

Examination of 11 Guaranteed Ride Home Programs Nationwide

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Research on 11 guaranteed ride home (GRH) programs nationwide is documented. A GRH program provides a way home for ridesharers who miss their regular ride home as a result of a daytime emergency or working overtime. These programs may increase participation in ridesharing programs by reducing a common fear of being stranded without transportation. The research canvassed all GRH programs in operation in 1988; a series of case studies is followed by a comparative analysis of key program elements. The 10 GRH programs described are those of Hughes Aircraft, Golden Gate Bridge Highway and Transportation District's Flex-Pool program, Montgomery County Government's subsidized taxi service, Reston commuter bus, 3M's back-up vanpool service, Palo Verde Nuclear Power Plant's back-up vanpool program, Xerox's company fleet car program, Northern Telecom's back-up carpool service, Prudential's escort service, and the Seattle Metro's and City of Bellevue's subsidized taxi service. A description of UCLA's GRH service is included as an example of the planning and development of such a program. The experiences of these early pioneers can shed light on current GRH planning efforts. Although no program was able to statistically support or reject the contention that GRH services encouraged ridesharing (because of lack of data on commuting trends before introduction of the program), all program administrators felt that the GRH services were successful in reaching their basic goals.

A guaranteed ride home (GRH) service is an increasingly common element in employer transportation demand management (TDM) programs. This service provides a way home for ridesharers in cases where they miss their regular ride home as a result of a daytime emergency or working overtime. It is hoped that such services will increase participation in rideshare programs by reducing a common fear of being stranded without transportation.

Research conducted by Crain & Associates on 11 GRH programs nationwide is summarized. The research consisted of a telephone survey completed during the summer months of 1988 and updated in 1989. At that time, the GRH programs described were the only such programs operating in the country. Today, particularly because of AQMD Regulation XV in Southern California, GRH programs are much more commonplace. (Regulation XV requires large employers to implement a TDM program at each site with over 100 employees.) The experiences of these early pioneers can shed light on current GRH planning efforts.

There are six ways to provide a GRH service for stragglers and other off-hour commuters:

- **Back-Up Vanpool.** Vans are made available for taking commuters-employees home in cases of emergency or working overtime (after 6 p.m.). In most cases, the vans are used during the day for a vanpool service. Straggler vans follow a fixed route and the passengers are picked up from and dropped off at set locations. Back-up vanpools pick up all prospective riders at the same starting point. Passengers are dropped off at different locations of their choice, being served as though by a supershuttle.

- **Back-Up Carpool.** For persons needing a ride, carpool matches are arranged to get them home.

- **Subsidized Taxi Service.** A person in need of a ride calls a taxi, pays for the ride out of his or her own pocket, and later is reimbursed by the employer.

- **Company Fleet Car.** In cases of emergency or working overtime, the employee may use a company car to get home and bring it back the same or next day.

- **Escort Service.** The employee makes arrangements with the security office to have a security guard escort him or her to nearby public transit.

- **Subsidized Public Transit.** A person in need of a ride uses public transit to get home, pays for the ride out of his or her own pocket, and is later reimbursed.

The first 10 GRH case studies were located by canvassing ridesharing agencies, local, state, and federal transportation officials, and known ridesharing experts nationwide. The canvassing effort consisted of approximately 50 telephone calls. In-depth telephone interviews were conducted with the administrators of each GRH program located. Six of the programs were located in private companies. The remaining four programs were operated by public entities, including one ridesharing agency and three city or county planning departments. The 11th case study, the development of UCLA's GRH program, was compiled from information in Crain & Associates' files.

Case studies are included on each program, followed by a comparative analysis that reviews key elements of GRH programs, such as types of services offered, eligibility criteria, limits on usage of the service, usage of the service, staffing levels, program costs, promotion techniques, and length of program.

