10-year period (2015–2024) based on attendance volume.

To compare CME coverage with actual healthcare demand, PhilHealth Claims Payment Reports from 2020 to 2024 from the website of PhilHealth ([philhealth.gov.ph](http://philhealth.gov.ph)) were analyzed to classify hospital admissions and RVS packages by medical field, using a parallel framework that was used for the webinars.<sup>5-9</sup>

### Data Management and Quality Control

All data were compiled and processed by one investigator (MY) in Microsoft Excel (Microsoft Corporation, Redmond, WA, USA) and cross-checked manually by two investigators (RG and AM) to ensure consistency and completeness. The PGIM database served as the primary source, and entries were independently verified against the official webinar attendance lists and CPD accreditation documents. Discrepancies, if any, were reconciled through double checking with PGIM administrative records. No third-party application was used for automated aggregation or analysis. Data cleaning and coding followed a standardized template reviewed by all investigators to maintain reliability.

### Data Analysis

A mixed descriptive-qualitative approach was employed to identify content trends. Responsiveness of CME programming was assessed by systematically mapping webinar delivery and participation patterns to epidemiologic profiles and healthcare utilization data.

Descriptive statistics generated frequencies and percentages for each classification category, such as webinar topic, field, attendance, and PhilHealth claims, providing a

structured basis for side-by-side comparison. This allowed the researchers to assess alignment or misalignment between CME content, physician interest (as reflected in attendance), and PhilHealth utilization (used to reflect the prevailing health conditions affecting the Philippine population).

The responsiveness of the UP Med Webinars program to the educational needs of the Philippine healthcare providers was assessed using Moore et al.'s Expanded Outcomes Framework for Planning and Assessing CME.<sup>11</sup> Level 1, or the Participation Level, served as the foundational tier of CME evaluation and focused on the quantitative measurement of learner involvement. Participation was assessed by examining webinar attendance data across all UP Med Webinars from 2015 to 2024. Metrics included the total number of attendees per topic and per medical field/domain. These figures were used to determine the program's overall reach and appeal, as well as to identify trends in engagement across time, field, and topic types. Participation data also enabled the identification of which clinical areas generated the most interest, based on consistent or peak attendance. High participation reflected both the perceived relevance of topics to clinical practice and the accessibility of the webinars to intended audiences. While Level 1 did not assess what was learned or applied, it provided essential baseline information on the dissemination and uptake of CME opportunities, which were critical factors in the overall effectiveness of an educational initiative.

Data verification audits were performed through random cross-checking of at least 10% of the entries by two investigators (RG and AM) to confirm accuracy of counts and classifications prior to statistical summarization.

### Researcher Characteristics and Reflexivity

The three researchers are senior faculty members of the University of the Philippines College of Medicine who served as heads of the committee for the UP Med Webinars from 2015 to 2017. Each holds administrative and academic roles related to continuing medical education, and has extensive experience in medical education program development, data analysis, and public health research. Their direct involvement in the planning and oversight of the UP Med Webinars provided them with insider knowledge of the program's structure, objectives, and documentation processes, which facilitated access to complete and accurate data.

To minimize potential bias arising from this insider position, the researchers adhered to pre-defined coding and analysis frameworks, conducted independent verification of data entries, and based all interpretations strictly on documented webinar records and publicly available PhilHealth datasets. Reflexive discussions were held during analysis to ensure that interpretations were grounded on evidence rather than personal assumptions about program impact. This approach enhanced the credibility, transparency, and transferability of the study's findings.

### Ethical Considerations

The study was registered with the UPM Research Grants Administration Office (RGAO) (RGAO 2025-0777) and was submitted to the University of the Philippines Manila Research Ethics Board (UPMREB) for review and ethical approval (UPMREB 2025-0475-EX).

## RESULTS

From 2015 to 2024, a total of 686 UP Med Webinars were conducted under the CPD-accredited program of the University of the Philippines College of Medicine, with an aggregate attendance of 685,994 participants.

### Trends in Number of Webinars by Medical Field and by Year

The number of UP Med Webinars increased significantly from 2015 to 2024 (Figure 1 and Table 1), reflecting the growing demand for CME in the Philippines. In 2015, the first year of the UP Med Webinars, only 11 webinars were conducted, predominantly in Internal Medicine (7), Neurology (2), and Pediatrics (1). By 2016, the number of webinars doubled to 22, with a more diverse set of topics including Dermatology (2), Otorhinolaryngology (2), and Ophthalmology (2). In 2017, the webinar count rose to 48, with Internal Medicine (17), Neurology (8), and Ophthalmology (7) accounting for a majority. The upward trend continued in 2018 with 61 webinars, notably led by Internal Medicine (30) and Other Topics (9), such as Medical Technology, Universal Health Care, and Geriatric Care. The following year, 2019, saw a slight increase to 62 webinars, again dominated by Internal Medicine (35), and a broader distribution across specialties such as Obstetrics and Gynecology (2), Surgery (2), and Pharmacotherapeutics (4) that covered Antimicrobial Treatment and Vaccines. A major expansion occurred in 2020, with 106 webinars, spurred by the launch of COVID-19-focused sessions (7), a surge in Internal Medicine (56), and high counts in Obstetrics and Gynecology (18) and Neurology (7). In 2021, a record 137 webinars were conducted, with Internal Medicine (57), Obstetrics and Gynecology (39), and Neurology (9) leading the way. The number slightly declined to 118 in 2022, though content remained rich, particularly in Pharmacotherapeutics (14) and Obstetrics and Gynecology (20). In 2023, the total dropped to 68, with Internal Medicine (33) still most prominent. By 2024, 53 webinars were held, with continued emphasis on Internal Medicine (31) and Other Topics (12), highlighting a sustained focus on core clinical areas while responding to evolving educational needs.

### Over-all Trends in Number of Webinars and Attendance by Medical Field

From 2015 to 2024, the most frequently covered field was Internal Medicine, accounting for 317 webinars (54.1%) (Figure 2) and 334,542 attendees (48.8%) (Figure 3) over

