

GAO

Report to the Chairman, Subcommittee on  
Health and the Environment, Committee  
on Energy and Commerce  
House of Representatives

November 1986

CONSUMER  
PRODUCT SAFETY  
COMMISSION

Concerns About Staff  
Memorandum Relating  
to All-Terrain Vehicles



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United States  
General Accounting Office  
Washington, D.C. 20548

Human Resources Division

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November 7, 1986

The Honorable Henry A. Waxman  
Chairman, Subcommittee on  
Health and the Environment  
Committee on Energy and Commerce  
House of Representatives

Dear Mr. Chairman:

This report is in response to your July 10, 1986, letter, in which you expressed concern about a Consumer Product Safety Commission (CPSC) staff memorandum dated June 13, 1986, containing comparative injury data for all-terrain vehicles (ATVs), minibikes, and snowmobiles. Specifically, you were concerned that the memorandum may play a crucial role in CPSC's decision on whether to regulate ATVs and asked us to determine (1) the source and reliability of the vehicle usage data presented in the memorandum, (2) whether its conclusions are justified, (3) why it was prepared, and (4) whether its preparation was consistent with CPSC procedures. The results of our work are summarized below and discussed in detail in appendix I.

Prior CPSC information indicated that ATVs posed a greater consumer hazard than minibikes and snowmobiles. This information was based on a comparative injury analysis that did not consider the relative usage patterns of the three vehicles. By contrast, the comparative injury analysis in the June 13 memorandum indicated that, based on an approximation of vehicle usage patterns, ATVs posed no greater hazard to consumers than the other two vehicles.

To determine the rationale for the latter analysis and its statistical validity, we interviewed the author of the memorandum and reviewed supporting documentation for the data and methodology for the analysis.

The reliability of the usage data used is questionable as the data were based on unsubstantiated anecdotal information provided by a small number of witnesses at CPSC public hearings on ATVs. Because such information was used, no statistical validity can be attributed to the results of the analysis. CPSC Commissioners who reviewed the memorandum expressed concern with the data base for the analysis and restricted public dissemination of it until the Commissioners have had an opportunity to consider it further.

The memorandum was written after CPSC's Executive Director discussed with CPSC's Associate Executive Director for Epidemiology the lack of usage data in the comparative injury data released earlier and the feasibility of using the testimony of the hearing witnesses to adjust the data. Both these officials believed the earlier analysis needed to be adjusted because it incorrectly implied that ATVs were more hazardous than minibikes and snowmobiles.

Notwithstanding these officials' concerns, the preparation of the adjusted analysis may have been inconsistent with the intentions of the Commissioners who voted to limit a staff analysis exclusively to ATVs as the other vehicles were not a regulatory concern at that time. Because of these concerns, public dissemination of the June 13 memorandum has been restricted.

Agency comments were not obtained on this report. However, during our review we interviewed the Chairman and other CPSC Commissioners, and this report reflects their views. Copies of this report are being sent to the Chairman of CPSC, the other CPSC Commissioners, and other interested persons. We will make copies available to others on request.

Sincerely yours,



Richard L. Fogel  
Assistant Comptroller General



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## Abbreviations

ATV	all-terrain vehicles
CPSC	Consumer Product Safety Commission
GAO	General Accounting Office

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# Concerns About CPSC Staff Memorandum Relating to All-Terrain Vehicles

In a July 10, 1986, letter, the Chairman of the Subcommittee on Health and the Environment, House Committee on Energy and Commerce, expressed concern about a June 13, 1986, Consumer Product Safety Commission (CPSC) staff memorandum. This memorandum contained comparative injury data for all-terrain vehicles (ATVs) and other off-road recreational vehicles indicating that ATVs are no more hazardous to riders than the other vehicles. Because the Chairman believed that the memorandum could play a crucial role in CPSC's decision on whether to regulate ATVs, we were asked to determine (1) the source and reliability of the vehicle usage data presented in the memorandum, (2) whether its conclusions are justified, (3) why it was prepared, and (4) whether its preparation was consistent with CPSC procedures.

ATVs are small motorized vehicles with three or four large, balloon-like soft tires and are designed for off-road use on a variety of terrains. They are intended to be ridden by a single person, having a seat designed to be straddled by the operator and handlebars for steering control. They are used primarily for recreation. ATVs are made primarily by four manufacturers—Honda, Kawasaki, Yamaha, and Suzuki. CPSC estimated that as of the end of 1985, there were about 2.5 million ATVs in the United States.

