MEDINSURANCE ANALYSIS

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REPORT SECTION

Executive Summary

Medinsurance is a corporate healthcare insurance provider serving clients across Indonesia. The company offers healthcare benefits to employees and their dependents (spouses and children) through a network of partnered providers, including hospitals, clinics, pharmacies, and more. Each healthcare claim is categorized by a primary diagnosis based on the International Classification of Diseases (ICD) framework.

This report analyzes claim data from **December 2024 to mid-April 2025**, covering a total of **20,616 claims**. On average, each month recorded over 4,000 claims. The **total claim value exceeds IDR 23 billion**, with **IDR 20 billion approved for billing**, resulting in an **acceptance rate of approximately 85.3%**.

As of April 2025, Medinsurance has partnered with **754 companies**, serving a total of **64,554 registered members**. The provider network spans **37 provinces across Indonesia**, with **clinics making up the largest share (33%)**, followed by **pharmacies, hospitals, and optical providers (each around 21–22%)**. **Laboratories represent the smallest share** of providers in the network.

Geographically, the majority of providers are concentrated on **Java Island**, particularly in **West Java, DKI Jakarta, East Java, Banten, and Central Java**. In contrast, **Papua and Sulawesi have the lowest representation**, with fewer than 10 providers each.

In this dataset, we identified potential outliers based on the **Billed** and **Accepted** amounts. The highest billed amount, **135,841,657.38**, corresponds to a claim for a **Single Delivery by Caesarean Section**, which is likely an unusual and high-cost medical procedure. Similarly, the highest accepted amount, **98,398,888.83**, relates to a claim for **Fever, Unspecified**, which stands out due to its unexpectedly high cost for a condition that is generally not as costly to treat. These extreme values may significantly impact overall analysis and trends, so further investigation is needed to determine if these are valid claims or potential errors in data entry or exceptional cases. It's important to conduct additional checks to verify the accuracy of these values and assess whether they should be excluded from the analysis to ensure more reliable insights.

This report aims to generate actionable insights into member claim behavior and provider distribution patterns. In addition to general trends, it seeks to identify anomalies and special cases within the claims data, offering valuable information to support business decisions and improve service delivery.

Seasonality trend in claim
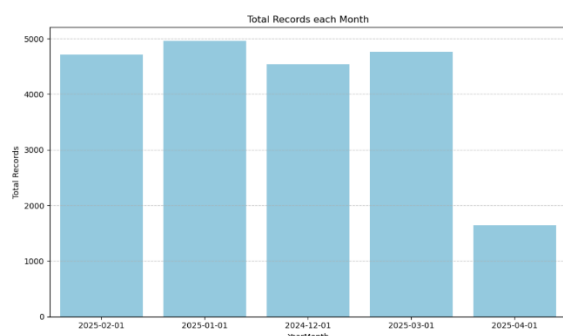
Based on the total number of claims, most months recorded over **4,500 claims**, with the exception of **April**, which reflects only a partial period. From **December 2024 to January 2025**, there was a notable **increase of 9%** in claim volume. However, this was followed by a **5% decline in February**, before showing a slight recovery in **March**.

Between **December 2024 and March 2025**, Medinsurance experienced a steady flow of billed and accepted claims. From **December to January**, the total billed amount rose by **16.48%**, with accepted claims increasing by **11.52%**, indicating strong claim activity. Although there was a slight dip in **February**— a **1.72%** decrease in billed and **2.23%** in accepted claims—the values quickly rebounded in **March** with modest growth. However, **April** saw a significant decline of over **64% in billed** and **62% in accepted** amounts compared to March, primarily because the data only captures claims made during the first half of the month.

Monthly Billed vs Accepted Amount (in Rupiah)