The 10 GRH programs located in the canvassing effort in spring 1988 were

1. Hughes Aircraft's back-up vanpool program, Tucson, Arizona;
2. Golden Gate Bridge Highway and Transportation Dis-

trict's (GGBHTD) Flex-Pool program, San Francisco, California;

3. Montgomery County Government's subsidized taxi service, Montgomery, Maryland;

4. Reston commuter bus, Reston, Virginia;

5. 3M's back-up vanpool service, St. Paul, Minnesota;

6. Palo Verde Nuclear Power Plant's back-up vanpool program, Phoenix, Arizona;

7. Xerox's company fleet car program, Palo Alto, California;

8. Northern Telecom's back-up carpool service, Santa Clara, California;

9. Prudential's escort service, Newark, New Jersey; and

10. The Seattle Metro-City of Bellevue's subsidized taxi service, Bellevue, Washington.

CASE STUDIES

Case Study 1: Hughes Aircraft's Back-Up Vanpool

Description

Hughes Aircraft Co. is located in Tucson, Arizona. The company has a work force of approximately 6,300 employees, one-third of whom use some type of ridesharing travel mode. The average commute is about 45 min round trip.

Background

On April 1, 1988, Hughes started a vanpooling service contracted by People Ridesharing Systems (PRS). The cost of the service is approximately \$39 per month per van rider. The cost to the vanpooler is low because of government air quality improvement subsidy. The program began with a 6-van fleet, which recently has increased to 35 vans. The vans are leased on a month-to-month basis. Hughes shares the vanpool program with a neighboring utility company; however, the majority of vanpool riders are Hughes employees. Each van carries an average of 11 riders and is driven by employees. Between the two work sites, there are approximately 400 vanpool riders.

GRH Service

The GRH program is limited to vanpoolers. Hughes has an emergency van for problems during the day and two late-schedule vans, one traveling to the east side of Tucson and the other traveling to the west side. The emergency van is usually driven by one of the ridesharing staff members; the two late vans are driven by employees who work later shifts on a daily basis. In this case, employees working overtime must call Hughes' ridesharing office before 4:00 p.m. to request a late ride.

Staffing and Budget

The cost of the GRH is included in the monthly vanpool

charge. There are two PRS staff members on site at Hughes who coordinate the vanpool program and approximately 1 hr (12 percent) of each employee's workday is spent working on the GRH service.

Results

The late vans have an average of three riders per day and the emergency van has approximately five riders per week. These ridership levels amount to 195 rides per year per 100 eligible employees for the late van service, 65 rides per year per 100 eligible employees for the emergency service, and 260 rides per year per 100 eligible employees for both GRH services. Hughes' commuter services coordinator states that the GRH successfully attracts riders to the vanpool program, but there is no point of comparison because the GRH service was part of the initial vanpool service.

Case Study 2: Flex-Pool GGBHTD's Back-Up Vanpool

Description

In 1981, the GGBHTD received a National Demonstration Project grant from FHWA and UMTA to support several of the district's ridesharing programs. Golden Gate Ridesharing was the ridesharing division of GGBHTD, which administered these services for the counties of Marin, Sonoma, and San Francisco from 1977 to 1987. Since 1987, the GGBHTD has contracted with RIDES for Bay Area Commuters, Inc., for ridesharing services.

Background

Flex-Pool was created to address the concern that potential ridesharers and transit users might have about being stranded if they missed their regular connections. The Flex-Pool service was developed to enhance the existing services (vanpools, carpools, subscription club buses, and Golden Gate Transit Express buses) and to provide a convenient back-up vanpool transportation system. The service was available to all commuters in the financial district who registered with the program; 7,000 persons registered for the service and received mail-back identification cards that stated their usual commute mode and other information used in data collection. District-owned vans traveled in loops through the financial or civic center district. Up to four vans at one time were used. The drivers were commuters who volunteered to drive the Flex-Pool van and to maintain simple records in exchange for a free commute and unlimited personal use of the van. As part of the demonstration project, Flex-Pool began in September 1982, and ended in early 1984.

GRH Service

For commuters who worked late, a van would leave from San Francisco between 5:30 and 6:30 p.m., traveling along U.S.-101 to designated stops in Marin and Sonoma counties. A

commuter needing a Flex-Pool ride made a telephone reservation by 3:30 p.m. to be picked up at a designated location in the city. Commuters who made a reservation were guaranteed a seat. Registrants who did not reserve a ride could flag down a Flex-Pool van at a pick-up stop, but were not guaranteed a seat. Golden Gate Ridesharing would notify the Flex-Pool driver of the reservations and the locations where the persons were to be picked up. The passengers paid for their ride at the pick-up time and the \$1.50 to \$3.00 fare varied according to destination. The average fare was \$1.95. The fare was kept low enough to attract riders, but high enough to prevent commuters from using the service as a daily commute mode.

