State Farm: Dangerous Intersections

BY

GROUP # 35

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What we will learn:

- The brief introduction of the State Farm Company
- Abstract of the case
- Content of the Case
- Questions and Answers

The brief introduction of the State Farm Company

- It was founded in 1922 by retired farmer George J. Mecherle
- The company was established with mutual automobile insurance company.
- This company specialized in auto insurance for farmers
- T he current chairman and CEO is Edward B. Rust, Jr.

Abstract of the case

- State Farm distributed a list of the 10 most dangerous intersections in the United States based on crashes resulting in claims by its policy holders, What started as study to reduce risk turned into an ongoing study that directs a major public relations effort: State farm provides funds for communities to further research their dangerous intersections and initiate improvements based on the research.
- This case tells us how the State Farm Dangerous Intersections initiative got started and how it was done.

Content of the Case:01/12

1) **Why do they research:**
   - In June 2001, State Farm Insurance, released the second part in its Dangerous Intersection reporting series.
   - State Farm modeled it's program after an initiative by the Insurance Corporation of British Columbia, Canada (ICBC), and the American Automobile Association of Michigan (AAA) to help position the nation's largest auto insurer as the most safety-conscious insurer.

Content of the Case:02/12

- State Farm saw this is an opportunity to expand its effort into a nationwide campaign in 1999
- State Farm has allocated significant resources as well as funds to initiative

Content of the Case:3/12

2) **How they get the basic information of intersections?**
   - in 1998's study, State firm included a location field as part of the data that its claims adjusters regularly complete,
   - This location information indicates whether the accident took place in an intersection or as part of an incident related to an intersection accident, and identifies the intersection.
   - Following the 1999 study, the fields for identifying intersections were further refined.

Content of the Case:04/12

3) The research of 1998:

- The first study in 1998, State Farm only looked at accidents involving intersecting roads.

The imperfect aspects of the first research:

- Does not include accident severity;
- Does not isolate demographic factors such as age or gender of the driver, driving record, etc.
- Does not isolate geographic factors, such as weather conditions, population of area, etc.
- Only looked at State Farms own internal incident reports, not at any public records involving traffic patterns or volume or police reports.

Content of the Case:05/12

4) **What about the data quality?**

- The reporting threshold for police filing reports on accidents differs widely from jurisdiction to jurisdiction.
- Some will only fill out reports when personal injury or criminal behavior is involved.
- Some will fill them out only when a vehicle is damaged to the degree that it needs to be towed from the scene.
- Others fill out such reports on every incident.
- Traffic volume reports are often prepared infrequently and often by independent sources

Content of the Case:06/12

5) **The result of 1998 Study:**

- In 1998 Study, State Farm identified 172 dangerous intersections. The top 10 most dangerous intersections in the United States were released publicly. Public affairs staff for each state could request that up to 10 intersections be identified for their state. As of August 2001, 97 cities (56.4%) had applied for State Farm grants.

Content of the Case:07/12

6) **The Transportation Engineers' viewpoint**
   - The attention from the public requires for immediate solutions, solutions that they often didn't have budgets to implement.
   - Not all accidents are the same; locations with accidents that result in injuries and death should be given more attention.
   - Think the result didn't consider intersection volume and accident rate data.

Content of the Case:08/12

7) **The improvement of 2001 study:**
   - To include accident severity, State Farm creates a measurement system of classifying accidents. For the 2001 study, which used 1999 and 2000 accident data, State Farm calculated a median property damage accident payout (approximately $1,700).
   - “High Severity": Incidents requiring payout of more than the median amount.
   - “Low severity”: Incidents requiring payout of less than the median amount.

Content of the Case:09/12

Exhibit SF 1–1 Danger Codes	No Personal Injury	With Personal Injury
No property damage	0	Y
Low property damage	1	1 + Y
High property damage	X	X + Y

Content of the Case:10/12

8) The result of 2001 Study:

- Each of those 224 is now eligible for the $20,000 grants to study the intersection to identify specific improvements.
- The top 10 are also eligible for $100,000 grants for improvements.

