Screening-To-Treatment-Timeline (STTT) Tracking Guidance

Version 2.0, 02 April 2012

Guidance on using the NHS DESP Screening-To-Treatment-Timeline tracking spreadsheet
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Introduction

What is Screening-To-Treatment-Timeline Tracking (STTT)?

Screening-to-treatment-timeline-tracking (STTT) is an internal quality assurance and failsafe process that monitors a patient’s journey, or ‘pathway’, and time taken along that pathway, when a patient is referred from a diabetic retinopathy screening programme to a hospital eye service for assessment or treatment.

Why is this important?

The reduction and prevention of visual sight-loss or impairment caused by Diabetic Retinopathy is at its most effective when the disease is both detected early (screening) and treated in a timely manner. It is the latter of these processes that Screening-To-Treatment-Timeline-Tracking aims to monitor and ensure that patients receive ophthalmological intervention within nationally approved timelines.

Who should perform Screening-To-Treatment-Timeline tracking?

It is the responsibility of every Diabetic Retinopathy Screening programme within England to monitor and track every patient who is referred from their programme to a hospital eye service. It is also each programme's responsibility to ensure that patients who no longer require follow up at a hospital eye service return to routine screening until such time it is once again deemed necessary for further specialist ophthalmological involvement.

What is the Screening-To-Treatment-Timeline tracking template?

The Screening-To-Treatment-Timeline tracking template is a Microsoft Excel Workbook that has been developed by the National Team of the NHS Diabetic Eye Screening Programme (NHS DESP) to support programmes with the process of monitoring timely referral, consultation and treatment.

The Excel workbook contains background processes (macros) that validate any data entered. It also provides functionality that measures the time taken between events along the patient pathway (such as Screening to Consultation at an ophthalmology department) and compares against nationally set standards. Alerts will be displayed if any national standard is breached.

Several performance monitoring spreadsheets are included within the workbook that allows the programme to measure activity against national standards within a variety of date ranges. Some of these spreadsheets contain charts that can be printed and used for performance monitoring within Programme Board Meetings.

How far will the Screening-To-Treatment-Timeline template track?

The Screening-To-Treatment-Timeline tracking template has been developed specifically to track referrals up to the first ophthalmic consultation. This has been aligned with the revised standards of 26th April 2011, Release 7, version 1.0. On-going year-on-year monitoring of patients who remain within ophthalmology care will require locally developed processes and recording methods.
What’s New?

As with all software applications newer versions are released as software bugs are fixed and upgrades introduced with new features.

Version 1.0
• First Release

Version 2.0
• Improved runtime error handling including error logging
• Transfer of data from older versions of the STTT Tracker into new versions
• Importing of data from other external data sources such as:
  o Bespoke excel timeline spreadsheets
  o Software Supplier Timeline Reports
• A process status indicator to reflect the progress of lengthy tasks such as importing data
• A breach indicator based on the current date to help track referral
• Sorting of referrals
• Filtering referrals, especially patients with R3 retinopathy
• Highlighting duplicate referrals

Upgrading to a new STTT version

For each user to upgrade to a new version of the STTT Tracker, the data held within each user's current version of the spreadsheet needs to be imported into the new version. Using the import process will ensure that all upgrades and bug fixes are applied appropriately.

To upgrade to a new version of the STTT Tracker please see the section:

Import/Export - > Importing data from STTT spreadsheet
Getting Started

Backup
As with all electronic files it is good practice to ensure that the STTT Tracker and associated log files (explained further in this document) are backed up daily. It is imperative that a process of backup is employed that ensures that a programme can restore itself to the last secure state of working and minimise the loss of data. Please ensure that you discuss with either your Programme Manager and/or IT manager to ensure such processes are in place before working with the STTT Tracker.

About Excel
The STTT Tracker has been developed using Microsoft’s spreadsheet application ‘Excel’. Microsoft Excel allows numerical values or data to be placed into the rows or columns of a spreadsheet, and to use these numerical entries for such things as calculations, graphs, and statistical analysis.

To help ensure that data entered into the spreadsheet is both validated and analysed properly, the STTT Tracker has been developed using a series of background macros.

For the STTT Tracker to work properly a version of Excel that is ‘Excel 2000’ or upwards must be used.

Running other spreadsheets at the same time
It is strongly recommended that other spreadsheets are closed when using the STTT Tracker as this may interfere with the macros built into the tracker.