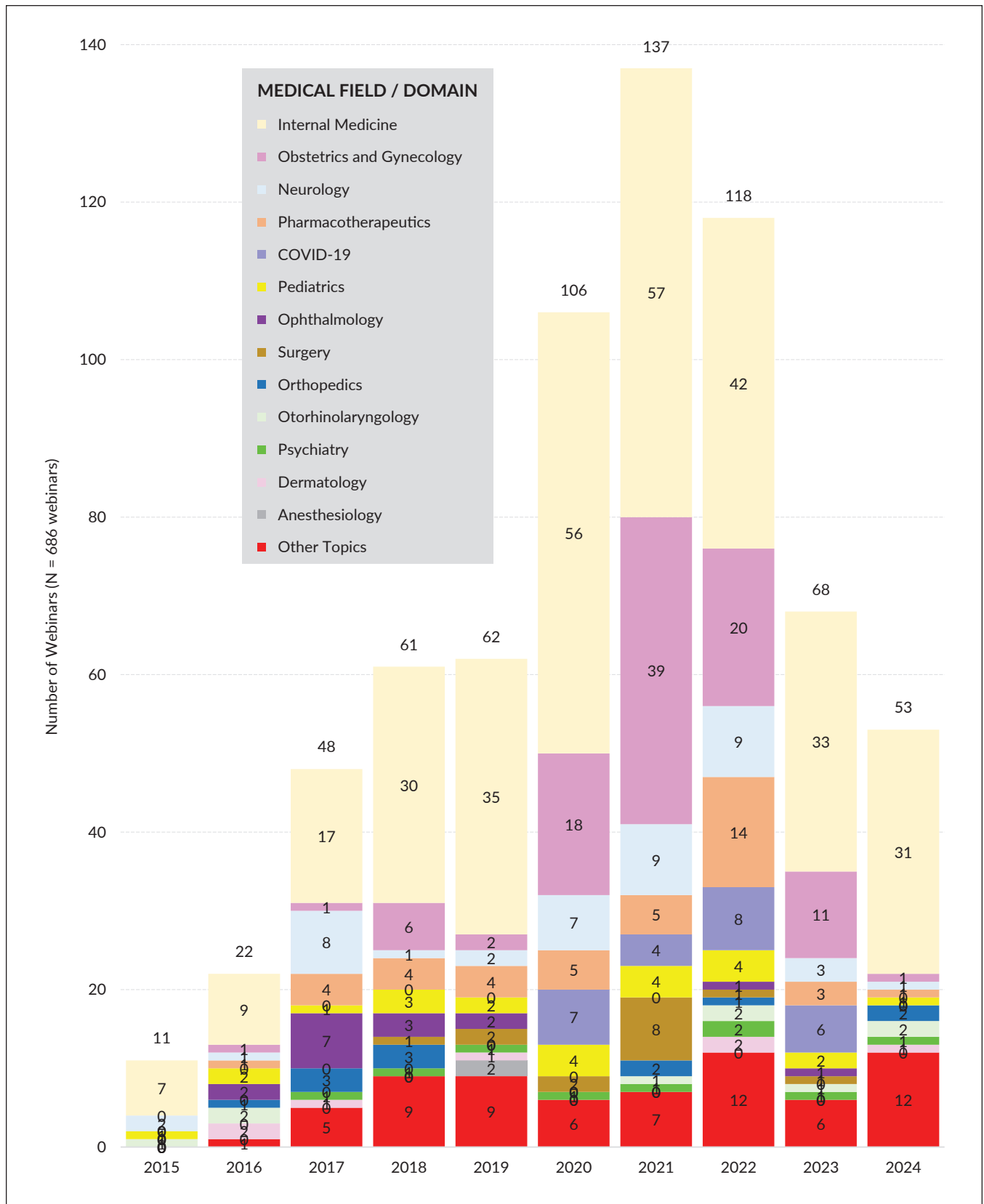


Figure 1. Number of UP Med Webinars classified by medical field from 2015 to 2024.

10 years. This was followed by Obstetrics and Gynecology, with 99 webinars (14.4%) and 134,404 attendees (19.6%), and Pharmacotherapeutics, with 41 webinars (6.0%) and 47,580 attendees (6.9%). Some medical fields also drew high levels of participation despite fewer webinars. Neurology had 43 webinars (6.3%) and 45,131 attendees (6.6%), while

COVID-19 topics, introduced only in 2020 during the pandemic, accounted for 25 webinars (3.6%) and a notable 38,604 attendees (5.6%), highlighting heightened interest in pandemic-related content during that period. Other specialties with moderate representation included Other Topics (e.g., Universal Health Care, Public Health, and Medical

**Table 1.** Number of UP Med Webinars and Attendees Classified by Medical Field

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total	% of Total
<b>Anesthesiology</b>												
Webinars	0	0	0	0	2	0	0	0	0	0	2	0.3
Attendees	0	0	0	0	859	0	0	0	0	0	859	0.1
<b>Dermatology</b>												
Webinars	0	2	1	0	1	0	0	2	0	1	7	1.0
Attendees	0	221	255	0	469	0	0	3372	0	2404	6721	1.0
<b>COVID-19</b>												
Webinars	0	0	0	0	0	7	4	8	6	0	25	3.6
Attendees	0	0	0	0	0	10972	6259	13455	7918	0	38604	5.6
<b>Internal Medicine</b>												
Webinars	7	9	17	30	35	56	57	42	33	31	317	54.1
Attendees	357	916	4092	11305	17950	51442	81571	64892	44377	57640	334542	48.8
<b>Neurology</b>												
Webinars	2	1	8	1	2	7	9	9	3	1	43	6.3
Attendees	152	128	1650	355	937	8659	12641	14247	4720	1642	45131	6.6
<b>Obstetrics and Gynecology</b>												
Webinars	0	1	1	6	2	18	39	20	11	1	99	14.4
Attendees	0	90	191	2145	853	20418	57298	33927	16394	3088	134404	19.6
<b>Ophthalmology</b>												
Webinars	0	2	7	3	2	0	0	1	1	0	16	2.3
Attendees	0	203	1949	1177	986	0	0	1551	1703	0	7569	1.1
<b>Orthopedics</b>												
Webinars	0	1	3	3	0	0	2	1	0	2	12	1.7
Attendees	0	77	686	1215	0	0	2761	1648	0	3965	10352	1.5
<b>Otorhinolaryngology</b>												
Webinars	1	2	0	0	0	0	1	2	1	2	9	1.3
Attendees	75	212	0	0	0	0	1677	2992	1983	3807	10746	1.6
<b>Pediatrics</b>												
Webinars	1	2	1	3	2	4	4	4	2	1	24	3.5
Attendees	71	270	182	1196	1073	3906	5158	6271	2989	1740	22856	3.3
<b>Pharmacotherapeutics</b>												
Webinars	0	1	4	4	4	5	5	14	3	1	41	6.0
Attendees	0	128	1180	1732	2141	4082	8176	23542	4607	1992	47580	6.9
<b>Psychiatry</b>												
Webinars	0	0	1	1	1	1	1	2	1	1	9	1.3
Attendees	0	0	221	301	373	1427	1485	3225	1314	1772	10118	1.5
<b>Surgery</b>												
Webinars	0	0	0	1	2	2	8	1	1	0	15	2.2
Attendees	0	0	0	321	1018	2075	10574	1736	788	0	16512	2.4
<b>Other Topics</b>												
Webinars	0	1	5	9	9	6	7	12	6	12	67	9.8
Attendees	0	106	1382	2756	4658	6236	9979	17992	7699	24110	74918	10.9
<b>Total by Year</b>												
Webinars	11	22	48	61	62	106	137	118	68	53	686	
Attendees	655	2130	11788	22503	31317	109217	197579	188850	94492	102160	685994	

Technology), comprising 67 webinars (9.8%) and 74,918 attendees (10.9%), and Pediatrics, with 24 webinars (3.5%) and 22,856 attendees (3.3%). In contrast, some fields such as Anesthesiology, Ophthalmology, Otorhinolaryngology, Orthopedics, Psychiatry, and Surgery had relatively fewer webinars and lower attendance, each contributing between 0.3% to 3.5% of the total webinar count and less than 2.5% of total attendance.

These comparative rankings from Figures 2 and 3 revealed that while the frequency of webinar offerings generally corresponded with participation levels, certain fields such as Psychiatry drew disproportionately high attendance despite

fewer sessions, suggesting heightened demand or relevance among healthcare professionals during the study period.

