



Telematics Survey Report
Auto Insurance Market in Maryland
July 2025

Market Analysis Unit
Market Regulation & Professional Licensing Unit
Maryland Insurance Administration

I. BACKGROUND

The Maryland Insurance Administration's (the Administration or MIA) Market Analysis Unit (within the Market Regulation and Professional Licensing Unit) is responsible for monitoring changes and trends within the insurance market in Maryland. The Market Analysis Unit periodically conducts surveys of carriers in the insurance industry to obtain pertinent and timely information regarding market issues, such as the use of telematics in the auto insurance market. The Administration is aware of recent changes occurring in the auto insurance market as insurers have adopted and implemented telematics programs to an increasing degree.

Telematics and usage-based data refers to data which is collected through devices installed in a vehicle, through mobile applications, or through other methods.¹ These devices transmit data in real time back to insurers regarding the driving behaviors of policyholders. This data is then used to alter the pricing of a policyholder's policy. Consumers have made the MIA aware of concerns regarding premium increases that have resulted from their insurer's review of their data. Consumers have raised concerns over the accuracy of the data collected as well. In light of an increase in the availability of telematics programs by insurers, along with concerns raised by consumers regarding those programs, the Administration has been monitoring the auto insurance market closely and has taken appropriate steps to obtain additional information and insights into the current state of the market. There are also usage-based programs which charge policyholders a premium rate based on the actual miles driven; these programs are not included in the telematics programs discussed in this report.

II. MARKET CONDUCT ANNUAL STATEMENT²

The Market Conduct Annual Statement is a filing collected annually from all auto insurance carriers in the state of Maryland that meet the thresholds under which a filing is required.³ One of those thresholds is that a carrier write \$50,000 in annualized premium or more. As indicated on the Administration's site:

The Market Conduct Annual Statement (MCAS) was developed through the National Association of Insurance Commissioners (NAIC). MCAS is designed to provide analysis of certain key market performance data that will help regulators allocate market regulation resources where they can be most effective.

¹ Market Conduct Annual Statement, Data Call and Definitions, Private Passenger Auto v. 2024.1.1 (1/15/2025). https://content.naic.org/sites/default/files/inline-files/MCAS%20Instructions%20PPA%202024.1.1_0.pdf. 2025

² Market Conduct Annual Statement (MCAS). Maryland Insurance Administration. <https://insurance.maryland.gov/Insurer/Pages/MarketConductAnnualStatement.aspx>. 2025.

³ Market Conduct Annual Statement (MCAS). National Association of Insurance Commissioners. 2025. <https://content.naic.org/mcas-2024.htm>.

Maryland statewide ratios (market indicators) are posted to the Administration's site annually. The Market Conduct Annual Statement data provides a few key insights into the use of telematics in the auto insurance market in Maryland. Those insights are the following:

- 126 insurers (individual companies, also referred to as "carriers") filed MCAS data in 2023.
- In 2023, 54 carriers indicated that they were using/collecting telematics data in some way. This indicates that 43% of the market that reported MCAS data in 2023 had some form of active telematics program.
- In 2022, 42 carriers indicated that they were using/collecting telematics data in some way. From 2022 to 2023, the number of carriers that indicated they were using/collecting telematics data in some way increased by 29%.
- In 2021, 53 carriers indicated that they were using/collecting telematics data in some way. From 2021 to 2022, the number of carriers that indicated they were using/collecting telematics data in some way decreased by 20.8%.

The Market Conduct Annual Statement data received over the last 3 years indicates roughly half of the insurers in the auto market in Maryland have some form of telematics program. In addition, the general trend has been that an increasing number of carriers are utilizing telematics. The decrease noted in 2022 could in part be attributable to many insurers revamping and resubmitting rate filings for new telematics programs, as they've assessed the historical data available to them from prior programs. The conclusion is that the use of telematics in the auto insurance market is not going away and insurers will continue to offer these programs to collect data.

III. SURVEY

In December of 2024, the Maryland Insurance Administration issued a survey to 18 insurers. These insurers were chosen as recipients on the basis of their market share, MCAS data, and internal information available to the Administration regarding their telematics programs. These 18 insurers represented 80.9% of the auto insurance market in Maryland, in 2023, based on their total premium written. This survey included only the private passenger auto segment of the market and not commercial insurance. The questions that were included in the survey can be seen in Exhibit A of the Appendix. The purpose of the survey was to obtain insights into how many policyholders are currently enrolled in a telematics program, as well as to obtain additional information regarding how these programs function and what safeguards are in place to protect consumers in the auto insurance market in Maryland.

