Prevalence and Resolution of Road Incidents in Cauayan City, Isabela: A Study on Law Enforcement Strategies

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ABSTRACT

Road incidents remain a major public safety concern in the Philippines, yet localized analyses of law enforcement responses are limited. This study examined the prevalence of road incidents in Cauayan City, Isabela, from 2020 to 2024, and assessed strategies employed by the Philippine National Police–Highway Patrol Group (PNP-HPG) to prevent and resolve these incidents. A mixed-methods approach combined quantitative analysis of official vehicular accident statistics with qualitative interviews of HPG officers (N=7). Results show a total of 4,016 accidents over five years, with motorcycles involved in 65.78% of cases. The most common risk factors were driving under the influence (51.54%), operating without a license (51.39%), and non-use of helmets (46.74%). Incidents peaked during holidays, at night, and in identified high-risk locations. Law enforcement strategies included checkpoints, traffic education programs, and inter-agency collaborations, but were hindered by manpower shortages, limited equipment, low public compliance, and systemic enforcement gaps. The findings highlight the need for targeted interventions, enhanced enforcement resources, and community-based safety initiatives to reduce accidents and improve public compliance with road safety laws.

Keywords: road incidents, highway patrol group, law enforcement strategies, road safety enforcement, public compliance

I. INTRODUCTION

Road traffic incidents are a pressing public safety and health issue in the Philippines. According to the Philippine Statistics Authority (PSA), 12,241 deaths due to road crashes were recorded in 2022, corresponding to a mortality rate of 11 per 100,000 population, which is significantly higher than the national target of four per 100,000 (Montemayor, 2025). Over the past decade, fatalities from road crashes have increased by an average of 25 percent annually, with drunk driving emerging as a leading cause. Of the 296,000 individuals injured in road crashes each year, about 25,000 cases are alcohol-related, with most incidents involving young male drivers and occurring during nighttime hours (Montemayor, 2025). These figures demonstrate that road safety is not merely a transport issue but a persistent public health concern requiring stronger interventions.

Research suggests that the causes of road crashes in the Philippines are multifaceted. While human error remains the primary factor, including speeding,

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driving under the influence, and distracted driving, other systemic factors exacerbate the problem. These include poorly designed road infrastructure, limited technological enforcement mechanisms, low public compliance with traffic laws, and inconsistent law enforcement practices (Metro Manila Development Authority [MMDA], 2023). The persistence of these problems, despite the existence of comprehensive traffic laws such as the Anti-Drunk and Drugged Driving Act (Republic Act 10586), indicates a disconnect between legislation, enforcement, and compliance.

The Philippines is not unique in this challenge. International studies likewise identify speeding, weak enforcement, alcohol impairment, and infrastructure deficits as consistent contributors to crash frequency and severity (Fondzenyuy et al., 2024; Hossain et al., 2024). Segun et al. (2024) highlight a strong positive correlation between risky driver behaviors and crash prevalence, underscoring the need for interventions that combine stricter enforcement with improved road engineering, technological surveillance, and community-based education. These findings align with observations in other low- and middle-income countries, where inadequate enforcement resources and socio-cultural attitudes toward traffic laws hinder compliance (Koramati et al., 2022).

To respond to these risks, the Philippine government has pursued a three-pronged approach of education, enforcement, and engineering. The Land Transportation Office (LTO), Department of Transportation (DOTr), Metropolitan Manila Development Authority (MMDA), and the Philippine National Police–Highway Patrol Group (PNP-HPG) serve as lead agencies, supported by international partnerships with organizations such as the Global Road Safety Partnership (GRSP) and the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). Programs include community-level speed monitoring, roadside checkpoints, random breathalyzer testing, and training for local traffic enforcers (Iqbal et al., 2019; Mehri et al., 2019). Despite these initiatives, the persistence of road crashes signals enduring gaps in law enforcement capacity, inter-agency coordination, and public adherence to safety laws.

While existing scholarship provides valuable insights into the prevalence and causes of road crashes in metropolitan areas such as Metro Manila, less attention has been given to mid-sized Philippine cities, where enforcement dynamics, traffic volume, and socio-cultural conditions differ significantly. This research gap calls for localized studies that examine how law enforcement strategies are carried out on the ground, what barriers officers encounter, and how these challenges shape the persistence of road incidents.