**Trends in Webinar Attendance by Year**

For each year from 2015 to 2024, the UP Med Webinars saw a steady increase in total attendees, with notable shifts in interest across medical fields/domains (Figure 4 and Table 1). In 2015, attendance was relatively low at 655, with the majority coming from Internal Medicine (357), Neurology (152), and Pediatrics (71). By 2016, total attendance rose to 2,351, with Dermatology (221), Ophthalmology (203), and Otorhinolaryngology (212) contributing modestly along-

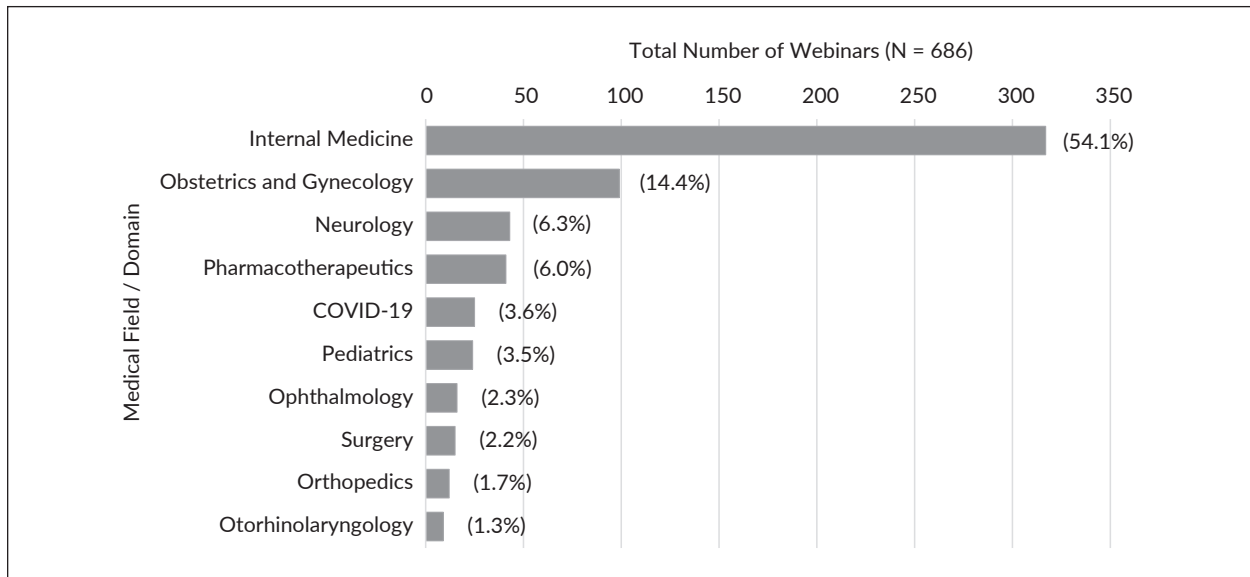


Figure 2. Top 10 medical field categories of UP Med Webinars ranked by total number of webinars from 2015 to 2024.

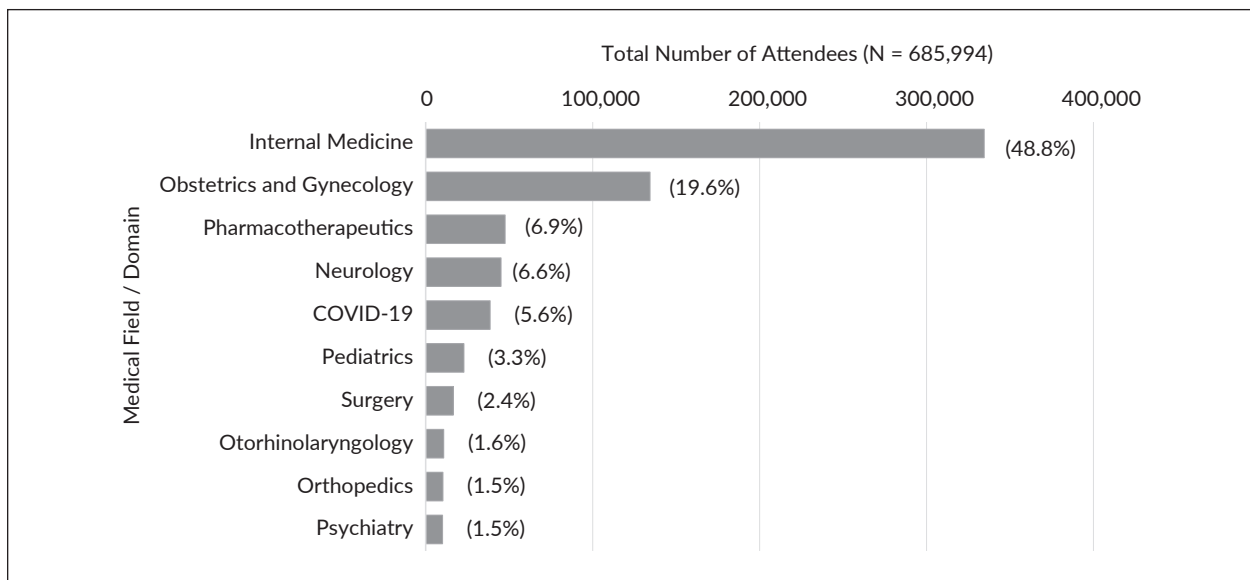


Figure 3. Top 10 medical field categories of UP Med Webinars ranked by total number of attendees from 2015 to 2024.