Staffing and Budget

The project was staffed by three professional positions and one clerical position, one project supervisor, one project coordinator, one part-time information-dissemination coordinator, and one part-time clerical assistant. Coordinating rides, data collection, recruiting drivers, designing marketing techniques, and tracking ridership information and program cost proved to be labor-intensive. The GGBHTD Ridesharing Division administered the Flex-Pool demonstration project through FHWA-UMTA funding. Service was discontinued when project funds were exhausted.

Results

The most effective vans were those that operated right after the evening peak by leaving the financial district between 5:30 and 6:00 p.m. This fact suggests that vans that cater to the slightly delayed worker may be the most useful. Unlike transit, Flex-Pool's occasional ridership was low. The Flex-Pool experience indicates that ridership is highly dependent on external events (e.g., holiday shopping and unusual weather conditions) and that occasional ridership varies depending on the needs of commuters. Over 4,300 commuters used Flex-Pool; therefore, from the standpoint of being a back-up transportation system, the service was a success. In fact, 90 percent of those who rated the service gave it an overall rating of good to excellent. Survey results indicated that the principal reasons cited for using Flex-Pool were that the vans were convenient, eliminated the need to drive, and saved money.

Case Study 3: Montgomery County, Maryland, Subsidized Taxi Public Transit

Description

The Montgomery County government employs 6,000 employees.

Background

Montgomery County's ridesharing policy includes subsidizing a portion of employees' cost to ride a bus, subway, or vanpool

in exchange for the employees' relinquishing their parking permits. The county has named this their GET-IN program; it was initiated in October 1986. Presently, of 6,000 employees, 155 are using transit or vanpool and are members of the GET-IN program. An additional 116 employees carpool, but are not eligible for GET-IN. Both these commuter groups are eligible for the emergency taxi fare reimbursement program.

GRH Service

In case of an emergency, the employee calls a taxi or uses public transit, pays for the ride, and later is reimbursed from the petty cash allotted each county department. Usage of the program is not limited because of the expected low ridership.

Staffing

No special staff is required.

Budget

No extra budget is allocated for the taxi fare reimbursement program. The total cost for the first year of operation was less than \$50, which included only the amount spent on taxi rides.

Results

The emergency taxi public transit program is rarely used and has produced a relatively low cost to the county. Within the first year of operation, the GRH service provided 2.2 taxi rides per year per 100 eligible employees.

Case Study 4: Reston Commuter Bus Back-Up Vanpool

Description

Reston, Virginia, is concentrated in about 10 mi² and is located about 25 mi west of Washington, D.C. The city grew rapidly from a population of 3,000 in 1968 to a population of 35,000 in 1980.

Background

The Reston bus service began in 1968 as a private service. In the late 1970s, the county began to subsidize the service with regional funds. Presently, the Reston commuter buses feed into Washington, D.C.'s, extensive Metrorail system, but previously traveled the complete commute to Washington, D.C. There are two fixed routes, one that services the north side of Reston and the other that runs through the south side of Reston. Bus fare is paid at the time of the ride and set according to trip mileage and time of day.

GRH Service

After 7:00 p.m., the two routes are combined into one 12-mi straggler bus route, which is run three times to pick up late workers from Metrorail stations and other stops. This single line is slower and longer than the earlier routes. The rider pays the regular bus fare for the late runs.

Staffing and Budget

The straggler route is figured into the total cost of running the busy system; therefore, no special budget or staffing is set aside for the GRH service. The buses used for the late services are vehicles kept on longer from the earlier routes; therefore, no additional buses are needed. The labor and mileage costs are not significant in comparison to the overall service cost.

Results

The late-hour buses are approximately $\frac{1}{4}$ to $\frac{1}{3}$ full, depending on the day.

Case Study 5: The 3M Company's Back-Up Vanpool

Description

The 3M Company, located in St. Paul, Minnesota, employs 12,700 persons.

Background

Of the 12,700 employees, 4,000 rideshare at this time. 3M began its ridesharing program in 1973 and has included a GRH service from its onset. The average commute is approximately $7\frac{1}{2}$ mi one way. The vanpool program uses 100 vans, driven by 3M employees.

GRH Service

In the event of an emergency or work schedule change, the person needing a ride home will usually ask his or her supervisor, carpool mate, or vanpool mate for a ride. 3M allows employees the flexibility to take coworkers home if needed during the day. Commute times are low enough that a driver would not miss much work.

