



*National Treatment Agency  
for Substance Misuse*

**National Drug Treatment Monitoring System (NDTMS)**

**NDTMS Data Quality Metrics**

**NDTMS Data Verification Metrics**

**NDTMS Data Quality Access Application User Guide**

**Guidance and Explanation**

**Financial Year 2011/12**

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# 1 Revision History

Version	Author	Purpose / Reason	Date
6.01	M.Heap	Uplifted in light of new CDS-F metrics	20/04/2009
6.02	M.Heap	Added details on TOP metrics	15/05/2009
6.03	P Mantrala	Edited v6.02 to facilitate interim metrics	19/11/2009
6.04	P Mantrala	Modified the Data Load & Data Quality percentage calculation formula	10/12/2009
6.05	P Mantrala	Removed CEM base figures from section 8.3	13/01/2010
7.00	J Jaswani	Updated document to bring in line with approved metrics for 2010/2011 Added Methodology and construct behind CEM based figures. Removed Aggregate scoring and replaced with Target based percentage aims and ambitions. Added new Alcohol and TOP Metrics Added Aim/Ambition percentage based Targets for new Metrics Changed Aim/Ambition percentage based Targets for some existing metrics. . Updated in light of new NTA central metrics.	06/05/2010
7.00	D Grundy	Included User Guide for DQ Access Application	12/05/2010
7.01	J Jaswani	Changes to Tolerances for Metric T01 Further detail around Metric T01 and T02	14/07/2010
7.02	D Grundy	Changes to Tolerances for Metric A01 Update to methodology for A01, A03, A04 and M08	
8.00	J Jaswani	Updated for 2011/2012	

# 2 External References

No	Description	Version
1	NDTMS Data Quality Metrics - 2009-10 - v6.01	6.01
2	SLA Addendum: Outputs, Guidance and Facilitation	1.0

References to the above documents will be indicated by square brackets (e.g. [1])

# 3 Outstanding Issues:

No	Section	Description
1	7 & 8	May need to draw out the targeted nature of the metrics (i.e. shift from monthly to quarterly targets – may even discuss trajectories)

#### 4 Significant Changes (in this issue):

No	Section	Description
1	9	Edited the Data Quality and Data Load percentage calculation formula in M1 & M2 metrics

#### 5 Distribution

Name	Role	Email address
NDTMS Regional Teams		Various
NTA Regional Teams		Various
Rosanna O'Connor	Director of Regional Management	
Stephen Hodges	Director of Corporate Services	
Colin Bradbury	Treatment Delivery Manager	
NTA Analysis Team		Various
Malcolm Roxburgh	NTA Information Projects Manager	
Alisha Cooper	Criminal Justice Information Manager	
Al Torkpour	Technical Lead NDTMS	
Marilyn Bell	NDTMS Contracts Manager	
Prasad Mantrala	Operations Section Manager	
Karen Cheney	IM&T Help Desk Manager	

## 6 Introduction

This document describes the Data Quality Metrics, which are monitored as part of the NTA's Service Level Agreement [2] with the regional NDTMS teams.

The purpose of this document is to explain how NDTMS data quality is monitored and in which areas, as well as explaining the purpose/importance and scoring mechanism of each metric.

This document aims to set out the NTA's national framework for measuring regional NDTMS data quality and as such the NTA understands the importance of ensuring the timely publication and dissemination of this document to its regional NDTMS partners.

The main audience of this document are:

- Regional NDTMS teams
- Regional NTA teams
- National NTA analysis/programme departments

All Data Quality Metrics will be supported by an associated MS Access application

The NTA will be providing regional spreadsheets, which highlight data quality trends, percentages, RAGS and national averages.

## 7 The NDTMS Data Model, Data Flows and Reporting

This section aims to give the reader a brief introduction to the conceptual NDTMS data model (i.e. the data architecture), how data flows into the NDTMS data systems (i.e. how data is acquired and finessed) and finally how this data is used to generate reports (e.g. such that can be found on [www.ndtms.net](http://www.ndtms.net)).

### 7.0.1 NDTMS Data Model

The current NDTMS data model is based on a linear timeline for each client at a given treatment service provider; starting at point of referral and finishing at the point of discharge.

In practice, a single line of CSV (Comma Separated Values) data is received from a service provider, representing the very core information of activity for a client at that service provider. This can be seen well in figure 1:

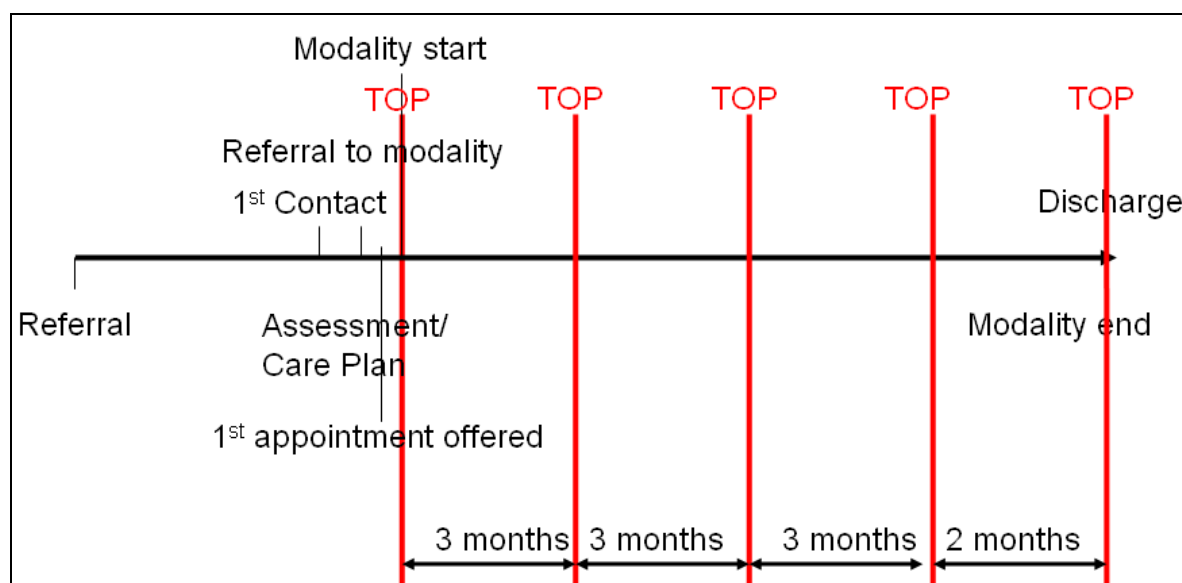


Figure 1: timeline view of NDTMS data

Figure 1 also shows that at certain times within a client's treatment journey the NTA is interested in slicing outcomes profiles to show the effectiveness of the treatment being received by the client. But it still does not show any relationships between data items or a real model of any kind.

