

Case Study 4: Medium Sized Metropolitan Transit System in the Southeast

Keywords: Program Design / Training / Metrics / Packaged Programs / Wellness / Driver Health / Transit

Transit is a complex undertaking. Large fleets of vehicles must move through public streets on coordinated routes and schedules, consistently and reliably, day after day. The operational challenge is monumental, even for a modest-sized agency. Transit is also a very public undertaking, being publicly funded, providing a public service, and operating large vehicles on public streets. Thus, the nature of transit operations (i.e., coordinated passenger movement in public) dictates an ever-present awareness and concern with safety. Phrases like “Safety – Security – Schedule” used by one transit authority to describe their philosophy capture this priority. Safety programs are usually (but not always) fully integrated into the driver hiring process (referred to as “on-boarding”) and completion is a condition of employment. This situation creates a continuum between safety programs and individual performance/human relations concerns.

There is a heavy reliance on packaged/commercial safety programs. Packaged programs, or slightly modified packaged programs dominate the industry. Transit agencies are highly networked with each other and highly risk-adverse. Industry practice is a common criteria and justification for selecting a given program, followed by previous experience with similar systems in other agencies. Modifications, when they are present, are usually hybrids of multiple packaged programs or a modest tailoring of a commercial package.

The primary traffic safety programs used by the transit industry are Smith System, TAPTCO (Transit and Paratransit Company, described as a bus version of the Smith System), and USDOT TSI (USDOT Transportation Safety Institute, TAPTCO is said to be TSI based). Programs are typically delivered as a mixture of classroom training, in-vehicle monitoring, and trainer/supervisor observation of revenue service (picking up fare-paying passengers).

The physical and physiological challenges of bus driving are recognized and well understood within the transit industry. Most agencies have some form of wellness program designed for bus operators. These are so fully integrated into the fabric of the transit business that they are not seen as elements of a safety program per se, though the link to safety is recognized.

Transit safety programs are of interest to other transit organizations or quasi-transit organizations (e.g., corporate shuttles) as benchmarks, and to general safety program managers for their use of packaged safety programs and the size of their operations.

This example is a transit system operating a diverse fleet of almost 200 fixed route buses, over 65 commuter buses, nearly 80 demand responsive vans, 14 light rail cars and 59 van pools. New hires must complete a seven week training course based on the USDOT TSI curriculum (with underlying Smith System behavioral elements) and modified by the selection and sequencing of the various (video) elements. For example, weather related driving, night driving, pedestrian

awareness, stress (see wellness below), etc. There are also other custom add-ins such as fleet specific equipment. The program itself is an off-the-shelf package (TAPTCO) described as "a bus specific version of the Smith System" (which is heavily truck based). The linkage between the DOT TSI curriculum and the TAPTCO product is unclear. TSI is considered the industry standard and has been used for over 17 years. It recently became the exclusive focus when a previous Smith System trainer left. (The TAPTCO product is believed to be TSI based.) There is a set of 100 questions that must be passed at the 80% level, as well as acceptable driving on the route. There is four hour refresher training on defensive driving for bus operators every two years.

There are five weeks of trainer lead course work (mostly classroom), followed by two weeks of in-service "training" under the supervisions of a "mentor" (an experienced driver who has been driving the route riding along). The "mentor" is an artifact of the union situation. Routes are selected based on seniority. Reassigning a driver to another route so the trainees can learn that route (under the mentorship of another driver from another route) would constitute a violation of the seniority protocol. Therefore the "mentor" is by definition a current driver on that route. There are 4 to 5 classes per year. The trainers are all drivers when they are not training, with the exception of one full time trainer who also coordinates the entire training program.

The general safety focus of transit operators notwithstanding, extensive safety metrics are kept. These include crashes per 100,000 miles, types of crashes such as rear end (reported as the most frequent type for this agency). These are tracked by frequency, as well as by location and by driver, location and route. They are treated as incidents at the personnel level, but are also used to inform driver retraining decisions (second preventable accident), locational hazards, and even changing actual routes to avoid hazardous areas or situations. There are explicit self-referential goals such as reducing crashes per 100,000 miles, but these are not program Go / No go decisions. Rather training is modified, and/or notices distributed or even routes changed.

Camera monitoring has recently been deployed and will be the basis for random "safety audits" which are currently conducted by supervisors (called "Top Managers"). These "no discipline" audits are inspections of randomly selected single trips (and drivers) conducted every two years across the system.

Wellness is recognized as an element of safety, but is treated somewhat pro forma in terms of admonitions to get out of the bus at rest stops and move around, walk when you can, limit alcohol, etc.

Regarding safety culture / safety climate, the agency is currently initiating a deliberate safety culture program under the auspices of a state mandate to conform to federal requirements to develop a "safety plan" buses consistent with 49CFR673.

Regarding incidental drivers, the agency adopts the citywide policy. The policy limits distance from offices, number of stops (for take home vehicles), cell phone use, etc. There is also a pro forma computer quiz. There is no physical driving test. In addition, all employees have annual MDR (motor vehicle driving record) checks.

Comments & Takeaways

- Review of preventable accidents are used to refocus training on a staff that always turns over (since students eventually graduate)
- Refresher training for busy times (here it's the semester but for other organizations it might be the Holiday seasons)
- The hot topic boards with real time information