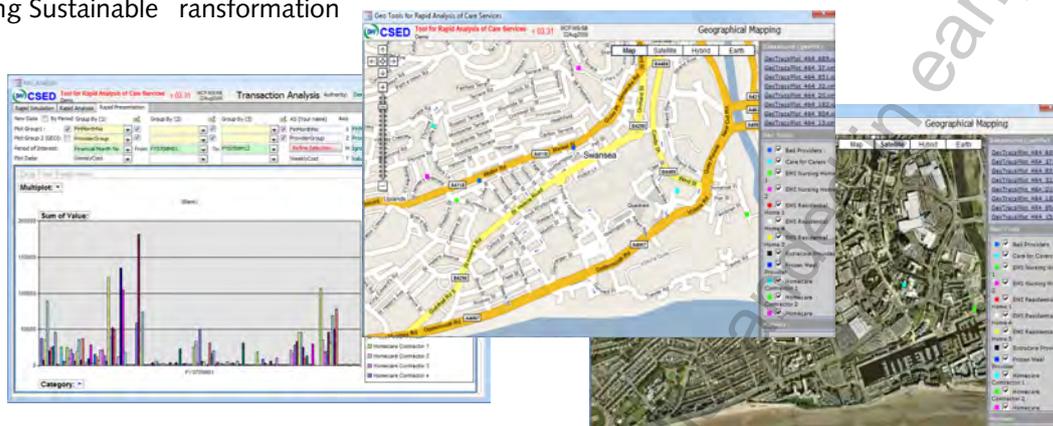


Putting People First Transforming Adult Social Care

Efficiency Delivery - Supporting Sustainable Transformation



Tool for Rapid Analysis of Care Services



* Note that, whilst based on a real councils' dataset, all data has been anonymised (including relocation to Swansea)

Overview

TRACS (Tool for Rapid Analysis of Care Services) is a software modelling package which helps councils identify efficiency savings in social care.

TRACS achieves this by rapidly:

- applying a wide variety of pricing, quantity, client, provider and service level 'what-ifs' to selected subsets of existing care packages; and
- showing trends and patterns in care package related information using reports, graphs and Google maps.

TRACS is targeted at social care commissioners and decision makers who want to test their ideas quickly and effortlessly. Once implemented TRACS can monitor the impact of any such change.

TRACS can be used across all areas of social care spend; tendering, commissioning, demographic analysis - all at the press of a few buttons and, for most datasets, within seconds.

Interfaces have been built linking TRACS to the majority of popular care management systems and many templates are available to interface to bespoke systems. Pricing information can either be entered manually or automatically transferred from relevant financial systems. Creating an interface for TRACS will usually require less than a day of input from the council and TRACS can often be up and running on the same day.

In addition to the core functionality, a further feature called TRACSMATCH identifies individual clients who have multiple identifiers either within the same or across multiple systems.

TRACS is set to become a de facto standard 'middleware' solution - providing a single mechanism to generate health returns (PSS/EX, etc) and for interfacing to other emerging analytical tools.

The Latest TRACS Version 3.3

Version 3.3 features:

- much more flexible (and quicker to implement) interfaces to CareFirst, Swift and others;
- improved reliability and simulation performance;
- greater flexibility for selection of data to plot and export to other applications;
- the ability to export graphs;
- mappings to the proposed new PSSEX standard.

Future TRACS Developments

Pipeline developments include:

- Data collection and reporting functionality covering standard DH returns (e.g. PSS/EX1, RAP, etc.);
- Interfaces to FloSc and other analytical solutions;
- Much improved choice in graphical presentation

TRACS complements other commissioning solutions developed by CSED (Care Services Efficiency Delivery)

- Internal versus External Toolkit : a structured and rigorous approach to identifying the true comparable costs of in-house and external services.
- Commissioning Diagnostic : helping to identify areas of improvement and potential solutions across the spectrum of commissioning activities
- Simple guidance to procurement law as it applies to social services; and
- A proposed Outcomes Framework (within TRACS)

TRACS also supports other CSED efficiency activities, including :

