



Inpatient Clinical Profile and Mortality Patterns at a Tertiary Referral Hospital in Indonesia: A Descriptive Study at RSUP Dr. M. Djamil Padang

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Abstract

Background: Hospital electronic medical records contain morbidity and mortality data that can be analyzed to provide a comprehensive picture of health profiles. However, most studies using inpatient data are limited in scope and do not integrate the distribution of diagnoses, mortality patterns, and case fatality rates into a single analytical framework. This study aimed to describe the characteristics of inpatients at Dr. M. Djamil General Hospital in Padang in 2025, including age distribution, gender, diagnosis patterns, mortality rates, and case fatality rates by diagnosis group.

Methods: This study employed descriptive analysis of electronic medical record (EMR) data from Dr. M. Djamil General Hospital in Padang for 2025, involving a total of 38,539 inpatients. The variables analyzed were age group, gender, and primary diagnosis. Data were presented in tables and bar charts.

Results: Throughout 2025, there were 38,539 inpatients, with the highest number in the 56–60 age group. Males dominated inpatient admissions in nearly all age groups, except for the 21–50 age group, which was dominated by females because of pregnancy complications and gynecological cancers. Of all patients, 4,517 (8.5%) died, with the highest mortality rate occurring in the 61–65 age group. The highest case fatality rates (CFRs) were recorded for diseases of the respiratory system (29.2%); endocrine, nutritional, and metabolic diseases (23.5%); and perinatal conditions (21.0%), surpassing neoplasms and diseases of the circulatory system, which actually recorded the largest absolute numbers of deaths. Disease patterns varied by age group; most notably, admissions among women aged 21–50 were dominated by pregnancy-related conditions and gynecological cancers, whereas those among men over 51 were dominated by diseases of the circulatory system.

Conclusion: The patterns of hospital admissions and deaths at Dr. M. Djamil General Hospital in Padang indicated that men and women faced different disease risks at each stage of life. These findings indicate that prevention programs and hospital healthcare services will need to be designed differently according to gender and age group to ensure greater effectiveness.

Keywords: patient profile, diagnosis patterns, mortality, hospital statistics, electronic medical records

Introduction

Hospitals are healthcare institutions that play a vital role in improving public health by providing comprehensive individual healthcare services, including promotive, preventive, curative, and rehabilitative care, through inpatient, outpatient, and emergency services.¹ In carrying out these functions, hospitals generate various types of healthcare information; every patient who is admitted, treated, and discharged, whether recovered or deceased, leaves a data trail recorded in their medical record. Medical records are documents that contain a patient's identity, examination results, treatments, procedures, and other healthcare services provided to them in accordance with applicable laws and regulations.² These data serve as the primary source for hospital

statistics, which can be processed into meaningful information on the health status of the population served.³ Analysis of mortality and morbidity patterns based on medical records forms a crucial foundation for service planning, the setting of national health priorities, and resource allocation at the hospital level.⁴ Without this information, promotive and preventive programs risk missing their target because it remains unknown which groups are most vulnerable, which diseases are fatal, and which subjects most urgently require intervention. Consequently, promotive and preventive efforts, which should be the frontline of public health protection, lose their direction.

Research on the characteristics of inpatients in Indonesia generally remains limited in scope. Some studies merely describe the demographic characteristics of a specific disease group. For example, a study at Ibnu Sina Hospital in Makassar described only the age and gender characteristics of pediatric typhoid fever patients without relating them to mortality patterns;⁵ a study at RSUD 45 Kuningan Regional General Hospital described only the clinical characteristics of patients with breast fibroadenoma without conducting a cross-diagnosis analysis;⁶ and a profile of hospitalized patients with type 2 diabetes also examined only a single disease group in isolation.⁷ Likewise, other studies examined only a single diagnosis within a specific period, such as a study on the characteristics of COVID-19 patients at a regional hospital that did not comprehensively integrate demographic findings with mortality patterns.⁸ Mortality studies have also generally not been linked systematically to patterns of hospitalization. For instance, an analysis of mortality factors at RSA UGM covered only adult patients over a three-month period and was not integrated with the overall morbidity picture.⁹ Similarly, a study at Dr. M. Djamil General Hospital in Padang analyzed mortality patterns based only on sex, age, and diagnosis from the Department of Forensic Medicine's death registry, rather than on comprehensive inpatient data.¹⁰ This situation highlights an unaddressed gap: the lack of a single, comprehensive framework that simultaneously analyzes demographic profiles, disease patterns, and mortality cases.