IV. CURRENT LAWS

In Maryland, there are a few key laws that relate to the use of telematics in the auto insurance market. Chapters 144 and 145 of the Acts of 2020 revised §§ 11-318, 27-501, 27-609, and 27-614 to address telematics programs. The changes include:

- *Pursuant to §27-501(t)*, with respect to private passenger motor vehicle insurance, an insurer may not require an applicant or a policyholder to participate in a program that measures the operations of an insured vehicle as a condition for underwriting a private passenger motor vehicle insurance risk, with a few exceptions outlined in that section.
- *Pursuant to §27-614 (c)(1)*, with respect to private passenger motor vehicle insurance, an insurer must, at least 45 days before the effective date of an increase in the total premium for a policy, send written notice of the premium increase to the insured at the last known address of the insured by a first-class mail tracking method, with a few exceptions outlined in that section.

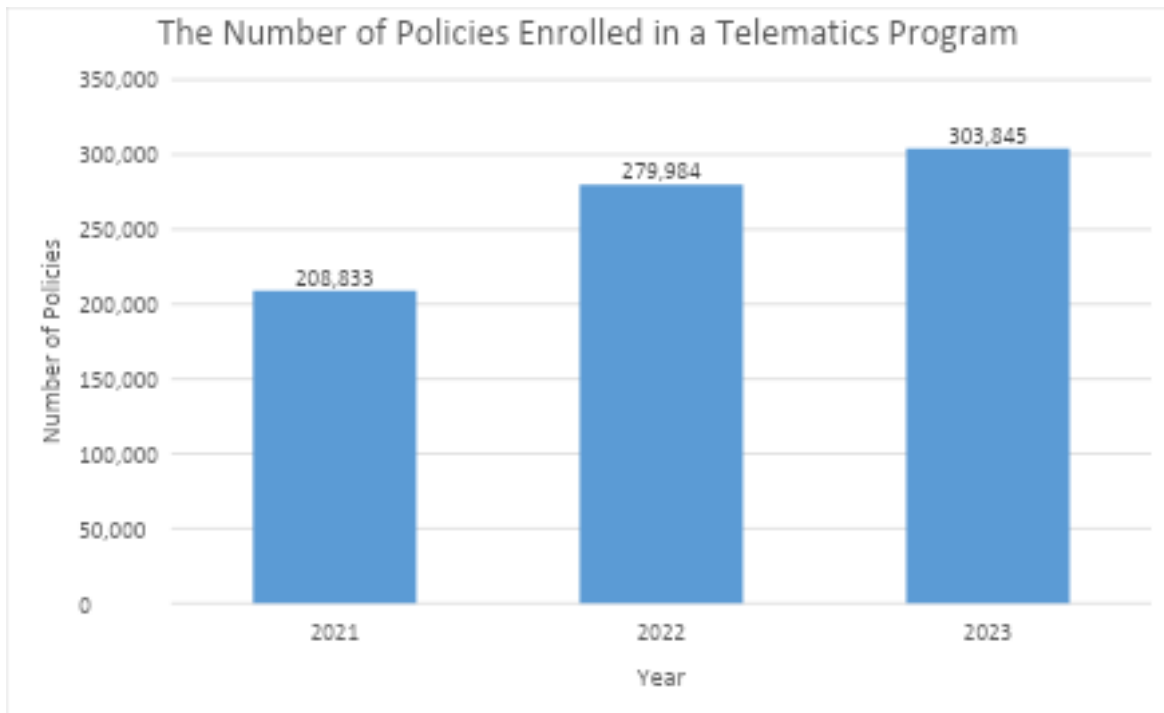
V. FINDINGS

Policies in Force

The findings detailed below will provide the results of the survey from 16 of the respondents. There were 2 insurers that indicated in their responses that their companies do not have a telematics program. In order to maintain consistency, the data regarding policies in force for these two insurers will not be included in the information presented.