The linear world shown above (i.e. time's arrow is the line) can also be seen in terms of relational groups of client data (see figure 2 below). This diagram pertains to a single client at a single service provider with two episodes, each with two interventions and three TOP records:

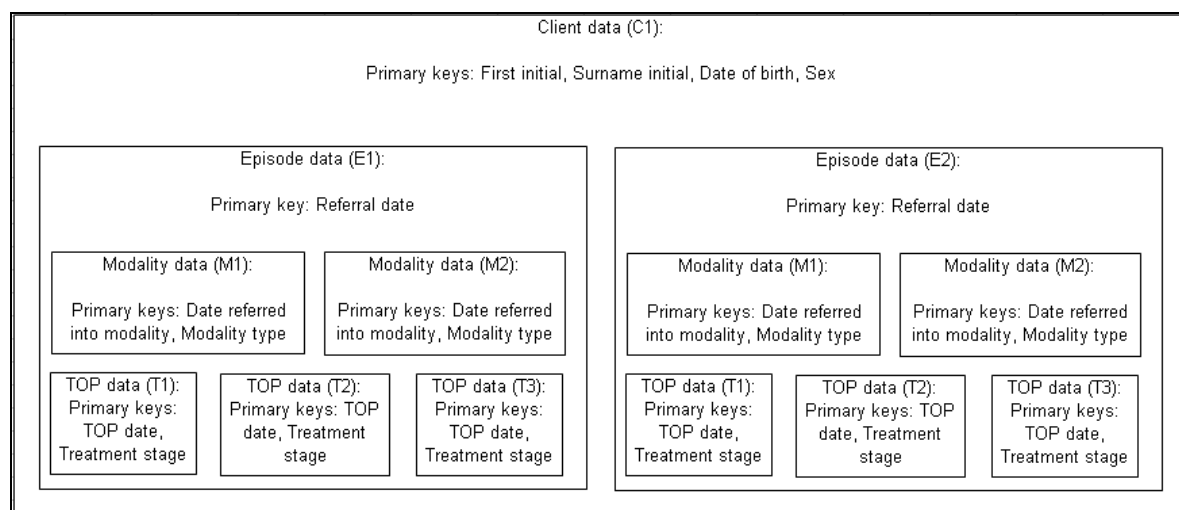
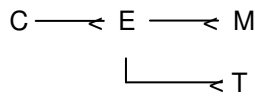


Figure 2: nested view of NDTMS data

A simpler version of the above “nested” diagram is demonstrated in figure 3 below, where C represents data related to a single client, E represents data related to the client’s episodes, M represent data related to the client’s interventions (or modalities) and T represents data related to the client’s treatment outcome profiles:



**Figure 3: relational view of NDTMS data**

Figure 3 shows that a single client can have multiple episodes, and just one of these episodes (or all) can have multiple interventions, as well as the same single (or all) episode having multiple TOP data.

Given the many ways of viewing the NDTMS data model, it is possible at each stage along the timeline, nested view or branching tree model to determine a set of data metrics pertinent to the hierarchical parts of the data.

The NDTMS data quality metrics are broken into sections to reflect this hierarchy, as well as utilizing any additional information from the NTA NDTMS Core Data Set Business Definitions [4], such as whether or an NDTMS field is mandatory, or even if it is expected to change at triage.

### 7.0.2 Data Flows and Reporting

Figure 4 shows an overview of the flow of data capture, verification, extraction, cleansing and finally report production.