Because of an increase in accidents involving ATVs, CPSC began an investigation of such accidents. According to information compiled by CPSC's Office of Program Management from CPSC's National Electronic Injury Surveillance System, in 1984 hospital emergency rooms treated 66,956 ATV-related injuries—more than seven times the number of injuries as in 1982. For the first 9 months of 1985, an estimated 78,000 ATV-related injuries were treated in hospital emergency rooms, about 44 percent more than the estimated injuries treated during the same period in 1984. According to CPSC documents, between January 1982 and September 1985, ATV-related deaths totaled 324.

Because of the concern over the number of deaths and the sharp increase in serious injuries related to ATVs, on April 3, 1985, CPSC approved an action plan to deal with the hazards associated with ATVs. To carry out the plan, CPSC established a special task force to address the problem.

CPSC's Division of Epidemiology developed comparative injury data for ATVs, minibikes, and snowmobiles. Injury comparisons for these three vehicles before 1986 were unweighted for usage patterns and showed that the number of injuries associated with ATVs was greater than that



for minibikes and snowmobiles. In the June 13, 1986, memorandum, CPSC's Associate Executive Director for Epidemiology gave CPSC's ATV Task Force chairman a comparison of 1985 injury data weighted for estimated intensity of use, which showed the injury rate for ATVs was lower than the rate for the other two vehicles.

## Scope and Methodology

Our work was limited to developing information relating to the vehicle usage data that were the basis for the comparative vehicle injury analysis in the June 13, 1986, CPSC staff memorandum. We interviewed the memorandum's author to determine the source of the data and to obtain information on the rationale for the analysis. To determine the statistical validity of the analysis, we reviewed supporting documentation for the data and methodology for the analysis, as well as internal assessments of the analysis.

As the analysis was intended to be disseminated publicly, we reviewed CPSC's policy and procedures for public release of such information. We also interviewed present and former CPSC Commissioners and other officials and staff to determine whether the analysis was consistent with CPSC policies and directives. Our work was done at CPSC headquarters in Washington, D.C., and its offices in Bethesda, Maryland, from June through September 1986.

## Usage Data Were Based on Testimonial Estimates; Conclusions Are Not Statistically Valid

The usage data in the June 13 memorandum were based on unsubstantiated estimates provided by seven witnesses who testified at CPSC public hearings on ATVs. Because the anecdotal data are soft—that is, not independently substantiated—the analysis based on them cannot be considered statistically valid. The memorandum, however, does not adequately address the uncertainty involved in the estimates received from the hearing witnesses. To avoid misrepresentation of the analysis, the memorandum should clearly explain the source and basis of the estimates as well as the logic for expecting the relative use of ATVs to be greater than minibikes and snowmobiles.

Between May 1985 and March 1986, CPSC held six public hearings to obtain safety-related information on ATVs. About 250 witnesses testified at the hearings, which were held throughout the country. The witnesses included ATV manufacturers, dealers, associations, and users and state and local officials. Seven witnesses—four dealers and three users—provided estimates on what they believed to be the relative frequency of use between ATVs and snowmobiles. According to the hearing record:

- Three users and a dealer believed the use ratio between ATVs and snowmobiles was 10 to 1.
- Two dealers believed the ratio was 5 to 1.
- One dealer believed the ratio was 20 to 1.

Two of the dealers also estimated the frequency of use for minibikes. According to the ATV Task Force chairman, none of the witnesses gave evidence to support their estimates.

The relative frequency of use in the memorandum compared the use of ATVs and minibikes to snowmobiles. Because CPSC did not have any use data for these vehicles, it relied on estimates of relative frequency of use obtained during hearings. The reason given for the more frequent use of ATVs was weather conditions. While we cannot ascertain that a relative use frequency of 10 is correct, it is logical that the number is greater than one. Because the relative frequency of use of minibikes was based on the unsubstantiated testimony of only two witnesses, we believe that there is no valid basis for an injury rate comparison for minibikes.

The relative exposure to risk for each vehicle type was computed by multiplying the total number of vehicles in use by the relative use. The total injuries for each vehicle type was then divided by the relative exposure to risk to compute a relative injury rate for each vehicle type. The resulting rate represents the relative danger of an injury for each vehicle use.

In evaluating the sensitivity of the comparison to the estimated frequency of use, we found that the injury rates for ATVs and snowmobiles were equal when ATVs were used four times as often as snowmobiles. This indicated that the conclusion in the June 13, 1986, memorandum would not change unless the relative use frequency was found to be less than four. However, because of the use of unsubstantiated anecdotal data, the level of confidence in the analysis results cannot be determined; thus, no statistical significance can be attributed to them.