About Macros
In Excel, you can automate tasks by using macros. A macro is a set of instructions that tells Excel what to do. These commands are written in a computer programming language called Visual Basic Applications (VBA) and operate in the background to help manage the data being entered within a spreadsheet

The Screening-To-Treatment-Timeline tracking spreadsheet has been developed using many macros to control, validate and analyse the data that is entered about referrals to hospital eye services.

Microsoft Excel also allows users to set different levels of ‘Macro Security’ to ensure that any macros within a spreadsheet can only operate under very strict control.

Using macro-enabled spreadsheets within your Trust
It is strongly recommended that users consult with their local IT department to determine the policy of using macro-enabled spreadsheets within their Trust before using the STTT Tracker.
If the use of macro-enabled spreadsheets has been significantly restricted within a Trust, users are requested to discuss in full the purpose of the STTT Tracker with their local IT department and whether the STTT tracker can be registered as a Trusted source.

Setting Macro Security Level

In order for the Screening-To-Treatment-Timeline macros to operate correctly it is recommended that the macro security level within Excel be set to ‘Medium’ (MS Excel 2003) or ‘Enable all macros’ (MS Excel 2007).

Please consult with your local IT administrator or help desk if you are unsure how to set the macro security.

Enabling Macros

Microsoft Excel 2003

If you are using Microsoft Excel 2003, a message box will appear upon opening the Screening-To-Treatment-Timeline tracking spreadsheet asking for confirmation as to whether the macros within the spreadsheet should be enabled or disabled:

![Security Warning](image)

Please select ‘Enable Macros’.

If the macros are disabled the Screening-To-Treatment-Timeline spreadsheet will open with the following warning message and will not allow referral data to be entered:

![Screening-To-Treatment-Timeline Tracking](image)

**WARNING**

**MACROS MUST BE ENABLED FOR THE SPREADSHEET TO OPERATE CORRECTLY**

Please exit the document, re-open and ensure macros are enabled

Thank you
To ensure that the spreadsheet will accept entry of referral data, close the document and re-open ensuring that the ‘Enabled macros’ option is selected.

**Microsoft Excel 2007**

To enable macros within Microsoft 2007, users will need to activate the ‘Developers Tab’ within the ribbon at the top of their screen. To achieve this user must access the ‘Excel Options’ via the Office Button at the top left of their screen:
This will trigger the Excel Options window. Please ensure that the ‘Show Developer Tab in the ribbon’ is ticked and then click on ‘OK’:

![Excel Options window](image1)

This should now activate a Developers tab at the top of the screen. Click on this tab and then click on ‘Macro Security’:

![Developer tab](image2)

This will now activate the ‘Trust Centre’ window. Make sure the ‘Enable all macros’ is checked (NB: Please remember to discuss this process with your local IT department) and then click on ‘OK’.
Welcome Screen

The ‘Welcome Screen’ is presented every time the spreadsheet is opened and provides both a clear identity as a national template and also allows a local identity to be stated (i.e. Programme Name) to reflect the ownership of the data within the spreadsheet.

To initiate your Programme Name to the Screening-To-Treatment-Timeline tracking spreadsheet, see the section ‘Personalising the spreadsheet → Programme Name’

Click ‘Continue’ to begin entering referral data into the spreadsheet.
Help

This document is the key guidance to accompany the STTT tracking spreadsheet. Users of the spreadsheet may also access similar guidance directly from within the spreadsheet by clicking on the ‘Help’ button:

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Information Icons

This is an information button that is presented throughout the STTT tracker and provides users with additional advice and guidance.
Personalising the STTT tracker

The Screening-To-Treatment-Timeline tracking spreadsheet has been developed to enable the recording and tracking of referrals made to hospital eye services by a specific diabetic retinopathy screening programme. Key parameters specific to a programme, such as the hospital eye services receiving referrals from the screening centre, will therefore need to be initialised within the spreadsheet.

These parameters can be accessed by clicking the ‘Options’ button along the buttons row at the top of the spreadsheet:

![Options window]

This will activate the Options window and allow a programme to setup programme specific parameters as follows:

**Programme Name**

To setup the screening programme name click the ‘Programme Name’ tab within the Options window and enter the name of your programme within the text box. This name will then be displayed within the Welcome Screen the next time spreadsheet is opened.
Areas

Some performance data is often required for different regions of a programme (such as a PCT). To achieve this an ‘Area’ data field has been created to allow the breakdown of data by particular regions within the programme.