In response, this study investigates the prevalence of road incidents, the enforcement strategies employed, and the challenges faced by law enforcement officers in a mid-sized urban setting in the Philippines. By situating the inquiry within the local context, the study aims to generate evidence that can inform context-sensitive policy interventions and strengthen road safety enforcement strategies aligned with both national priorities and international road safety frameworks.

II. METHODS

A. Research Design

The study employed a mixed-methods research design, combining both quantitative and qualitative approaches to comprehensively investigate road incidents in Cauayan City, Isabela. The quantitative component involved the analysis of vehicular accident statistics from 2020 to 2024 to determine the frequency and trends of road incidents in the area. To obtain the necessary data, the researcher sought permission from the appropriate authorities for access to official records. In parallel, the qualitative component utilized a semi-structured interview guide to explore the experiences, knowledge, strategies, and challenges encountered by law enforcement personnel, particularly those in the Highway Patrol Group (HPG). The use of mixed methods enabled the researcher to capture both measurable patterns and rich contextual insights, facilitating a more holistic analysis.

B. Methods and Instrumentation

For qualitative data collection, the study used a semi-structured interview guide, which allowed the researchers to document participants' experiences and perceptions while maintaining flexibility to explore emerging topics during interviews. This tool supported in-depth discussions and ensured that the data remained relevant to the research objectives. To assess the prevalence of road incidents, the researchers conducted a content analysis of vehicular accident statistics from 2020 to 2024. The data were processed using an operational percentage formula to quantify and compare incident frequencies across years. The combination of these instruments provided both narrative and numerical evidence to support the study's findings.

C. Sampling and Population

The qualitative aspect of the study focused on the Highway Patrol Group (HPG) in Cauayan City, Isabela. A purposive sampling method was employed to select participants who had relevant experience and met specific criteria. As noted by Nikolopoulou (2022), purposive sampling involves the deliberate selection of individuals based on their ability to provide rich, relevant information. The population consisted of seven police officers who had served with the HPG from 2020 to the present and had substantial experience dealing with road incidents and enforcement efforts in the city. These individuals were selected due to their direct involvement in local road safety initiatives.

D. Data Gathering Procedure

Before data collection, the researchers secured approval from university officials and submitted formal communication to the target respondents. A formal letter was submitted to the Highway Patrol Group (HPG) in Cauayan City, Isabela, requesting permission to conduct interviews and obtain access to official vehicular accident records. In response, the HPG approved and provided the researchers with relevant accident reports covering the years 2020 to 2024. Informed consent letters were also distributed to participants to ensure ethical compliance and voluntary participation in the interviews.

Following these approvals, the researchers conducted interviews using a prepared guide and collected the official road incident reports furnished by the HPG.

To complement and validate the interview and documentary data, field observations were conducted to witness firsthand the road safety measures implemented by the HPG. These included monitoring traffic checkpoints, observing community awareness programs, and noting the enforcement of road safety laws in real time.

Throughout the data collection process, the researchers strictly adhered to ethical standards. The confidentiality of participant identities was preserved, and all data were handled with care and security to ensure the credibility and integrity of the study.

E. Data Analysis

The study utilized both content analysis and thematic analysis in processing the data. Content analysis was applied to the vehicular accident reports to identify patterns and trends in the prevalence of road incidents in Cauayan City over the five years. The findings were quantified to show variations and changes over time. Meanwhile, thematic analysis was used to interpret the interview responses. This involved coding the data, identifying recurring themes, and organizing them based on their relevance to the research objectives. The analyses provided a comprehensive understanding of the frequency of incidents, the strategies employed by law enforcement, and the challenges they faced in addressing road safety issues.

III. RESULTS AND DISCUSSION

A. Profile of the Participants

For the qualitative phase of the study, a total of seven participants from the Highway Patrol Group (HPG) in Cauayan City, Isabela, were interviewed. The participants held various positions within the unit, which represent a range of ranks and responsibilities related to traffic operations, investigation, and administrative functions. To ensure confidentiality, code names were assigned to each participant during data analysis and presentation.

Among the respondents, one participant held the rank of Police Major (PMAJ) or Police Executive Senior Police Officer (PESPO), representing the highest-ranking officer involved in the study. Two participants were designated as Police Non-Commissioned Officers (PNCOs), with responsibilities in finance and operations, respectively. One respondent was a Police Executive Master Sergeant (PEMS) and another held the rank of Police Senior Master Sergeant (PSMS), both of whom are senior non-commissioned officers typically tasked with supervisory and enforcement roles. Additionally, one Patrolman (PAT) and one Assistant Investigator were interviewed, representing the operational and investigative aspects of road safety enforcement.