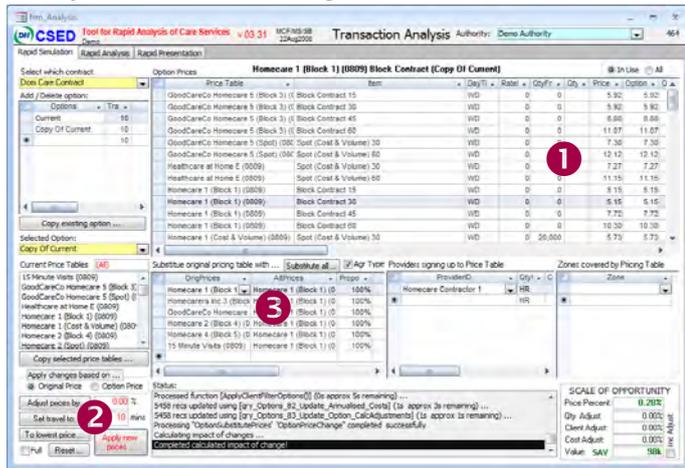
- Demand Forecasting and Capacity Planning - especially POPPI, PANSI and FLOSC;
- Homecare Reablement - by tracking the impact of reablement; and
- Assessment and Care Management process re-engineering around the brokerage areas

"I cannot see how you can do strategic commissioning without a tool like TRACS"

Lee Woolway, Projects Officer Resource Management,
Sheffield City Council

How TRACS Works

Analysis of Price Changes



1. Changing price and adjusting item quantity

At its simplest, TRACS provides the ability to change the price of an item based upon a provider's price list and adjust the quantity of the item supplied. As such changes apply to the most recent 'live' care records, the resulting simulation accurately reflects the impact on current costs. Changes can be stored as an 'option' or scenario which means that multiple ideas can be tested, stored and recalled.

2. Changing all pricing within a framework

There is functionality to support three common types of mass price change:

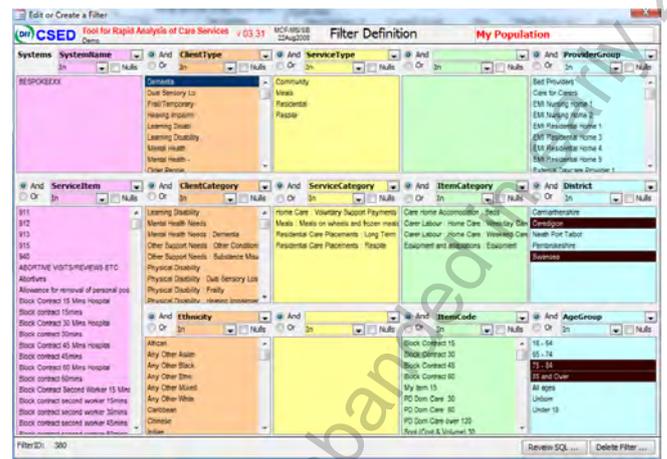
- Application of a standard price change : TRACS provides push button functionality to adjust all selected prices within a framework by a fixed amount. e.g. how would a 2.5% price uplift impact overall costs?
- Consistent application of pricing premiums : It is quite common - although not universal - for councils to pay a premium for short visits. Typically such prices have evolved over time and lost any logical basis. TRACS provides the mechanism to re-apply a consistent approach (expressed in minutes) and thereby re-establish a logical basis for setting premiums - often with significant commercial benefit.
- The 'cherry pick' option : Many councils have a variable pricing model where different providers are paid different amounts for nominally the same service. TRACS can take the lowest price of all providers for each item and establish 'negotiation boundaries' based upon the minimum price paid within the existing supply.

