

Title	<b>Forecasting Length of Stay and Cost [FLoSC]</b>
Key Objectives of the Model	<p>This model aims to help local authorities analyse and understand the dynamics of residential long-term care for the elderly by making use of their routinely collected operational data.</p> <p>Specifically, the model provides:</p> <ol style="list-style-type: none"> <li>1. High-level insights into the pattern of movement of residents between and within residential care and nursing care.</li> <li>2. Forecasts of the cost of known commitments, that is of the cohort of publicly funded residents currently in the system based on recent trends. This cost represents the future resources that are already committed due to past admission decisions - a cost councils cannot easily escape. Knowing this baseline cost provides useful input to a local authority's budget planning.</li> </ol>
Description	<p>Westminster University, Health and Social Care Modelling Group [HSCMG] developed the model from a research project (partly funded by the EPSRC) in close collaboration with the Housing and Social Service Department of the London Borough of Merton.</p> <p>The underlying methodology and results have been published in several academic journals, including the Journal of the Royal Statistical Society, Journal of the Operational Research Society, Health Care Management Science and the International Journal of Medical Informatics.</p> <p>The software program that handles all the computation and model fitting is well tested. The model is able to distinguish the set of residents with relatively short stays from the longer stay patients.</p> <p>The software toolkit is an Excel 'Add-in' with a familiar user interface.</p>
Application areas	<p>The model was developed in the context of residential care for the elderly in close collaboration with a local authority.</p> <p>The primary application is for modelling the movement (or survival) of residents in long-term care and for forecasting the costs associated with the existing population.</p>
Input	<p>The simple data requirement is one of the main benefits of this model. The input is operational data already routinely captured by information systems in almost all local authorities.</p> <p>The essential information concerning a resident's stay is: date of admission, type of care, date of discharge (if applicable), and destination of discharge (if applicable). A unique identifier for each resident is needed to track movements of a resident in the system. Other information, such as gender and age at admission, might also be useful if more detailed analysis is desired.</p>
Output	<p>The report contains the results of the fitted model, summary statistics about the data, a diagram showing the high-level pattern of residents' movement and tables and charts of the forecasted costs over a user specified period.</p>

Resources External – initial set-up, ongoing support	Council staff with knowledge of the operational database, familiarity with Excel and statistical concepts could carry out the analysis but consultation with the University research staff could be valuable for setting up the work and interpreting the results.
Internal – initial set-up, ongoing support	The major effort is likely to be in extracting data from the database and cleaning up missing data fields. This will be beneficial in improving data quality for operational use as well as for the analysis.
Indicative Costs and timing	CSED has funded the development and the software is available to councils free of charge.  There would be ongoing benefits in repeating the analysis for forecasting demand and budgeting. Incremental costs for further use would be minimal.
Additional considerations	The system can be downloaded from the website, which also includes detailed documentation including methodology, user guide, tutorial and installation instructions.  <a href="http://www.healthcareinformatics.org.uk/FLoSC">http://www.healthcareinformatics.org.uk/FLoSC</a>
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Documentation	'A software tool to aid long-term budget planning at local authority level' International Journal of Medical Informatics 75 (2006) 664-670

*Disclaimer:*

*CSED provides this information as an indicative overview of the methodology. Councils will need to evaluate proposals from suppliers in the light of their local situation before making decisions on specific applications.*