Table 1.
Profile of the Respondents

Participant	Code Name	Rank/Position
Participant 1	P1	Finance Police Non-Commissioned Officer (PNCO)
Participant 2	P2	Police Major (PMAJ) or Police Executive Senior Police Officer (PESPO)

Participant 3	P3	Police Senior Master Sergeant (PSMS)
Participant 4	P4	Patrolman (PAT)
Participant 5	P5	Operation Police Non-Commissioned Officer (PNCO)
Participant 6	P6	Assistant Investigator
Participant 7	P7	Police Executive Master Sergeant (PEMS)

B. Prevalence of Road Incidents

Between 2020 and 2024, the Cauayan City Disaster Risk Reduction and Management Office (CDRRMO) responded to a total of 4,016 vehicular accidents, which involved 5,374 individuals needing emergency assistance. Over the five years, road accidents increased by 64.38%, rising from 612 in 2020 to 1,006 in 2024. The steepest increases occurred between 2021 and 2022 (21.73%) and 2022 and 2023 (21.39%), while the 4.90% rise from 2023 to 2024 suggests the trend, although still upward, may be slowing. This aligns with global findings that post-pandemic mobility surges have reversed earlier declines in road crashes due to lockdowns (Lotan & Shinar, 2021). The marked spikes between 2021 and 2023 can be partly attributed to increased mobility after pandemic restrictions eased, as echoed by participant narratives and recent spatial-temporal studies (Rodrigo, 2024).

Table 2.
Yearly Vehicular Accidents and Increase in Cauayan City, Isabela, 2020-2024

Year	Accidents (N)	Percentage Increase (%)
2020	612	-
2021	649	6.05
2022	790	21.73
2023	959	21.39
2024	1006	4.9

Monthly data shows that December consistently had the highest accident count with 425 incidents (10.58%), followed by August (368, 9.16%) and October (366, 9.12%). The lowest was recorded in April with 279 cases (6.95%). These changes likely indicate that more travel days during holidays, breaks, and public events lead to higher road accidents and increased exposure to risk. Therefore, it is important to choose a time to travel when the roads are clear or have minimal traffic to reduce the possibility of being involved in an accident. This mirrors international trends where road crashes escalate during festive seasons due to elevated travel and social activities (Shipp et al., 2021).

In terms of time of day, the most dangerous periods were the evening hours, particularly between 6:00 PM and 9:00 PM. The hour from 7:01 PM to 8:00 PM saw the highest frequency with 317 incidents (7.89%), followed by 6:01 PM to 7:00 PM (302, 7.52%) and 8:01 PM to 9:00 PM (258, 6.42%). Together, these three hours alone account for over 21% of all accidents, emphasizing the need for improved visibility, law enforcement, and commuter safety awareness during the evening rush hour. This aligns with qualitative observations from law enforcement regarding increased incidences of alcohol-impaired driving, driver fatigue, and reduced visibility. This is

consistent with findings from multiple regions where peak evening hours, combined with alcohol consumption and poor lighting, significantly elevate crash risks (Sukhai, 2013). Officers emphasized intoxication as a recurring issue during these hours, reinforcing the call for stricter sobriety checks, improved street lighting, and high-visibility enforcement as risk mitigation strategies.

With regard to accident location, most incidents occurred on major roads and highways. Notable hotspots include Tagaran to Cabaruan Bridge (361, 8.99%), West Tabacal Road (379, 9.44%), and East Tabacal Road (359, 8.94%). These high-volume corridors are likely sites of speeding and heavy-vehicle interactions. Meanwhile, Gov. F.N. Dy Avenue to Luna (204, 5.08%) and Rizal Park to R. Sawit Sr. St. (160, 3.98%) are urban centers where mixed traffic and pedestrian activity complicate traffic flow. Even barangay and residential roads, such as Sipat Street (39, 0.97%), R. Sawit Sr. St. to Marabulig 1 & 2 (106, 2.64%), and Don Jose Canciller Avenue (64, 1.59%), had a substantial share of incidents. These locations are conducive to speeding and improper overtaking, which are behaviors often cited in crash reports and academic studies (Segun et al., 2024; Komba, 2007). Similar spatial patterns in cities such as Barcelona and Minnesota have informed the allocation of checkpoints and patrols to high-risk zones (Lario Gómez, 2024; Rodrigo, 2024).