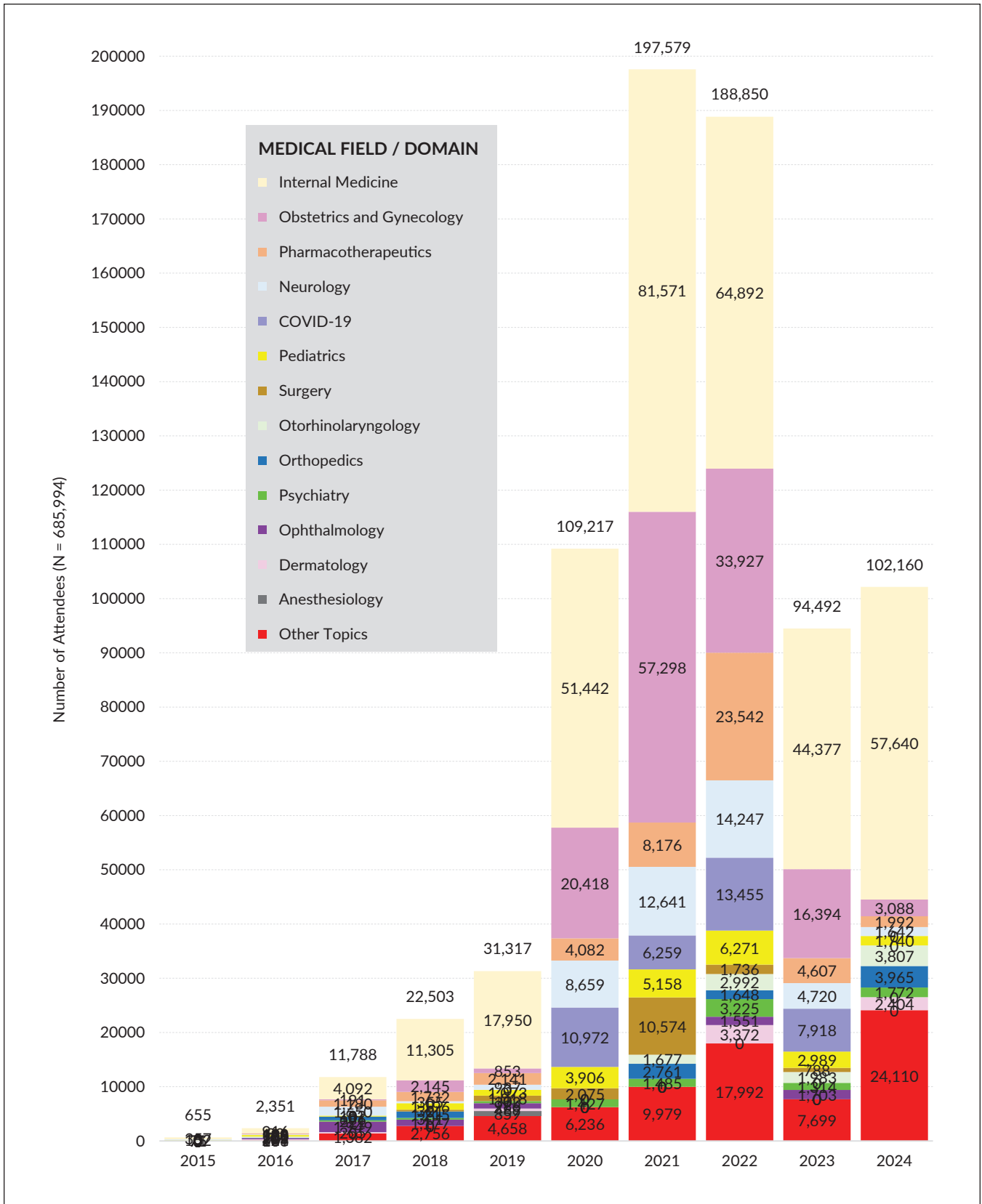


Figure 4. Number of attendees classified by medical field from 2015 to 2024.

side Internal Medicine (916). In 2017, the webinars gained momentum, drawing 11,788 participants. Internal Medicine led with 4,092 attendees, followed by significant interest in Neurology (1,650), Pharmacotherapeutics (1,180), and Ophthalmology (1,949). The trend continued in 2018 with 22,503 attendees, dominated by Internal Medicine (11,305), Pediatrics (1,196), and Obstetrics and Gynecology (2,145). By 2019, attendance reached 31,317, still led by Internal Medicine (17,950), while interest in Surgery (1,018), Pharmacotherapeutics (2,141), and Other Topics (4,658) grew. A dramatic spike occurred in 2020, with 109,217 attendees, driven by the introduction of COVID-19 webinars (10,972), and strong numbers in Internal Medicine (51,442) and Obstetrics and Gynecology (20,418). In 2021, attendance nearly doubled to 197,579, with Internal Medicine (81,571), Obstetrics and Gynecology (57,298), and Neurology (12,641) being the most popular. The year 2022 maintained high numbers (188,850), with strong participation in Pharmacotherapeutics (23,542), Neurology (14,247), and COVID-19 topics (13,455). The spike in attendance from 2020 to 2022 suggest a surge in demand for virtual CME during the COVID-19 pandemic, as well as a strong interest in topics that directly align with prevalent clinical concerns and evolving healthcare needs. By 2023, attendance tapered to 94,492, though Internal Medicine (44,377) and Obstetrics and Gynecology (16,394) remained prominent. In 2024, the total attendees reached 102,160, with Internal Medicine again leading (57,640), followed by Other Topics (24,110) and Orthopedics (3,965). The data reflect evolving public health concerns and clinical interests, with Internal Medicine consistently at the forefront and significant surges in interest tied to emerging challenges like COVID-19.

### Over-all Trends in Attendance by Topic

Over a 10-year period (2015–2024), analysis of webinar attendance across medical topics (Table 2) revealed key trends in topic popularity and evolving CME engagement. Diabetes consistently ranked highest in total attendance, drawing 77,698 participants, and securing the top rank in four out of ten years, reflecting sustained interest and clinical relevance across the decade. Pregnancy-related topics followed closely with 58,511 attendees, peaking in 2020 and 2021 amid growing attention to maternal health. Cancer management was third in overall attendance (48,073) and frequently ranked in the top five from 2016 to 2024, indicating a strong demand for oncology-related CME. Topics such as Hypertension, Reproductive Health, and COVID-19 also maintained high cumulative turnout, each exceeding 38,000 attendees, although their annual rankings fluctuated based on emerging health trends, most notably the spike in COVID-related webinars during 2020 to 2022.

Topics with historically high disease burdens, such as Heart Disease, Antimicrobial Treatment, Vaccines, and Dyslipidemia, consistently appeared in the top 10 to 15, underscoring their importance in clinical practice. Conversely,

topics such as Newborn Screening, Vertigo, and Liver Diseases drew notable engagement in select years but lacked consistent presence in the top ranks. Lower-ranked topics including Toxicology, End-of-Life Care, and Glaucoma saw limited coverage and participation, suggesting potential gaps in topic prioritization or audience reach.

Notably, certain fields such as Spiritual care, Professional concerns, and Geriatric care, though less represented, garnered moderate interest in specific years, reflecting evolving practitioner concerns beyond purely clinical subjects. These trends suggest a dynamic CME landscape responsive to disease prevalence, emerging public health challenges, and evolving physician interests. The data also highlight opportunities to increase coverage of underrepresented yet clinically important areas, ensuring that CME remains inclusive, responsive, and aligned with national health priorities.

### Alignment Between CME Content and Public Health Priorities

Based on the data from Table 3, the Top 10 most attended UP Med Webinar topics from 2015 to 2024 reflected a strong alignment with high-burden, high-interest areas of clinical practice and public health concern.

PhilHealth top medical cases and procedures from 2020 to 2024 (Tables 3 and 4) revealed a consistent pattern of high disease burden in clinical areas corresponding largely to Internal Medicine, Obstetrics, and Pediatrics, with additional representation from Neurology, Otorhinolaryngology, Radiology, and Ophthalmology. PhilHealth claims data over five years reflected a high disease burden in acute and chronic Internal Medicine-related illnesses, maternal (categorized under Obstetrics and Gynecology) and newborn care (categorized under Pediatrics), infectious disease management (categorized under Internal Medicine and Pharmacotherapeutics), and chronic procedure-based treatments like dialysis and cancer care (categorized under Internal Medicine). These trends underscore the public health priorities and service demands shaping healthcare delivery in the Philippines.

Analysis of PhilHealth claims data from 2020 to 2024 revealed a strong positive alignment between many of the top reimbursed illnesses and the topics covered by the UP Med Webinars program. Several of the highest-ranking conditions in terms of PhilHealth claims payment, such as pneumonia, dengue fever, acute gastroenteritis, urinary tract infection, hypertensive emergencies, and peptic ulcer disease, were consistently addressed in the webinars. As shown in Table 3, the top ten PhilHealth medical conditions ranked by claim count were overwhelmingly Internal Medicine-related. Pneumonia (moderate and high risk) maintained the #1 rank across all five years, and received substantial attention through targeted webinar sessions on pneumonia management and antimicrobial treatment. Other persistent top-ranking conditions included Dengue fever, Acute gastroenteritis, Urinary tract infection, Hypertensive emergencies,