In 2023, 303,845 in-force policies⁴ were enrolled in some type of telematics program, out of a total of 2,296,713 in force policies. That was an enrollment rate of 13.23%. In 2022, 279,984 in-force policies were enrolled in some type of telematics program, out of a total of 2,259,843 in force policies. That was an enrollment rate of 12.39%. In 2021, 208,833 in-force policies were enrolled in some type of telematics program, out of a total of 2,200,046 in force policies. That was an enrollment rate of 9.49%. The number of in-force policies enrolled in some type of telematics program increased year over year, from 2021 to 2023, by 45.5%. The enrollment rate has increased year over year from 9.49% in 2021 to 13.23% in 2023. This indicates that there has been a consistent and gradual increase in the number of Maryland consumers enrolled in a telematics program through their auto insurer.

⁴ Some carriers do have more than one separate telematics program.



Rate Increases and Decreases⁵

Rate Increases in 2023

In 2023, 62,233 in-force policies that were enrolled in some type of telematics program experienced a premium rate increase (an increase due to an adjustment in the telematics score) at renewal. In 2023, 263,703 in-force policies were enrolled in some type of telematics program. 62,233 represents 23.6% of policies enrolled in some type of telematics program.

⁵ Some insurers indicated that in some instances some policies may have experienced a decrease in premium despite an increase in their telematics risk factor and vice versa. In these instances, increases and decreases were still incorporated into the data where appropriate, regardless of the ultimate impact on premium. For example, increases in telematics rating factors were considered rate increases, despite the fact the actual premium on a policy may have decreased for other reasons. There were some companies that had individual telematics programs that did not result in premium increases or decreases at renewal. In these instances, those policies enrolled in those programs were not counted as in-force policies for the purposes of these two sections. Additionally, the number of policies that experienced no change in premium is inflated, given the fact that some enrollments in 2023 would not have experienced a renewal until 2024. Lastly, it's important to note that some policyholders may have cancelled their policy or left the program, during calendar year 2023; therefore, that data is not included in either the enrolled policy count at the end of the year or in the count of increases or decreases.

Rate Decreases in 2023

In 2023, 82,170 in-force policies that were enrolled in some type of telematics program experienced a premium rate decrease (a decrease due to an adjustment in the telematics score) at renewal. In 2023, 263,703 in-force policies were enrolled in some type of telematics program. 82,170 represents 31.16% of policies enrolled in some type of telematics program.

In 2023, this indicates that roughly 45.24% of in-force policies that were enrolled in some type of telematics program experienced no change in premium at renewal as a result of the telematics data reviewed.

Notice of Premium Increases

There were 14 insurers that indicated that the company does issue a Notice of Premium Increase in the event that the review of telematics data results in an increase in premium for a policy. There was 1 carrier that responded that they do not and the Administration is following up with that carrier. Lastly, there was 1 insurer that indicated that projected policy credits and discounts are visible through their telematics policyholder application. The Administration is likewise following up with that insurer.

Voluntary v. Involuntary Telematics Programs

Almost all of the respondents indicated that their programs were completely voluntary.

Those insurers all indicated that not all drivers have to agree to be tracked by their telematics device or program. It is possible for only one vehicle and/or driver insured by a policy to opt in. In this instance, the majority of carriers indicated that the average of all drivers would be used to calculate the telematics factor score. Non-participating vehicles and/or drivers would be given a neutral score that would be averaged with the participating vehicles and/or drivers' scores.

Test Drive

In some instances, insurers require a test drive at the policy inception in order to determine the telematics rating factor that will be used for the policy moving forward. A "test drive" means an underwriting period after the policy is bound during which the insurer collects data to set a premium for the policy. This period may last a set number of days, or until the insured logs a minimum number of hours, but the purpose is to set the premium based on telematics data.

The responses from the insurers surveyed varied regarding test drives. There were 4 respondents that either do not require or offer a test drive. The remaining 12 respondents had

different requirements for their test drives. There were some carriers that only required a certain number of trips to be completed. There were some carriers that only required a certain number of miles to be driven. Also, there were some carriers that only required data for a set number of days or hours. Lastly, many carriers require different combinations of miles, hours, days, and/or trips.

How does the carrier review telematics data when assessing a policyholder's premium at renewal?