Monthly Average Billed vs Accepted Amount (in Rupiah)
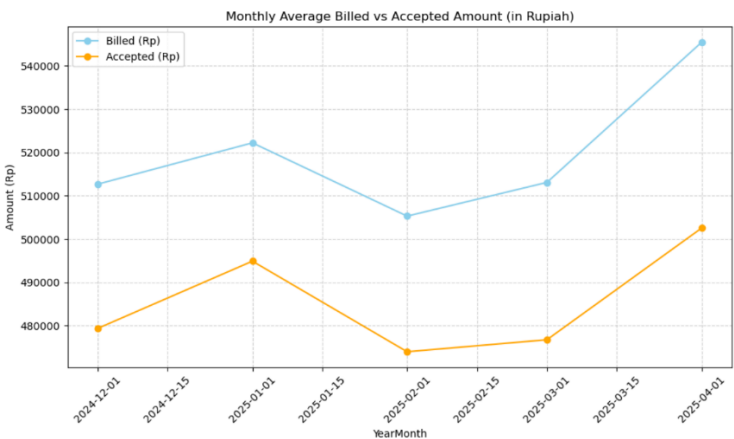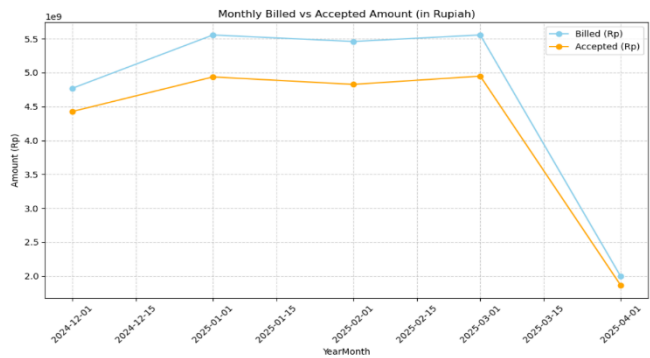
Interestingly, while the **total billed and accepted amounts declined in April 2025**—likely due to partial data for the month—the **median (average per claim) values actually increased**. From March to April, the **average billed amount rose by 6.31%**, and the **average accepted amount grew by 5.41%**, suggesting that although fewer claims were submitted, the individual claim values were higher. This highlights a shift in claim behavior, where the volume may drop but the severity or cost per claim increases.

TOP DIAGNOSE

ICDCode	DIAGNOSE	COUNT(CLAIMNO)
J06	Acute Upper Respiratory Infections Of Multiple And Unspec...	2934
J00	Acute Nasopharyngitis (Common Cold)	2318
J06.9	Acute Upper Respiratory Infection, Unspecified	2054
J02	Acute Pharyngitis	1811
Z34	Supervision Of Normal Pregnancy	1491
R50.9	Fever,Unspecified (Demam, Tidak Specifik)	1107
K30	Dyspepsia	1099
A09	Diarrhoea And Gastroenteritis Of Presumed Infectious Origi...	1043
K02	Dental Caries	887
H52.1	Myopia (Rabun Jauh)	743

Based on the dataset, we can observe that the most common diseases among employees are related to **respiratory issues**, **fever**, **gastrointestinal problems** (including conditions like dyspepsia, diarrhea, and gastroenteritis), **dental problems**, and **myopia**. These categories of diseases are frequently diagnosed among employees and represent a significant portion of the total claims submitted.

Respiratory diseases and fever are commonly seen in various workplace environments, potentially due to the spread of common viral infections. Gastrointestinal issues, such as dyspepsia and gastroenteritis, are also prevalent, which could be linked to dietary habits, stress, or other factors influencing digestion. Dental problems, including conditions like tooth decay or gum disease, also appear frequently, highlighting the importance of dental care and preventative treatments. Additionally, **myopia** (near-sightedness) is another common condition, suggesting that visual health is an area requiring attention, possibly due to long hours in front of screens or other environmental factors.

ICDCode	DIAGNOSE	Total_Claims	Total_Billed	Avg_Billed_Per_Treatment
O82	Single Delivery By Caesarean Section (Melahirkan Secara Sc)	98	2995209140.91	30563358.580714
A91	Dengue Haemorrhagic Fever (Demam Berdarah Dengue)	80	677796129.18	8472451.614750
A90	Dengue Fever	74	585630331.71	7913923.401486
A01.0	Typhoid Fever (Demam Typhoid)	122	675033884.53	5533064.627295
J18.0	Bronchopneumonia , Unspecified	134	727759214.53	5431038.914403
K01.1	Impacted Teeth	283	769903227.32	2720506.103604
H52.1	Myopia (Rabun Jauh)	743	1330115203.99	1790195.429327
Z23	Need For Immunization Against Single Bacterial Disease	378	583065839.44	1542502.220741
Z24	Need For Immunization Against Certain Single Viral Diseases	569	863379107.20	1517362.227065
R50.9	Fever,Unspecified (Demam, Tidak Specifik)	1107	1624063398.63	1467085.274282

Top 10 Diagnoses with the Highest Average Billed Per Treatment

Caesarean section deliveries stand out as the most expensive diagnosis in both inpatient and outpatient categories. The average cost for inpatient caesarean procedures is around 30.5 million IDR, while outpatient claims for the same diagnosis average at about 25.6 million IDR—showing a difference of approximately 5 million. This gap likely reflects the added hospitalization costs associated with inpatient care.