Table 2. UP Med Webinar Topics Ranked by Number of Attendees

Topic	10-Year Rank	Total Attendees (2015-2024)	Rank per Year based on Number of Attendees										
			2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
Diabetes	1	77,698	2	4	5	1	1	1	2	9	5	3	
Pregnancy	2	58,511	-	-	-	22	-	3	1	1	11	-	
Cancer Management	3	48,073	-	2	30	2	2	10	5	4	1	1	
Hypertension	4	44,167	-	14	10	3	7	7	4	5	6	4	
Reproductive Health	5	41,666	-	-	-	24	-	6	3	7	3	-	
COVID-19	6	38,604	-	-	-	-	-	2	11	3	2	-	
Heart Disease	7	34,354	-	1	2	8	10	5	6	6	12	9	
Antimicrobial Treatment	8	26,090	-	-	3	20	5	14	12	2	-	-	
Vertigo	9	24,576	-	-	-	-	18	4	9	8	13	-	
Vaccines	10	20,148	-	5-7	19	4	8	19	17	10	9	15	
Dyslipidemia	11	20,109	-	-	-	28	4	35	21	14	4	6	
Nutrition	12	18,794	-	-	-	-	3	-	16	13	14	5	
Newborn Screening	13	17,942	5	-	-	-	-	-	-	-	-	24	
Uterine Disorders	14	17,826	-	-	-	18	-	-	7	15	24	-	
Pain	15	17,292	4	18	1	5	-	-	14	18	22	7	
Liver Diseases	16	14,284	-	-	-	10	-	-	-	21	19	2	
Technology	17	13,572	-	-	-	6	9	9	35	19	10	-	
HPV	18	10,552	-	-	33	-	31	12	10	44	-	-	
Dyspepsia	20	9,233	-	-	6	7	12	15	15	36	-	-	
Osteoporosis	23	8,470	-	-	-	-	16	-	25	45	8	-	
Arthritis	24	8,283	-	-	28	9	-	-	20	-	7	-	
Vascular Diseases	25	8,283	-	-	-	-	-	-	8	-	-	-	
COPD	28	7,843	8	-	14	-	27	34	27	28	-	11	
Allergy	30	7,065	1	13	-	-	-	21	-	22	16	21	
Seizure Disorders	31	6,360	-	5-7	8	-	-	27	34	16	-	-	
Spiritual	34	5,967	-	-	-	-	-	-	-	-	31	8	
Professional Concerns	37	5,726	-	-	-	-	-	-	-	38	-	10	
Asthma	38	4,757	3	3	4	-	20	21	38	-	21	-	
Geriatric Care	43	3,487	-	-	9	12	6	20	-	-	-	-	
URTI	45	3,353	-	10	-	-	-	-	23	33	-	-	
Psoriasis	49	2,292	-	8	-	-	25	-	-	25	-	-	
Headache	58	1,657	6	-	-	-	28	23	-	-	-	-	
Infectious Diseases	61	1,577	7	-	-	-	-	-	-	35	-	-	
Glaucoma	74	794	-	5-7	22	19	-	-	-	-	-	-	
End of life Care	78	436	-	-	7	-	-	-	-	-	-	-	
Toxicology	92	120	-	9	-	-	-	-	-	-	-	-	

and Peptic ulcer disease, all categorized under Internal Medicine. Asthma exacerbations and Stroke (infarction) were also common, with Stroke representing Neurology (Rank 4) and Asthma linked again to Internal Medicine. Otorhinolaryngology and Pediatric conditions made brief appearances, with Newborn sepsis (Pediatrics) and Upper respiratory tract infections (URTI) (Otorhinolaryngology) entering the top ten in select years. COVID-19 pneumonia and outpatient HIV/AIDS care appeared prominently in the pandemic years, reflecting evolving healthcare demands.

Anemia (categorized under the topic of Blood Disorders and the field of Internal Medicine) also entered the top 10 in 2024, indicating its rising contribution to hospital admissions. These findings demonstrated the responsiveness of the UP Med Webinars to prevalent national health concerns and suggested intentional alignment with disease priorities.

In Table 4, the top reimbursed procedures and case packages (RVS-based) were similarly dominated by Internal Medicine and Obstetrics. Hemodialysis consistently held the top rank across all five years, and was indirectly addressed

**Table 3.** Top 10 Medical Cases of PhilHealth (ranked by number of claims) and Alignment with UP Med Webinars

PhilHealth Illness Description*	Alignment with UP Med Webinars		Claims Payment Rank*				
	Medical Field (Rank)**	Topics (Rank)***	2020	2021	2022	2023	2024
<i>Pneumonia Moderate and High Risk</i>	Internal Medicine (1)	Pneumonia (27), Antimicrobial Treatment (8)	1	1	1	1	1
<i>Dengue Fever (Mild / Severe)</i>	Internal Medicine (1)	Dengue (35)	2	3	2	3	2
<i>Acute Gastroenteritis</i>	Internal Medicine (1)	Diarrhea (40)	3	5	3	2	3
<i>Urinary Tract Infection Admissible</i>	Internal Medicine (1)	Urinary Tract Infection (60), Antimicrobial Treatment (8)	4	6	6	4	5
<i>Hypertensive Emergency Urgency</i>	Internal Medicine (1)	Hypertension (4)	5	2	5	6	4
<i>Peptic Ulcer Disease with / without Hemorrhage</i>	Internal Medicine (1)	Dyspepsia (20)	6	7	8	5	6
<i>Asthma in Acute Exacerbation</i>	Internal Medicine (1)	Asthma (38)	7	-	10	8	8
<i>Stroke Infarction (Hemorrhagic / Non-Hemorrhagic)</i>	Neurology (4)	Stroke (46)	8	8	7	7	9
<i>Upper Respiratory Tract Infection</i>	Otorhinolaryngology (8)	Upper Respiratory Tract Infection (45)	9	-	-	9	7
<i>Newborn Sepsis</i>	Pediatrics (6)	Newborn Screening (13), Antimicrobial Treatment (8)	10	9	9	-	-
<i>Outpatient HIV / AIDS Packages</i>	Internal Medicine (1)	HIV (48)	-	4	-	-	-
<i>COVID-19 Pneumonia Package</i>	Internal Medicine (1)	COVID-19 (6)	-	10	4	10	-
<i>Anemia</i>	Internal Medicine (1)	Blood Disorders (21)	-	-	-	-	10

\* Sources: PhilHealth Stats and Charts 2020 to 2024<sup>5-9</sup>

\*\* Rank based on Figure 3

\*\*\* Rank based on 10-Year Rank in Table 2

**Table 4.** Top 10 RVS-based Packages and Procedures by PhilHealth (ranked by number of claims) and Alignment with UP Med Webinars