All 16 insurers indicated that their telematics program processes are fully automated. Many of the respondents indicated that they regularly audit the data and systems to make sure that they are collecting accurate information. Many companies have algorithms that identify anomalies in the data that can indicate that there may be an issue in what was collected. Most of the respondents also indicated that policyholders can review their trips and data in their apps to make sure that trips are classified correctly. In many cases, there is a short time limit (typically a certain number of days) in which a policyholder can flag a trip as having been recorded incorrectly and submit a correction. For example, if an app had recorded a trip in which the policyholder was just a passenger and not a driver, they would need to submit that correction through the app.

Is any type of automated scoring utilized when reviewing telematics data?

All 16 insurers indicated that some form of scoring is utilized when reviewing telematics data. There were 9 respondents that indicated that they utilize scoring that ranges from 0 to 100 (100 being the highest rating). Additionally, 4 of the respondents utilize a form of scoring that generates a discount factor (usage based insurance score) that is applied to a policy. Also, 2 respondents utilize a different scoring method with different ranges. Lastly, 1 of the respondents does not utilize any type of scoring.

How often is telematics data assessed for each policyholder?

There were 13 insurers that indicated that telematics data is assessed at renewal. Many of these respondents indicated that a policyholder's telematics rating factor or score will remain constant and that it will only change if a policyholder requests to be re-monitored for the purpose of generating a new score. In that way, for many of these programs, the policyholder can choose when and if they would like to be monitored for a telematics rating change. There were 2 insurers that indicated that telematics data is assessed more frequently than only at policy renewal. There was 1 insurer that indicated that there are no changes after the initial rating and a policyholder cannot request a re-monitor.

Telematics Data Elements Collected

The 16 insurers provided a general summary of the data elements collected by their telematics' programs. Below is a list of the data elements identified⁶:

- Location
- Speed
- Braking
- Time of Day
- Acceleration
- Cornering
- Trip Route
- Odometer
- Deceleration
- Battery Level
- Fuel
- Vehicle Data Trouble Codes
- Vehicle Information
- Distance
- Vehicle Identification Number
- Device Trouble Codes
- Mobile Phone Usage
- Phone Permissions
- Device Information
- Days Driven
- Distracted Driving
- Mobile Phone Type
- Ignition
- Phone Motion
- Idle Time
- Adaptive Cruise Control
- Lane Keep Assistance
- Automatic Emergency Braking
- Seatbelt
- Turn Signal
- Adaptive High Beam
- Engine RPMs
- Altitude
- Installation Time Stamp
- Uninstalled Time Stamp
- Plugged or Unplugged (Telematics Device)
- G-Force
- Swerving
- Handheld Calling
- Hand-Free Calling
- Phone Handling
- Screen Activation Data
- Forward Collision Warnings
- Forced Autopilot Disengagements
- Unsafe Following
- Aggressive Turning

There were many insurers that indicated that telematics data is only used for rating and not underwriting. Traditional underwriting entails assessing an individual policyholder's risk level based off of factors, such as age, vehicle, driving record, and accident history. In these instances, insurers are indicating that the underwriting of the policy is unaffected by the collection of telematics data. The only thing that is changing then is a rating factor that impacts the premium paid, but not the underlying underwriting of the policy.

⁶ This is not meant to be inclusive of every possible data element collected, but rather a general outlook of what is collected.

Telematics Program Disclosures

All 16 insurers indicated that disclosures regarding, for instance, what data is collected, are provided to policyholders prior to their enrollment in a telematics program. In the majority of instances, these disclosures are all provided during both the quoting process and binding process. All of the respondents indicated that policyholder consent to the collection of data is required prior to enrollment in a telematics program. Some insurers did indicate that if there is a minor on the policy, the adult policyholder can consent on behalf of that minor. In most cases, individual driver consent is also required; however, if (for example) a telematics program requires the installation of a device in a car, some insurers did indicate that it is ultimately the policyholder's decision whether or not to enroll in the program. In this instance, any driver of that vehicle would be subject to data collection.

All 16 insurers also indicated that disclosures regarding the privacy of data are also provided to policyholders.

Is data collected by the carrier directly or through a third-party?