This study aimed to describe the characteristics of inpatients at Dr. M. Djamil General Hospital in Padang in 2025, including age distribution, gender, diagnostic patterns based on ICD-10 disease groups, mortality rates, and case fatality rates (CFRs) by diagnostic group. By integrating all these dimensions into a single analytical framework, this study was expected to provide a basis for evidence-based decision-making by hospital management, health departments, and local governments in designing more effective interventions and allocating resources efficiently.

Methods

Study Design

This study was a descriptive study using a retrospective approach based on secondary data. This design was chosen because it allowed the characteristics of inpatients to be described systematically from available data, without any intervention in or manipulation of the study subjects.

Participants and Eligibility Criteria

The study sample consisted of all inpatients at Dr. M. Djamil General Hospital in Padang throughout 2025, using total sampling; that is, all data meeting the inclusion criteria were included without exception. The initial data set comprised 38,539 inpatients. The inclusion criteria were all patients hospitalized at Dr. M. Djamil General Hospital in Padang from January 1 to December 31, 2025, whose medical records were recorded in the EMR system. The exclusion criteria were incomplete medical record data for one or more key variables (age and sex) and duplicate entries identified in the EMR system.

Data Collection and Variables

This study used three main variables. First, age group was defined as the patient's age at admission, categorized into 5-year intervals ranging from under 1 year to 100 years, and measured on a nominal scale. Second, sex was defined as the patient's biological sex as recorded in the medical records, categorized as male or female, and measured on a nominal scale. Third, primary diagnosis was defined as the main medical condition that led to

the patient's hospitalization, classified according to the International Classification of Diseases, 10th Revision (ICD-10), and measured on a nominal scale. Data were collected as secondary data from the EMR system of Dr. M. Djamil General Hospital in Padang. A data cleaning process was then carried out, which included checking the completeness of data for all main variables, removing duplicate entries, grouping patients' ages into 5-year intervals, and grouping primary diagnoses according to ICD-10.

Data Analysis

The cleaned data were analyzed using data analysis software. Data analysis was performed using descriptive statistical methods. Because all variables were categorical, the statistical measures used were frequency and percentage. In addition, the case fatality rate (CFR) was calculated for each diagnosis group; that is, the proportion of patients who died out of the total number of patients treated in each group. Finally, the results of the analysis were presented in tables and bar charts to facilitate the visualization of patterns across categories and age groups.

Ethical Considerations

The study was conducted under ethical clearance number DP.04.03/D.XVI.10.1/251/2026, issued by the Health Research Ethics Committee (KEPK) of Dr. M. Djamil General Hospital in Padang. Because the study employed a retrospective secondary data design using the Electronic Medical Record (EMR) system, no direct intervention on patients was involved. All data were de-identified by removing direct personal identifiers, including patient names, medical record numbers, and national identification numbers. Given the retrospective secondary data design, a waiver of informed consent was submitted to the KEPK in accordance with applicable regulations.

Results

Distribution of inpatients by age group and gender

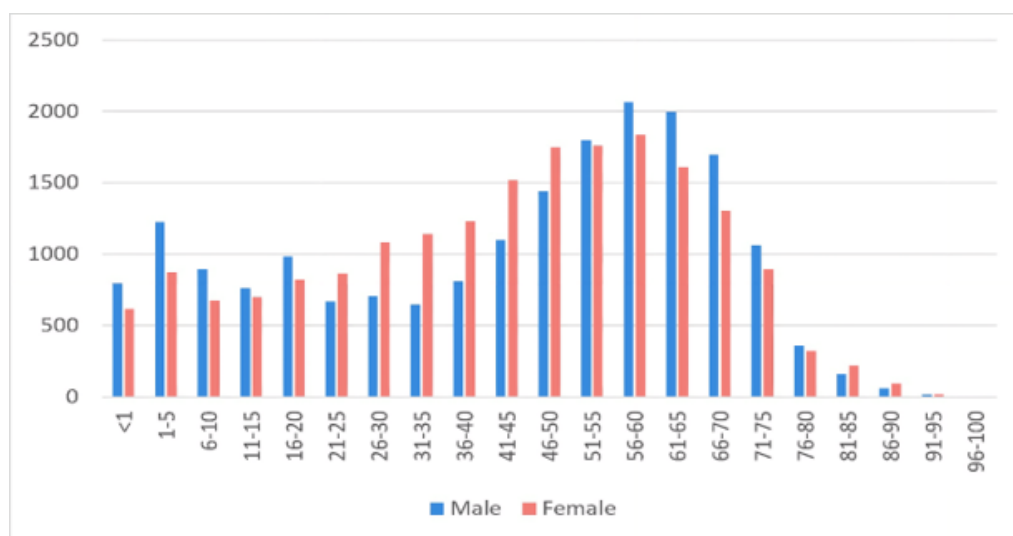


Figure 1. Distribution of inpatients by age group and gender at RSUP Dr. M. Djamil, 2025