Staffing and Budget

The amount of work generated from the GRH equals less than 1 percent of a staff member's workday. The cost of the service is not separated from the overall vanpool program budget; however, the cost is low because the service is rarely used.

Results

For the vanpooler group, the GRH is used approximately 12 times per year. This usage amounts to 0.3 ride per year per 100 eligible employees. A count for other modes of ride-sharing is not kept. One reason why the GRH is not used often may be caused by employees' apprehensions toward asking coworkers for rides.

Case Study 6: Palo Verde Nuclear Power Plant Back-Up Vanpool

Description

The Palo Verde Nuclear Power Plant is located in Wintersburg, Arizona, approximately 50 mi outside of Phoenix.

Background

The plant has a vanpool program coordinated and implemented by PRS. The program has 200 vans. The total number of persons ridesharing is 2,000 and the average commute is approximately 40 mi one way. Vans leave the plant at various times of the day serving employees who have more erratic work schedules. The last three vans are normally scheduled to leave the plant at 4:30, 5:30, and 7:30 p.m. These vans are usually not filled to capacity, allowing other riders on if needed in case of a schedule change.

GRH Service

In case an employee has a schedule change or home emergency, he or she calls the ridesharing office and a coordinator sets up a ride home for the person. The coordinator puts that person in another van, forms an ad hoc vanpool, or has a PRS employee take the person home. The emergency vans are usually driven by a PRS staff person or a plant security guard, unless the rider is put in a vanpool that is scheduled to leave earlier. The late vans are usually driven by vanpool drivers, back-up vanpool drivers, or PRS staff members. The GRH vans, acting as super shuttles, take people anywhere they need to be dropped off.

Staffing and Budget

PRS has 12 employees on site maintaining the van fleet. This number includes mechanics, drivers, and staff. The GRH is coordinated by one staff member who spends approximately 20 percent of his or her workday on this service.

Results

The GRH is used by 30 to 40 persons per day. The annual ridership level for this service is 637 riders per 100 eligible employees. The GRH is used often as a result of the erratic

schedules required by the plant workers and this frequent usage has made the program expensive to run.

Case Study 7: Xerox's Company Fleet Car

Description

Xerox employs approximately 375 persons at the Palo Alto site. These employees commute on average 10 to 20 mi one way from their homes. Some employees travel as far as San Francisco, which is located about 35 mi north of Palo Alto.

Background

Of the 375 Xerox employees, 25 rideshare. The company subsidizes 25 percent of the commuting costs for those employees who rideshare. This subsidy serves to encourage the employees not to commute alone by car. Types of HOV modes that are subsidized are vanpools, bus, and train. In addition, Xerox owns five cars that are used for business purposes, of which only three are let out at one time. These fleet cars have been available since 1978.

GRH Service

In cases of emergency, an employee may use one of the company cars to get home, if a car is available. The fleet car use is limited to 2 hr, but in desperate situations, can be taken home and brought back the next day.

Staffing and Budget

No special budget or staff is set for emergency situations as it is rarely used.

Results

The fleet cars are used approximately two times per week, which amounts to 27.7 rides per year per 100 eligible employees.

Case Study 8: Northern Telecom Back-Up Carpool

Description

Northern Telecom, located in Santa Clara, has 1,200 employees.

Background

Northern Telecom has a carpool match-up program, and subsidizes bus tickets for employees. The average employee commutes 10 mi one way to work. There are 111 carpoolers, 15 bike riders, and 10 motorcycle riders.

GRH Service

Northern Telecom has no written GRH program; however, if an employee cannot find a ride home, the ridesharing office will attempt to find him or her someone with whom to carpool. The company has provided this service since the beginning of the Carpool Matching Program in 1980.

Staffing and Budget

No special budget or staffing is set because it is not a written program. The time it takes to coordinate back-up carpool rides is small, which keeps down the associated costs for staffing.

Results

This ad hoc GRH is used approximately one time per month. The annual ridership level is one ride per 100 eligible employees. The low usage is because the assistance is used mostly as a last resort. In addition, there is no promotion of a GRH; therefore, employees may not be aware of this option in cases of emergency.

Case Study 9: Prudential's Escort Service

Description

Prudential, located in Newark, New Jersey, employs approximately 3,500 employees, who are located within four buildings in the downtown area.