There were 11 insurers that indicated that the telematics data is collected by a third party. In addition, 5 insurers indicated that the telematics data is collected directly by the insurer. Many of the carriers that have their data collected by a third party indicated that there are strict processes and procedures in place to both maintain the security and privacy of data, but also to evaluate the security and privacy of the third-party housing that data. These processes and procedures range from technical to administrative and to even physical. Data is not only housed at a secure physical facility, but there are also limits placed on which company personnel can access the data. Furthermore, even once designated company personnel have physical access to the data, they have to have the appropriate credentials in order to get past the cryptographic/encryption controls. The majority of these third-party providers are bound by the terms of their contractual obligations when it comes to the safeguarding of policyholder data. In many of these contracts, third party providers are required to conduct regular risk assessments and to evaluate the effectiveness of their security and privacy controls. These attestations regarding security controls are then required to be provided to the insurer as requested.

For both insurers that collect the data through a third-party and directly, there were a number of safeguards identified in the responses. Many of the responses identified the use of encryption, as well as the restriction of company personnel that have access to this data. In many cases, insurers have indicated that the telematics data is accessible by the least number of employees required, which is typically limited to a small group of data scientists. This is meant to both limit the number of company personnel that have access to the data and to further, limit the number of points of access that could be breached. Many of the responses also indicated that once data is transmitted to the insurer it is deleted from the telematics device or app. In the same way, once a third-party has transmitted data to the insurer, that data is purged from the third-party's database. Many carriers also indicated that the minimum amount of personal information is

maintained for each policyholder. This means that only enough personal information is linked to the telematics data to ensure that it corresponds to each policy correctly. This further helps to limit the risk of key personal information being breached.

Complaints Submitted to the MIA

All 16 insurers indicated that if an insured files a protest to go to a hearing in response to a submitted complaint to the Administration, they do have the ability to provide data to support the findings that lead to a premium increase as a result of the collection of telematics data. There were some carriers that indicated that they would likely need additional time (more than the typical time) to respond in order to gather all of the supporting data.

How long do insurers maintain policyholder's telematics data?

Insurers' responses to this question varied. Many of the respondents indicated that they retain the telematics data between 5 and 25 years. There were a few that indicated that they maintain the data indefinitely, unless there are legal requirements that determine how long the data can be held. Many insurers indicated that the data is maintained to inform future coverage/plan development as well as rate proposals.

Written Governance Program for Algorithms or AI used in Telematics Programs

There were 9 insurers that indicated that they do have a written governance program for any algorithms or artificial intelligence utilized in the telematics program. Additionally, 2 insurers indicated that one was in progress. Also, 3 insurers indicated that they do not currently have a program, but 1 did indicate that there is not currently any AI utilized in the telematics program. Lastly, 2 of the insurers did not provide a direct response, but indicated that there are related internal governance processes.

Significant Changes in 2024

There were 2 respondents that indicated that they moved to a proprietary model for their telematics programs in 2024. Additionally, 1 of the respondents indicated that their telematics program shut down in 2023. Lastly, 3 respondents indicated that updated algorithms were filed with the Administration in 2024. The remaining respondents did not note any significant changes to their telematics programs in 2024.

VI. CONCLUSION

The findings from the survey indicate that more and more insurers are adopting telematics programs and that consumers need to be aware of what is collected and how the data is used prior to consenting to enroll in one of these programs. Privacy notices do vary from insurer to insurer and there are currently no requirements regarding how the notice must be written. In general, these programs require the active involvement of policyholders to ensure that data is being collected accurately. Telematics programs are intended to provide policyholders with some control and influence over the premium that they pay, but there is the risk that the data collected can result in increases in premium. The data indicates from 2023 that there was roughly only a 31.16% chance that a policyholder would experience a premium decrease due to their enrollment in a telematics program. The MIA will continue to monitor the number of insurers offering telematics programs in our market year over year. It will also continue to work with insurers and stakeholders to ensure that telematics data is both safeguarded and protected and utilized only for the purposes outlined in insurer rate filings. The Administration is dedicated to ensuring that new technologies are implemented and utilized in our market in accordance with the laws and regulations of Maryland.

It is key that Maryland consumers take the time to read through insurer privacy notices and to ask pertinent questions regarding how their data will be utilized. Maryland consumers should be fully aware of the risks associated with enrolling in a telematics program prior to making the decision to enroll. There is currently no standardization of the notices to consumers. There are also no requirements applied to the notices to ensure that they are consumer-friendly to read and understand. The Administration provides consumer education as to the importance of understanding these programs, but standardization or minimum requirements for the notices are areas for additional consideration.

