

Drug Treatment Demand Model Aide Memoir

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Home Office

1 Introduction

- 1.1 This document supports the Drug Treatment Demand Model (DTDM), providing the user with a quick reference guide. It aims to enhance the user's knowledge and ability to use the model, by detailing the sheets in the model and defining the inputs required and the resulting outputs.

2 Interface – Inputs Sheet

- 2.1 This sheet allows the user to change the value of inputs, run the model, and to obtain the headline results on the PDU population in the area specified.
- 2.2 There are two types of data cells on this sheet:
- Yellow cells - indicate information that may be changed by the user.
 - Light blue cells - denote results cells that cannot be modified by the user.
- 2.3 The default input values provided are the best centrally available at the time of model publication. DATs may change them if desired.
- 2.4 If a cell turns red, it indicates that the value entered is invalid and should be amended before running the model. These invalid values include:
- Text where a number is expected.
 - A percentage that is greater than 100 or less than zero.
 - A number that is less than zero, e.g. durations and costs.
- 2.5 Once an update of the input values (yellow boxes) has been entered, click on Run to update the result values (blue boxes).
- 2.6 The following paragraphs define each input (yellow) cell in the input sheet and result (blue) cells where applicable.

Table 1 – Problematic Drug User Population

- 2.7 **Row 8** contains the initial PDU population estimates for the baseline year. Subsequent results in the row show the number of PDUs the model calculates to be in the DAT at the beginning of each subsequent year.
- 2.8 **Row 9** is an input row where the PDU creation rate is entered. The figure indicates the number of new PDUs who are expected to enter, or to come into being, in the DAT in each year. The rate is averaged across the year; i.e. there is no seasonal adjustment to the PDU creation rate. Note that 5% of PDUs are created in the Custodial Sentence state, whilst the remaining 95% are created in the Community state.
- 2.9 The Year 2003/4 starting population column shows the population spread at the beginning of the simulation. Note that the total population is the same as the Total PDUs in DAT cell for the start of year 2003/4.
- 2.10 The model calculates the population for 2004/05 onwards. This is displayed in the blue cells in row 8.

Table 2 - Criminal Justice System

- 2.11 Table 2 contains the input parameters that define the path of PDUs through the adult CJS.
- 2.12 **Row 24:** The results indicate the annual number of PDU arrests as calculated by the model.
- 2.13 **Rows 25–26:** Arrest rate. The next two rows contain the rate at which PDUs in the community are arrested. This rate is expressed as the frequency, per annum, with which a single PDU can expect to be arrested (assuming they stay in the community). Row 25 contains the rate for those PDUs who are in some kind of treatment, while row 26 gives the average rate for those who are not in contact with these treatment services.
- 2.14 For example, an arrest rate of 2 per year indicates that while in the community, the average wait time until arrest is six months. A rate of three per year would mean an average wait of four months, and so on.
- 2.15 The numbers in the remainder of the CJS table indicate the percentage flows between the various parts of the system. For example, at charge, the flows represent number of PDUs who are out on bail having been charged, compared to the number who are remanded in custody having been charged.
- 2.16 It is not necessary for the percentages to sum to exactly 100 because the model will scale the numbers appropriately so that they do. However, it is recommended that the user enter numbers whose sum is close to 100 as the scaling process applied to extreme values may lead to ambiguous results.
- 2.17 **Row 27:** Percent of arrestees to Arrest Referral (AR). This row contains the proportion of arrestees who are seen by an AR worker regardless of whether they are subsequently referred to treatment. It is assumed that referral does not affect subsequent progress through the CJS.
- 2.18 **Rows 29–30:** Release without charge. These rows contain the proportion of arrestees who are subsequently released without charge. It is assumed that the percentage released depends on whether the PDU is in (Tier 3/4) treatment.
- 2.19 **Rows 32–33:** Remand status. The proportion of arrestees remanded on bail and in custody respectively. Note that the DTDM does not separately account for PDUs that plead guilty and are summarily dealt with. Therefore if this data is collected, it is recommended that the flows be divided between the remand and bail states.
- 2.20 **Row 34:** Mortality and Rehabilitation Rates. This row shows the percentage flow of PDUs that either die whilst in this state or if accessing treatment rehabilitate, as determined in table 5.
- 2.21 **Row 37:** Acquittals. This row contains the proportion of those arrested and charged who are acquitted in court. They are assumed to return to the community.
- 2.22 **Rows 39–42:** Disposals. These rows contain the proportions in which convicted PDUs are split between custodial sentences, DTTOs and other

community sentences respectively. The default data values reflect the assumption that those fined are a negligible proportion; if it is considered necessary to include them; they may be represented by the 'other sentence' flow that has no treatment portion and has zero duration.

