

Technical Note 2/2008

Concessionary Travel - Audit and Monitoring



Financial Administration basics of Concessionary Travel

- The Audit process checks and validates the data
- Monitoring seeks out trends and facilitates projections
- Reimbursement is driven by the validated data

All 3 processes are inter-related and can feed off each other

- All involve the same data (ie details of concessionary journeys)
- Key indicators derived from that data are the building blocks of all 3 processes
- Compare and contrast tasks in monitoring can be an important input to audit and can help build confidence

Primary Data Inputs

- Journeys = volume
- Boarding point = responsible authority
- Fare = financial scale

Secondary Data Attributes

- Operator
- Route
- Vehicle Journey
- Driver
- Passholder details

Like it or not, the Operators' assistance is needed in obtaining the data. Cooperate rather than confront

- Operator/TCA are typically untrusting
- In reality very few, if any operators set out to "defraud"
- Many operators, particularly smaller ones, just do not understand the process or the relevance of data and its impact on the reimbursement payments they receive
- There is a mutual interest in getting the data right
- There is a need to work with operators to improve data quality and trust

Data Collection Methods

- Manual extraction from source on to paper or spreadsheet "claims"
- Electronic extraction at source (where electronic ticket machines are used)

Where can data errors occur?

- At source (the point of recording)
- At the time of extraction where manual methods are used
- At any point where transcription is involved
- At the point of use/interpretation

Why can the data be wrong at source?

- Driver distraction (dealing with other passengers, busy periods, etc)
- Failure to check validity and/or type of card
- Incorrect interpretation/understanding of scheme rules (eg in respect of time discretions)
- Error in operating ticket machine (clock time, fare stage, etc)
- Ticket machine breakdown
- Incorrect recording of destination and thus equivalent fare (if this is done)
- Driver "fraud"

Typically

- Journeys are under-counted
- Destinations (and thus "shadow" fares) are recorded inaccurately
- Amongst 450 operators MCL deals with, we have only ever encountered one instance of "fraud"

HOWEVER, there are problems with data but many of these are resolved in the routine scrutiny aimed at calculating correct reimbursement payments and not directly as a result of any formal audit procedures. The key to audit is the "trail" through the process and not so much specific audit tasks. Hence MCL favours an integrated process.

Eliminating the main problem areas

- Avoid reliance on manual extraction of data wherever possible
- Avoid the need for manual transcription of data
- Make sure operators understand what is required and why
- Reduce/remove scope for "guestimation" (eg allocation of journeys to TCAs)
- Compare and contrast key indicators and relate these to external influences (weather, holidays, strikes, etc)

MCL use Electronic Ticket Machine (ETM) data, extracted at source, wherever possible. This and other manually extracted data are fed into a comprehensive Central Information System (CIS) which readily enables reporting of key indicators and more detailed interrogation where needed. This approach also minimizes the need for manual extraction, transcription and "guestimation".

The devil is in the detail - we must ensure the source data is sufficiently accurate and meaningful

- Journey count and location of boarding
- Fare

Methods for securing accurate journey counts

- A “live” smart card system (but who funds the cost of readers on every bus)
- Undertake on-bus audits
- Work with operator revenue control staff (when you can find them)

Boarding locations

- For ETM operators the setting of fare stage is self-enforcing and not an area of great concern if that data is being extracted electronically
- For operators providing manual claims, survey checks may be necessary

Fares – how do we value journeys made?

- Need to be at least at route level to avoid under and over reimbursement
- Cannot rely of “shadow” fares
- Could use analysis of boarding origins by direction and time of day (but complex)
- Use adult on-bus fares as a proxy (but may need adjustment for discounts and journey length differentials)
- Surveys to establish values or check values

After various trials MCL have settled on the proxy method which is also supported by DfT guidance. Operators that supply ETM data can also supply route-by-route average adult on bus fare values. These are picked up in the CIS.

We do need surveys, BUT

- They are expensive, should be used sparingly and thus targeted for maximum effect
- Difficult to undertake on-bus surveys covertly
- Can help validate journey count data and identify potential problems and this is probably the most important function for surveys
- Can help validate average fare values and establish differentials between adult and concessionary journeys
- Need to be representative and, when “used in anger”, statistically sound (and this is where they can get expensive)

A cost-effective approach to journey count audit surveys

- Carry out random, on-bus counts and compare with ETM (or other) data to identify problems

- If problems found (amber warning), repeat checks to establish if the problem is recurrent over a period of time
- If the problem is recurrent (red warning), undertake covert and/or other checks and establish a statistically significant set of results to discuss with the operator
- The operator is then encouraged to take management action or, if he feels he cannot, is asked to accept a factoring of his journey data

A summary of the MCL approach

- Integrate audit, monitoring and calculation of reimbursement payments
- Make sure operators understand what is needed and work with them as far as possible
- Require electronic data extraction wherever possible
- Use adult, on-bus fares as a proxy for concessionary journey values but adjust for discounts
- Establish or buy into a CIS
- Monitor key indicators, compare and contrast
- Undertake a limited survey programme to audit journey counts with some coverage to check average fare values and the accuracy of geographic allocation in the case of manual data submissions