ICDCode	Diagnose	avg_billed
O82	Single Delivery By Caesarean Section (Melahirkan Secara Sc)	25590510.166667
H52.1	Myopia (Rabun Jauh)	1704734.500338
Z23	Need For Immunization Against Single Bacterial Disease	1542502.220741
Z24	Need For Immunization Against Certain Single Viral Diseases	1517362.227065
K04.1	Necrosis Of Pulp (Pulpal Ganggrene)	1293419.087643
K01.1	Impacted Teeth	1185065.859479
K04.0	Pulpitis	1161875.235794
K02	Dental Caries	1072042.440045
Z34	Supervision Of Normal Pregnancy	1009855.158391
J18.0	Bronchopneumonia , Unspecified	983981.298065

Among **outpatient claims**, conditions such as **myopia**, **immunization-related visits**, and **dental treatments** make up some of the highest average costs after caesarean deliveries. These typically range from 1 million to 1.7 million IDR, reflecting preventive or specialized care that doesn't require hospital stays.

Interestingly, **myopia** also appears prominently in **inpatient claims**, but with a significantly higher average cost—around 17.5 million IDR. This suggests that inpatient cases may involve surgical correction or complications that warrant hospitalization. Other costly inpatient diagnoses include various **fever-related illnesses** like dengue and typhoid fever, with average billed amounts ranging from 8 million to 11.4 million IDR, reflecting the severity and resource demands of such conditions.

ICDCode	Diagnose	avg_billed
O82	Single Delivery By Caesarean Section (Melahirkan Secara Sc)	30498091.549130
H52.1	Myopia (Rabun Jauh)	17579102.060000
A90	Dengue Fever	11378218.055800
A91	Dengue Haemorrhagic Fever (Demam Berdarah Dengue)	10533640.768730
A01.0	Typhoid Fever (Demam Typhoid)	10106730.242131
J18.0	Bronchopneumonia , Unspecified	9260449.639583
I10	Essential (Primary) Hypertension	8654333.830000
R50.9	Fever,Unspecified (Demam, Tidak Specifik)	8511838.178864
K01.1	Impacted Teeth	7220199.041250
K30	Dyspepsia	6705533.919167

PROVINCE	total_claim
D.K.I. Jakarta	7369
Banten	4842
Jawa Barat	2952
Bali	811
Sumatera Selatan	763
Jawa Timur	664
Sulawesi Selatan	449
Jambi	337
D.I. Yogyakarta	325
Kalimantan Timur	323

PROVINCE	total_claim
Papua	1
Papua Barat Daya	2
Nanggroe Aceh Darussalam	3
Kalimantan Barat	7
Sumatera Barat	11
Riau	13
Kepulauan Riau	13
Lampung	28
Bangka Belitung	96
Maluku	110

Based on the image, we can see that most claims were made in DKI Jakarta (36%), followed by Banten (24%) and Jawa Barat (14%). In contrast, the provinces with the fewest claims are Papua, Papua Barat Daya, and Nanggroe Aceh Darussalam, each with no more than 10 claims.

Province with the Highest Total Claims   Province with the Least Total Claims

| PROVINCE	total_billed	PROVINCE	total_billed
Banten	6986567034.11	Nanggroe Aceh Darussalam	2404247.07
D.K.I. Jakarta	6503087090.64	Papua	2807531.73
Jawa Barat	3818759123.47	Papua Barat Daya	4460026.03
Jawa Timur	1004630905.69	Sumatera Barat	11968452.67
Sumatera Selatan	842507722.14	Kalimantan Barat	12131800.97
Bali	734880966.83	Riau	13826125.95
Sumatera Utara	696268362.37	Kepulauan Riau	16753393.41
Jawa Tengah	505945814.70	Lampung	41365668.29
Sulawesi Selatan	497264051.74	Maluku	57320516.08
D.I. Yogyakarta	283449847.68	Sulawesi Tenggara	68244687.34

Province with the Highest Total Billed   Province with the Least Total Billed

When comparing based on total billed, although DKI Jakarta has the highest number of claims, Banten records the highest total billed amount, indicating larger transaction values. Additionally, while Bali ranks fourth in total claims, it falls to sixth place in terms of total billed. Moreover, Sumatera Utara and Jawa Tengah rank seventh and eighth by total billed, despite having relatively fewer claims— suggesting that their average claim values are significantly higher.