Table 3.
Types of Vehicles Involved in Accidents in Cauayan City, Isabela, 2020-2024

Vehicle Type	Frequency (N)	Percentage (%)
Motorcycle	3712	65.77
Tricycle	917	16.25
Car	680	12.05
Truck	153	2.71
Bus	33	0.58
Kuliglig	18	0.32
Bicycle	112	1.98
Unidentified	19	0.34

Likewise, Table 3 shows that the type of vehicles involved heavily skews toward two-wheeled transport. Motorcycles were involved in 3,712 cases (65.78%), while tricycles followed with 917 (16.25%). Cars (680, 12.05%), trucks (153, 2.71%), and buses (33, 0.58%) had lower shares. This data mainly indicates that motorcycle users are the most at-risk group on the road. The prevalence of motorcycle-related incidents identifies motorcyclists as the most vulnerable road users, consistent with global and regional data (Kumar, 2023; Francesconi & James, 2021). The involvement of unlicensed and inexperienced riders further reflects a need for targeted interventions. These findings align with previous studies emphasizing the need for stricter licensing enforcement, mandatory helmet policies, and education campaigns (Chrcanovic, 2012; Sumit et al., 2024). The alarming statistics on impaired driving (51.54%) and helmet non-use (46.74%) in Cauayan reflect regulatory compliance gaps that require urgent attention through enhanced law enforcement and community engagement.

Table 4.
Types of Road Accidents in Cauayan City, Isabela, 2020-2024

Accident Type	Frequency (N)	Percentage (%)
Self-Accidents	1666	41.48
Collisions with Other Vehicles	1721	42.85
Pedestrian-related	255	6.35
Vehicular Falls	253	6.3
Others	2	0.05
Unspecified	34	0.85
Reported to PNP	1423	35.43

Furthermore, Table 4 shows the types of road accidents in Cauayan City, Isabela, from 2020 to 2024. Results show that the majority were collisions between vehicles, accounting for 1,721 cases (42.86%), followed closely by self-accidents at 1,666 cases (41.49%), which often involve loss of control, particularly among single-rider motorcycles. Pedestrian-related incidents and vehicular falls were also reported, though with significantly lower frequencies.

Table 5.
Risk Factors in Vehicular Accidents in Cauayan City, Isabela, 2020-2024

Category	Frequency (N)	Percentage (%)
Drivers under the influence	2070	51.54
Passengers under the influence	408	10.16
Pedestrians under the influence	67	1.67
Drivers without helmets	1877	46.74
Passengers without helmets	683	17.01
Drivers without a license	2064	51.39

While in Table 5 presents the identified risk factors contributing to vehicular accidents in Cauayan City, Isabela, from 2020 to 2024. The most frequently occurring risk factor was drivers under the influence of alcohol or drugs, with a total of 2,070 cases, accounting for 51.54% of the reported incidents. The next risk factor was drivers without a valid license, reported in 2,064 cases or 51.39% of the total. Another major contributor was drivers without helmets, involved in 1,877 cases or 46.74%, highlighting a significant non-compliance with safety gear regulations. In terms of passengers, 683 cases or 17.01% involved passengers not wearing helmets, while 408 passengers or 10.16% were reported to be under the influence during the time of the accidents. Although less frequent, pedestrians under the influence were still a contributing factor, involved in 67 cases, representing 1.67% of the incidents.

Overall, the quantitative data suggest that the leading risk factors in vehicular accidents in the area involve impaired driving, unlicensed drivers, and failure to use safety equipment, particularly helmets. These findings underscore the need for stricter enforcement of laws related to sobriety, licensing, and the mandatory use of protective gear to reduce road incidents in the locality.

Findings from the interviews with Highway Patrol Group (HPG) officers in Cauayan City reveal that vehicular accidents occur with alarming frequency, particularly those involving motorcycles. Several participants reported that road incidents happen either daily or every other day, with more severe or major accidents

occurring once to three times per week. According to P1 and P4, these accidents often involve motorcycles, especially single-rider types, and frequently result in injury or death. P4 emphasized that "major accidents in Cauayan usually occur once, twice, or three times a week," while P7 noted that road crashes happen "almost every other day."