Background

The company offers free parking; therefore most employees drive to work. The company also owns vans that are used as a shuttle service to the local train station and parking lots. The shuttle runs in the morning from 7:00 to 8:50 a.m., and in the afternoon and evening from 3:20 to 8:00 p.m. The shuttle vans are owned by Prudential. In addition, Prudential also has a vanpool program for its employees through a third-party service called Rideshare.

GRH Service

In the event an employee needs to work late, he or she must make an appointment with the security office before 8:00 p.m. that day for a security guard to take the employee to a train station or a parking lot. The security supervisor notifies the night shift of the appointment, and a security guard takes the employee to his or her destination with one of the shuttle vans. The service has been available since 1973 with the initiation of the shuttle service.

Staffing and Budget

No special staffing or budget is set aside from the total security budget. However, cost is low because of the short commute to and from the parking lots and train stations.

Results

Approximately 20 to 25 riders use the escort service per week. This calculates to 33.4 rides per year per 100 eligible employees.

Case Study 10: Seattle Metro–City of Bellevue’s Subsidized Taxi

Description

The subsidized taxi concept was tested by the city of Bellevue and by Metro, the county transit and ridesharing agency, in two target areas in Bellevue: the central business district (CBD), and the suburban area along I-90. In 1987, the CBD target group was made up of 20,000 CBD employees, and along the I-90 corridor 7,000 employees were targeted. In addition, the city of Bellevue requires new developments of over 100,000 gsf to provide a guaranteed ride home program.

Background

Bellevue’s TDM program began in 1979 to encourage ride-sharing with reduced parking requirements in the central business district. In 1987, the city began a 2-year demonstration of various subsidy and marketing strategies, one of which was subsidized taxi. The Bellevue TDM demonstration program was called Easy Ride, and was targeted at suburban employment sites. Easy Ride was administered by the Bellevue Department of Planning, which contracted with Metro to provide specific services. Metro developed the subsidized taxi GRH program in conjunction with its contract to provide TDM services for the city. Metro has continued to study the subsidized taxi concept; however, this case study presents only the agency’s initial efforts in Bellevue.

GRH Service

The GRH service began in August 1987. Carpoolers, vanpoolers, and bus riders were eligible for the program. Commuters interested in participating in the GRH service registered with the program by filling out a form detailing their commute information. The applicants were then given limited-mile taxi vouchers that were good for 1 year. The I-90 vouchers were worth up to 60 mi and the CBD vouchers were worth up to 40 mi. Metro negotiated an exclusive contract with the Yellow Cab Company and in return Metro received a 10 percent rebate for more than 25 taxi rides per month. The employee using the taxi service called and requested a Yellow Cab, paid for the ride out of his or her own pocket, and sent the voucher to Metro with the taxi ride

information for reimbursement. Metro refunded the full cost of the taxi fare less a \$1.00 payment.

Staffing and Budget

Two staff positions entitled “transportation coordinators” were created to market the Easy Ride program including the GRH service, as well as other special commuter transportation programs. Metro’s accounting staff processed the taxi vouchers that had been submitted within the first 6 months. Because of the low volume of vouchers submitted, Metro did not anticipate needing additional voucher processing staff at that time. At the program’s onset in 1987, Metro agreed to subsidize the first 100 vouchers for the CBD target group, and the city of Bellevue agreed to subsidize the first 100 vouchers for the I-90 target area. Metro’s GRH program budget was \$6,000 per year for the first 2 years, which was taken from its Federal Aid to Urban Systems (FAUS) fund (gas tax), and sustained the program until spring of 1989. The city of Bellevue budget was \$8,000 per year for 2 years, taken from the city budget, which carried the I-90 program into spring of 1989.

Results

Metro evaluated the GRH program’s first 6 months of operation. The study found that 142 persons registered for the program within the CBD and I-90 corridor target areas. Metro’s analysis also found that only nine employees who took 11 rides had used the service. This usage amounts to a ridership level of 15.5 rides per year per 100 eligible registered employees. The analysis concluded that the low usage may be because of the limit on travel miles, influencing riders to save their vouchers for emergency situations. In addition, several participants had stated that they disliked riding in taxis—yet, not enough to make them turn away from the program. Moreover, this factor may also encourage participants to use their taxi rides only as a last resort.