RESPIRATORY DISEASE ANALYSIS

There are 5 ICD Coded that are related to respiratory diseases J00, J02, J02.9, J06, and J06.9. Almost all of the diagnose become the top total claim and always in the top 5 for each month, except J02.9, which is Acute Pharyngitis, Unspecified are not really a lot in claim.
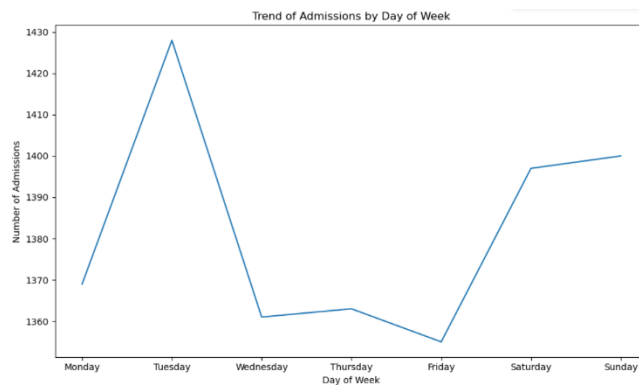
The line chart reveals a unique pattern in the total number of claims by diagnosis across the week. There is a noticeable spike from Monday to Tuesday, with an increase of about **4.4 percent**, followed by a significant drop on Wednesday, decreasing by around **4.9 percent**. Claims slightly rise again on Thursday, but Friday shows the lowest point in the week with total claims dropping to under 1300. Over the weekend, there's a clear surge, with Saturday experiencing a **12 percent increase** from Friday, and Sunday continuing the trend with a further **0.7 percent increase** from Saturday. This trend suggests higher claim activity at the start and end of the week, with a dip around midweek.
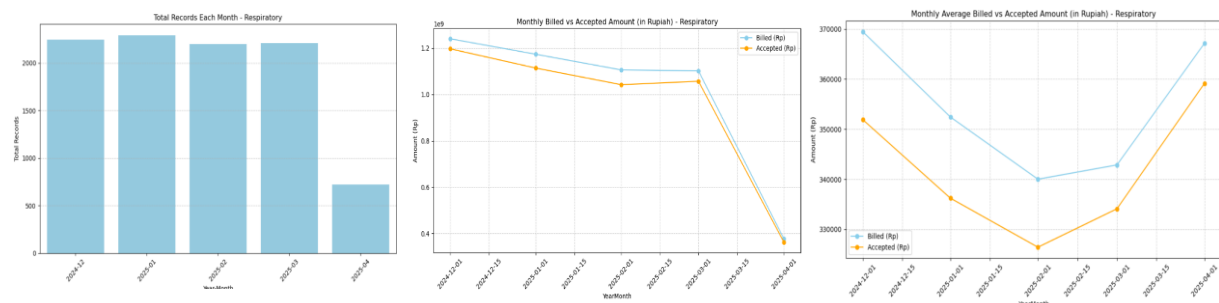
From December 2024 to March 2025, the total number of claims remained relatively stable, ranging between 2,200 and 2,300 claims per month. However, both the total billed amount and the average transaction value show a consistent decline over this period. The total billed dropped by approximately 5.4% from December to January, followed by another 5.8% decrease in February, and a slight 0.4% dip in March.

In line with this, the average transaction value decreased from Rp 369,438 in December to Rp 352,421 in January (down 4.6%), then further to Rp 340,006 in February (a 3.5% drop), before slightly increasing to Rp 342,855 in March (up 0.8%). By April, the average transaction rose again to Rp 367,142, though the data for April may be incomplete.

Additionally, I conducted statistical tests to examine whether there were any significant changes in the data during major holidays such as Christmas, Ramadhan, and Eid al-Fitr. The results revealed that Christmas and Eid al-Fitr did not show any statistically significant impact on the billed and accepted amounts. However, Ramadhan did show a significant effect, which can be observed in the graph where the month of Ramadhan exhibited distinct trends in both claims. This suggests that during Ramadhan, there may be specific patterns in claim behaviour, potentially due to changes in healthcare utilization during the holiday period.