Throughout 2025, the inpatient wards at Dr. M. Djamil General Hospital in Padang recorded a total of 38,539 patients. The distribution of inpatients by age group showed that the number of inpatients was concentrated in the adult age group. An upward trend began to emerge in the 41–45 age group, with an increase of approximately 28.5% compared with the 36–40 age group, and peaked in the 56–60 age group with 3,903 patients. After this peak, the number of patients declined consistently from the 61+ age group down to the 96–100 age group, which recorded only 3 patients.

In general, males accounted for a higher number of patients than females in most age groups, with a peak in the 56–60 age group at 2,068 patients. Females reached a peak in the same age group but with a lower number, namely 1,835 patients. A notable pattern specific to males was observed in the infant, toddler, and 16–20 year

age groups, each of which showed a higher rate than adjacent age groups. Among females, the number of patients increased more consistently from the age of 21 until it reached the same peak at ages 56–60. However, when viewed collectively, there was one age window in which females recorded higher numbers than males, namely between the ages of 21 and 50. Outside this range, both in younger age groups and in those over 50, males consistently recorded higher numbers of hospitalizations.

Distribution of diagnoses among inpatients

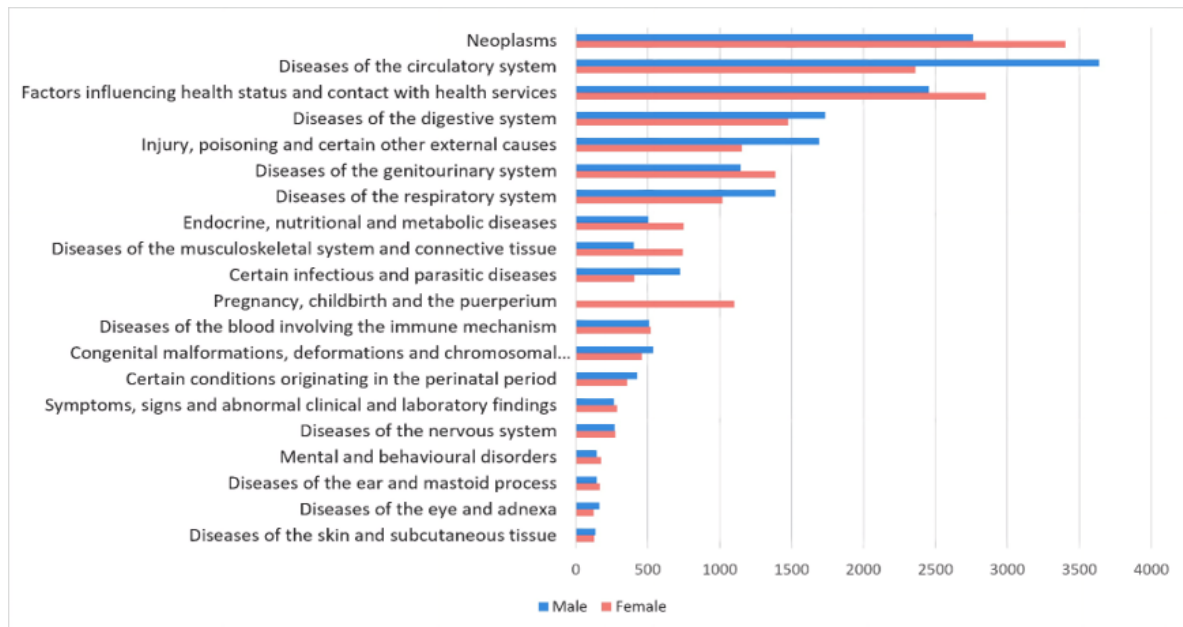


Figure 2. Diagnosis profile of inpatients at RSUP Dr. M. Djamil, 2025

Further analysis was conducted to identify differences in disease patterns and in the distribution of diagnoses across patient groups by gender. Overall, neoplasms and diseases of the circulatory system constituted the diagnostic groups with the highest number of patients, followed by factors affecting health status, diseases of the digestive system, and poisoning and injuries. These five diagnostic groups accounted for the highest number of cases throughout 2025.