Based on its review of the June 13 memorandum, CPSC's Office of General Counsel raised a number of questions concerning the validity or reliability of the data. (The General Counsel's Office is responsible for making sure that publicly disclosed information is, among other things, not misleading or inaccurate.) Essentially, that office wanted to know who provided testimony on usage data at CPSC hearings and the basis for their testimony, whether these witnesses had any expertise in this area,

and whether their testimony was corroborated by any empirical or independent data.

A CPSC assistant general counsel, who reviewed the memorandum, told us he opposed public release of the memorandum because only one of the seven witnesses testified that he had made some comparison of ATVs and either snowmobiles or off-road vehicles. The other six witnesses, he said, provided information in response to questions relating to comparative frequency of use between ATVs and snowmobiles and minibikes. In responding to the questions, the assistant general counsel said the data provided by the witnesses on frequency usage were guesses and not statistically valid but that the "memorandum packaged the information in a way that gave it credibility that it didn't deserve."

In a July 15, 1986, memorandum to the ATV Task Force chairman, the Associate Executive Director for Epidemiology acknowledged that the witnesses' testimony on relative vehicle usage data was anecdotal and said that he was not aware of any corroborating data. He added, however, that he had no qualms about using anecdotal information when it is provided by knowledgeable persons. He considered the witnesses' testimony on frequency of usage to be the best information available to CPSC staff for adjusting CPSC's unweighted hazard analysis.

Further, the Associate Executive Director said:

"... common sense suggests that the internal consistency of the estimates received from the seven witnesses at three different hearings coupled with what we know about the relationship of their use to prevailing weather conditions, places these estimates in the right ball park. In my judgment, they are sufficiently reasonable to adjust vehicle-specific estimates so they can be more accurately compared than we had done previously, with the unqualified data."

The CPSC Chairman agreed with the Associate Executive Director. However, three of the four Commissioners then sitting (one Commissioner's position was vacant) told us they had concerns with the analysis in the memorandum. One of the Commissioners said public dissemination of the memorandum has been restricted until CPSC's Office of General Counsel has cleared it for release in accordance with CPSC procedures (see pp. 12-13) and the Commissioners have further considered and approved its release. The Commissioner also said she attended four of the six hearings and considered the witnesses' statements on estimated relative usage of the vehicles as "something off the cuff" and speculative and she was not comfortable with the use of this data.

## Memorandum Was Prepared to Correct Previously Released Comparative Injury Data

CPSC's Executive Director told us that he discussed with the Associate Executive Director for Epidemiology the preparation of the June 13 memorandum to correct misinterpretations of previously released injury data that ATVs were more dangerous than minibikes and snowmobiles. However, the Associate Executive Director said he prepared the memorandum on his own initiative because he believed the earlier data were misleading and needed to be adjusted. He said that he had drafted an earlier memorandum containing similar information after the Executive Director had inquired about the possibility of using estimates provided by witnesses at the CPSC public hearings on ATVs. The Executive Director told us that he discussed the draft memorandum with the then Acting CPSC Chairman and was told that the information should not be disseminated. The Acting Chairman told us she did not approve dissemination of the draft memorandum because the Commissioners had voted against a comparative analysis of the three vehicles.

The Associate Executive Director told us that in mid-1984 CPSC staff provided to the Commissioners a hazard analysis presenting ATV injury data along with other recreational vehicles. This analysis compared the number of injuries associated with ATVs, minibikes, and snowmobiles and the numbers of the three vehicles in use during 1983. It showed that for each 1,000 vehicles in use, the injury rate for ATVs was slightly more than for minibikes but two to three times that for snowmobiles. It did not take into account the usage patterns for the three vehicles because, according to the Associate Executive Director, the analysis used "crude" figures as the intent was not to show definitive comparisons. Industry officials, he said, complained that the analysis was misleading since the data were not weighted for vehicle usage patterns, and the media and others erroneously interpreted the data as indicating ATVs were more hazardous than the other two types of vehicles.

The Executive Director told us that CPSC is obligated by law to improve inaccurate or misleading data. He said he discussed the industry's criticism with the Associate Executive Director for Epidemiology and the ATV task force, who agreed that the comparative data released earlier were flawed. He said that because the previously released comparative data incorrectly implied that ATVs were more hazardous than the other two vehicles, at his suggestion a footnote was added to the data cautioning users that the data are not weighted for usage patterns. Also, he said the staff proposed to the Commissioners that exposure surveys be done for the three vehicles to obtain frequency of use data that could be used to adjust the unweighted analysis. The Commissioners denied the proposal (see p. 12).