PROVIDER

Medinsurance can cover to all the 37 province ,with total 6057 healtchacare provider, and mostly located in jawa barat there are 1336 healtch care provider, followed by DKI Jakarta with 889, and jawa timur 616

When we look at the number of claims, **DKI Jakarta leads with 7,369 claims**, followed by **Banten** and **Jawa Barat**. This confirms Jakarta's role as a **central hub for healthcare utilization**, likely due to its population density and concentration of medical providers.

However, in terms of **total billed**, **Banten surpasses all other provinces**, even though its number of claims is **lower than DKI Jakarta**. This points to a **higher average treatment cost** in Banten, possibly driven by a greater proportion of **inpatient procedures**, **higher regional pricing**, or different **insurance claim behaviors**.

Meanwhile, **Jakarta's average cost per treatment**, while not low in absolute terms, is **lower than Banten's**, suggesting more **frequent, moderate-cost treatments** — likely dominated by **outpatient visits**.

Jawa Barat continues to stand out as a **balanced province**, showing moderate claim volume and total billed figures — potentially serving as a **model for cost-efficient claims management**.

Lastly, **Jawa Tengah** and **Sumatera Utara** report **high total billed amounts** but are **absent from the top 10 in claim volume**, indicating **fewer but more expensive claims**, likely stemming from **inpatient or high-complexity procedures**.

| ProviderID	Province	avg_billed
P727262	Jawa Timur	10828400.000000
P422634	Jawa Timur	9568051.866000
P491982	Banten	8696792.160000
P939031	D.K.I. Jakarta	7561792.800000
P692482	Jawa Barat	7532365.120000
P958587	Jawa Barat	6531481.840000
P563246	D.K.I. Jakarta	6268547.000000
P502365	Banten	6093761.520000
P489409	Jawa Barat	5747329.260000
P419050	Banten	5693964.040000

Outpatient Insights:

The province with the highest **average treatment cost** for outpatient care is **Jawa Timur**, followed by **Banten** and **DKI Jakarta**. This supports the previous insight — although Jawa Timur is **not among the top 10 provinces by number of claims**, it still contributes significantly to **total billed costs**, indicating that outpatient treatments there are relatively **more expensive per claim**.

ProviderID	Province	avg_billed
P569791	D.K.I. Jakarta	53359698.810000
P860918	Jawa Barat	46401657.340000
P754986	D.K.I. Jakarta	45766705.180000
P995920	D.K.I. Jakarta	42319957.680000
P730067	D.K.I. Jakarta	41471458.830000
P510633	Banten	40975759.820000
P858143	D.K.I. Jakarta	40905754.665000
P722550	D.K.I. Jakarta	39765763.640000
P176519	Sumatera Selatan	39271859.101667
P408174	D.K.I. Jakarta	33602726.015000

Inpatient Insights:

For inpatient care, the **highest average treatment costs** are most dominant in **DKI Jakarta**, **Jawa Barat**, and **Banten**, suggesting these provinces may have **more complex or costly inpatient procedures**, possibly due to the availability of more advanced healthcare facilities or higher regional healthcare costs ER
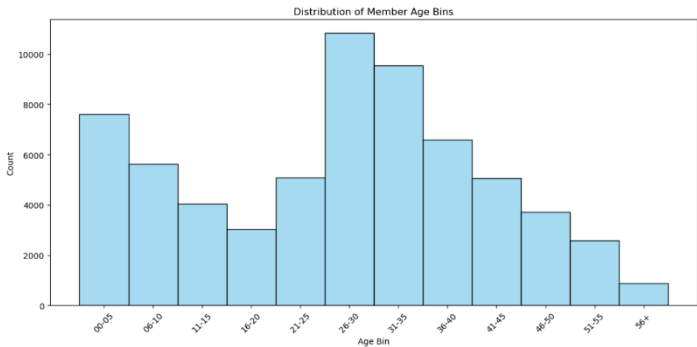
Member

Membership Count by Gender
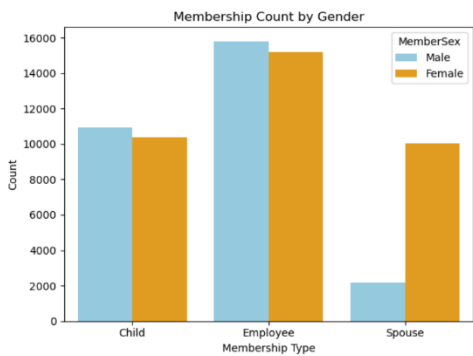
Demographic Overview

Out of a total of 64,554 members, **Employees** make up the largest group with **31,005 members (48.03%)**, followed by **Children** with **21,325 members (33.03%)**, and **Spouses** with **12,224 members (18.94%)**.