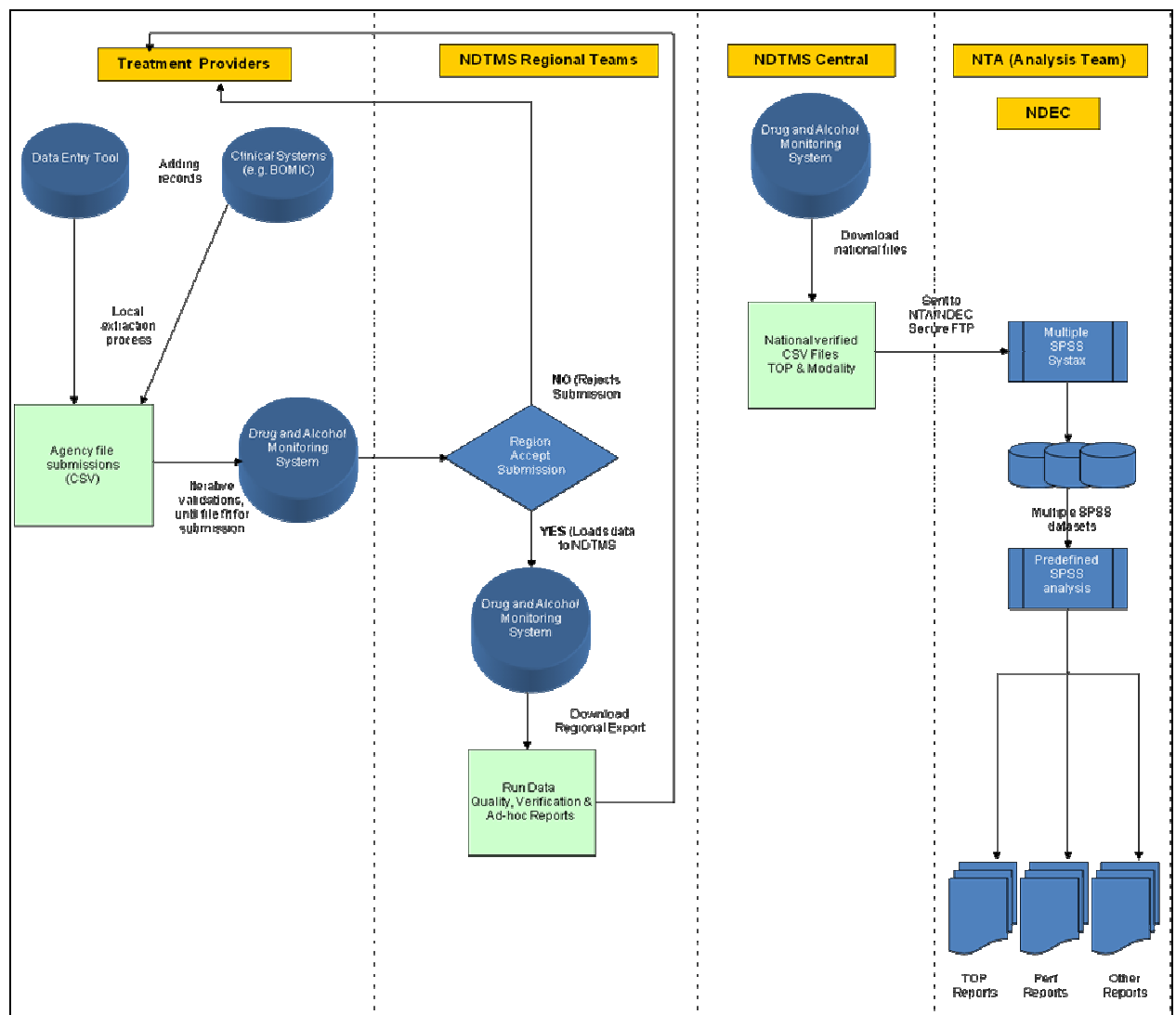


Figure 4: NDTMS data flow (from service provider through to national NTA reporting level)

## 8 NDTMS data quality framework for 2011/12

All metrics detailed in section 9 will be focused on a monthly national basis, targeted on a quarterly national basis and reviewed every 6 months with each regional NDTMS team.

This section should be read in conjunction with [1].

The approach for adding, monitoring and then finally removing metrics from this framework has usually worked from the following:

- Most metrics are derived from core NDTMS activity (driven off the business rules held within [3]) and subsequently from DoH/HO initiatives (e.g. missing modality start audit)
- Once a metric has been approved, a start position is captured with each metric per region
  - Attaining a national baseline and tolerances (Ambition/Aim)
- Providing a 12-month window for all regional NDTMS teams to attain the aim
  - Monitored and reported each month
- Once each metric has been addressed sufficiently (i.e. zero or insignificance), the loading validation rules that also support the metrics can be shifted to ERROR (thus making it impossible to load any more records that meet the metrics' criteria) and the metric can be moved into the redundant metrics worksheet
  - To be monitored and reported by exception each 6 months

The methodology of the approach above is unlikely to change, however the 12-month window may need to be contracted in order to accommodate the pressures of correcting/fixing long-term outstanding data quality issues (e.g. where mismanaged data migrations have protracted the timely correction of data within last year's 12-month window).

### 8.0.1 NDTMS Data Quality Metrics v6.06

The worksheet **CEM based figures** houses regional totals for Episodes, Modalities and TOP records and in some instances is used as the denominator for a subset of the metrics.

- CEM1. Total Episodes – All episodes for related active agencies.
- CEM2. Current Episodes – Currently open or recently closed episodes for active agencies (Open episodes or episodes discharged on or after 01/04/2009)
- CEM3: Current Modalities – Modalities associated with open episodes or recently closed episodes for active agencies (Open episodes or those with a discharge date on or after 01/04/2009)
- CEM4: Active Agencies – Number of agencies with no de-active date.
- CEM5: Agencies submitting data – Number of agencies submitting data.
- CEM6: Total number of modalities related to active agencies or those, which have been, deactivated on or after 01/04/2005
- CEM7: Total number of TOP records related to active agencies or those, which have been deactivated on or after 01/04/2005.

The worksheet **"Metrics base figures"** usually houses the numerator values for any percentages quoted in any of the RAG worksheets and contains the following figures:

- M1. Data load percentage per region
- M2. Data quality percentage per region
- M3. Number of unique client episodes sharing the same client reference (potential duplicates) per region
- M4. Number of episodes with missing discharge data per region
- M5. Number of duplicate open episodes per region
- M6. Number of distinct episodes that overlap per region
- M7. Percentage completion of the field PRNTSTAT per region
- M8. Percentage completion of the field CHILDWTH per region
- M9. Number of duplicate open modalities per region
- M10. Number of overlapping modalities per region
- M11. Number of clients in effective treatment with no modality start per region
- M12. Number of episodes with poly drug registered as DRUG1-3
- M13. Number of agency episodes misreported under tier 4 interventions
- C2. Number of agencies complying with latest CDS (G) per region

- C3. Number of episodes with dates out of sequence per region
- C4. Number of episodes with dates outside agency de-active date per region
- C5. Number of records with incomplete discharge/modality end/exit data per region
- A1. Number of primary alcohol episodes but no related alcohol modalities.
- A2. Number of primary, secondary or tertiary alcohol episodes with related alcohol modalities and no PCT code.
- A3. Number of primary alcohol episodes with mismatches between Alcohol Days and Units.
- A4. Number of primary alcohol episodes with missing or zero Alcohol units.
- T1. Number of individuals who have an overlapping TOP Care Coordination field.
- T2. Number of individuals expected to have a TOP Care Coordination field populated but do not have one.

