



*National Treatment Agency
for Substance Misuse*

National Drug Treatment Monitoring System (NDTMS)

**GUIDANCE NOTES ON HANDLING TREATMENT PROVIDER
SYSTEM MIGRATION / DATA SOURCE CHANGES**

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1 Revision History

| Version | Author | Purpose / Reason | Date |
|---------|---------------|--|----------|
| 0.1 | NDTMS Network | Initial version using and adjusting the document 'NDTMS Guidance Notes on Information System Migration Approaches v0.2' | 20/01/10 |
| 0.2 | NDTMS Network | Further amendments following meeting of NDTMS working group. | 09/02/10 |
| 0.3 | NDTMS Network | Addition of glossary Minor text changes throughout document. Removal of 'Outstanding Issues' box Incorporation of a new Appendix B which replaces the old Appendix A – Implementation Check List. Appendix B 'Migrating to the NDTMS Data Entry Tool (DET)' in the previous version has been incorporated into the main body of the document. A new Appendix A has been added to provide NDTMS teams with risks associated with non-migration of historic data. | 08/04/10 |
| 0.4 | NDTMS Network | Minor refining of some text and addition of a paragraph to section 9.1 | 27/05/10 |
| 1.0 | JJ | Links updated and document finalized. | 16/06/10 |
| | | | |

2 External References

| No | Description | Version |
|----|-------------|---------|
| | | |

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

3 Significant Changes (in this issue):

| No | Section | Description |
|----|---------|----------------------|
| | | See Revision History |
| | | |
| | | |
| | | |

4 Distribution

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5 Glossary of Terms

| No | Term | Description |
|----|--------------------|---|
| | Minimum Data Level | The NDTMS Minimum Data Level is the minimum amount of data required to produce NDTMS performance reports, which require baseline data extending back to 1 st January from the previous financial year. For reporting purposes, the financial year changes after the July upload e.g. For data that is to be submitted during July 2010 the extract should contain all records that are not discharged, or who were discharged after 01/01/08. For data that is to be submitted after 01/08/2010 the extract should contain all records that are not discharged, or who were discharged after 01/01/09. |
| | Partnerships | Formerly known as Drug (and Alcohol) Action Teams (DATs or DAATs). For the purposes of this document, Partnerships may, in some cases, act as Treatment Providers (see explanation under the term 'Treatment Provider' below). |
| | Treatment Provider | Previously referred to as 'Agencies'. A service providing structured drug and/or alcohol treatment, whether statutory, non-statutory or private that is submitting data to NDTMS. For the purposes of this document the term can be read to include Mental Health Trusts, Partnerships or other Organisations that have an agreed responsibility for making decisions on the purchase of software to be used by one or more Treatment Providers, or that submit data on their behalf. |

6 Background

The document entitled 'NDTMS Guidance Notes on Information System Migration Approaches' was first introduced in 2007 and updated in 2008 (v2). It was largely based upon the ERPHO – NDTMS Information Systems Migration Protocol document. During 2009 the NDTMS teams expressed a desire for the NTA to update the document to provide more up to date guidance to the NDTMS Regional Teams. As the NDTMS teams have, over the past few years, all gained day-to-day knowledge and expertise in the processes involved in system migration/data source changes, it was considered appropriate for the NTA to facilitate a re-write of the guidance via an NDTMS working group. Using the legacy document referred to above as a basis for discussion, together with the various regional protocols and procedures that exist, this new document has been produced.

7 Introduction

When a Treatment Provider decides to move from one system to another (either from its own choice or under direction from another body i.e. Partnership or Mental Health Trust), the regional NDTMS team should ensure that they are involved in the process at the earliest opportunity.

Advice and guidance from the NDTMS team can help ensure that any new system supports

the NDTMS reporting requirements¹, and that the associated project plan for the system implementation is designed to safeguard data continuity and data quality throughout the transitional period.

This document aims to outline the issues that NDTMS teams will need to consider in relation to their own involvement and the advice that they may pass on to Treatment Providers both prior to, during and after the system migration/data source change process.

The audience for the document is primarily the NDTMS regional teams. However, it is also intended to be informative to the NTA central information team. If the NDTMS teams wish to share the contents with Partnerships and/or Treatment Providers it can be used as reference material for this purpose. However, it should be adjusted accordingly or go out with an accompanying explanation clarifying that the document's audience is NDTMS regional teams, but that it has been forwarded for their information.