Metro found that 10 percent of the participants switched from driving alone to an HOV mode as a result of the GRH program. However, the promotional campaign targeted HOV users, thus making this analysis inconclusive. Furthermore, the majority of single-occupancy vehicle switching was into vanpools, which may be a result of a \$10 per month vanpool subsidy offered through Easy Ride rather than of the GRH service.

Case Study 11: Development of UCLA’s GRH Program

This case study serves as an example of the development of a new GRH program. It describes the policy-making process of developing the UCLA GRH program in 1988. Crain and Associates assisted UCLA’s Commuter Assistance-Ridesharing (CAR) Office in implementing its TDM plan since 1985. In 1988, UCLA decided to develop a GRH program for UCLA vanpoolers. Such a service would provide a way home for CAR’s 684 vanpoolers in cases when the van-

pool rider missed his or her usual ride home. The following sections contain the steps UCLA took in formulating its initial GRH service.

The CAR office reviewed background material and constructed a preliminary proposal. The proposed service had two programs: one for overtime workers and a second for daytime emergencies. The late service would consist of an evening straggler van service that would be driven by a UCLA employee who had a later work schedule (for example, 10 a.m. to 7 p.m. rather than 9 a.m. to 5 p.m.). The routes would follow existing vanpool routes. The emergency-day service would use subsidized taxis for those vanpool riders living within 20 mi of UCLA. Vanpoolers living more than 20 mi from UCLA would have a fleet service rental car available to them.

Focus Groups

Several questions regarding the GRH program surfaced repeatedly during meetings with the CAR staff, and it became evident that they needed clarification. Examples of the types of questions that needed to be addressed were the following. Where would riders like to be dropped off? Which travel options appealed most to vanpool riders and would be most useful for getting home in cases of emergency or working late? How would riders prefer to pay for the service? Would vanpoolers rather pay for the service through a monthly registration fee or by the ride? (The university was able to subsidize only a portion of the cost.)

In order to look more closely at these questions, Crain & Associates recommended that focus groups be conducted. Focus groups are a widely used marketing technique to gather in-depth qualitative information. Groups of subjects who possess a common characteristic related to a topic are gathered together. A structured discussion evolves on the basis of their responses to various questions posed by the researcher. This technique is most often used by marketing firms to examine personal opinions regarding a service or product. Focus groups are conducted in an informal atmosphere (by providing a lunch, for example) to ensure that the participants feel comfortable in voicing their opinions. The researcher prepares a question outline that he follows strictly to ensure that all issues are covered and that all focus groups receive equal treatment. However, questions are asked in an open-ended format to initiate discussion. Questions are broad at the beginning of each new topic and then move to specific issues within those topics.

Two GRH focus groups were conducted with CAR vanpool riders in January 1989. The focus groups were jointly organized by Crain & Associates and the CAR office. The CAR staff reserved space on campus and arranged for a light lunch to be served. The CAR staff also contacted vanpool riders who had been randomly selected from a current vanpool list to participate in the focus group meetings. About 20 people were scheduled to attend each session. Crain & Associates was responsible for the GRH focus group design and analysis. A discussion guide was constructed and the basic structure of the focus groups, including visuals, was organized. Each focus

group session spanned 1½ hr and was audiotaped for later analysis.

Analysis of the focus group discussions produced the following key findings:

- Participants felt that the straggler van would best serve late departures. Carpools would be the second choice after the straggler van.
- Fleet service rental car would best serve the daytime emergency departures.
- Taxi rides would not be a viable option because of high fares unless trip distances were less than 15 mi.
- The UCLA Buspool would be a viable option for a small portion of vanpool riders that lived in the direction of the UCLA Buspool routes.
- The straggler van, taxi, and rental car services were the three most popular options with the focus group participants.
- Focus group attendees prefer a pay-per-ride system to a pay-per-month system.
- Participants from both focus groups commented that the straggler van name had a negative image. Thus, the name of the service was changed from straggler van to night rider van.

These focus group findings were used as a key reference in determining the final GRH program design. For instance, the travel options considered for the initial service, the night rider van, fleet car rental, and the taxi, were greatly influenced by the outcome of the focus groups.

Sensitivity Analysis of GRH Service Cost

Before the initial service was finalized, a sensitivity analysis of probable program cost and an estimation for a budget would need to be conducted. The sensitivity analysis examined the cost of providing a night rider van service, subsidized taxi service, and a fleet rental service, the three most popular options according to the focus groups.