When examined by gender, the distribution of diagnoses showed varying patterns. Females predominated in the groups of neoplasms; factors affecting health status, particularly chemotherapy; diseases of the urinary and genital systems; endocrine disorders; and diseases of the musculoskeletal system, while other groups, such as pregnancy and childbirth, were found exclusively in females. Conversely, diseases of the circulatory, digestive, and respiratory systems, infectious and parasitic diseases, and cases of poisoning and injuries were more prevalent among males.

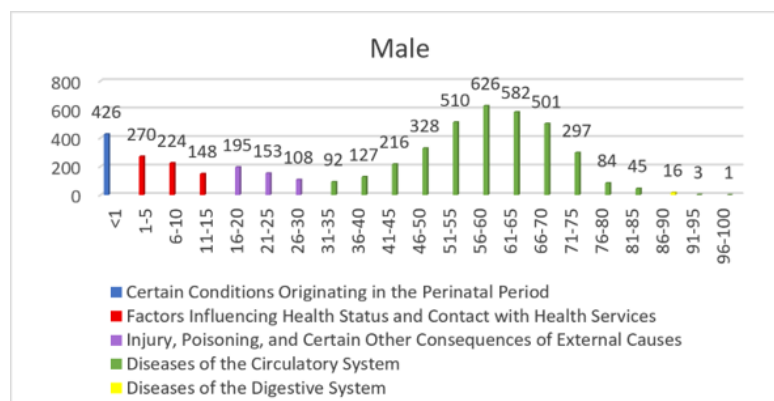


Figure 3. Leading diagnoses among male inpatients by age group at RSUP Dr. M. Djamil, 2025

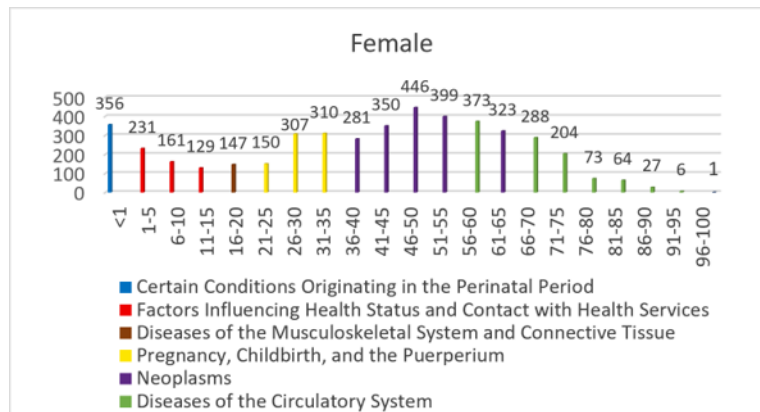


Figure 4. Leading diagnoses among female inpatients by age group at RSUP Dr. M. Djamil, 2025

Upon further analysis by age group, it was found that in the under-1-year age group the diagnostic profiles of boys and girls showed no differences; both were dominated by conditions originating in the perinatal period, with the most common diagnoses being congenital pneumonia and transient tachypnea of the newborn. The higher proportion of male infants in this age group likely reflected differences in birth rates rather than differences in the types of disease. In the 1–5 year age group (toddlers), the majority of hospitalized patients were undergoing chemotherapy. Even so, the second most common diagnosis differed by gender: among boys it was dominated by leukemia, whereas among girls it was dominated by congenital malformations.

In the 6–10 and 11–15 year age groups, both boys and girls showed patterns similar to those of the toddler group, namely a predominance of diagnoses related to factors affecting health status, reflecting the high number of hospitalizations for chemotherapy and neoplasms, particularly acute lymphoblastic leukemia. By contrast, a different pattern was observed in the 16–20 age group: males aged 16–20 were frequently hospitalized for poisoning, injuries, and several external causes, primarily epidural hemorrhage and fractures, which were likely related to accidents or severe impacts.¹¹ Meanwhile, among females in the same age group, hospitalizations were dominated by musculoskeletal disorders such as lupus erythematosus.

Among females aged 21–35 years, the most common causes were pregnancy- and childbirth-related conditions, particularly severe preeclampsia and placenta previa with hemorrhage. In the 36–50 age group, neoplasms became the most common diagnostic group, with breast cancer (malignant neoplasm of the breast), uterine cancer (malignant neoplasm of the uterus), and cervical cancer (malignant neoplasm of the cervix uteri) being the most prevalent. In males, diseases of the circulatory system began to emerge as the dominant diagnostic group at ages 31–35 and achieved full dominance at age 51 and older, with the most common diagnoses being unstable angina, stage 5 chronic kidney disease, lung and tracheal cancer, and liver cirrhosis. Among women aged 51–65 years, neoplasms still predominated, but they were replaced by diseases of the circulatory system after the age of 66.