To ensure data entry consistency, it is imperative to setup the name of each area for which referrals can be associated. To setup the areas click on the ‘Areas’ tab of the options window:

![Areas tab](image)

To modify the list of areas use the ‘Add’, ‘Delete’ or ‘Modify’ buttons along the right hand side of the options window.

Once setup each area can be selected from a drop down menu when selecting a spreadsheet cell within the ‘Area’ column of the screening encounter being recorded:

![Spreadsheet cell](image)
Referring centres

For the majority of screening programmes referrals occur out of a single administrative office (Referring Centre) however some programmes refer from more than one centre.

To ensure data entry consistency, it is imperative to setup the name of each centre submitting referrals to hospital eye services. To setup the referring centres click on the ‘Referring Centres’ tab of the options window:

For example, those programmes with a single referring centre may wish to setup a singular centre name such as ‘DRSS’ (Diabetic Retinopathy Screening Service) or ‘Central Office’. In fact ‘DRSS’ has been set as a default within the template; however this can be modified or deleted accordingly.

To modify the list of referring centres use the ‘Add’, ‘Delete’ or ‘Modify’ buttons along the right hand side of the options window.

Once setup each referring centre can be selected from a drop down menu when selecting a spreadsheet cell within the ‘Referred from’ column of the screening encounter being recorded:
Hospital eye Services

Each screening programme refers patients with sight-threatening retinopathy to one or more treatment centres, also known as Hospital Eye Services.

To ensure data entry consistency, it is imperative to setup the name of each Hospital Eye Service receiving referrals from the screening programme. To setup the name of each treatment centre click on the ‘Hospital Eye Services’ tab of the options window:

To modify the Hospital Eye Services list use the ‘Add’, ‘Delete’ or ‘Modify’ buttons along the right hand side of the options window.

Once setup each Hospital Eye Service can be selected from a drop down menu when selecting a spreadsheet cell within the ‘Referred to (Name of HES)’ column of the screening encounter being recorded:
Non-Diabetic Retinopathy Referral Categories

The Screening-To-Treatment-Timeline tracking spreadsheet allows referrals to be recorded that are related to non-diabetic retinopathy (Non-DR) eye conditions, such as cataracts.

Categories listed for Non-DR referrals can be setup via the ‘Non-DR Categories ‘tab of the Options window:

The template has already been populated with four default categories: ‘AMD’, ‘CATARACT’, ‘BRVO’ and ‘CRVO’. These defaults can be deleted, modified and new categories added accordingly, to suit your programme’s needs.

Any modifications to the list will immediately affect the drop down menu that is presented when selecting a spreadsheet cell within the ‘Non-DR Referral Category’ column of the screening encounter being recorded. See the section Entering referral information→ Recording Non-Diabetic Retinopathy referrals (Non-DR)
## Entering referral information

Each row within the STTT tracking spreadsheet represents a single patient referral to a hospital eye service. Each column within the spreadsheet represents a particular piece of information relating to each referral, such as the date of the referral.

Each piece of information can be entered in any order by moving between the ‘cells’ of the spreadsheet using either the cursor arrow keys on the keyboard or clicking directly using the mouse.

The columns coloured in light blue represent data supplied by the screening programme; columns coloured in dark blue represent data supplied by the appropriate hospital eye service.

Each cell of information expects data of a certain type and format. For example, ‘Date Screened’ will expect a date formatted as ‘dd/mm/yyyy’. To find out the expected type of data and format for each column please refer to Appendix B - Referral Information Definitions.

## Scrolling the Referrals worksheet

To help ensure that referral information is entered against the appropriate patient the STTT tracker has been setup to in such a way that the ‘Status’, ‘NHS No’ and ‘Date Screened’ are always in view. This means that using the horizontal scroll bar at the bottom of the screen will only scroll the columns from ‘Area’ onwards:

![Image of spreadsheet with scroll bar highlighted]

Release 2.0, Screening-To-Treatment-Timeline (STTT) Tracking Guidance
Restrictions within the spreadsheet

The Screening-To-Treatment-Timeline tracking spreadsheet is heavily restricted in an effort to ensure data quality and consistency. Several key functions have been deactivated to assist this process, such as Copy and Paste, Insert and Deleting of rows.