The worksheet “**Completed NDTMS Verification dataset RAG**” houses the percentages and RAG scores for monthly completed NDTMS datasets (red scores show failure) and contains the following figures:

- C2. Current CDS compliance percentage and RAG
- C3. Episode dates out sequence percentage and RAG
- C4. Episodes with dates outside agency de-active date percentage and RAG
- C5. Episodes with incomplete discharge/modality end/exit data percentage and RAG

The worksheet “**Core NDTMS Metrics RAG**” houses the core metrics for monitoring main business functions within the NDTMS and contains the following figures:

- M1. Data load percentage per region
- M2. Data quality percentage per region
- M3. Percentage of unique client episodes sharing the same client reference (potential duplicates) per region
- M4. Percentage of episodes with missing discharge data per region
- M5. Percentage of duplicate open episodes per region
- M6. Percentage of distinct episodes that overlap per region
- M7. Percentage completion of the field PRNTSTAT per region
- M8. Percentage completion of the field CHILDWTH per region
- M9. Percentage of duplicate open modalities per region
- M10. Percentage of overlapping modalities per region
- M11. Percentage of clients in effective treatment with no modality start per region
- M12. Percentage of episodes with poly drug registered as DRUG1-3
- M13. Percentage of agency episodes misreported under tier 4 interventions
- A1. Percentage of primary alcohol episodes but no related alcohol modalities per region
- A2. Percentage of primary, secondary or tertiary alcohol episodes with related alcohol modalities and no PCT code per region.
- A3. Percentage of primary alcohol episodes with mismatches between Alcohol Days and Units per region.
- A4. Percentage of primary alcohol episodes with missing or zero Alcohol units per region
- T1. Percentage of individuals who have an overlapping TOP Care Coordination field between treatment providers per region.
- T2. Percentage of individuals expected to have a TOP Care Coordination field populated but do not have one per region.

## 9 NDTMS Data Verification Metrics

All metrics below will be averaged over the last 6 months when reviewing performance at each regional SLA review.

Metric name	Technical details	Business details (headline data issues plus supporting details)	Targets
<b>Completed dataset RAG</b>			
C2	<p>Current CDS Compliance</p> <p>Percentage of agencies submitting files that do not meet the current version/standard of the NDTMS Core Data Set (CDS) – metric to be taken from the latest monthly submissions</p> <p>(Distinct number of agencies submitting to the current CDS level for their monthly submission) / (Distinct number of agencies submitting data that month)</p>	<p><b>Service provider’s data conformity to NDTMS</b></p> <p>Provides first measure of how well a regional NDTMS team’s providers are doing to migrate their monthly data submissions to the latest version of the NDTMS core data set (i.e. post April 2010 this is CDS G)</p>	<p>Ambition: 100%</p> <p>Aim: 95 %</p> <p>&lt; 95% Warrants further investigation by the central NDTMS team.</p>

	<b>Metric name</b>	<b>Technical details</b>	<b>Business details (headline data issues plus supporting details)</b>	<b>Targets</b>
C3	Episode dates out of sequence (number of episodes)	(Number of episodes meeting this criteria) / (Number of current episodes)	<p>This metric deals with multiple conditions that a service provider's data have not met:</p> <p><i>Date of birth must at least 1 year and 1 day before Referral, Care plan date, Health care assessment, Hep C start date</i> It is unlikely that a client under the age of 1 year and 1 day would be referred and/or given a care plan and/or provided a healthcare assessment and/or have been tested for Hep C</p> <p><i>Referral date cannot be after Triage date</i> A client cannot be triaged (when the client first makes face-to-face contact with a service provider) before being referred to that service</p> <p><i>Triage date cannot be after Discharge date</i> A client cannot be discharged from treatment before a client is triaged</p> <p><i>Health care Assessment date cannot be after Discharge date</i> A client cannot be discharged from treatment before they are given a health care assessment</p> <p><i>Care plan Assessment date cannot be after Discharge date</i> A client cannot be discharged from treatment before they are given a care plan</p> <p><i>Hep C start date cannot be after discharge date</i> A client cannot have started treatment for Hep C in an episode of treatment after being discharged from that same episode</p>	<p>Ambition 0.00%</p> <p>&gt; 0.00% Warrants further investigation by the central NDTMS team</p>
C4	Episodes with record dates outside the agency de-active date	(Number of episodes meeting this criteria) / (Number of total episodes)	<p><b>Numbers in treatment calculations</b> In terms of NDTMS, a service provider is either active or de-active, depending on its commissioning status: active means that the service is providing interventions/referrals to clients and</p>	<p>Ambition 0.00%</p> <p>&gt; 0.00% Warrants further investigation by the central NDTMS team.</p>

Metric name	Technical details	Business details (headline data issues plus supporting details)	Targets
		<p>submitting data to the NDTMS; de-active means that the service has been decommissioned and no longer submits data to the NDTMS. When a service is decommissioned, all treatment episodes for clients at that service should be closed and discharged (the same works for those clients being transferred to another service). This metric highlights those treatment episodes which have treatment dates which sit on or after the de-activate date of the decommissioned treatment service provider. These data records are discounted in NDTMS reporting and can therefore be critical to correct for those partnerships struggling to meet targets</p> <p>Highlights agency episodes with treatment information dates (triage, discharge, modality start/end) that sit outside the agency de-active date</p>	
C5	Episodes with missing discharge/modality end dates for de-active agencies	<p><b>Numbers in treatment calculations</b>  Much like metric C3 above, this measurement shows those agencies with missing discharge information and/or missing intervention closure dates, for those agencies which are de-active</p> <p>Highlights agency episodes with treatment information dates/flags (discharge date, modality end date and modality exit status) that are missing for de-active agencies</p>	<p>Ambition: 0.00%</p> <p>&gt; 0.00% Warrants further investigation by the central NDTMS team.</p>

## 10 Data Quality Metrics

	Metric name	Technical details	Business details (headline data issues plus supporting details)	Targets
<b>Core NDTMS Metrics</b>				
M1	Data Load percentage	Percentage of data that was able to be loaded (no errors) into NDTMS  (Number of valid records) / (Total number of records – number of blank records)	<b>Numbers in treatment calculations</b> Headline figure to indicate how many records (at a provider, partnership or regional level) were loadable into the regional database. The goal here is to attain 100% load. Any data that does not get loaded is thrown away each month. Differences of 1-2% therefore are actually quite significant. 100% data load means that all records were valid (i.e. no record contained a serious data error preventing loading). If load % increases, then other more detailed metrics will change according to how the load % was resolved  Highlights providers' quality of monthly file submissions: <b>load</b> and data quality	Ambition: 99.90%  Aim: 99.80%  < 99.80% Warrants further investigation by the central NDTMS team.
M2	Data Quality percentage	Percentage of data that contained no Errors or Warnings (measure of data quality)  (Number of records with no errors and warnings) / (Total number of records – number of blank records)	<b>Performance management targets</b> Headline figure to indicate how many records (at an agency, DAT or regional level) were perfect (i.e. not just loadable but also had no minor data errors). A minor data error might require the changing of an incorrect PCT code for example. This measurement indicates at a high level how well data submissions conform to complete NDTMS accuracy  Highlights agencies' quality of monthly file submissions: load and <b>data quality</b>	Ambition: 99.80%  Aim: 97.50%  < 97.50% Warrants further investigation by the central NDTMS team.