A consistent pattern emerged among participants regarding the type of vehicles involved, and motorcycles were cited as the most common. P2 noted that incidents involving "motorcycle versus motor vehicle" and "motorcycle versus pedestrian" were especially frequent, particularly along highways like Tagaran. This was echoed by P5 and P7, who pointed out that most accidents occur when drivers are under the influence of alcohol, especially during late afternoons or nighttime.

Driver error was highlighted as the most common cause of road crashes, with alcohol consumption being a major contributing factor. P2 stated that many of the incidents occur when drivers are intoxicated, particularly around payday, when drinking is more common. P6 and P3 also mentioned other causes, such as fatigue, poor road conditions, and defective vehicles, including instances where malfunctioning headlights led to dangerous misidentifications of vehicles at night.

Several officers also raised concerns about unlicensed and underage drivers. P1 observed that many of those involved in accidents lacked a valid driver's license or formal driving experience. This trend aligns with findings from MMARAS (2023) and Khatib et al. (2015), which report a high prevalence of road crashes among young males aged 18 to 34, particularly in urban areas.

Accident hotspots were also consistently identified across interviews. Locations such as Barangay Tagaran, Alinam, the Mercedes–Cauayan boundary, the Rizal Park intersection, Cabatuan Road near San Fermin, and poorly lit barangay roads were repeatedly mentioned as high-risk areas. Officers attributed this to the presence of wide or straight roads that encourage speeding, combined with poor lighting, minimal signage, and a general lack of road discipline. The expansion of roads from two to four lanes was also identified as a risk factor, as it encourages higher driving speeds and risky overtaking maneuvers. P3 emphasized that many accidents could be attributed to a lack of traffic seminar attendance, leading to ignorance of basic road signs and rules.

C. Strategies Employed by Law Enforcement in Resolving Road Incidents

Insights from the interviews show that in order to address the growing number of road incidents, the HPG officers in Cauayan City employ a multifaceted strategy. Such a strategy combines visibility, education, inter-agency collaboration, emergency response, and community engagement. A dominant theme across interviews was police visibility, particularly through checkpoint operations. P1 emphasized that routine checkpoints discourage unlicensed or intoxicated drivers from traveling, thereby reducing accident risk. This strategy is well-supported in international literature, where checkpoint visibility has been shown to deter unlicensed and impaired driving (Sherman, 1992; Adejugbagbe et al., 2015). The psychological impact of visible enforcement, as reported by officers, is echoed in studies identifying checkpoints as behavioral modifiers (Cambridge Systematics, 2008).

Another core strategy is traffic education and community outreach, which involves conducting seminars and lectures for various groups such as public utility drivers, students, and residents. These sessions aim to raise awareness on traffic rules, defensive driving, and the importance of road courtesy. P2 and P4 noted that these activities are preventive rather than punitive and often include one-on-one advisories or warnings before issuing tickets. Defensive driving education is also central to the HPG's initiatives. Officers reported that most motorcycle-related accidents result from overconfidence or poor decision-making. Thus, reminders on helmet use, proper gear, and responsible vehicle maintenance are commonly stressed. P7 introduced the "BLUE BUGGETS" (Brakes, Lights, Under chassis, Engine, Battery, Uniform, Gas, Gears, Emergency tools, Tires, Signal lights) checklist as part of their safety advocacy to encourage pre-drive inspection among motorcycle users. These resonate with literature suggesting that localized and engaging methods can influence driver behavior positively (Segun et al., 2024). Studies by Sumit et al. (2024) and Khan & Das (2024) reinforce the importance of these grassroots programs in promoting defensive driving and helmet use, particularly among motorcyclists and young drivers.

The HPG also works closely with the Land Transportation Office (LTO) and barangays to deliver joint lectures and implement licensing checks. P2 cited collaborative programs where HPG and LTO officers discuss different aspects of traffic safety, such as anti-carnapping, licensing, and vehicle registration. This integration extends road safety messaging into the community. Research shows that inter-agency coordination amplifies road safety campaigns' effectiveness and increases institutional credibility (Francesconi & James, 2021; Rodrigo, 2024). Such joint efforts create consistency in advocacy and enforcement, critical for long-term impact.

In responding to road incidents, law enforcers share that they prioritize the preservation of life. P2 and P7 explained that the first response is always to rush the injured to the nearest hospital, followed by securing the scene, gathering witness statements, and conducting investigations. P3 added that ensuring safety at the scene, such as calling ambulances and initiating first aid if needed, is a standard operating procedure.