PhilHealth Illness Description*	Alignment with UP Med Webinars		Claims Payment Rank*				
	Medical Field (Rank)**	Topics (Rank)***	2020	2021	2022	2023	2024
<i>Hemodialysis Procedure</i>	Internal Medicine (1)	Diabetes (1), Kidney Diseases (33)	1	1	1	1	1
<i>Expanded Newborn Care Package</i>	Pediatrics (6)	Newborn Screening (13)	2	4	3	2	2
<i>Routine Obstetric Care including Antepartum Care, Vaginal Delivery and/or Postpartum Care (Normal Spontaneous Delivery Package) for Hospitals</i>	Obstetrics (2)	Pregnancy (2)	3	3	4	4	3
<i>Cesarean Delivery</i>	Obstetrics (2)	Pregnancy (2)	4	5	5	5	10
<i>Routine Obstetric Care Including Prenatal, Delivery and Newborn Services of Non-hospital Facilities (Maternity Care Package), 1<sup>st</sup> Claim</i>	Obstetrics (2)	Pregnancy (2)	5	-	-	7	-
<i>Chemotherapy Administration</i>	Internal Medicine (1)	Cancer Treatment (3)	6	6	6	6	5
<i>Vaginal Delivery Only (with Episiotomy)</i>	Obstetrics (2)	Pregnancy (2)	7	-	-	-	-
<i>Radiation Treatment Delivery (Cobalt or Linear Accelerator)</i>	Radiology (None)	None	8	9	10	-	-
<i>Outpatient HIV / AIDS Packages</i>	Internal Medicine (1)	HIV (48)	9	-	9	9	9
<i>Intensity Modulated Treatment Delivery, Single or Multiple Fields/ARCS via Narrow Spatially and Modulated Beams</i>	Radiology (None)	None	10	7	7	8	7
<i>COVID-19 Testing Package</i>	Internal Medicine (1)	COVID-19 (6)	-	2	2	3	4
<i>Cataract Extraction</i>	Ophthalmology (11)	Cataract (84)	-	8	8	10	8
<i>Dilation and Curettage</i>	Obstetrics (2)	Reproductive Health (5)	-	10	-	-	-
<i>Animal Bite Treatment Package</i>	Internal Medicine (1)	None	-	-	-	-	6

\* Sources: PhilHealth Stats and Charts 2020 to 2024<sup>5-9</sup>

\*\* Rank based on Figure 3

\*\*\* Rank based on 10-Year Rank in Table 2

through recurring webinars on the chronic burden of Diabetes (Rank 1 in topics) and Kidney Diseases (Rank 33). Obstetric care procedures, both in hospitals and non-hospital settings (e.g., Normal spontaneous delivery, Cesarean delivery, and Maternity care packages), consistently ranked within the top five, were covered under the Pregnancy topic (Rank 2 in topics), underscoring the responsiveness of the UP Med Webinars to reproductive health priorities and maternal health services. Expanded newborn care also remained highly ranked throughout, reflecting Pediatric priorities in early-life care. Other notable procedures included Chemotherapy administration (covered under Cancer Treatment, Rank 3 in topics). The COVID-19 testing package surged during the pandemic years, peaking PhilHealth Claims at Rank #2 in 2021 and maintaining a strong presence through 2024, was covered by the UP Med Webinars through COVID-19 topics during the pandemic years (2021–2024). Cataract extraction and Animal bite treatment also entered the top 10 PhilHealth Claims in later years, suggesting increasing outpatient procedural demand.

However, some gaps were noted. Some PhilHealth top claims were only partially addressed or covered indirectly. For example, while Hemodialysis was discussed in the context of underlying diseases (e.g., Diabetes, Hypertension), there were no dedicated sessions on dialysis management itself. Similarly, upper-ranking obstetric procedures like vaginal delivery with episiotomy and dilation and curettage appeared in PhilHealth's top claims but had inconsistent webinar coverage across the study period.

Certain high-claims conditions, such as asthma in acute exacerbation and upper respiratory tract infections, had inconsistent coverage across the five-year period, suggesting opportunities for more sustained attention. Pediatric infectious conditions like newborn sepsis saw coverage early in the study period but were absent in later years, potentially missing opportunities to reinforce updated clinical guidelines. In some cases, topics such as urinary tract infections appeared to be addressed indirectly through broader antimicrobial treatment discussions, which may not fully meet the need for targeted, condition-specific continuing education.

Certain high-value claims had little to no representation in UP Med Webinars. Radiation treatment delivery and intensity-modulated treatment delivery, both major oncology procedures, were not explicitly covered in any webinar despite oncology being a recurring theme through chemotherapy-related sessions. Likewise, animal bite treatment packages, a persistent public health concern in the Philippines, were only addressed once in 2024, suggesting missed opportunities for more regular coverage.

Overall, despite the noted gaps, the UP Med Webinars still showed clear strengths in aligning with PhilHealth's top claims, especially for high-burden chronic diseases, maternal and child health services, and infectious disease management. Targeted improvements, such as incorporating sessions on procedural and surgical topics with high claims value,

ensuring sustained coverage of certain maternal and pediatric conditions, and directly addressing treatment modalities like dialysis and radiotherapy, could further enhance the program's completeness and strategic alignment with national healthcare utilization patterns.

## DISCUSSION

### Summary of Main Findings

From 2015 to 2024, a total of 686 CPD-accredited UP Med Webinars were conducted, attended by 685,994 participants. The annual number of webinars and attendees steadily increased, peaking during the COVID-19 pandemic (2020–2022) with heightened demand for virtual CME and pandemic-related topics. Internal Medicine consistently emerged as the most frequently covered field, accounting for 54.1% of webinars and 48.8% of total attendance, followed by Obstetrics and Gynecology (14.4% of webinars; 19.6% of attendance) and Pharmacotherapeutics (6.0% of webinars; 6.9% of attendance). Certain fields, including COVID-19 and Psychiatry, attracted disproportionately high attendance despite fewer sessions, indicating strong interest during periods of public health urgency. The top 10 webinar topics included Diabetes, Pregnancy, Cancer, Hypertension, Reproductive Health, COVID-19, Heart Disease, Antimicrobial Treatment, Vertigo, and Vaccination, reflecting a mix of chronic disease management, maternal health, infectious diseases, and emergent health concerns.

Comparison with PhilHealth claims data (2020–2024), on the other hand, revealed a high disease burden in Internal Medicine, Obstetrics, and Pediatrics, with top medical conditions including Pneumonia, Dengue, Hypertensive emergencies, and Stroke. These findings indicate some alignment between the most covered webinar topics and national healthcare utilization trends, particularly in high-burden clinical areas.

### Temporal Trends in Webinar Offerings

Before the UP Med Webinars, CME delivery in the UPCM was largely dependent on in-person conferences and workshops. Although in-person CMEs were effective, it imposed logistical and financial barriers for many healthcare professionals in the Philippines, which is considered to be a low- and middle-income country.<sup>12</sup> The steady rise in UP Med Webinar offerings from 2015 to 2021 reflected broader global trends in CME, particularly the shift toward digital, flexible, and on-demand learning platforms. The expansion of internet access and digital tools facilitated greater feasibility and uptake of online CME, even prior to the COVID-19 pandemic.<sup>13</sup>

This transformation was dramatically accelerated in 2020, when the pandemic necessitated the widespread cancellation of face-to-face learning activities and catalyzed the rapid adoption of virtual CME worldwide.<sup>14</sup> The consistently high turnout, particularly during the pandemic years, reflected

broad physician engagement and the successful transition to virtual CME delivery. The record number of UP Med Webinars in 2020 and 2021 reflected broader global trends in CME, particularly the shift toward digital, flexible, and on-demand learning platforms.<sup>15</sup> In the Philippines, regulatory bodies such as the Professional Regulation Commission began accrediting online CME activities as part of Continuing Professional Development (CPD) requirements, further incentivizing physician participation in virtual learning activities.<sup>16</sup>

The slight decline in webinar numbers from 2022 to 2024 likely reflected post-pandemic recalibration. Nevertheless, the continued dominance of Internal Medicine in webinar content suggested a strategic alignment with national health priorities and persistent clinical demands. This trend was consistent with international recommendations for CME to remain relevant, accessible, and responsive to both learner needs and public health realities.<sup>17</sup>

### Alignment with Philippine Health Priorities

International organizations, such as the World Health Organization (WHO), have consistently emphasized the need for CME programs to not only be evidence-based but also contextually relevant, tailored to the epidemiological realities and public health priorities of specific regions.<sup>3</sup> According to the WHO, such alignment ensures that educational initiatives contribute meaningfully to strengthening health systems, addressing care disparities, and improving patient outcomes. CME, when informed by national health data, is better positioned to close knowledge-practice gaps that directly impact disease burden and service delivery efficiency. Similarly, studies by Cervero and Gaines support the idea that CME should not only improve physician knowledge but also be aligned with public health strategies.<sup>18</sup> They assert that CME programs should be strategically aligned with broader public health goals, thereby acting as levers for change within health systems. Their research supports a systems-based view of CME, one that promotes not only individual learning but also organizational and societal benefit through measurable outcomes in practice behavior and health indicators.