Validation

In order to maintain data quality each cell is validated against both the expected data type and format as information is entered. An error is displayed if the information entered does not conform to these criteria, for example:

![Invalid Value](image)

The spreadsheet will also perform checks to ensure that any dates entered are in an appropriately chronological order. For example, the ‘Final grade date’ of a referral cannot occur before the ‘Date Screened’ - if this does occur an error message window will appear like this:

![Invalid Value](image)

Clicking on ‘Retry’ will clear the data entered and allow the user to re-enter the data.

Chronological date ordering

Previously, all dates entered along the timeline of a referral need to follow a chronological order. It has become apparent following discussion with programmes that it is possible for the dates given as an initial appointment date (i.e. ‘Allocated’) do not necessarily follow a chronological order against the actual attended date. Therefore as of version 2.0 of the STTT tracker, the ‘Date allocated for first appt within HES following ‘Date Screened’’ and the ‘Date allocated for first laser following date screened’ will not be measured against the actual date of attendance.
Duplicate referrals

As with all administrative systems, errors will occur. To help reduce these errors and maintain the quality of the data within the STTT tracker, a function to highlight duplicate referrals has been implemented.

Duplicates are identified through a comparison match between combinations of NHS Number and Date Screened.

To highlight the duplicates click on the ‘Duplicates’ tab of the Options window and then click the ‘Highlight Duplicates’ button:

![Highlight Duplicates button]

Having activated the ‘Highlight Duplicates’ function the STTT Tracker will sort the referrals in ascending order of NHS Number and then in ascending order of Date Screened. This will group any potential duplicates. The system will now compare NHS Number and Date Screened combinations and will highlight any duplicates as follows:

![Duplicate referrals]

Each duplicate referral should then be modified accordingly to either correct the data or replaced with another referral's data.
To deactivate the highlighted referrals simply repeat the highlight process however the duplicates button will now show ‘Unhighlight Duplicates’.

Highlighted duplicates will also be deactivated once the user begins entering new referrals.
The ‘Status’ column

A traffic-light status system has been developed within the spreadsheet to help identify those referrals which have either:

- (Red) - Breaches against national timeline standards. See section: Entering referral information → Timeline Breaches

- (Amber) - Outstanding referral data to be completed (most likely feedback from the hospital eye service)

- (Green) - Completed successfully with no timeline breaches and, where appropriate, feedback from the hospital eye service.

This status system is represented by coloured arrows within the first column of the spreadsheet:

![Status Column Example]

This column cannot be edited and the arrows will be modified automatically and will change colour depending on the referral information entered.

To identify the necessary information required to complete a referral and trigger a green status please see Appendix C - Information Required for completed referrals.
Retinopathy Levels

The input of retinopathy levels is required for both the final grade outcome within the screening programme and the ophthalmology outcomes returned by the hospital eye service.

These outcomes are split into retinopathy (Rx) and maculopathy levels (Mx) for both a patient’s right eye (RE) and left eye (LE). Both the Rx and Mx levels are entered by selecting from the required level from drop-down menus:

These levels are set to national standard minimum grading criteria (See Appendix D - Retinopathy Grading Standard) and therefore cannot be changed.

In some cases the Rx and Mx levels presented within the drop-down menus will change depending on the Rx or Mx level that has already been entered for a particular eye. For example, if the Mx level has already been set to ‘M1’ then an Rx level of ‘R0’ cannot be entered for that eye as M1 indicates at least an R1 level of retinopathy. Therefore the drop down menu will change accordingly:

Conversely, if an ‘R0’ level of retinopathy has already been set then an Mx level of ‘M1’ cannot be entered.
Types of referral

The STTT tracking spreadsheet will automatically determine the type of referral being made based on the retinopathy and maculopathy levels entered into the final grade outcome and will update the ‘Type of Referral’ column accordingly. The ‘Type of Referral’ column cannot be changed by the user.

Diabetic retinopathy referrals (‘DR’)

Referrals will be classified as a diabetic retinopathy referral (‘DR’) if the retinopathy level in either eye of the final grade outcome is greater than or equal to ‘R2’ or the maculopathy level in either eye of the final grade outcome is equal to ‘M1’.