Diseases of the circulatory system began to emerge as the dominant diagnostic group among males in the 31–35 age group, gaining strength and achieving full dominance in the group aged 51 and older, coinciding with the return of male dominance in overall patient numbers. In this age group, the most common diagnoses were heart disease (unstable angina) and chronic kidney disease (stage 5), accompanied by neoplasms such as lung cancer, tracheal cancer, and liver cirrhosis.

Distribution of deceased patients by age group and gender

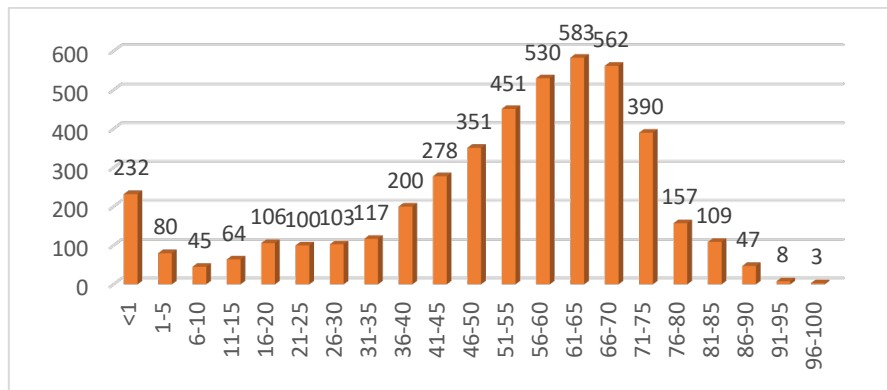


Figure 5. Distribution of inpatient deaths by age group at RSUP Dr. M. Djamil, 2025

Of the 38,539 inpatients throughout 2025, 4,517 (approximately 8.5%) died. The distribution of deaths by age group showed a consistently rising pattern from the younger age groups, peaking in the 61–65 age group with 583 cases, or about 13% of all deaths, and then gradually declining in the older age groups. This peak in the number of deaths occurred one age group later than the peak in the number of hospitalizations, which occurred in the 56–60 age group.

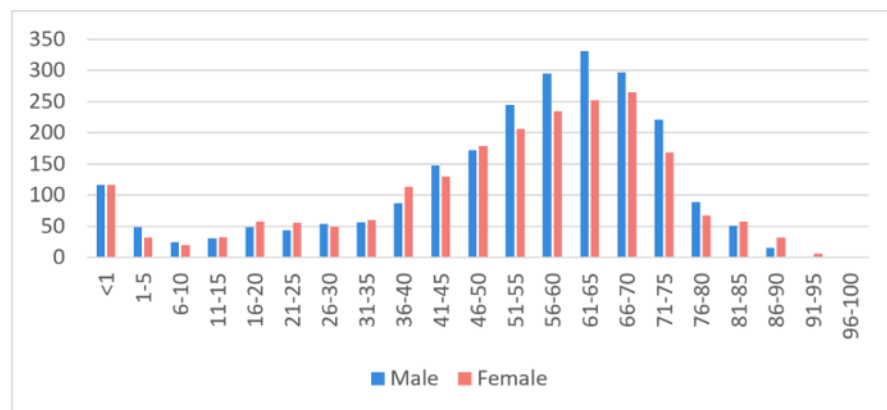


Figure 6. Distribution of inpatient deaths by sex at RSUP Dr. M. Djamil, 2025

In the under-1 age group, the number of deaths among males and females was identical, in contrast to the hospitalization data, which were dominated by males. A striking reversal also occurred in the 16–20 age group: in hospitalizations, this group was dominated by males; however, in the mortality data, more females died. Upon further examination, the increase in the number of deaths among males became notably evident in the 51–55 age group and peaked in the 61–65 age group with 331 cases. Among females, a fairly sharp increase was already visible earlier, in the 36–40 age group, but the peak was not reached until the 66–70 age group, with 265 cases. This pattern is consistent with global epidemiological evidence showing that men have a lower life expectancy than women. In 2021, the global life expectancy gap between the two reached 5 years, with an average life expectancy of 73.8 years for women and 68.4 years for men, and this gap is universal across all countries.¹²