UP Med Webinar topics were aligned with the top ten most frequently claimed medical conditions under PhilHealth from 2020 to 2024 and successfully targeted core areas of clinical importance and national disease burden.<sup>19</sup> Pneumonia, which consistently ranked as the top PhilHealth claim, was addressed through multiple webinars on pneumonia management and antimicrobial treatment, demonstrating responsiveness to the country's primary healthcare burdens.<sup>20</sup> Dengue fever, another high-ranking condition, was covered in webinars across several years (2016, 2018, 2019, 2023, and 2024), reflecting its endemic and seasonal prevalence.<sup>21</sup> Acute gastroenteritis, consistently among the top three conditions, was addressed by six webinars on diarrhea between 2018 and 2022.<sup>22</sup> Urinary tract infections, frequently ranked between fourth and sixth, were covered through sessions focusing

on antimicrobial treatment and kidney-related conditions. Hypertensive emergencies, another significant chronic condition, were repeatedly addressed in hypertension-related webinars, highlighting cardiovascular disease management as an educational priority.<sup>23</sup>

Other conditions such as peptic ulcer disease, dyspepsia, asthma, and stroke were also represented in the webinar program, albeit less prominently. Notably, webinars on anemia and upper respiratory tract infections (URTIs) corresponded to PhilHealth claims data, but suggested room for expanded coverage and engagement. Interestingly, despite the public health relevance of webinars on dengue, diarrhea, stroke, and blood disorders, their attendance was not high enough to place these topics among the top ten most attended sessions. This gap between healthcare demand and audience engagement should warrant attention for future programming.

The top webinar topics by attendee interest from 2015 to 2024, including diabetes, pregnancy, cancer management, and hypertension, closely mirrored the high-burden diseases in the Philippine healthcare system.<sup>24</sup> Internal Medicine-related topics dominated both viewership and webinar counts, reinforcing the program's alignment with PhilHealth's most commonly claimed conditions and its relevance to everyday clinical practice. However, more consistent updates and targeted content for underrepresented yet significant conditions, such as anemia and HIV, may further enhance the program's impact.

PhilHealth's top ten RVS-based packages and procedures from 2020 to 2024, revealed similar alignment with the UP Med Webinars. Hemodialysis, consistently ranked first, reflected the substantial healthcare demand for chronic kidney disease management, a need addressed in webinars on diabetes and kidney disease. The Expanded Newborn Care Package, frequently in the top three, aligned with webinars on newborn screening. Obstetric procedures such as routine vaginal delivery, cesarean section, and prenatal/postnatal care, which dominated PhilHealth's claims data, were well represented through sessions on pregnancy and reproductive health, although a broader range of obstetric topics could strengthen this alignment. Cancer-related procedures and chemotherapy administration were addressed appropriately, while outpatient HIV/AIDS care was covered in three webinars (2016, 2018, and 2024), demonstrating responsiveness to chronic care and infectious disease trends.<sup>25</sup>

Nevertheless, certain high-volume procedures such as radiation therapy (no dedicated webinars) and cataract extraction (only one webinar in 2017) lacked direct alignment with webinar content, pointing to potential gaps in coverage for specialties like radiology and ophthalmology. Similarly, the absence of webinars addressing animal bite treatment, ranked sixth in 2024, highlighted an opportunity to expand coverage into urgent public health concerns. Despite these gaps, UP Med Webinars were largely responsive to procedural trends indicated by PhilHealth data, particularly within Internal Medicine, Pediatrics, and Obstetrics. Expanding

webinar content to include high-demand procedures from other specialties could further enhance relevance and comprehensiveness.

### Physician Engagement with UP Med Webinars

The Theory of Planned Behavior (TPB) and the principles of needs-based continuing medical education (CME) state that CME programs, such as the UP Med Webinars, are not only educational tools, but also strategic responses to perceived health system needs and practitioner demand.<sup>26</sup> The TPB can also help explain why healthcare professionals choose to attend the UP Med Webinars. If medical professionals believe that attending these webinars enhances their clinical knowledge or helps fulfill CME requirements, they are more likely to develop a positive attitude toward participation. The UP Med Webinars are accessible, free, and online, which reduces barriers to participation. The convenience and flexibility of online learning platforms increase perceived control over when and how to engage with CME content.

Slotnick emphasized that CME is most effective when it is data-driven and contextually relevant, and noted that physician engagement in CME is significantly influenced by the perceived clinical relevance of the content.<sup>26</sup> When topics align with the daily clinical encounters of doctors, such as hypertension, diabetes, pneumonia, or maternal health complications, CMEs become not only more appealing but also more likely to influence practice behavior. Targeted CMEs can address known knowledge and competency gaps, as seen in Philippine primary care settings where general practitioners often report low confidence in managing certain noncommunicable diseases and antimicrobial stewardship practices.<sup>14</sup> Addressing these gaps through well-curated CME content contributes to improved patient care outcomes and more efficient health system functioning.

According to Moore et al., effective CME is outcomes-based and should align with public health priorities to achieve meaningful changes in clinical practice and patient outcomes.<sup>11</sup> Moore's model provides a structured lens through which the educational and systemic impact of UP Med Webinars can be assessed and enhanced. Moore's model details seven progressive levels of outcomes to assess the effectiveness of CME programs. These levels range from immediate metrics such as participation and satisfaction to more complex outcomes including changes in clinical practice and improvements in population health. Applying

Moore's framework to the UP Med Webinars allows for a comprehensive evaluation of the program's effectiveness. At the foundational level, webinar attendance data can be used in Moore's Level 1, which addresses participation or the number of learners.

The evaluation of UP Med Webinars using Moore's seven-level outcomes framework showed a maturing CME program with increasing alignment to public health priorities and a potential for sustained impact across multiple levels of healthcare delivery.<sup>11</sup> At Level 1 (Participation), the UP Med Webinars program demonstrated remarkable growth, conducting 686 webinars and reaching nearly 686,000 participants over a ten-year period. This level assessed the extent to which the intended audience engaged with the activity. High participation indicated accessibility and relevance, serving as a necessary foundation for deeper learning and impact. The consistently high turnout, particularly during the pandemic years, reflected broad physician engagement and the successful transition to virtual CME delivery.

To further reinforce its impact across all levels of Moore's framework, future evaluations could incorporate formal measures of learner satisfaction, post-webinar assessments of knowledge and competence, and longitudinal tracking of clinical performance and patient outcomes where feasible.