Non-Diabetic Retinopathy Referrals (‘Non-DR’)

Some outcomes from the grading of digital retinal images require a patient to be referred for ophthalmological assessment due to other non-diabetic eye complications.

These referrals will be classified as ‘Non-DR’ if the retinopathy level in either eye of the final grade outcome is no greater than ‘R1’ and the maculopathy level is no greater than ‘M0’.

These types of referrals can be further categorised using the ‘Non-DR Referral Category’ data field:

- Diabetic Retinopathy
- Non-Diabetic Retinopathy
- Ungradeable

To change the categories for Non-Diabetic Retinopathy referrals see the section Personalising the spreadsheet for your programme (‘Options’) → Non-Diabetic Retinopathy Referral Categories.

Ungradeable referrals (‘SLB’)

For some patients who are screened the digital images captured will be very difficult to grade; most often as a result of cataracts which obscure the view of the retina. If a grader is unable to sufficiently grade a patient’s retinal images then the overall grading outcome must be classified as ‘Ungradeable’.

A referral is recognised as ‘Ungradeable’ if the Rx level of the final grade outcome is set to ‘RU’ or the Mx level is set to ‘MU’. The ‘Type of referral’ will automatically change to ‘SLB’.
Patients with ‘Ungradeable’ images will be referred into a specific clinic in order to try and obtain a better view of their retina. These clinics are known as ‘SLB’ (Slit-Lamp Biomicroscopy) clinics. Such clinics can operate from within Hospital Eye Services or in some cases function from within the screening programme themselves.
Organising referral information

Sorting

Referrals can be sorted on up to three different data columns. To sort the referrals click the ‘Sort’ button at the top of the spreadsheet.

This will activate the ‘Sort’ window

Sort fields can then be selected by picking the required data column to sort on from the drop down-list:

To apply the sort criteria click the ‘Apply’ button.
If the referrals need to be sorted on more than one field the additional sort columns can be applied by clicking the ‘And’ button and selecting a further sort field:

![Sort referrals by...](Image)

NB: You cannot sort on filtered lists. Please apply the filtering as best you can before applying your filters.

**Filtering**

Individual columns of the STTT Tracker can be filter using Excel’s ‘Auto filter’ function which has been activated for the ‘Referrals’ spreadsheet. You can filter on just one column, such as ‘Date Screened’, or two or more columns.

For example, to filter for a specific Area, follow these steps:

Click the drop down arrow at the right of the Area heading

![Filtering Area](Image)

In the list of Areas, click your preferred Area (in this case ‘Area A’)

![Filtering Area](Image)
The ‘Referrals’ spreadsheet will now list only those referral records whose ‘Area’ data item is equal to the previously chosen Area. Note how the row numbers have changed and how the drop down arrow has changed colour (or in some versions of Excel to arrow icon will change) to reflect the fact that this column has been filtered:

![Spreadsheet Image]

**WARNING:** Filtering on more than one columns at a time will only apply the filters against the previously filtered referrals and therefore narrowing the list further.

**NB:** All filters will be removed whenever any of the pivot tables or charts are activated or prior to importing new data.

### R3 patients

Some programmes have expressed difficulty within Version 1.0 of the tracker in identifying and prioritising their R3 patients within the list of referrals and have often opted to keep two separate STTT trackers; one for R3 referrals and another for all other referred patients.

This is a perfectly reasonable method and a process that can be continued. However, a new function has been applied that will enable users to filter all patients with **R3 retinopathy in either eye** and maintain a single STTT tracking document:

![Spreadsheet Image]

The R3 button at the top of the spreadsheet is a ‘toggle’ button that indicates whether or not the list of referrals is currently filtered for patients with **R3 retinopathy in either eye**.

When activated the R3 button remains ‘pushed-in’ and signifies that the referrals are currently filtered to those patients with R3 retinopathy:
The filtered list of R3 patients can continue to be filtered further using the drop-down boxes on each header as described above to narrow the list further.

To deactivate the filtering of R3 patients, simply click on the button again. This will remove ALL filtering that may have been applied.
Timeline Breaches

What is a timeline breach?

Referrals to hospital services from diabetic retinopathy screening services are measured against several national quality assurance ‘timeline’ standards that have been implemented to ensure that patients’ referrals are timely and that they receive consultations within a minimum time frame. The timelines will be different depending upon the level of retinopathy identified at screening.