8 Deciding what System to choose

8.1 Choosing a System

At the start of a project, Partnerships and Treatment Providers should identify a number of candidate systems. The NDTMS regional teams have a key role to play in this process because of their awareness of existing products and wide range of experience of them. NDTMS regional teams should be prepared to talk to the NTA and other NDTMS colleagues about their impressions of certain systems and/or software suppliers and in particular the quality of submissions that are provided by Treatment Providers already using the system. The NDTMS regional teams should also be prepared to attend implementation meetings and provide advice/guidance at all stages of the project. This is to ensure that the NDTMS reporting requirements are understood and supported.

Advice to Treatment Providers

- Decision makers should be aware of the main software suppliers who currently provide substance misuse treatment information systems. Contact details of the suppliers can be found on the NTA web site: <http://www.nta.nhs.uk/software-suppliers.aspx>
- Software demonstrations would be beneficial, where Treatment Providers invite ALL the people that would be using the system (i.e. administrators and clinical staff) to attend. NDTMS regional team members could also attend, as appropriate.
- Visits to and/or talks with other Treatment Providers already using the same system (as the one(s) being considered) would provide insight into both the implementation process and the system's day-to-day operational use – All suppliers should be able (and keen) to provide reference sites that can be approached.
- Any chosen system must be compliant with the latest version of the NDTMS core dataset.
- Robust project management is essential throughout the process – from initial planning and procurement through to go-live and eventual sign off.
- Cost implications such as data migration, training on the use of the system, user licenses, upgrades/patches need to be explicit within any contract.

¹ The NDTMS reporting requirements are described in the NDTMS Core Data Set documents (e.g. the Business Definitions, Technical Definitions, Reference Data and File Format specification) which can be found on the NDTMS Core Data Set web page <http://www.nta.nhs.uk/core-data-set.aspx>

- The NTA guidance document on the assessment of IT systems provides some useful information. This can be found on the NDTMS Core Data Set web page <http://www.nta.nhs.uk/core-data-set.aspx>

It should be remembered that NDTMS regional team members can only advise on how to choose a system but they cannot and should not recommend any particular system. System choices are the ultimate responsibility of the Treatment Providers concerned.

9 Moving the Treatment Provider to a new system

9.1 Data Migration

It is important that the NDTMS regional teams ensure that Treatment Providers understand that a key part of their project plans will be to determine their data migration strategy. Key personnel should be aware of the options and their advantages and disadvantages.

Advice to Treatment Providers

Approaches to data migration typically include the following options:

- All the data from the current system is included in the transfer
- All data going back to 2005 is incorporated (i.e. all open episodes and those discharged on or after 1st April 2005)
- All data from another given point in time is transferred.
- No automated migration – manual entry of chosen data directly into the new system.

Under extreme circumstances a further option could be to use the data held by the NDTMS database (rather than the data held by the Treatment Provider) but the shortcomings of this option need to be **fully** understood by those concerned.

The decision on migration of data will be dependent upon a range of factors including:

- The data quality of the legacy database
- The data quality requirements of the new system
- The ability of the new system to identify those records that cannot be migrated (due to data quality issues)
- The ability of the new system to batch load current data
- The availability of staff/records for a data cleaning exercise and/or manual entry
- The effect of any additional workload on clinical and administrative continuity

Whatever the approach, it is highly recommended that the new system results in a historical position being stored, and that this position at least matches the NDTMS Minimum Data Level. The present advice from the NTA is that the Minimum Data Level should include the period over which changes to activity data may have an impact on published performance figures (see section 5: Glossary of Terms). Should Treatment Providers decide not to migrate data to at least this level then the risks associated with their approach should be explained to them (see Appendix A).

Having been provided with the information contained in Appendix A, if a Treatment Provider decides not to migrate data to at least the minimum data level recommendations, the Treatment Provider will be required to acknowledge in writing that they understand the risks. This should be shared with Partnerships and the NTA regional team to ensure that they are aware of the situation.

It is good practice to resolve all data quality issues prior to migration where possible. Data should be reconciled as part of the migration process and this may be prior to, during and/or

after migration. NDTMS regional teams might conduct a partial or full refresh of data. Partnerships should be kept fully informed during the whole process in relation to any potential problems that might affect performance.

It is vital that Treatment Providers factor these considerations into their project plans and that they allow sufficient time and resource to complete the data migration process effectively.