### Implications for CME Planning

From 2020 to 2024, the number of PhilHealth-accredited physicians in the Philippines steadily increased from 42,944 to 48,035, an overall growth of approximately 11.8% over five years (Table 5). This expanding workforce played a central role in delivering health services reimbursed by PhilHealth, as all claims payments, whether for medical cases or procedures, were made through these accredited physicians. Medical specialists consistently comprised the majority, accounting for 52% to 54% of the total each year. Their numbers rose from 22,364 in 2020 to 25,500 in 2024, reflecting a growing demand for specialized care across the country. Correspondingly, many of the top PhilHealth claims, such as those for pneumonia, hypertension, chemotherapy, and dialysis, were managed by specialists, emphasizing their critical contribution to the health system. General practitioners (GPs) without additional training made up about 24–26% of accredited physicians. Although the numbers of GPs without training dipped in 2021, they rebounded and steadily grew from 11,076 in 2020 to 12,295 in 2024.

**Table 5.** Number of PhilHealth Accredited Physicians by Year

PHYSICIANS	2020	2021	2022	2023	2024
<i>General Practitioners</i>	11,076 (26%)	9,932 (24%)	10,920 (25%)	11,644 (26%)	12,295 (25.6%)
<i>General Practitioners (with Training)</i>	9,504 (22%)	9,133 (22%)	9,598 (22%)	9,866 (22%)	10,240 (21.3%)
<i>Medical Specialists</i>	22,364 (52%)	21,965 (54%)	23,010 (53%)	23,640 (52%)	25,500 (53.1%)
<b>Total Accredited Physicians</b>	<b>42,944</b>	<b>41,030</b>	<b>43,528</b>	<b>45,150</b>	<b>48,035</b>

Sources: PhilHealth Stats and Charts 2020 to 2024<sup>5-9</sup>

Meanwhile, GPs with additional training remained relatively stable, comprising around 21–22% of the pool, rising slightly from 9,504 in 2020 to 10,240 in 2024.

These trends in accreditation and PhilHealth service delivery have direct implications for UP Med Webinars. As accredited physicians are responsible for a wide range of reimbursed services, both generalists and specialists represent key audiences for continuing professional development. UP Med Webinar programming should therefore aim to reflect the clinical realities faced by these providers, ensuring content relevance across general practice and specialty areas aligned with PhilHealth's most common claims.

### Limitations of the Study

Only CPD-accredited webinars documented in the PGIM official database were included to ensure consistency and data verifiability. While this criterion provided a standardized and quality-assured dataset, it may have excluded non-accredited sessions that nonetheless contributed to the overall breadth of CME content. This exclusion may slightly underestimate the diversity of topics offered through UP Med Webinars, particularly during earlier years or informal sessions that were not formally submitted for CPD accreditation.

Webinar participation in this study was used as a proxy for physician interest and engagement; however, attendance cannot be interpreted as a direct measure of intrinsic motivation, since participation in CPD-accredited sessions may also reflect compliance with professional requirements. The decision to include only CPD-accredited webinars was therefore both conceptual and methodological. PGIM-accredited sessions were the only ones with official attendance records, consistent documentation, and quality assurance processes aligned with CME standards, ensuring data integrity and verifiability. Although incorporating non-accredited webinars might have provided additional insight—particularly in distinguishing extrinsic from intrinsic drivers of participation—these sessions lacked uniform documentation and were not systematically archived in the PGIM database. As a result, including them would have introduced inconsistencies in data verification and limited the reliability of comparisons. This constraint reduces the ability to fully determine whether participation patterns were primarily driven by content relevance or by CPD incentives.

We did not measure learner satisfaction (through attendee feedback) and learning outcomes (through pre- and post-tests) and thus, we could not evaluate part of Level 2 (satisfaction) and Level 3 (learning) outcomes in Moore et al.'s seven-level outcomes framework. We also did not account for the effect of pharmaceutical marketing demand and industry sponsorships on the webinar topics.

This study relies primarily on PhilHealth claims data, which, although standardized and comprehensive for reimbursable healthcare encounters, provides an incomplete representation of the full spectrum of population health

needs. PhilHealth claims tend to capture conditions that lead to hospital-based or formally reimbursed treatment, thereby underrepresenting preventive, primary care, and community-managed conditions that ideally should be addressed before escalating to higher levels of care. As a result, the alignment observed between PhilHealth utilization patterns and available health services should be interpreted with caution, recognizing that the dataset may not fully reflect the broader burden of disease or unmet health needs within the population. This limitation underscores the importance of contextualizing findings within the constraints of claims-based data and acknowledging the potential gaps inherent in such sources.

### CONCLUSION

The UP Med Webinars from 2015 to 2024 demonstrate a strong alignment to PhilHealth utilization. The most common topics on Internal Medicine address the prevalent and priority diseases, such as pneumonia, dengue, acute gastroenteritis, and hypertensive emergencies. The frequent inclusion of topics related to maternal health, chronic diseases, and cancer care suggests a strategic orientation toward both communicable and noncommunicable disease management, which are crucial components of the burden of the Philippine health system.

Gaps include underrepresented yet high-priority conditions, such as anemia, HIV, and animal bite management, and procedures, such as radiation therapy and cataract surgery. Audience engagement data also reveal a disconnect in some cases between high-burden disease topics and webinar attendance.

Future studies may include non-CPD-accredited webinars and alternative CME delivery formats to provide a more comprehensive mapping of educational content and its alignment with national health priorities.

### Recommendations

In light of these findings, the continued alignment of CME initiatives like UP Med Webinars with national health data is both feasible and beneficial. By using PhilHealth datasets, CME planners can identify emerging public health trends and evolving clinical priorities, ensuring that educational content remains timely and impactful. Future CME strategies would benefit from delivering field-specific depth for subspecialists while maintaining accessible, broad-based content for general practitioners who manage common, high-volume conditions. Strengthening underrepresented areas, enhancing multidisciplinary coverage, and fostering engagement among frontline providers will be key to further enhancing the utility and inclusiveness of CME in the Philippines. CME programs that remain closely tied to health system data and epidemiological evidence are best positioned to support meaningful improvements in clinical practice and population health outcomes. To

further reinforce its impact across all levels of Moore's framework, future evaluations could incorporate formal measures of learner satisfaction, post-webinar assessments of knowledge and competence, and longitudinal tracking of clinical performance and patient outcomes where feasible.

PhilHealth-accredited physicians account for only a subset of the country's total medical workforce. Many GPs and outpatient-based clinicians, who are not PhilHealth-accredited, continue to manage high-volume primary care conditions that do not necessarily appear in claims data. As such, relying solely on PhilHealth utilization patterns may underrepresent the educational needs of GPs, who serve as first-contact providers for a significant portion of the population. Future webinar programming should therefore integrate additional data sources, such as outpatient disease surveillance, primary care epidemiologic trends, and DOH morbidity reports, to ensure that content addresses both hospital-based and community-level clinical priorities.

Future research should consider integrating complementary data sources, such as Department of Health epidemiologic surveillance reports, national prevalence surveys, and burden-of-disease estimates, to provide a more comprehensive understanding of both preventive and treatment-oriented health priorities. Incorporating these broader datasets would allow for a more accurate assessment of population health needs and help ensure that analyses are not solely dependent on reimbursable healthcare encounters. Additionally, policymakers and health system planners should recognize the limitations of PhilHealth claims data when making decisions about resource allocation and service delivery. A multi-source, population-based approach is recommended to more effectively align health-care availability with actual community health needs and to inform more equitable and strategic health system improvements.

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All authors certified fulfillment of ICMJE authorship criteria.

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