Cost estimates for the three travel modes were gathered through phone interviews with local taxi services and information provided by the CAR office on fleet car rental rates and vanpool costs. The CAR staff also provided the data on the average vanpool commute and vanpool fare. These data were used to calculate the effects on cost if the night rider vans carried regular vanpool riders who would pay a monthly vanpool fare. If the van carried a few regular van riders, it would help recover a portion of the van's operating costs. Three cost scenarios were used to examine the effects of differing GRH ridership.

As expected, the analysis found that the per-ride cost of each travel mode differed. The night rider van is the least expensive per ride, because the service is operating regardless of GRH ridership. The fleet rental and the taxi are more expensive per ride because the total cost increases for each additional GRH ride taken.

GRH program costs vary depending on the specific characteristics of the employment site. However, UCLA's experience illustrates the importance of investigating the factors that may or may not affect the service costs.

GRH Policies and Procedures

The final step before implementation was to design GRH policy guidelines and operating procedures. The policies covered program purpose, subsidies, eligibility, GRH travel options, GRH day service, GRH evening service, pricing, generating workload, and staffing needs. For instance, the initial GRH program would only be available to vanpool riders and would be used primarily to supplement the vanpool program. It was also agreed that to best serve vanpool rider needs, the GRH program must be varied and not dependent on one service type. For instance, if a GRH participant must work past the time of the night rider van departure, he or she should be covered by a subsidized taxi program or fleet service rental car. Therefore, it was decided that the evening GRH service would consist of the night rider van, supplemented by the taxi and fleet service rental as back-up. The day GRH service would include the taxi service and a fleet car rental service. It was also established that the GRH user would pay a copayment for the service; it was not to be a fully subsidized program.

The GRH procedures set the guidelines for day-to-day operations such as program registration, notification, dispatch selection, travel option preference, and promotion. If a GRH user called and requested a ride, a certain chain of events would occur. First, the caller is transferred to the appropriate GRH staff specialist and is verified to be a registered vanpool rider. Then the staff person would ask the GRH participant for his or her destination, probable trip mileage, and desired trip time. On the basis of this information plus what time the request is made (certain options are not available after certain times in the day) the staff specialist can determine the most appropriate travel mode to be given.

If the night rider van is appropriate, the GRH user meets the van at an appointed place on campus. He or she must purchase a night rider ticket ahead of time to be admitted on the van. The GRH rider is then taken to his or her car located at one of the vanpool parking lots along the night rider route.

If instead, a rental car is preferred, the GRH user must come to the CAR office and fill out the appropriate forms. He or she is then given the keys to a fleet service's car and returns the vehicle the next day. On return of the rental vehicle, the GRH participant pays a portion of the rental car rate. The taxi service would be used as back-up because the fare would be high for the average vanpool rider (average commute is approximately 40 mi one way). The taxi company would bill the CAR office for the ride. The GRH staff specialist would then notify the user to pay the required copayment.

The UCLA GRH program began on July 1, 1989. The service is currently available to approximately 800 vanpool riders. The CAR office plans to expand the GRH program to include all registered carpoolers in the near future.

COMPARATIVE ANALYSIS OF GRH PROGRAMS

This section provides a summary and comparative analysis of 10 case studies that were in existence in 1988. Of the 10 programs, there were 5 back-up vanpool services, two subsidized taxi services, one back-up carpool program, one company fleet car use, and one escort service. The majority of the programs had formal GRH policies, whereas three, Prudential's escort service, Xerox's company car program, and Northern Telecom's back-up carpool matching, were essentially ad hoc programs.

Eligibility requirements for use of the program varied ac-

TABLE 1 SUMMARY OF SERVICE TYPES, ELIGIBILITY, USAGE LIMITS, AND ACTUAL USAGE

PROGRAM NAME	GRH TYPES	ELIGIBILITY*	LIMITS	USAGE**
FLEX-POOL	Strag/Van	All Commuters	request by 4pm	***
HUGHES	Strag/Van	VP	request	260.0
PALO VERDE	Strag/Van	VP	none	637.0
RESTON	Strag/Van	All Commuters	***	***
3M	Strag/Van	VP	none	0.3
N. TELECOM	Carpool	All Commuters	none	1.0
BELLEVUE	Taxi	CP, VP, T	mileage	15.5
MONTGOMERY	Taxi, Bus	CP, VP, T	none	2.2
XEROX	Fleet Car	All Commuters	time	27.7
Prudential	Escort	All Commuters	request	33.4

* CP - carpoolers; VP - vanpoolers; T - transit riders.