3. Changing the price list

TRACS collates related prices together under a 'price list'. In addition to providing a basis for selectively applying the above price rate changes, such lists can be substituted for one another. This allows for two common scenarios to be tested:

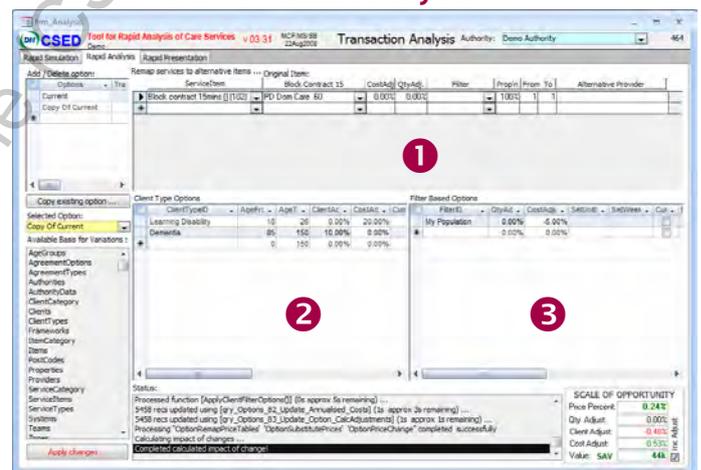
- substitution of one provider by another - useful during tendering or in a situation where an alternative provider must be found; and/or
 - remodelling of pricing structure - moving from a variable pricing model to a fixed one or vice versa or testing the impact of geographical zoning.
- Such changes can be selectively applied using a 'filter'

The Power of 'Filters'



'Filters' enable TRACS to apply selective changes. A filter defines a subset of data based on whatever information has been provided to TRACS (e.g. age, client characteristics, service aspects, etc.). Such selections are automatically stored for subsequent recall across the whole of TRACS. When filters are used, any changes are limited to those packages which fall within the filter criteria. Since TRACS allows combinations of changes, these filters allow very sophisticated simulations.

Cost and Volume Based Analysis



1. Changing what you buy

TRACS makes a distinction between a service and the item being purchased under the heading of the service. This means that you are able to switch what is bought. This lends itself to testing ideas around individual budgets and direct payments (where traditional packages are substituted by an equivalent direct payment), changes to the profile of packages (e.g. substituting a proportion of 15 minutes with 30 minute visits) and testing the impacts of a move from residential to supported living models.

2. Applying demographic changes

If clients are categorised appropriately in the system and dates of birth are provided, then TRACS provides the mechanism to quickly test the impact of demographic changes such as those forecast via POPPI and PANSI. Examples might include the impact of an increasing percentage of dementia cases in the over 85 age group or the costs associated with an increasing number of young people with learning difficulties entering the system

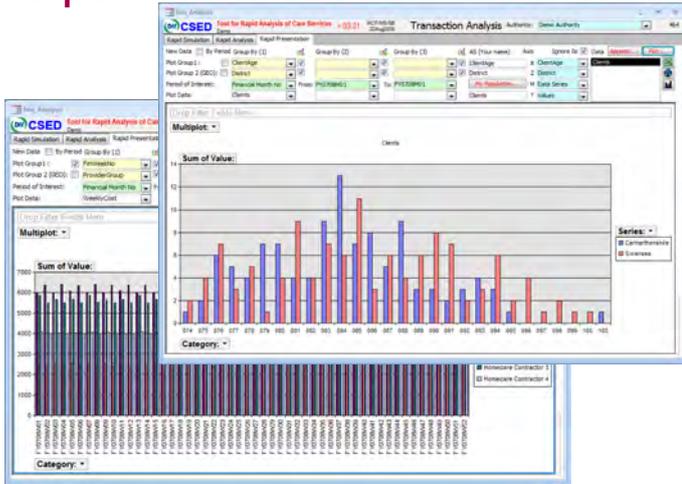
3. 'Filter' Based Adjustments

Filters can also be used to test the effect of cost and/or volume changes:

- Quantities may be adjusted by a percentage;
- Costs may be adjusted by a percentage;
- The unit cost may be set to a fixed value; and/o
- An overall weekly cost may be set

For example, you can test the impact of a 10% increase in weekly costs for residential placements in a particular geographical area. Alternatively you may have variable costs for a particular service and want to know the impact of changing to a fixed cost.