Case fatality rate by disease diagnosis in deceased patients

Table 1. Case fatality rate by diagnosis group among inpatient deaths at RSUP Dr. M. Djamil, 2025

Diagnosis group (ICD-10)	Total patients	Deaths	CFR
Diseases of the respiratory system	2.409	703	29.2%
Endocrine, nutritional, and metabolic diseases	1.254	295	23.5%
Certain conditions originating in the perinatal period	782	164	21.0%

Diagnosis group (ICD-10)	Total patients	Deaths	CFR
Certain infectious and parasitic diseases	1.131	215	19.0%
Mental and behavioural disorders	321	61	19.0%
Symptoms, signs, and abnormal clinical and laboratory findings	553	98	17.7%
Diseases of the nervous system	546	88	16.1%
Diseases of the skin and subcutaneous tissue	267	39	14.6%
Neoplasms	6.165	876	14.2%
Diseases of the digestive system	3.209	455	14.2%
Diseases of the circulatory system	6.000	750	12.5%
Diseases of the genitourinary system	2.536	277	10.9%
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	1.031	74	7.2%
Injury, poisoning, and certain other consequences of external causes	2.846	178	6.3%
Diseases of the musculoskeletal system and connective tissue	1.149	51	4.4%
Congenital malformations, deformations, and chromosomal abnormalities	997	30	3.0%
Pregnancy, childbirth, and the puerperium	1.102	33	3.0%
Factors influencing health status and contact with health services	5.303	69	1.3%
Diseases of the eye and adnexa	286	1	0.3%
Disease of ear and mastoid process	315	0	0.0%

Note : Totals exclude patients and death with missing primary diagnosis data.

An analysis of the case fatality rate (CFR) by diagnostic group showed that a high number of deaths did not necessarily reflect a high risk of death per patient. Diseases of the respiratory system recorded the highest CFR among all diagnostic groups, with 703 deaths out of 2,409 patients (29.2%), far exceeding the other diagnostic groups, even though this was not the group with the largest number of patients. This finding is consistent with the literature, which indicates that severe respiratory diseases requiring hospitalization, including pneumonia and acute respiratory distress syndrome (ARDS), have very high clinical fatality rates. The next diagnostic groups with high CFRs were endocrine, nutritional, and metabolic disorders (23.5%), conditions originating in the perinatal period (21%), and infectious and parasitic diseases (19%). Conversely, neoplasms and diseases of the circulatory system, the two groups with the highest absolute number of deaths, recorded lower CFRs, at 14.2% and 12.5%, respectively.

Discussion

This study analyzed 38,539 inpatients at Dr. M. Djamil General Hospital in Padang throughout 2025, focusing on three main dimensions: demographic distribution by age and sex, diagnostic patterns based on ICD-10, and mortality, including the case fatality rate by diagnostic group. In general, the number of patients was concentrated in the adult to pre-elderly age groups, with the highest count in the 56–60 age group. Males

accounted for the majority of inpatients in nearly all age groups, except for the 21–50 age group, which was dominated by females. Overall, the primary diagnoses were dominated by neoplasms, diseases of the circulatory system, and factors affecting health status such as chemotherapy, with different patterns between the sexes: diagnoses in females were more frequently neoplasms and reproductive disorders, whereas those in males were more frequently diseases of the circulatory system, injuries, and diseases resulting from lifestyle and occupational exposure. Furthermore, 8.5% of patients died, with the peak occurring at ages 61–65 for males and 66–70 for females.

Among infants under 1 year of age, both boys and girls were predominantly diagnosed with perinatal conditions, with congenital pneumonia and transient tachypnea being the most common diagnoses. The higher proportion of male infants in this age group was most likely due to birth rates rather than to greater susceptibility to illness. This is supported by data showing that congenital pneumonia is one of the leading causes of early neonatal death, with an incidence of about 1% in full-term infants, rising to 10% in preterm infants.¹³ In Indonesia, pneumonia is even the leading cause of death among children aged 12–59 months. The similarity in these patterns indicates that neonatal mortality is a universal issue that transcends gender and therefore needs to be a distinct priority in maternal and child health programs.¹⁴