9.2 Data Comparison Process

Before data is migrated to the new system a comparison should be made to identify any discrepancies between the data held on NDTMS national system and the data within the Treatment Provider's legacy system. Any discrepancies need to be resolved or accounted for prior to migration of data to the new system (see section 9.1)

9.3 Parallel Running

The NDTMS regional teams should ensure that Treatment Providers understand that their project plans should allow for the parallel running of the old and new systems during the implementation phase of the project. The length of time that a Treatment Provider will need to run dual systems will depend upon the circumstances.

Advice to Treatment Providers

A parallel running period should be used to ensure that the Treatment Provider is comfortable with the new system and that the quality of the data submitted to NDTMS has not been compromised. By comparing the data submissions from the new and old systems, issues relating to errors and inconsistencies can be identified. The areas to consider prior to agreeing a plan for parallel running are the:

- Capacity of the Treatment Provider and cooperation of the staff to input data into two systems.
- Experience of software supplier in undertaking data migrations
- Maturity of the software in providing NDTMS extracts
- Licensing limitations that may apply
- Known data quality issues
- Timing of go-live

Unless both systems are using exactly the same extract criteria, and the historical base of data is the same; comparisons can be tricky. There should be a clear understanding between the NDTMS regional team and the Treatment Provider as to what checks should be done and by whom. Details of recommended checks appear below in 9.4 'Prove-out submission from new system'.

Migration projects rarely run to timetable and issues identified (particularly in later stages of the project) may take time to resolve. Treatment Providers should therefore understand that continuity of NDTMS data provision is dependent upon the availability of the old system whilst delays and issues are resolved.

9.4 Prove-out Submission from New System

Once the data has been migrated (or manually entered), it is necessary for the extract from the new system to be proven out. This should be undertaken at the earliest opportunity (before the new system goes "live" and during any parallel running) so as to allow time to identify and correct any errors.

Checks should involve comparisons with extracts from the new system, and comparisons with the data held in the NDTMS database including the following activities:

- The Treatment Provider needs to validate their new file on DAMS and achieve the required level of load (100%) and data quality (100% unless there are agreed exceptions).
 - System suppliers should have in place procedures and process that ensure that the extract can meet the data load and data quality expectation thresholds published by the NTA.
 - All errors identified will need to be assessed to determine their cause (e.g. data quality issues, system miss-specification etc) and rectified as appropriate.
- Comparing candidate monthly submission extracts from the old and new systems (or the new system and the NDTMS database) to identify any inconsistencies between the two (as already stated in 9.2 - unless both systems are using exactly the same extract criteria, and the historical base of data is the same; comparisons can be tricky).
- Comparing the submission with data already held in the NDTMS database is required to ensure data consistency/continuity. It is best practice to identify such issues as:
 - Episodes that have not been included on the extract
 - Any modalities for episodes that have not been included on the extract
 - Mismatches with TOP records
 - Any field-level changes
- As best practice and if time and resource permits, the NDTMS regional teams may provide a report on the data completeness of the data submitted; identifying any fields that have been inadequately populated.

The above activities may require action to be taken on a number of different fronts (additional training of users, resolution of errors identified in the new system, amendment/addition of data in the new system etc).

As a result of this close investigation of the Treatment Provider data, it is likely that issues with the data already held in the NDTMS database may be identified (erroneous clients/episodes/modalities, missing/incorrect discharge dates etc). This may require that Treatment Providers update their data in consultation with the NDTMS regional team so that the NDTMS database is corrected.

Be aware that this is an iterative process and may require several cycles over time.

9.5 Cut-over

Parallel running and extracts from the old system can be discontinued once the NDTMS regional team and the Treatment Provider are satisfied with the operation of, and the data from, the new system and that it is fit for purpose in relation to the NDTMS submission.

If the new system has acquired all the data related to the NDTMS Minimum Data Level, then the Treatment Provider, in consultation with the regional NDTMS team (and Partnership as appropriate) may opt to refresh the NDTMS database by submitting an extract from the new system once all outstanding issues have been resolved and the Treatment Provider is ready to go “live” with the new system.

Ensure that DAMS is updated with details of new system.

10 Ongoing Monitoring

All Treatment Providers should be informing the regional NDTMS team of any deletions of records or changes to key information (i.e. client attributors, referral date, modality type, date referred to modality and TOP date) to enable the relevant modifications to be made to the NDTMS data (to keep them in sync).