Graphs



Any data available to TRACS can be plotted. Subsets of data can be selected via filters, data can be viewed over time to see trends in volumes and costs, and grouped and combined in a variety of ways. It is also not just about costs and volumes - plots such as age profiles can also be displayed (for example, by geographical region).

Up to six dimensions can be specified at any time. Once selected, any three can be instantaneously combined to form the basis for X-axis, series, and multi-graph plotting (with the Y-axis reserved for the value). We are working on expanding the range of graph options.

Time Based Profile

TRACS creates records for every week of service for all packages it knows about. It becomes easy to see trends, plot joiners and leavers, and compare data over different time horizons.

By creating a record for every week of service, it is also possible to superimpose actual data from an invoicing or time management system and then compare it with the commitment based calculations carried out by TRACS.

Exporting Data to Excel

The data selected for plotting and mapping can also be exported, at client level, to Excel for more detailed local analysis. Fields selected for grouping purposes are independently available for you to use within the spreadsheet enabling you to apply the more sophisticated analytical capabilities of Excel (e.g. PivotChart/Table functionality).

Google® Mapping

We have recently added the ability to transfer data to Google® maps.



Available via a button on the graphing screen, this functionality provides a mechanism to transfer the selected data to a geographical map. Each grouping of data can be colour coded prior to uploading to Google® for plotting on either traditional maps or satellite images.

TRACS comes preloaded with ward and district mapping to postcodes (courtesy of ONS) and longitude and latitude co-ordinates (courtesy of Ordnance Survey). Whilst the latter can be obtained dynamically via Google® geocoding, TRACS populates this information as data is loaded into the system.

This functionality lends itself to zoning analysis, geographical demographic profiling and locality team optimization.

Data Drill Down

Most parts of the interface support 'drill-down'. Double-clicking on the relevant part of the screen displays the associated agreements so that you can see exactly which records have been selected. This helps to check that the end results have been correctly implemented. Double clicking on the agreement record drills down further into the detailed calculations behind each element within the package.

Other Features

TRACS also includes the following:

- TRACSMatch - the facility to match providers and clients from different systems (or recognise duplicates within the same system);
- A very efficient engine for manually creating and maintaining price lists;
- Mechanisms to plot and export derived data; ratios, averages, etc.
- The ability to 'map' existing client types, service types and ages to the proposed new PSS EX1 headings without having to re-configure existing systems; and
- Documentation and a comprehensive set of remote support tools (error logging, hotfix and patch utilities)

For the Technically Minded

System pre-requisites

The following lists the minimum system requirements for running TRACS:

- A relatively recent PC or laptop (minimum Pentium 4);
- A minimum of 512MB of memory (1GB recommended);
- Free hard disk capacity of around 2GB for the average council, 3GB for large counties;
- A run-time version of Microsoft Access (version XP/2002 or greater - including 2007 but now excluding 2000);
- Internet Explorer 5.0 or above and an internet connection for the Google® mapping features.

At least one PC will require the following for linking to the host care management and related systems to extract the data TRACS needs:

- ODBC connectivity (read-only rights recommended) to the underlying care management system/s; and
- A full version of Microsoft Access XP/2002 or greater

TRACS is an application in its own right. The reason for using Microsoft Access is portability and flexibility. As TRACS is designed as a single user standalone application, most councils are able to justify installing MS Access for the purposes of running TRACS - even in environments where IT policy discourages the use of MS Access based databases. TRACS will run over a network in 'thin client' environments.

Refreshing TRACS data

For performance and physical portability reasons TRACS has been designed to operate on a standalone PC using a snapshot of care management data. Other than an internet connection (needed only for geographical mapping) TRACS does not need to operate over a network (although with sufficient band-width TRACS can do so).

Since it uses a snapshot, TRACS requires periodically updating with the latest data. Once configured this update is no more than a five button press operation, taking approximately an hour of elapsed time to refresh for an average council.

What data does TRACS use?

TRACS is designed to work with transaction level data. In the case of homecare this is at the level of the priced element making up a care plan e.g. how many 30 minutes visits a week for a given client, the days of the week and timing (if price varies for week-ends and/or evenings) the frequency - if not weekly, and the start and end dates over which the plan operated.