	<b>Metric name</b>	<b>Technical details</b>	<b>Business details (headline data issues plus supporting details)</b>	<b>Targets</b>
M3	Duplicate clients (with same client reference)	Metric to be calculated as percentage of records that are identified for the episodes  (Number of client reference episodes meeting this criteria) / (Number of total episodes)	<b>Numbers in treatment calculations</b> Client engaged in treatment at a service provider can be assigned a client reference number (this detail must be unique at the service provider for that client). This metric shows those unique clients who share the same client reference at a service. It is a good indicator of data double-entry or erroneous data. Removing these potentially erroneous clients from the database will alter numbers in treatment  Highlights those agencies with duplicate clients with the same attributers	Ambition: 0.05%  Aim: 2.50%  > 2.50% Warrants further investigation by the central NDTMS team.
M4	Missing Discharge Data	Metric to be calculated as percentage of records that are identified for the current episodes  (Number of episodes meeting this criteria) / (Number of current episodes)	This metric shows client treatment data that has not been discharged properly. To discharge a client's treatment episode, a discharge date AND discharge reason is required. This report shows those treatment data where one of these data items is missing. Missing discharge dates affect the reported monthly <b>Numbers in treatment calculations</b> (this can also affect local retention rates); missing discharge reasons affect quarterly performance partnership planned discharges  Highlights agency episodes where there are missing discharge dates and present discharge reasons (or vice versa)	Ambition: 0.00%  Aim: 0.25%  > 0.25% Warrants further investigation by the central NDTMS team.

Metric name	Technical details	Business details (headline data issues plus supporting details)	Targets
M5 Duplicate open episodes	<p>Metric to be calculated as percentage of records that are identified for the current episodes</p> <p>(Number of episodes meeting this criteria) / (Number of current episodes)</p>	<p>This metric shows duplicate open (no discharge information) client treatment data (for the same client at the same service provider). A client may only have one active/open non-overlapping treatment episode at any given time, until that client is discharged from treatment and starts another. A treatment episode is defined based on the referral and discharge dates. Each treatment episode will have treatment interventions associated with it (i.e. modalities). If this data error is not corrected (one of the episodes discharged or deleted), this could affect <b>treatment journeys</b> for the partnership.</p> <p>The figure below shows an example of what is as a duplicate open episode and the type of scenario, which is highlighted by the metric.</p> <p>The second treatment episode has a referral date AFTER the referral date of the first treatment episode.</p> <p>Treatment Episode 1   -----  Treatment Episode 2   -----</p> <p>Highlights agency episodes where a client has two episodes which are open (no discharge date)</p>	<p>Ambition: 0.05%</p> <p>Aim: 1.00%</p> <p>&gt; 1.00% Warrants further investigation by the central NDTMS team.</p>

Metric name	Technical details	Business details (headline data issues plus supporting details)	Targets
M6 Overlapping episodes	<p>Metric to be calculated as percentage of records that are identified for the current episodes.</p> <p>(Number of episodes meeting this criteria) / (Number of current episodes)</p> <p>The conditions which support this particular metric are described below</p> <p>Highlights where the closed treatment episode has a referral date <b>AFTER</b> the referral date of the open treatment episode.</p> <p>Treatment Episode 1   ----- Treatment Episode 2   -----  </p> <p><i>The above scenario usually occurs if a referral date for the treatment episode is amended to a later date and is discharged but the treatment episode with an incorrect earlier referral date is still on the system.</i></p> <p>Treatment Episode 1   -----   Treatment Episode 2   -----</p> <p><i>The above scenario is where we have a treatment episode that is discharged but a second treatment episode has a referral date after the referral date of the first treatment episode and is open.</i></p>	<p>Overlapping episodes can be thought of as similar to metric M5, but one of the episodes has a discharge date. For example: episode 1 discharge date is after the referral date of episode 2, this means that both episodes overlap. A client can only have one distinct active/open non-overlapping treatment episode. Either the discharge dates or referral dates will require to be amended for these two episodes in order to make them continuous and non-overlapping. This metric will affect how <b>treatment journeys</b> are calculated.</p> <p>Highlights agency episodes where a client has two different episodes (different referral dates) which overlap (the discharge date of one is after the referral date of the other)</p>	<p>Ambition: 0.05%</p> <p>Aim: 1.00%</p> <p>&gt; 1.00% Warrants further investigation by the central NDTMS team.</p>

	<b>Metric name</b>	<b>Technical details</b>	<b>Business details (headline data issues plus supporting details)</b>	<b>Targets</b>
M7	Percentage completion of parental status field (percentage of current episodes)	(Number of episodes with PRNTSTAT complete) / (Number of current episodes)  The metric highlights cases where for every treatment episode we have missing data in the Parental Status PRNSTAT field (Nulls/Zero constitute blanks)	<b>New drug strategy priorities for 2009/10</b> focuses more attention on the hidden harm agenda. The aim is to improve the current collection of data on the number of children living with clients and can be used for <b>needs assessment</b> and local planning needs	Ambition: 80.00%  Aim: 75%  < 75.00% Warrants further investigation by the central NDTMS team.
M8	Percentage completion of children with field (percentage of current episodes)	(Number of episodes with CHILDWTH complete, where expected) / (Number of current episodes, where expected)  The metric highlights cases where for every treatment episode we have missing data in the Children With CHILDWTH field. (Nulls constitute blanks)	<b>New drug strategy priorities for 2009/10</b> focuses more attention on the hidden harm agenda. The aim is to improve the current collection of data on the number of children living with clients and can be used for <b>needs assessment</b> and local planning needs	Ambition: 80.00%  Aim: 75%  < 75.00% Warrants further investigation by the central NDTMS team.