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**Appendix I  
Concerns About CPSC Staff Memorandum  
Relating to All-Terrain Vehicles**

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Later, according to both the Executive Director and the Associate Executive Director, they met in November or December 1985 to discuss the information provided by the witnesses and the possibility of using the information to adjust CPSC's earlier hazard analysis for ATVs. The Executive Director said that at the meeting, which was also attended by the ATV Task Force chairman, he discussed ways to improve the "defective" data. He told us that in searching for an answer, he "probably" asked the Associate Executive Director if testimonial data obtained from hearing witnesses were suitable for adjusting the data. According to the Executive Director, the Associate Executive Director agreed that the use of testimonial data, while not perfect, was "a way of approximating the surveys."

The Associate Executive Director, who did not attend the hearings, said that after reviewing the hearing transcripts, he concluded that the witnesses' usage estimates were acceptable for adjusting the hazard analysis to reflect comparative injury rates for the three vehicles based on their relative frequency of use. He told us that CPSC has used this "kind of data before, as conservatively as possible," in the field of accident prevention when they were the only data available, without representing the data as being "statistical" data. Therefore, he said he adjusted the comparative injury rates for ATVs, minibikes, and snowmobiles to reflect usage patterns.

According to the ATV Task Force chairman, he was told by the Executive Director that the adjusted injury data were developed because the Executive Director "was getting signals" that a pending report of a subcommittee of the House Committee on Government Operations was going to depict ATVs as much more hazardous than snowmobiles and minibikes and that the Executive Director believed it was important to clarify the record.

According to the Executive Director, in response to a request from a member of the Subcommittee, CPSC provided a copy of the June 13 memorandum, along with other materials, to the member. The frequency of use data in this memorandum was the basis for the dissenting views in the Committee's report on ATVs that found that the use of ATVs presented an unreasonable and imminent risk of death and serious injury requiring immediate enforcement action (H. Rept. 99-678).

The Associate Executive Director told us that he had earlier (about Dec. 1985) presented an adjusted analysis to the Executive Director. The Executive Director told us that he discussed with the then Acting CPSC

Chairman the feasibility of making the adjusted analysis available to the Commissioners. He said the Acting Chairman did not approve dissemination of the data to the Commissioners but did not say why. He said that there was not a compelling need to get the adjusted data released at that time, but that ultimately it needed to be released. The then Acting Chairman told us that she did not believe dissemination of the information was necessary as CPSC was concerned only with ATVs and the Commissioners had voted against a comparative analysis of the three vehicles.

The Associate Executive Director said he disagreed with the Acting Chairman and when a new Acting Chairman took office in June 1986, he again discussed with the Executive Director the need to publicly release the adjusted injury data to correct misinterpretations of the previously released data. Therefore, he prepared his June 13, 1986, memorandum and submitted the adjusted injury data to the ATV Task Force chairman.

## Preparation of Analysis May Be Inconsistent With Commission's Intent

Under the Consumer Product Safety Act, CPSC is responsible for helping consumers evaluate the comparative safety of consumer products. The Associate Executive Director for Epidemiology is responsible for injury data analyses to identify hazards or hazard patterns. However, because the Commission denied a staff request for making an exposure survey covering the three vehicles, the Associate Executive Director's comparative injury analysis of ATVs, minibikes, and snowmobiles presented in the June 13 memorandum seems to be inconsistent with the Commission's intent.

In September 1985, the Commission, by a vote of three to one, denied a staff request for an exposure survey for the three vehicles. According to the three Commissioners who voted against the three-vehicle survey, the vote was intended to limit CPSC's staff study exclusively to ATVs. The CPSC Chairman, who voted in favor of the survey, disagreed. The three Commissioners said that they voted to limit the survey to ATVs because the other vehicles were not a matter of concern in CPSC's assessment of ATVs. One Commissioner said the Commission's vote should have been a "clear signal to the staff that that was the way we were headed" and if there was good reason for the staff to do otherwise, the Commission should have been consulted.

That Commissioner also said that the Commission usually does not get involved with public dissemination of product safety information. Such

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**Appendix I**  
**Concerns About CPSC Staff Memorandum**  
**Relating to All-Terrain Vehicles**

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information is reviewed and cleared by cognizant CPSC technical and program staffs, the Executive Director, and the Office of General Counsel before it is publicly released to guard against dissemination of inaccurate or misleading information. In view of the Commission's vote, the Commissioner said she discussed her concerns with the June 13 memorandum with two other Commissioners who agreed with her. Consequently, she said the staff was advised not to release the memorandum to the public until it had been cleared by the Office of General Counsel and the Commission had an opportunity to review it and decide on its disposition. As of October 6, 1986, the memorandum had not been publicly released.





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