For a full definition of the referral timeline standards set for each level of sight-threatening retinopathy and ungradable images, please refer to the National Quality Assurance Standards on the website of the National Team for the NHS Diabetic Eye Screening Programme at: http://diabeticeye.screening.nhs.uk/quality

The Screening-To-Treatment-Timeline tracking spreadsheet monitors the time taken (‘timeline’) between various events of a particular referral as each piece of referral information is entered.

If any timeline exceeds (‘breaches’) an approved standard, the STTT Tracker will present both an alert and highlight the date that has caused the breach. For example:

Here the timeline for a referral that has R3 retinopathy has been breached against Objective 7 of the National Standards. This has triggered the following alert:

![Timeline Breach Alert]

Click on ‘Ok’ of the alert window.

The date that has caused the timeline breach is now highlighted in red:
This process of monitoring each national timeline objective occurs throughout the STTT Tracker and will continue to alert the user and highlight the breach dates as referral information is entered.

**Breaches against the current date**

In Version 1.0 of the STTT, timeline breaches were previously alerted to the user only when the timeline dates were actually entered within the referral line. Some programmes found this alert to be a little late, particularly if there had been a delay in receiving data from hospital eye services and would have preferred the ability to chase the patient’s appointment much sooner.

The STTT Tracker will now also alert the user to breaches in timelines using the current date. For example, if an R3 referral’s consultation date is currently empty but breaches national timelines according to the current date, then this is highlighted in blue:

![Image of STTT Tracker showing breach alert]

Once the actual consultation date is available this can then be entered and the alert will either change to red if the timeline was breached or the alert will disappear if the patient’s appointment was timely.

**NB: The pivot tables and charts DO NOT measure breaches against the current date?**
Checking breaches on start-up

Using the current date as a measure for potential breaches means that checks need to be made daily. For this reason the STTT Tracker will check for breaches every time the spreadsheet starts up and the following message window appears:

Objectives 11 & 12

As Objectives 11 & 12 share the same piece of referral information to measure performance (i.e. ‘Date first lasered following date screened’) each breach has to be coloured differently:

Breaches of Objective 11

When a referral breaches Objective 11 the ‘Date first lasered following date screened’ is coloured in Red.

Breaches of Objective 12

When a referral breaches Objective 11 the ‘Date first lasered following date screened’ date is coloured in Purple.

Simultaneous breaches of both Objective 11 and 12

There may be some occurrences where a referral will breach both Objective 11 and Objective 12 of the National Quality Assurance Standards; a breach against this date on both these objectives at the same time is coloured in Grey.
Import/Export

Overview

The STTT Tracker is deliberately restrictive in its data entry in order to control and validate as much data as possible so that data quality can be maintained. However this can be quite time consuming when completing the details for many referrals, particularly when copying information from another source into the STTT Tracker.

It can be equally frustrating when wishing to perform analysis above and beyond the standard performance outcomes against the national service objectives currently provided by the STTT Tracker.

For these reasons a series of functions have been implemented that will allow the transfer of data into the STTT Tracker from other data sources.

Data can be stored in a variety of ways but the STTT Tracker has been limited to the import of data from three key external data source types:

- A previous macro-enabled STTT Tracker developed by the NHS DESP
- An excel spreadsheet
- A retinal screening software supplier specific timeline report

The export of data in an unrestricted format is also provided and which will programmes to implement their own analysis.

Importing data

Importing data into the STTT Tracker can be accessed via the ‘Options’ button on the menu and clicking on ‘Import/Export’ tab:
Importing data from STTT spreadsheet

This function is predominately used to upgrade to a new version of the STTT Tracker and can be accessed by clicking on the “Import Data from STTT spreadsheet” button:

In order to import data from a previous macro-driven STTT Tracker, the system needs to know the location of the previous STTT file. A window will be presented in order for you to navigate to the location of the STTT file:

Having moved to the folder location of your STTT file, either click on the file name and click the ‘Open’ button or double-click the name of the file.
The system will immediately begin to import the data from the previous STTT file into the new STTT Tracker and append the data to the ‘Referrals’ worksheet. Should data already exist within the ‘Referrals’ worksheet, the loaded data will be appended i.e. starting at the bottom of the existing data. The import progress is demonstrated within a small progress window:

![Progress window](image)

Upon completion, the ‘Options’ window will disappear and the user returned to the ‘Referrals’

**Importing data from external data source**

To import data from either an excel spreadsheet or a timeline report generated from one of the software suppliers, click on the “**Import Data from External Data Source**” button:

![Import mode window](image)

**Import mode**

The following window will appear in order to determine the type of external data source that is required for import. The system will default to an excel spreadsheet.
Importing data from an excel spreadsheet

Many programmes have been maintaining their own timeline tracking spreadsheets, within excel, using either the original template outlined by the national team several years ago or have developed their own format. Some programmes may also be receiving spreadsheets from hospital eye services that detail ophthalmology outcomes for referred patients.