D. Challenges Encountered by Law Enforcement in Resolving Road Incidents

Findings from the interview also show that HPG officers in Cauayan City face several challenges in their effort to manage and respond to road incidents, which can be grouped into logistical constraints and behavioral systemic issues.

A primary logistical constraint is the lack of essential equipment, particularly breath analyzers for detecting alcohol-impaired driving. Officers noted that only the LTO has these tools, which limits the ability of HPG personnel to enforce drunk driving laws effectively. P1 and P3 both pointed out that the lack of technology prevents efficient detection and documentation of violations. Manpower shortages were also reported. P4 highlighted that only 16 personnel cover the entire province of Isabela, hampering the group's ability to conduct checkpoints, respond to incidents, and maintain a visible presence on all roads. The HPG also suffers from limited access to surveillance equipment and mobility resources, with some officers stating that only a few individuals are assigned access to these tools. P5 explained that while

surveillance devices exist, they are not widely available or operational, making it difficult to gather evidence in cases without eyewitnesses. This is a global issue, with studies highlighting that under-resourced enforcement severely undermines laws against impaired driving (Shipp et al., 2021; Chrcanovic, 2012). The shortage of trained personnel also hinders HPG's capacity to maintain a consistent presence across Isabela's extensive road network.

Behavioral challenges were also equally pressing. Officers described how non-cooperative drivers, especially motorcyclists, evade checkpoints or engage in dangerous behavior during enforcement. P3 described how enforcement can feel "unfair" when the value of penalties exceeds the daily earnings or even the vehicle value of low-income drivers. This reality creates tension between legal enforcement and social equity. The proliferation of unlicensed or underage drivers also emerged. P7 recounted frequent encounters with minors or adults without licenses, many of whom use motorcycles as their primary—and often, only—mode of transportation. Their unfamiliarity with road rules increases the likelihood of accidents. These findings are echoed by studies in India and Zambia, where attitudes toward enforcement directly correlate with crash rates and law violations (Kumar, 2023; Mudenda, 2014).

Several officers also expressed a moral dilemma when issuing penalties to economically disadvantaged violators. P5 admitted that enforcement is difficult when the violator is struggling to make ends meet. P2 echoed this sentiment, noting that issuing ₱5,000 tickets to those earning just enough for daily expenses presents an ethical challenge. Recent literature reinforces this concern by emphasizing the importance of proportional penalties and non-financial corrective actions, such as mandatory safety education and training programs, as more effective and ethical responses to violations (Qi et al., 2024; Adejugbagbe et al., 2015).

Lastly, weak systemic support was cited as a key barrier. Even when traffic violations are documented and reports filed, enforcement is often undermined by poor follow-through. P6 emphasized that individuals continue driving unregistered or uninsured vehicles despite policies like "no registration, no travel." The inconsistency in applying penalties and limited legal consequences for repeat offenders contributes to a culture of non-compliance. Similar sentiments were recorded in South African and U.S. safety reviews, where inconsistent follow-through from the justice system diminished the impact of frontline policing (Sukhai, 2013).

IV. CONCLUSION

Combining both quantitative data and qualitative insights, this study shows the necessity of a comprehensive and integrated approach to improve road safety in Cauayan City. The analysis of accident prevalence, reinforced by insights from Highway Patrol Group officers, underscores the urgent need for focused interventions during high-risk months and peak traffic hours. These interventions should include rigorous enforcement of helmet laws, stricter licensing regulations, and consistent sobriety checks. Simultaneously addressing systemic and behavioral challenges, such as ensuring fair but firm penalties and equipping law enforcement officers with necessary technological and logistical resources, will further bolster the effectiveness of these measures.

Moreover, fostering a community-based culture of road safety through sustained educational campaigns and inclusive dialogues between law enforcement and community stakeholders is essential. Empowering barangay-level authorities to actively participate and assume shared responsibility in traffic management can significantly mitigate road incidents. Such holistic strategies promise not only immediate reductions in traffic accidents but also sustained long-term improvements in road safety across Cauayan City.

In conclusion, road incidents in Cauayan City remain a persistent challenge influenced by multiple factors, including risky driver behavior, inadequate road infrastructure, enforcement limitations, and systemic shortcomings. Motorcycle riders, in particular, have emerged as the most vulnerable group, accounting for the highest proportion of incidents due to prevalent risky behaviors. Consequently, reinforcing the consistent use of protective gear, especially helmets, is strongly advised as a preventive measure.

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