- 2.23 The **blue result cells** in Table 2 for the baseline year show the number of PDUs that flow through the CJS at each point. Note that this is not the number in each part of the CJS at a particular time; they show the total flow through the entire year.

Table 3 - Community

- 2.24 **Rows 47-51:** These rows indicate the proportion of PDUs in the community in treatment through a number of non-CJS sources.

Table 4 - Treatment System

- 2.25 The input rows in Table 4 indicate the percentage of PDUs in particular states that are in treatment.
- 2.26 **Rows 57-62:** These rows give the proportion of PDUs who are in treatment via the CJS as a result of the following: arrest referral, bail conditions, remanded in custody, custodial sentence and as part of a DTTO or Generic Community Service (GCS).
- 2.27 **Row 64:** This row allows the user to input the proportion of PDUs that are already in treatment.

Table 5 - Rates & Durations

- 2.28 **Row 67:** The mortality rate for PDUs.
- 2.29 **Row 68:** The rehabilitation rate for PDUs, i.e. the proportion who recover from their addiction in one year. This proportion is only applicable to those PDUs accessing treatment.
- 2.30 **Rows 73-78:** The duration rows indicate the average length of time that a PDU will remain in the given state.

Table 6 - Treatment Rates & Durations

- 2.31 Table 6 defines parameters for the treatment modalities.
- 2.32 **Rows 81-86:** The percentage of PDUs entering treatment that are referred to each of the 6 treatment modalities. Note that this will not equate to the percentage of PDUs actually in each modality at any one time as durations differ. It is assumed that the modality mix does not depend on what part of the CJS, if any, the PDU is in.
- 2.33 **Rows 90-95:** The average duration in treatment is defined as the average length of time that a PDU receiving treatment can expect to be receiving it, assuming they complete it successfully, i.e. the 'textbook' duration.
- 2.34 **Rows 98-103:** These rows contain the annual dropout rate for each modality.

2.35 **Rows 108-113:** The unit cost (£) for a year's supply defines the cost of providing a year's worth of treatment to one PDU for a particular treatment modality.

3 Forecast Demand Sheet

3.1 The Forecast Demand sheet provides outputs from the model.

3.2 **Table 7** shows the number of PDUs who enter treatment in the year by modality, by referral source (CJS or community). These figures represent the flow into treatment over the year, not the average number in treatment at any one time.

3.3 **Table 8** provides the number of PDUs in treatment by modality and by referral source at the beginning of the year. This accounts for those PDUs that were in treatment the previous year and are still accessing treatment at the beginning of the current year, i.e. 'retained in treatment' as defined in the NDTMS.

3.4 **Table 9** shows how the flow into treatment is split between PDUs in different CJS states, as well as the flow due to Arrest Referral.

3.5 **Table 10** indicates the necessary capacity required to handle all the PDUs entering, and in, treatment.

3.6 **Table 11** shows the cost (£) in each year to provide the necessary capacity stated in Table 10.

3.7 **Tables 12 and 14** provide the annual number of PDUs dying and rehabilitating in each state, whilst **Table 13** provides the annual number of PDUs that flow through each point in the CJS. This allows the user to verify that the numbers are sensible in the forecast years.

4 Forecast New Problematic Drug Users Sheet

4.1 This sheet allows the user to monitor the number of new PDUs entering treatment, i.e. those that have never been in treatment before.

4.2 **Table 15** is yellow depicting input fields. Here the user can enter the proportion of the PDU population who are believed to have been in treatment already, both in the community generally and those referred by the CJS.

4.3 **Table 16** uses the inputs of Table 15 and the results in Table 9 to estimate the number of PDUs that are new to treatment.

5 DAT Summary Chart

5.1 The DAT Summary chart provides an overview of the total number of PDUs who are in the DAT, and the number who are in treatment within the DAT.