** Number of rides per 100 eligible employees per year.

*** Insufficient information.

TABLE 2 SUMMARY OF STAFFING, COST BUDGET, PROMOTION, AND LENGTH OF PROGRAM

PROGRAM NAME	STAFFING*	COST/BUDGET	PROMOTION**	LENGTH
FLEX-POOL	300%	\$1.95/ride	High	9/82-84
HUGHES	40%	\$40 VP fare	Medium	4/88-
PALO VERDE	20%	High	***	***
RESTON	0%	***	***	1969-
3M	1%	\$0	None	1973-
N. TELECOM	0%	\$0	None	1980-
BELLEVUE	10%	\$14,800/yr	High	8/87-
MONTGOMERY	0%	\$10/ride	Medium	10/86-
XEROX	0%	\$0	None	1978-
PRUDENTIAL	0%	\$0	Low	1973-

* Percentages assume that 100% equals one full-time staff person.

** "High" assumes 4+ promotional items; "Medium" assumes 2 - 3 items;

"Low" assumes 1 promotional item.

*** Insufficient information.

cording to the type of service, how much of the costs were subsidized, and whether the program had formal policies. The ad hoc GRH services were generally available to all employees. The two taxi service cases were available to all commuters who rideshare, to avoid favoring one rideshare mode over another. The back-up vanpool most often had the strictest eligibility requirements, restricting service to vanpool riders. This circumstance was found for Hughes Aircraft, Palo Verde Nuclear Power Plant, and 3M. No other strong patterns for eligibility were found.

Staff size ranged from zero to four and workloads were low. When information was available, the daily work ranged from 1 to 20 percent of the staff persons' daily workload. The ad hoc GRH services took the least amount of coordination time because of low usage and lack of marketing tasks. This was the situation for 3M's back-up vanpool, Xerox's company car service and Northern Telecom's escort service. The taxi services of the Montgomery County government and Seattle Metro-City of Bellevue did not require much staffing because rides were arranged by the GRH participants themselves. The program that had the largest staff size, GGBHTD's Flex-Pool service, was a demonstration project that required large amounts of paperwork for UMTA documentation.

Budget estimates were higher for the back-up vanpools, which operated regardless of ridership. The services that operated only when in need (e.g., subsidized taxis, back-up carpools, company car rentals, escort service, and public transit) had lower usage and lower costs. All three of the ad hoc programs did not have GRH budgets set aside because the associated costs were too low to require it. Usage varies greatly by type of service and appears to be higher for services that operate regularly.

Nine out of the 10 cases were in operation during the survey. One program, GGBHTD's Flex-Pool, was discontinued because it was a demonstration project and had depleted its

funds. One other program, the Seattle Metro-Bellevue subsidized taxi service, was an experimental 2-year project that was scheduled to end in Spring 1989. However, the service had low usage allowing the budget to fund an additional 6 months of operation. There is no real pattern with regard to lifespan of services; however, the ad hoc services tend to have long life spans ranging from 8 to 15 years.

Promotional techniques varied widely. Some of the formal GRH programs were heavily marketed, whereas the ad hoc services had no promotion whatsoever. No strong correlation between promotion techniques and usage patterns was found.

Five out of the 10 had no restrictions on usage. The limits associated with the other five programs were not extensive and mainly were related to ride requests being made within a time limit. The one service that had the most restrictions, Seattle Metro-Bellevue's taxi service, limited the mileage that would be subsidized.

PROGRAM RESULTS

No program was able to statistically support or reject the contention that GRH services encourage ridesharing. This was mainly caused by inadequate ridesharing data before and after GRH programs were implemented. In cases where adequate ridesharing data were collected, GRH was usually implemented concurrently with other incentive programs. This procedure made it difficult to attribute increases in high-occupancy vehicle ridership exclusively to the GRH service. However, all 10 programs felt they were successful in reaching their basic goals. The individual goals differed from service to service but they all were formed to assist ridesharers to get home in situations of daytime emergency and overtime work. Tables 1 and 2 present the 10 GRH programs and indicate how they relate to the nine characteristics described earlier.