Based on the bar chart, particularly in the *Spouse* category, we can observe that most members are male employees who registered their wives. In contrast, a smaller portion are female employees who registered their husbands, indicating a gender pattern in dependent registration.

Age Distribution

Based on the histogram, the highest population of members falls within the **26–30 age group**, accounting for **10,833 members or 16.78%** of the total. This is closely followed by the **31–35 age group** with **9,533 members (14.77%)**, and the **00–05 age group**, which represents **7,609 members (11.79%)**. The high proportion in the 26–35 range suggests that a significant number of employees

Distribution of Member Age Bins

are in their prime working age and likely starting or raising young families—further reflected by the notable share of members in the youngest age bin (00–05).

Regional Membership Distribution

Most members are located in D.K.I. Jakarta, with 4,822 members, followed by Banten with 3,734, and Jawa Barat with 2,302. These three provinces make up a large portion of the total membership. D.K.I. Jakarta alone accounts for about **7.47%**, Banten **5.78%**, and Jawa Barat **3.57%** of the total 64,554 members. On the other hand, Bali and Jawa Timur have fewer members, with Bali at **0.88%** and Jawa Timur at **0.79%**. This suggests that membership is more concentrated in the western part of Indonesia, particularly in urban areas like Jakarta.

MemberAgeBin	MemberSex	total_member	total_claimants	utilization_rate	total_claims	total_billed	avg_billed_per_claim	avg_billed_per_claimant
00-05	Female	3635	1008	27.7%	1472	Rp1,579,525,848	Rp1,073,047	Rp434,533
00-05	Male	3974	1061	26.7%	1587	Rp1,876,169,087	Rp1,182,211	Rp472,111
06-10	Female	2834	468	16.5%	646	Rp573,229,671	Rp887,352	Rp202,269
06-10	Male	2797	447	16.0%	602	Rp600,526,519	Rp997,552	Rp214,704
11-15	Female	1948	196	10.1%	238	Rp253,221,802	Rp1,063,957	Rp129,991
11-15	Male	2099	197	9.4%	243	Rp288,709,537	Rp1,188,105	Rp137,546
16-20	Female	1461	118	8.1%	156	Rp242,101,785	Rp1,551,935	Rp165,710
16-20	Male	1558	112	7.2%	143	Rp228,823,151	Rp1,600,162	Rp146,870
21-25	Female	3219	900	28.0%	1394	Rp1,186,008,300	Rp850,795	Rp368,440
21-25	Male	1864	384	20.6%	579	Rp558,554,885	Rp964,689	Rp299,654
26-30	Female	7118	2348	33.0%	3813	Rp4,564,884,527	Rp1,197,190	Rp641,316
26-30	Male	3715	866	23.3%	1367	Rp1,314,418,363	Rp961,535	Rp353,814
31-35	Female	5781	1619	28.0%	2593	Rp3,028,758,295	Rp1,168,052	Rp523,916
31-35	Male	3752	705	18.8%	997	Rp873,004,685	Rp875,632	Rp232,677
36-40	Female	3663	815	22.2%	1268	Rp1,397,085,844	Rp1,101,803	Rp381,405
36-40	Male	2919	471	16.1%	647	Rp685,821,035	Rp1,060,002	Rp234,951
41-45	Female	2673	462	17.3%	675	Rp710,045,052	Rp1,051,919	Rp265,636
41-45	Male	2394	298	12.4%	418	Rp417,791,419	Rp999,501	Rp174,516
46-50	Female	1888	299	15.8%	406	Rp427,911,638	Rp1,053,970	Rp226,648
46-50	Male	1818	203	11.2%	290	Rp298,124,329	Rp1,028,015	Rp163,985
51-55	Female	1079	159	14.7%	250	Rp223,862,075	Rp895,448	Rp207,472
51-55	Male	1494	208	13.9%	310	Rp401,580,172	Rp1,295,420	Rp268,795
56+	Female	335	51	15.2%	78	Rp126,118,584	Rp1,616,905	Rp376,473
56+	Male	536	55	10.3%	70	Rp183,191,084	Rp2,617,015	Rp341,774

- **Women Aged 26–30: Most Active Users**

  Women in the 26–30 age group stand out as the **most active users of healthcare**, with a **utilization rate of 33.0%**, the **highest total claims (3,813)**, and the **highest total billed (Rp4.56 billion)**. With over 7,118 members, they represent the largest age-gender group. This demographic is likely in a life stage involving **maternal and reproductive health needs**, which drives higher engagement with health services.