Among patients aged 1–5 years, the majority of those hospitalized were receiving chemotherapy. Interestingly, however, the second most common diagnosis differed between boys and girls: leukemia in boys and congenital malformations in girls. A similar pattern was observed in the 6–15 year age group, where chemotherapy and acute lymphoblastic leukemia (ALL) were the most common diagnoses. In the 16–20 age group, distinct patterns were observed between males and females. Males were more frequently hospitalized for injuries, particularly epidural hemorrhage and fractures, which were likely related to accidents or severe impacts.¹¹ Conversely, females in the same age group were more frequently hospitalized for musculoskeletal conditions such as systemic lupus erythematosus, an autoimmune disease that epidemiologically affects young women more frequently, consistent with the fact that over 8% of autoimmune diseases are diagnosed in women.¹⁵ This difference reinforces the argument that preventive approaches for adolescent boys and girls will need to be designed differently: adolescent boys will require more specific safety programs to prevent injuries, whereas girls will require better screening and management of autoimmune conditions.¹⁶ Interestingly, although hospitalizations in this age group were dominated by males, the mortality data showed the opposite pattern: more females died. However, in the mortality data, deaths in the 16–20 age group were not primarily due to injuries or musculoskeletal conditions but rather to respiratory diseases, particularly acute respiratory failure and bronchopneumonia. Meanwhile, among males of the same age, deaths were dominated by neoplasms, specifically acute lymphoblastic leukemia (ALL). This finding aligns with a Children's Oncology Group study of more than 9,700 patients, which showed that boys with ALL faced an approximately 20% higher risk of the disease than girls.¹⁷ Thus, the high rate of hospitalizations among boys due to injuries and the high rate among girls due to lupus in this age group did not reflect mortality patterns; rather, respiratory diseases and neoplasms accounted for the majority of deaths.

The pattern of injuries among males did not disappear immediately after adolescence but continued into the 21–30 age group, in which poisoning and injuries remained the leading causes of hospitalization among males, although the numbers were lower than in the 16–20 age group. Globally, traffic accidents are reported as the leading cause of death among young people aged 5–29 years, with males being three times more likely to die in accidents than females.¹⁸ However, this pattern was not fully reflected in the mortality data.

Among females aged 21–50 years, a significant shift in patterns was observed. In the 21–35 age group, hospitalizations were dominated by pregnancy complications such as preeclampsia and placenta previa with hemorrhage. In the 36–50 age group, neoplasms became the most common diagnosis, particularly malignant neoplasms of the breast, uterus, and cervix. This shift illustrates how women's disease risk begins to rise sharply after puberty and how their primary health risks move from reproductive complications during the childbearing years to the burden of gynecological cancers in middle age, consistent with evidence that women's risk factors

are interrelated throughout their reproductive lives and transition into the burden of chronic diseases as they age.¹⁹ A similar pattern was also found in the mortality data; neoplasms remained the dominant cause of death among females aged 21–65 years, particularly malignant neoplasm of the breast, unspecified secondary malignant neoplasm of the pleura, and malignant neoplasm of the ovary. This long period of dominance, from ages 21 to 65 years, indicates that cancer poses the greatest threat to females throughout their reproductive years and into early adulthood; therefore, gynecological cancer screening should ideally begin in the third decade of life, when these risks first become prominent, rather than waiting until middle age. Ovarian cancer itself ranks as the eighth most common cancer among women globally, with a 5-year survival rate that remains below 50% in most countries.²⁰ It should be noted that although severe preeclampsia was commonly found as a cause of hospitalization among females aged 21–35 years, this condition did not frequently result in death. This aligns with the fact that, although preeclampsia complicates 2–4% of pregnancies and causes approximately 40,000 maternal deaths per year globally, the condition generally resolves after delivery of the placenta.²¹

In males, diseases of the circulatory system emerged as the dominant diagnosis from ages 31–35, gained prominence, and eventually predominated at age 51 and older, coinciding with the return of male dominance in the overall number of hospitalized patients. The most common diagnoses in this age group were unstable angina and stage 5 chronic kidney disease, accompanied by neoplastic diagnoses such as lung and tracheal cancer and liver cirrhosis. This is most likely associated with the accumulation of smoking habits, given that smoking is a significant risk factor for both acute and chronic cardiovascular diseases, contributing to approximately 20% of all global deaths; 2.7 million deaths in 2019 were attributable to smoking-related cardiovascular disease.²²

This pattern is also consistent with the mortality data, in which kidney failure due to hypertension was the leading cause of death among males aged 51 years and older. These findings reinforce the hypothesis that the accumulation of cardiovascular risk factors over several decades eventually manifests at that age. Biologically, males are more susceptible to vascular changes from early in life, whereas females experience an acceleration of vascular changes only in middle age, owing to the weakening of hormonal protection.²³ This explains why the prevalence of cardiovascular disease is higher in men until middle age but eventually converges with that of women in old age, as the protective role of estrogen weakens after menopause.^{24,25}