Metric name	Technical details	Business details (headline data issues plus supporting details)	Targets
M9 Duplicate open modalities (number of modalities)	<p>(Number of modalities meeting this criteria) / (Number of current modalities)</p> <p>The metric highlights where an individual client has started multiple treatment modalities of the same type at a single treatment service provider.</p> <p>Treatment Modality 1   ----- Treatment Modality 2   -----</p> <p>The above condition is where we have two treatment modalities of the same modality type for a single client at a single treatment service provider where the modality start date of the second treatment modality is after the modality start date of the first treatment modality.</p> <p>Treatment Modality 1   ----- Treatment Modality 2   -----</p> <p>The above condition is where we have two treatment modalities of the same modality type for a single client at a single treatment service provider and both treatment modalities share identical modality start dates.</p>	<p><b>Treatment journey</b> (episodes left open too long affect the linking of a client's treatment journey, which directly affect retention and waiting times), numbers in treatment (a client left on the books for too long will be continually counted month-on-month until they are discharged)</p> <p>Highlights agency interventions/modalities where two or more client treatments ostensibly have been repeated (duplicate) but not finished/closed</p>	<p>Ambition: 0.10%</p> <p>Aim: 0.25%</p> <p>&gt; 0.25% Warrants further investigation by the central NDTMS team.</p>

Metric name	Technical details	Business details (headline data issues plus supporting details)	Targets
M10 Overlapping modalities (number of modalities)	<p>(Number of modalities meeting this criteria) / (Number of current modalities)</p> <p>The metric highlights where a single client has more than one treatment modality of the same modality type at a single treatment service provider where the modality start date of a second treatment modality is BEFORE the end date of a previous treatment modality of the same type and is open.</p> <p>Treatment Modality 1  -----   Treatment Modality 2  ----- </p> <p>OR</p> <p>Treatment Modality 1  -----   Treatment Modality 2  ----- </p>	<p><b>Treatment journey</b> (episodes left open too long affect the linking of a client's treatment journey, which directly affect retention and waiting times), numbers in treatment (a client left on the books for too long will be continually counted month-on-month until they are discharged)</p> <p>Highlights agency interventions/modalities where client's treatment overlaps another identical intervention for that client</p>	<p>Ambition: 0.10%</p> <p>Aim: 0.25%</p> <p>&gt; 0.25% Warrants further investigation by the central NDTMS team.</p>

Metric name	Technical details	Business details (headline data issues plus supporting details)	Targets
M11 Clients in effective treatment, with no modality start (number of records)	(Number of NDTMS records meeting this criteria) / (Total number of NDTMS records)	<p><b>New effective treatment calculation 2008/09</b> This measurement deals with those clients who might have been left on a service provider's systems too long, without starting a modality. This could affect potential under-counting of clients in treatment and will affect the new effective treatment calculation and treatment journeys</p> <p><b>Clients in effective treatment</b> Clients in effective treatment during the period 1 January 2007 to 30 September 2007 (these dates are parameters in the Crystal Report and each can be rolled onwards one month at the point of the next data load). This means:</p> <ul style="list-style-type: none"> <li>o The client is triaged before 30 September 2007 and discharged after 1 January 2007, or is still in treatment, and <ul style="list-style-type: none"> <li>o The difference between triage and discharge is greater than or equal to 83 days, or</li> <li>o The difference between triage and discharge is less than 83 days and the discharge code is 1, 2 or 5</li> </ul> </li> </ul> <p><b>Clients in contact for longer than 4 weeks, who have not started treatment</b> This cohort of clients is designed to highlight potential data issues. The assumption here is that these clients, having been in treatment for 4 weeks or more, should have started a treatment intervention, and therefore should have a modality start recorded.</p> <p>Clients in contact during the period 1 October 2007 and 30 November 2007 (dates derived from the parameters). This means:</p> <ul style="list-style-type: none"> <li>o The client is triaged between 1 October 2007 and 30 November 2007, and discharged after 30 September 2007, or still in treatment, and <ul style="list-style-type: none"> <li>o The difference between triage and discharge is greater than or equal to 28 days, or</li> <li>o The difference between triage and 31 December 2007 is greater or equal to 28 days and client is still in treatment</li> </ul> </li> </ul>	<p>Ambition: 0.25%</p> <p>Aim: 0.50%</p> <p>&gt; 0.50% Warrants further investigation by the central NDTMS team.</p>

	<b>Metric name</b>	<b>Technical details</b>	<b>Business details (headline data issues plus supporting details)</b>	<b>Targets</b>
M12	Poly drug use (number of modalities)	(Number of modalities meeting this criteria) / (Number of current modalities)	This metric shows the proportion of modalities where drug1, drug2 or drug3 = poly drug (8888).	Ambition: 0.05% Aim: 0.25% > 0.25% Warrants further investigation by the central NDTMS team.
M13	Misreporting of tier 4 interventions from non-tier 4 agencies (number of modalities)	(Number of modalities meeting this criteria) / (Number of current modalities)	This metric shows the proportion of tier 4 only modalities being reported by non-tier 4 agencies.	Ambition: 0.25% Aim: 0.50% > 0.50% Warrants further investigation by the central NDTMS team.
A1	Primary Alcohol episodes but no Alcohol Modality	(Number of Episodes meeting this criteria) / (Number of primary alcohol episodes triaged on or after 01/04/2009)  This metric highlights cases where we have Primary alcohol episodes, with at least one drug intervention but the episode does not relate to an alcohol modality.	This metric shows the proportion of Primary alcohol episodes with at least one drug related modality but no alcohol modality.  It is important that agencies submitting primary alcohol episodes are treating clients with appropriate treatment modalities. This metric will highlight whether data received by the NTA is as accurate as possible.	Ambition: 1.5% Aim: 2.5% > 2.5% Warrants further investigation by the central NDTMS team.
A2	Primary, Secondary or Tertiary Alcohol episodes with related alcohol modalities but no PCT	(Number of Episodes meeting this criteria) / (Number of primary alcohol episodes triaged on or after 01/04/2009) This metric highlights cases where we have primary, secondary or tertiary alcohol episodes with related alcohol modalities but no PCT	This metric shows the proportion of Primary, secondary or tertiary alcohol episodes or alcohol modalities but no PCT codes assigned. It is important that ANY alcohol treatment activity be supported by the presence of the correct PCT code to ensure that data is included in alcohol data performance monitoring.	Figures are too small to set Aims and Ambitions for now.