- **Older Men Incur the Highest Costs per Claim**

  Despite a relatively **low utilization rate of 10.3%**, males aged 56 and above incur the **highest average billed per claim at Rp2.61 million**. This indicates that while they use services less frequently, their treatments are **more intensive or complex**, possibly due to **chronic conditions** or age-related illnesses.

- **High Utilization & High Cost: Women 31–35**

  Women in the 31–35 age group also show a **high utilization rate of 28.0%** and an **average billed per claimant of Rp523,916**, with a **total billed of Rp3.03 billion**. This continuation of high engagement beyond their early 30s reinforces the trend of **women in their reproductive and family-building years** driving significant healthcare usage.

- **Young Children (0–5): High Utilization, High Claims**

  Children aged 0–5 (both genders) show a **utilization rate around 27%**, with **~1,500 claims each**, and an **average billed per claim of approximately Rp1 million**. This indicates frequent visits for **routine checkups, vaccinations, and common pediatric illnesses**, contributing significantly to overall claim volumes.

- **Teens (16–20): Healthy, Low-Cost Group**

  At the other end of the spectrum, members aged 16–20 exhibit the **lowest utilization rate (~7%)** and **lowest average cost (Rp150K–170K)**. This suggests they are **generally healthy** and relatively **inexpensive to insure**, which can help offset the higher costs seen in other age groups.

Conclusion & Recommendation

1. **Seasonality**
   - Most months recorded over 4,500 claims. From **December 2024 to January 2025**, there was a **9% increase** in claims.
   - From **December to January**, the total billed amount rose by **16.48%**, and accepted claims increased by **11.52%**, indicating strong claim activity. After that, the numbers remained steady, with a drop in April due to fewer claims.
   - In **April 2025**, despite fewer claims (likely due to incomplete data), the average value per claim increased, with the average billed amount rising by **6.31%** and the average accepted amount by **5.41%**, showing a shift toward higher-value claims.

2. **Top Diagnose & Cost**
   - Respiratory issues, fever, gastrointestinal problems, dental conditions, and myopia are the most common health concerns among employees, suggesting a need for better focus on infection prevention, digestive health, dental care, and eye health.
   - Caesarean section deliveries are the most expensive diagnosis in both inpatient and outpatient care, with inpatient procedures costing more due to hospitalization. Dengue-related illnesses also rank high in cost.
   - Myopia, immunizations, and dental care are costly for outpatient care, while inpatient myopia claims suggest more intensive treatments like surgery.
   - Fever-related illnesses, including dengue and typhoid, contribute to higher inpatient costs due to their complexity and resource demands.

3. **Claim Volume Trends:**
   - Claims peak on Tuesday and Saturday, suggesting employees seek care at the start or end of the workweek, possibly due to work schedules.

4. **Claims and Spending (Dec 2024 - Mar 2025):**
   - Claims remained steady, but total billed and average transaction values dropped. A slight recovery occurred in March, with a bigger increase in April based on average transaction value, likely due to Ramadhan.

5. **Holiday Impact:**
   - No significant effect from Christmas or Eid on claims or billing. However, Ramadhan significantly impacted healthcare usage, possibly due to changes in daily routines, fasting, or limited access to care.

6. **Jakarta Leads in Claims:**
   - DKI Jakarta has the most claims (7,369), reflecting its role as a healthcare hub due to population density and provider concentration.

7. **Banten's High Billing:**
   - Banten has the highest total billed amount, despite fewer claims, likely due to higher inpatient procedures or regional price differences.

8. **Cost-Efficiency in Jawa Barat:**
   - Jawa Barat, with the most healthcare providers (1,336), shows balanced claim volume and billed amount, indicating efficient utilization.

9. **High-Cost, Low-Volume Areas:**
   - Jawa Tengah and Sumatera Utara have high billed amounts but lower claim volume, suggesting expensive inpatient procedures dominate.

10. **Outpatient Care in Jawa Timur:**

- Jawa Timur has the highest average outpatient treatment cost, followed by Banten and Jakarta.

11. **Inpatient Care in Jakarta, Jawa Barat, and Banten:**

    - These provinces have the highest inpatient care costs, likely due to advanced facilities and higher healthcare costs.

12. **Demographics:**

    - **Employees:** 48.03% of members are employees, followed by children (33.03%) and spouses (18.94%), indicating a focus on working individuals and their families.