11 Migrating to the NDTMS Data Entry Tool (DET)

The NDTMS Data Entry Tool (DET) is a non-clinical, secure, web based database for collecting NDTMS data. It is intended to be used as a data capture tool for treatment providers that do not have a dedicated clinical system able to deliver the NDTMS core dataset. It is provided free of charge by the NTA but only collects the data required by NDTMS – as such it is not intended as a replacement for a clinical system – for further information on the DET see <http://www.nta.nhs.uk/ndtms.aspx>

The DET incorporates the NDTMS data validation engine, thus as data is entered into the system, validation checks are automatically performed to ensure that the data meets the required NDTMS Core Data Set technical definition – for further information see: <http://www.nta.nhs.uk/core-data-set.aspx>

11.1 Minimum environment criteria for the DET

Although the DET is a web-based application, there are some minimum environment criteria necessary to support the use of the DET. For further information on the criteria see: http://www.nta.nhs.uk/uploads/ndtms_minimum_environment_criteria.pdf

11.2 Data Migration to the DET

The standard strategy for agencies moving to the DET is for data migration to at least conform to the NDTMS Minimum Data Level. If the Treatment Provider has all the required data in their database, then that can be used as a data source; alternatively the Treatment Provider's data already held in the NDTMS database could be used. Since the DET applies a stricter level of validation than that used to accept data to NDTMS from other systems, it is likely that some data cleansing will need to take place.

The DAMS emulator should be used to identify those records that have data quality issues that need to be addressed before the data can be migrated. Typically the data cleansing process is as follows

- NDTMS regional team processes the Treatment Provider's data through the DAMS emulator
- Validation reports are sent out to the Treatment Provider for resolution
- Treatment Provider makes any necessary corrections (including deletion of erroneous records)
- The above process is repeated until all required corrections have been completed.
 - If the process results in a small number of issues that cannot be resolved, then the Treatment Provider must be informed of the remaining invalid records, and these records must also be deleted from the NDTMS database (so as to ensure that the two databases are kept in sync).

Assuming that at least the NDTMS Minimum Data Level has been migrated into the DET, then there is an option to refresh the Treatment Provider's data in the NDTMS database using an extract of data from the Treatment Provider.

11.3 Training and data completion

The NDTMS regional teams will need to;

- Configure DAMS to identify the Treatment Provider as a DET user
 - Set the Treatment Provider reporting level and DET active indicator
 - Update the system id to DET
- Provide training for the Treatment Provider staff and set up user accounts
- Inform the Treatment Provider to check through the migrated data
 - The initials and postcode can be expanded to provide full client information for local use.
 - Instruct the Treatment Provider to manually enter the invalid data that was not migrated into the DET (the built in validation will ensure that any error in the data must be corrected before the record can be saved).

Appendix A

12 Risks associated with non-migration of historic data

The NTA has no powers to require the migration of data onto new IT systems, and the NDTMS programme will report against whatever data is provided to it. However, it is important to understand that submitting data that does not at least meet the Minimum Data Level has significant organisational risks for the submitting organisation: It also has the potential to adversely affect PCT, Mental Health Trust and Local Authority performance ratings.

The risks fall into two categories. The most significant is that an absence of data in the extracts from the new system causes significant differences in the monthly performance figures. Should these be serious enough to call the validity of local information into question, PCTs and/or Mental Health Trusts may be excluded from CQC ratings, and counted by CQC as having failed the indicator. There are several instances of this having happened.

The second risk from this approach is that it may not be practical to go back and amend historic data where the data is later discovered to be wrong. Where this data is also used to calculate current performance figures against previous years' baseline data, the NDTMS requires any erroneous data from the previous year to be corrected by the Treatment Provider. An inability to do this could, in principle, also result in an exclusion from CQC performance ratings. This has been averted in the past by getting Treatment Providers to correct NDTMS extracts for previous years from client case notes. However, because of the semi-anonymous nature of the NDTMS data, doing this has proven to be more difficult, time consuming and expensive than migrating data.

Given the serious problems that some Treatment Providers and Partnerships have experienced as a result of not migrating historic data, the NTA **strongly recommends** that services migrating between software systems migrate data consistent with at least the Minimum Data Level.

Appendix B

13 Summary checklist

| Actions | Ref | Completed by | Date |
|--|-----|--------------|------|
| Activities listed in this document | | | |
| Provide guidance on systems purchase | 8.1 | | |
| Agree the data migration approach | 9.1 | | |
| Carry out data comparison process | 9.2 | | |
| Start parallel running procedure | 9.3 | | |
| Prove out submissions | 9.4 | | |
| Agree cut-over point and ensure that DAMS is updated with details of new system. | 9.5 | | |
| Additional activity | | | |
| Update Treatment Provider audit spreadsheet/database if appropriate. | | | |