A3	Primary alcohol episodes with mismatches between Alcohol Days and Units.	(Number of Episodes meeting this criteria) / (Number of primary alcohol episodes triaged on or after 01/04/2009)  This metric highlights Primary alcohol episodes, which include mismatches between Alcohol days and Alcohol units.	This metric shows the proportion of Primary alcohol episodes, which contain mismatches between Alcohol days and Alcohol units. (i.e. 3 Alcohol Days 0 units)  It is expected that these fields be populated with values > 0 for Primary Alcohol episodes.	Ambition: 0.50%  Aim: 0.70%  > 0.70% Warrants further investigation by the central NDTMS team.
A4	Primary alcohol episodes with missing Alcohol Units	(Number of Episodes meeting this criteria) / (Number of primary alcohol episodes triaged on or after 01/04/2009)  This metric highlights Primary alcohol episodes, which contain nulls or zero in the Alcohol units fields.	This metric shows the proportion of Primary alcohol episodes with missing or zero Alcohol units.  It is expected that this field are populated with a value > 0 for Primary Alcohol episodes	Ambition: 0.05%  Aim: 0.10%  > 0.10% Warrants further investigation by the central NDTMS team.
T1	Individuals with Overlapping TOP Care Coordination	(Number of Individuals meeting this criteria) / (Number of individuals aged between 16 and 17 regardless of type of drug or if >= 18 then must be primary drug )  This metric highlights any cases where we have individuals, which have the TOP Care Coordination field set to YES for open episodes across more than one distinct agency.	T1: This metric shows the proportion of clients whose TOP care coordination is conflicted across two or more agencies.  It is important that only one agency is recognised as being responsible for TOP care coordination to ensure TOP completion compliance is accurate and to avoid the collection of redundant TOP information	Ambition: 2%  Aim: 3%  > 2% Warrants further investigation by the central NDTMS team.
T2	Individuals expected to have a TOP Care Coordination but do not have one.	(Number of Individuals meeting this criteria) / (Number of individuals triaged on or after 01/04/2009 aged between 16 and 17 regardless of type of drug or if >= 18 then must be primary drug)	T2: This metric shows the proportion of clients that do not have TOP care coordination flagged at any agency that they are currently being treated.  It is important that every client has an	Ambition: 10%  Aim: 15%  > 15% Warrants further investigation by the central NDTMS team.

		<p>This metric highlights any cases where we have individuals with at least one open episode, triaged on or after 01/04/2009 with a related structured intervention who are expected to have TOP but the TOP Care Coordination field for all open episodes is set to NO or blank.</p>	<p>agency that is responsible for TOP care coordination to ensure TOP forms are completed at the required intervals, and to ensure accurate TOP compliance figures.</p>	
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# 11 MS Access Application

The metrics are supported by an MS Access application. This application itself is incorporated with all the business logic required for each of the metrics and is able to output the questionable records from each month's regional database as well as calculate the metric figures, percentages and RAG scores.

When the MS Access application is opened, you will be presented with the main dashboard. This allows you to specify the location of the databases required to produce the metric figures as well as showing you the selection of metrics and reports that are currently available.

The screenshot shows the 'frmMetricSearch : Form' window. At the top, it displays 'NDTMS Data Quality Metric SQL Database' and 'Ver 0.4 PROD (30-Apr-10)'. The 'Current month's data' section is set for 'Yorkshire\_Humberside' in 'Mar-10'. The 'Regional Database' is 'C:\Documents and Settings\dgrundy\Desktop\2010-03\Yorkshire & Humber\RegionalData\_1'. The 'Agency Database' is 'C:\Documents and Settings\dgrundy\Desktop\2010-03\Yorkshire & Humber\ECMS Agencies'. The 'Codes' are 'X:\Development\Jason\DAMS Codes v2.4.mdb'. The 'Previous month's data' section is set for 'Feb-10' with the same 'Regional Database'. Below this is a 'Please choose the metric:' section with radio buttons for 'Data Quality' (selected), 'Samples / CEMs', and 'Ad-hoc'. A table titled 'Required Databases' lists metrics with columns for Code, MetricName, Sample, Version, Regional, Regional (prev), Agency, and Codes. The 'View' section at the bottom has radio buttons for 'Details' (selected), 'Agency', 'DAT Episode', and 'DAT Agency', along with a 'Run' button. Annotations include: 'Database Locations' pointing to the database paths; 'Metric List' pointing to the table; 'Report View' pointing to the 'All Metrics Report' button; and 'Record View' pointing to the 'View' section.

## 11.1 Database Locations

to be able to produce all of the metrics, you must specify the location of the following databases:

1. Current month's regional database
2. Previous month's regional database
3. Current month's agency database
4. Most recent codes database

when specifying the location of the database you should ensure that you choose a local copy saved on to the hard drive of the computer that you are using. Although you can choose a file from a network share, it will perform significantly slower.

When you specify the file, it will be automatically linked and some sanity checks will be performed

to ensure that you have linked the correct type of database for the correct month.

The locations you specify will be remembered for when the MS Access applications next opened, so you will only have to specify the codes database whenever a new version is released.

It is possible to run specific metrics without having to specify the location of every database. The metric list shows which ones are required for each metric and only those ones will be checked for when the metrics are run individually. However, all databases must be specified to be able to produce the “All Metrics Report” and calculate percentages and RAGs.