    - **Spouse Registration:** More male employees register wives than female employees register husbands, suggesting a gender trend in dependent registration.

    - **Young Population:** The largest age group is 26–30 (16.78%), followed by 31–35 (14.77%), with many young families and children aged 0–5 (11.79%).

13. **Regional Concentration:**

    - Membership is concentrated in urban areas like DKI Jakarta (7.47%), Banten (5.78%), and Jawa Barat (3.57%). Bali and Jawa Timur have fewer members, reflecting regional skew.

14. **Women Aged 26–30: Most Active Users**

    - Highest utilization rate (33.0%), total claims (3,813), and billed amount (Rp4.56B), likely due to maternal and reproductive health needs.

15. **Older Men (56+): High Cost per Claim**

    - Despite a low utilization rate (10.3%), men aged 56+ incur the highest average cost per claim (Rp2.61M), indicating more intensive or chronic treatments.

16. **Women Aged 31–35: High Utilization & Costs**

    - Utilization rate of 28.0% and Rp3.03B total billed, showing ongoing healthcare needs related to family life.

17. **Children Aged 0–5: High Utilization & Claims**

    - Utilization rate of 27%, with ~1,500 claims per gender and Rp1M average cost, driven by vaccinations and common pediatric illnesses.

18. **Teens Aged 16–20: Healthy & Low-Cost**

    - Lowest utilization (~7%) and average cost (Rp150K–170K), indicating generally good health and low healthcare needs in this group.

19. **Outliers**
    - Watch out for outliers, as some transactions exceed 100 million rupiah, which is significantly higher than typical billing for similar diagnoses. Extended stays also contribute to higher total billing, so it's important to identify and address these anomalies.

20. **Missing Values:**
    - Be cautious of missing values. Some claims have member numbers, but when checked against the member database, there's no matching data. This could indicate data inconsistencies or errors that need to be addressed.

Recommendations for MedInsurance:

1. **Implement Preventive Care Programs:**

- Since respiratory issues, gastrointestinal problems, dental conditions, and myopia are the most frequent claims, MedInsurance could offer discounts or incentives for members to participate in wellness programs, regular check-ups, and preventive care to reduce the frequency and cost of these claims.

2. **Offer Flexible Claim Filing Options:**

- Given that claims peak on Tuesdays and Saturdays, MedInsurance should ensure that claim filing and support services are easily accessible during these high-demand times. Consider offering extended hours or more convenient online claim submission options.

3. **Review High-Cost Diagnoses for Efficiency:**

- Since caesarean sections and dengue-related illnesses are high-cost claims, MedInsurance could negotiate with healthcare providers for cost-effective treatment options or bundled packages, especially for high-frequency claims like dengue treatment.

4. **Adapt Policies for Seasonal Changes:**

- The impact of Ramadhan on healthcare usage suggests a shift in the demand for healthcare during this time. MedInsurance could adjust its policies to cater to these changes, such as offering more flexible coverage during fasting periods or promoting health education around maintaining health while fasting.

5. **Optimize Claim Management for High-Cost Regions:**

- Provinces like Banten and Jawa Tengah have high total billed amounts, suggesting costly inpatient procedures. MedInsurance could introduce regional cost management strategies, like creating partnerships with specific hospitals or offering second-opinion services to reduce unnecessary treatments and control costs.

6. **Promote Cost-Efficient Care in Jawa Barat:**

- Jawa Barat demonstrates efficient healthcare usage. MedInsurance should analyze and promote this model in other regions to optimize costs while maintaining quality care. This could include working with healthcare providers to maintain or improve cost-efficiency.

7. **Provide Tailored Health Plans for Younger Employees and Families:**

- Since employees aged 26–35, and families with young children, are the largest groups of claimants, MedInsurance could offer more customized health plans that cater to their specific needs (e.g., maternity, pediatric care, and eye care). This could help reduce claims in these areas by focusing on preventive measures.

8. **Consider Proactive Care for Older Members:**

- Older men (56+) incur higher treatment costs. MedInsurance could offer targeted programs for older employees, such as health screenings, chronic disease management, or wellness check-ups, to help detect issues early and avoid expensive claims.

9. **Ensure Data Quality:**

- MedInsurance should implement regular checks for outliers or unusual patterns in claims data, especially during peak periods or for high-cost claims. This will help identify any potential issues with false data inputs, such as duplicates or incorrect billing, ensuring accuracy in claim processing and reporting.