APPENDIX

EXHIBIT A: SURVEY QUESTIONS

1. What were the total number of policies in force as of December 31, 2023?
2. How many of the company's in-force policies, as of December 31, 2023, were enrolled in some type of telematics program, for which the carrier was collecting real-time or periodic data regarding the policyholder's driving habits?
3. What were the total number of policies in force as of December 31, 2022?
4. How many of the company's in-force policies, as of December 31, 2022, were enrolled in some type of telematics program, for which the carrier was collecting real-time or periodic data regarding the policyholder's driving habits?
5. What were the total number of policies in force as of December 31, 2021?
6. How many of the company's in-force policies, as of December 31, 2021, were enrolled in some type of telematics program, for which the carrier was collecting real-time or periodic data regarding the policyholder's driving habits?
7. How many of the company's in-force policies that were enrolled in some type of telematics program, as of December 31, 2023, experienced an unfavorable telematics score/discount factor, such that the telematics rating impact caused an increase in premium at renewal, regardless of whether the policy increased or decreased due to other reasons overall, during calendar year 2023?
8. Pursuant to §27-614, does the Company issue a Notice of Premium Increase for an increase in premium due to the review of data collected from a telematics device, even if the increase is due to just a loss of a discount?
9. How many of the company's in-force policies that were enrolled in some type of telematics program, as of December 31, 2023, experienced a favorable telematics score/discount factor, such that the telematics rating impact caused a decrease in premium at renewal, regardless of whether the policy increased or decreased due to other reasons overall, during calendar year 2023?

10. Is the company's telematics program voluntary?
11. Do all drivers listed on a policy have to agree to be tracked by the telematics device or program? Is it possible for only one driver and/or vehicle to opt in, while the others do not? How are premiums affected when one or more drivers on the policy do not participate in the program?
12. If a test drive is used for an applicant/insured during the initial underwriting period, how much data needs to be collected in order to activate the telematics device and/or program? Please provide the way that this is measured (for example, by miles driven). If insufficient data is received, how does that affect the policyholder's premium?
13. Are disclosures provided to a policyholder, prior to their enrollment in the telematics program? If so, please provide all disclosures provided to a policyholder.
14. Does the policyholder, or each driver, consent to the collection of data prior to their enrollment in the telematics program? If so, please provide the consent form(s).
15. Please provide a brief summary of all of the data that is collected by the company's telematics program. Please provide the company's underwriting guidelines regarding the use of telematics data.
16. How does the carrier review telematics data when assessing a policyholder's premium at renewal? Is the process fully-automated, semi-automated, or manually reviewed by an underwriter? How does the company verify the accuracy of the data collected? Please provide any pertinent underwriting guidelines.
17. Is any type of automated scoring utilized when reviewing telematics data? If yes, please explain how the score is calculated and what the range of scores is. Please provide any pertinent underwriting guidelines.

18. How often is telematics data assessed for each policyholder? Is premium only adjusted at renewal? If not, how often is telematics data assessed with a corresponding adjustment in a policyholder's premium.
19. Is the telematics data collected by the company both private and protected? How does the company safeguard policyholder data collected by telematics?
20. Are disclosures provided to the policyholder regarding the privacy of their data? Please provide any disclosures provided to policyholders regarding the privacy of their data when enrolled in this program.
21. Is the telematics data collected by the carrier directly or through a third-party? If a third-party collects the data, how does the company verify the security and privacy of the data held by the third-party? Please provide any pertinent company guidelines or procedures.
22. How long does the company maintain a policyholder's telematics data? Please provide any pertinent company guidelines or procedures.
23. If an insured files a protest and goes to a hearing (following receipt of a disposition on a DOI complaint) regarding a Notice of Premium Increase, does the Company have the ability to provide data to support the findings that led to that increase at that hearing?
24. Has the company implemented any significant changes to its telematics program in 2024? If so, please explain what those changes are.
25. Is there a written governance program for any algorithm or artificial intelligence used in the telematics program? See Bulletin 24-11. Provide a copy of the written governance program.