In this second round, State Farm has committed $5.48 million to the safety program.

Content of the Case:11/12

9) **The Track Plans made by the State Farm:**

Once a city completes an intersection's improvements, State Farm will start tracking accidents for that intersection for a period of one year.

- Each grant application for an affected city's study of a dangerous intersection must include:
  - Collection and analysis of Police report data.
    - An engineer's "geometric review" of the intersection.
  - A capacity profile of the intersection.
  - A traffic conflict study.
  - A benefit-cost analysis.
  - A schedule of improvements (short term, intermediate term and long term).

Content of the Case:12/12

10) **Application of the Study:**

- The new data may help create a new model of desired intersections traits against which improvement plans can be assessed. Further increasing the effectiveness of the loss prevention program and making life a easier for the transportation engineers with whom they must partner to achieve safety success.

Questions and Answers:1/9

1) **Identify the various Constructs and Concepts involved in the study:**
   - Methodology:
     - Applied research
     - Quantitative research
     - Qualitative research:
     - Induction:
   - Sampling:
     - Multistage Cluster Sampling: This is a probability sampling design that is a stratified sampling of clusters. Stages will involve by using this method. This method is used when researchers want to study clusters in geographical areas.

Questions and Answers:2/9

- Multipoint Scale:

Exhibit SF 1–1 Danger Codes	No Personal Injury	With Personal Injury
No property damage	0	Y
Low property damage	1	1 + Y
High property damage	X	X + Y

Questions and Answers:3/9

2) **What hypothesis might drive the research of one of the cities on the top 10 dangerous intersection list:**

- Flamingo Road and Pines Boulevard, Pembroke Pines, Fla
- Red Lion Road and Roosevelt Boulevard, Philadelphia
- Grant Avenue and Roosevet Boulevard, Philadelphia
- Seventh Street and Bell Road, Phoenix
- 51st Street and Memorial Drive, Tulsa, Okla
- 71st Street and Memorial Drive, Tulsa, Okla
- 19th Avenue and Northern Avenue, Phoenix
- State Highway 121 and Peterson Road, Frisco, Texas
- Clearwater Parkway and Veterans Memorial Boulevard, Metairie, La
- Fair Oaks Boulevard and Howe Avenue, Sacramento, Calif

Questions and Answers:4/9

- The criteria on which the 10 most dangerous intersections are based
  - Intersection Volume.
  - Accident rate.
  - Geometric Review
  - Number of Personal Injury
  - The Cost of the accident.

Questions and Answers:5/9

3) **Evaluate the methodology for State Farm's research:**

They have used the mixed method. These are:

- Quantitative: Data Collection and Analysis
- Qualitative: Interview, Action research

Questions and Answers:6/9

4) **If you were State Farm, how would you address the concerns of transportation engineers?**

I will do the following:

- Fund Support
- Analysis the accident including demographic factors, geographic factors, geometric review, traffic Volume, Accident rate, cost of accident etc.

Questions and Answers:7/9

- Establish a CCTV monitoring the traffic and record the accident when it happened.
- Establish databases which have sufficient information to tally accident rates for intersection and build model to make the same problem easily be solved.

Questions and Answers:8/9

5) **If you were State Farm, would you use traffic volume counts as part of the 2003 study? What concerns, other than thos expressed by Nepomuceno, do you have?**

Yes! Because traffic volume is one of the factors which affect traffic accidents. High volume roads with relatively more crashes. Conversely, it is low.

Questions and Answers:9/9

- The Concerns:
  - Traffic Signs are not Significant.
  - Drivers behavior such as not wearing a seatbelt, the mood or drinking
  - Passers behavior. Such as children have no Safety awareness, older may dull and some young may run across the road.

ANY QUESTION?

THANK YOU FOR YOUR PARTICIPATION