## 11.2 Metric Types

Due to the sheer volume of metrics, these have been divided in to several categories. Clicking on a different category will change the list that is shown below. When you go on to run the “All Metrics Report”, it will be based on the category of metric that you have defined here. You will usually want to have it on “Data Quality”.

### Data Quality

These metrics form the basis of the Data Quality Framework and are the ones, which the RAGs are based on. These relate to specific data cleaning activities that need to take place.

### Samples / CEMs

This is a list of all the denominators that are used for calculating the metric percentages.

### Ad-hoc

These are not used by the Data Quality Framework but are still useful for ad-hoc data cleaning or other operational and monitoring purposes.

## 11.3 Metric List

This shows a list of all the available metrics based on the type that has been selected. If you only want to run one metric then you don't always need to specify the location of every database. You only need to specify the databases as indicated by the “X” marks on the right hand side of the list.

This list also shows the current version number of each metric as well as the sample or CEM that is used to calculate the percentage and RAG.

Single clicking on one of the items in the list selects it.

## 11.4 Record View

This provides 4 different ways of outputting the information for the selected metric. The list that is produced can be exported so that it can be used in regions' own reporting systems.

### Details

This outputs each of the problematic records and the number of records in the list represents the metric figure.

### Agency

This provides a count of the problematic records on an agency by agency basis.

### DAT Episode

This provides a count of problematic records based on each DAT of residence. However, because the regional database doesn't contain repatriated data, these figures aren't fully representative.

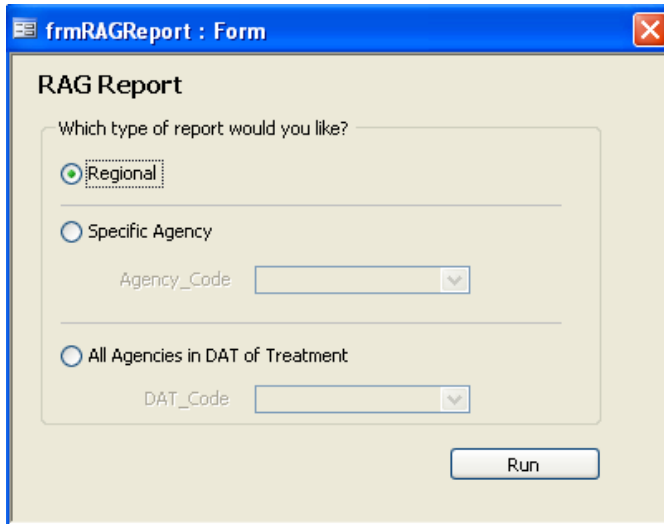
### DAT Agency

This provides a count of problematic records based on the DAT of treatment.

## 11.5 Report View

This report shows the figures for all metrics simultaneously, as well as calculating the percentage scores and monthly RAGs based on predefined percentage ranges.

By default, the report will show the metrics and RAGs on a regional basis. These are the figures that will be used for performance management. But it is also possible to calculate the metrics and RAGs on an agency by agency basis which might be useful for regional data cleansing activities.



The screenshot shows a window titled "frmRAGReport : Form" with a close button in the top right corner. The main content area is titled "RAG Report" and contains the following elements:

- A question: "Which type of report would you like?"
- Three radio button options:
  - Regional
  - Specific Agency
  - All Agencies in DAT of Treatment
- Below the "Specific Agency" option, there is a text label "Agency\_Code" followed by a dropdown menu.
- Below the "All Agencies in DAT of Treatment" option, there is a text label "DAT\_Code" followed by a dropdown menu.
- A "Run" button is located at the bottom right of the form area.

If you choose to run the report on an agency by agency basis this could take a very long time. At the moment you can only run the report on a maximum of 1 DAT at a time due to the amount of time it takes to produce.

Some of the metrics cannot be directly translated to specific agencies so these will not be included on the report but this are something, which may be reviewed in the future.

## Regional Metric Report

Code	Metric Name	Ver	Total	Sample	Sample #	Metric	Mar 2010 RAGs		
							Green	Amber	RAG
A01	Alcohol Primary Drug but No Alcohol Modality	0.3	1959	S03	9830	19.93%			
A02	Missing PCT for Alcohol Episodes	0.2	10						
A03	Alcohol Days and Units Mismatches	0.2	22	S03	9830	0.22%			
A04	Missing Alcohol Units for Primary Alcohol	0.2	2535	S03	9830	25.79%			
C02	Core Dataset F Compliance	6.06	210	CEM5	210	100.00%	100.00%	100.00%	<span style="background-color: green; color: black;">G</span>
C03	Episode Dates out of Sequence	6	6	CEM1	152120	0.00%	0.00%	0.00%	<span style="background-color: red; color: black;">R</span>
C04	Episode Dates vs. Agency De-active	6	0	CEM1	152120	0.00%	0.00%	0.00%	<span style="background-color: green; color: black;">G</span>
C05	Incomplete Close Down for Agency	6	295	CEM3	73106	0.40%	0.00%	0.00%	<span style="background-color: red; color: black;">R</span>
M01	Data Load Percentage	6.06	99.90%			99.90%	99.90%	99.80%	<span style="background-color: green; color: black;">G</span>
M02	Data Quality Percentage	6.06	99.40%			99.40%	97.50%	94.00%	<span style="background-color: green; color: black;">G</span>
M03	Duplicate Client Refs	6.1	1680	CEM2	59509	2.82%	0.05%	2.50%	<span style="background-color: red; color: black;">R</span>
M04	Missing Discharge Data	6.1	2	CEM2	59509	0.00%	0.25%	0.50%	<span style="background-color: green; color: black;">G</span>
M05	Duplicate Open Episodes	6.1	1178	CEM1	152120	0.77%	0.05%	1.00%	<span style="background-color: orange; color: black;">A</span>

**Total:**

The number of problematic records identified by the metric.

**Sample #:**

The number of records that is used for the denominator of the metric.

**Metric:**

The metric percentage figure based on the total and sample figures.

**Green & Amber:**

The desired range for the metric figure as specified by the national team and these may vary month on month.

**RAG:**

The state of the metric based on where the figure falls between the green and amber figures.