Whilst the simulation side of TRACS only uses currently open care packages (generally packages with no end date) the graphing and geographical plotting side of the functionality allows for time-based trend analysis. For these reasons TRACS usually extracts a full financial year of data plus whatever portion of the current financial year is available.

For every week that a package runs, TRACS will create a record. In addition to allowing for trend analysis and for summation at any level from weekly to annually, this also provides the ability to store actuals from invoicing / time-sheeting systems.

In addition to basic care plan and provider pricing / cost details, TRACS will usually extract reference data (see adjacent) for the purposes of refined analysis and selection including:

- For each package element: provider details, accounting details (cost centre, expense code, department, etc), team details, geography (post code, ward, district etc)
- Against each client: ethnicity, gender, age, religion, etc.

Interface implementation process

The process of interfacing TRACS to a care management and related systems generally involves the following sequence of activities:

1. Demonstration of TRACS in order to make initial system mapping decisions - ideally involving commissioners and care management system managers;
2. Initial data extraction (to create a local copy of relevant care management data);
3. Data mapping - usually customising an existing mapping template;
4. Initial validation of first attempt at processing the data into TRACS;
5. Updating of interface logic to reflect validation findings
6. Final confirmation of interface logic
7. Substitution of copied tables with linked tables; and
8. Hand-over / presentation to operational staff

The extent to which this work is supported by CSED depends on the needs of the specific council

Ongoing support and maintenance

TRACS has three specific remote support mechanisms:

1. Extensive logged error trapping with a 'request' mechanism by which to email this to TRACS@dh.gsi.gov.uk;
2. 'Hotfix' functionality to receive and implement email based corrections to the TRACS logic; and
3. 'Patch' functionality as a means of implementing more significant version changes.

For more information regarding TRACS:

- visit www.csed.csip.org.uk;
- contact your regional CSED lead; or
- email or telephone:
mark.x.stephenson@dh.gsi.gov.uk 07920 814 101; or
steven.bain@dh.gsi.gov.uk 07763 743 767; or
TRACS@dh.gsi.gov.uk 020 7972 1296

CAREFIRST Tables	SWIFT Tables
ADDRESSES	ADDRESS_HISTORIES
ADE_TASKS	CARE_ITEMS
ADE_TIMES	CARE_OFFERINGS
ADE_VARIATIONS	CLIENT_CATEGORIES
AGREEMENT_DETAILS	CODED_ALT_COST_RSNS
CATEGORIES	CODED_BC_CONT_RATE_LEVELS
CLASSIFICATIONS	CODED_CARE_ITEM_1ST
CODE_VALUES	CODED_CARE_ITEM_2ND
COST_CODE_SETS	CODED_CARE_ITEM_3RD
COST_CODES	CODED_CLIENT_CATEGORIES
COST_RATES	CODED_CONTRIBUTION_TYPES
COST_UNIT_CODES	CODED_ETHNIC_ORIGINS
FAIRS_CONTRACTS	CODED_FREQUENCIES
LOCATIONS	CODED_GENDERS
ORGANISATION_TYPES	CODED_INVOLVEMENT_ROLES
ORGANISATION_UNITS	CODED_ORGANISATIONS
OTHER_REF_NUMBERS	CODED_PROVISION_END_REASONS
PERSONS	CODED_RELIGIONS
RATE_VARIATIONS	CODED_TITLES
REF_VALUES	CODED_TRANSACTION_UNITS
RESOURCING_OPTIONS	COMMITMENTS*
SERVICE_ELEMENTS	CONTRIBUTIONS
SERVICE_PACKAGES	COST_CENTRES
SERVICE_REGISTERS	COST_COMMITMENTS
SERVICE_TYPES	DIVISION_SERVICES
SUPPLIER_INVOICES*	GAZETTEER_ADDRESSES
TRANSFER*	GAZETTEER_HIERARCHIES

* For Actuals if stored within CareFirst