Among females aged 51 years and older, diagnostic patterns showed two groups of diseases that predominated in turn. Neoplasms remained a prominent diagnosis in the 51–65 age group, reflecting the ongoing burden of gynecological cancers that began as early as age 36. Only at age 66 and older did diseases of the circulatory system begin to predominate as the leading diagnosis, similar to the pattern seen in males; however, the dominance of these degenerative diseases was observed in an older age group than in males. This temporal difference is consistent with the protective role of estrogen in the cardiovascular system, which weakens significantly only after menopause.²⁵

Overall, both the hospitalization and the mortality data illustrated distinct life-course patterns between males and females. In infancy, disease patterns were universal and not gender-specific. From childhood and adolescence onward, respiratory diseases and cancer predominated in both groups, but males tended to transition to cancer sooner while also facing a greater burden of injuries. During adulthood and their productive years, females bore the burden of reproductive health problems and gynecological cancers for nearly four decades, whereas males faced a far more varied pattern, ranging from infections to cardiovascular disease, which became dominant from the age of 51. In old age, both groups eventually converged on the same diagnostic group (diseases of the circulatory system), although at different ages.

Clinical Implications

These findings have several important practical implications. First, because disease patterns clearly differ by age and gender, health promotion and prevention strategies will ideally need to be designed more specifically. Road

safety and injury prevention programs will need to be a priority for males aged 16–30 years, while gynecological cancer screening should target females as early as possible. Second, interventions to control cardiovascular risk factors, particularly smoking, should not wait until males reach adulthood but should begin as early as adolescence. Third, the emergence of HIV and tuberculosis (TB) as the leading causes of death among males aged 26–30 years is a warning sign that requires a response through stronger early detection and treatment programs in this young, productive age group.

Limitations

This study has several strengths. Because it used total sampling of all 38,539 inpatients over a full year, the results are comprehensive and subject to minimal selection bias. The data also came from electronic medical records standardized with ICD-10, which allowed consistent cross-diagnosis analysis of inpatient and mortality data. On the other hand, this study also has several limitations. Because the data came from a single hospital, the recorded diagnostic profile may not necessarily represent the general population. The descriptive nature of the study also prevented causal conclusions from being drawn. Finally, because the data covered only one year, long-term trends could not be identified.

Based on the findings and limitations above, several areas could become the subject of future research. The descriptive analysis conducted provides an initial overview of patient distribution, diagnostic patterns, and mortality among inpatients at Dr. M. Djamil General Hospital in Padang in 2025. Moving forward, future studies will be able to expand the analysis using inferential and multivariate approaches to assess the relationship between age, gender, diagnosis, length of hospital stay, and the risk of death in greater depth. In addition, including the patient's region of origin as a variable, together with time-series analysis, will help identify differences in the characteristics of referred patients and track changes in disease trends and mortality rates over time.

Conclusion

This study described the clinical profile of inpatients and mortality patterns at Dr. M. Djamil General Hospital in Padang, a tertiary referral hospital, in 2025. Of the 38,539 inpatients, the majority were adults and pre-elderly, with a peak in the 56–60 age group; men accounted for the majority of inpatients in nearly all age groups, except for the 21–50 age group, in which women were more numerous. The clinical profiles showed distinct patterns between the sexes: diagnoses in women were more frequently associated with neoplasms and reproductive disorders, whereas in men, diseases of the circulatory system, injuries, and diseases related to lifestyle and occupational exposure were more common.

Mortality patterns indicated that 8.5% of patients died, with the peak in deaths occurring at ages 61–65 years for men and 66–70 years for women. Diseases of the respiratory system were recorded as having the highest case fatality rate (29.2%), far exceeding that of the diagnostic groups with the largest absolute numbers of deaths, such as neoplasms and diseases of the circulatory system. Overall, the clinical profile and mortality patterns at Dr. M. Djamil General Hospital in Padang were systematic and differed markedly by age and sex, providing an epidemiological picture that can serve as a basis for more targeted health service planning at tertiary referral hospitals.

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Declaration concerning generative AI and AI-augmented technologies in the compositional process

In the course of preparing this paper, the authors utilized ChatGPT to enhance readability and linguistic quality. Subsequent to utilizing this tool/service, the authors assessed and amended the information as necessary and assume complete accountability for the publication's content.

Declarations of competing interest

No potential competing interest was reported by the authors.

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