The STTT Tracker has been developed to allow the import of data from excel spreadsheets of varied formats. However, because the layout of these spreadsheets will vary it is important to be able to accurately map data between the STTT Tracker and the programme’s own excel timeline spreadsheet. For this to happen the excel spreadsheet to be imported must be appropriately prepared.

Preparing your excel spreadsheet for import

For the import to work accurately, the spreadsheet to be imported must:

- NOT contain any blanks cells WITHIN the ‘header row’ (see below)
- NOT contain any blank rows BETWEEN referrals
- NOT contain any blank columns BETWEEN data items
- Have each column strictly formatted (e.g. a column for dates must only contain dates). Any unexpected data item (e.g. a number instead of a date) that is
identified during the import process will count as an invalid referral. See the section on ‘Handling Import Errors’.

What is the header row?

The first row of the excel spreadsheet to be imported must contain the ‘header’ row. The header row provides a name for each column of data and must start at the first row and first column of the spreadsheet. It is this header row that the STTT Tracker will use to map data into its own data columns and ensure that each referral is imported accurately.

NB: There must be no gaps between each column header otherwise the import process will stop reading the header row and only use the columns found up to that point.

Identifying the location of your excel spreadsheet

In order to import data from your excel spreadsheet, the system needs to know the location of your excel file. A window will be presented in order for you to navigate to the location of your file:

Having moved to the folder location of your excel file, either click on the file name and click the ‘Open’ button or double-click the name of the file.

Reading the header row

Once the location of the excel file has been identified the system will begin to read the ‘header row’ (see section on ‘What is the header row’ for more details) of the spreadsheet so that the column headings for the data can be determined. Once the header row has been read a window will appear displaying the column headings found
and then seeks confirmation from the user as to whether the header row has been accurately read: Example -

If the column headings found are not recognised then click the ‘No’ button. The following message will appear:

Clicking the ‘Ok’ button will return you to the Options window. Please refer to the section ‘Preparing your excel spreadsheet for import’ to ensure all measures have been put in place to allow the excel file to be imported accurately. Should the import process continue to have problems identifying your data then please contact the national team for support.

If, however, the column headings have been accurately identified then click the ‘Yes’ button. This will then lead into the mapping process.

**Mapping data into the STTT Tracker**

It is highly unlikely that the data held within each bespoke excel spreadsheet will have been given the same column headings as that currently held by the STTT Tracker. For example, the STTT Tracker has a data column called ‘NHS no’ which refers to each patients National Health Service number. Some spreadsheets may be storing this same piece of information but with a slightly different column heading
e.g. ‘NHS Number’. It may even be called something completely different, such as ‘Identification Tag’, although this is unlikely. However, it is these differences that the import process has to contend with and therefore cannot make assumptions that a column with the heading of either ‘NHS Number’ or ‘Identification Tag’ is in fact the patient’s National Health Service number - it’s just not that clever!

To manage this problem, the import process allows the user to ‘map’ each of the columns within the excel spreadsheet to the column headings within the STTT Tracker. This ensures that each data item is accurately placed into the right position of the STTT Tracker during import. The following ‘mapping window’ will appear:

![Import Mapping Window]

The dark grey boxes refer to the STTT Tracker column headings. Alongside each of these boxes are drop-down lists which present to the user the list of column headings found within the header row. This then allows the user to select the appropriate column heading from the excel spreadsheet from which data will be imported and placed accordingly into the column of the STTT Tracker. For example, the figure below shows how the data within the excel spreadsheet under the column heading of ‘Date referred (Standard 7)’ will be imported into the STTT tracker column ‘Date referred’.
Partial mapping

It is not necessary to map against every STTT tracker column and therefore allows partial importing of data. You may have several pieces of data split across several spreadsheets which need to be aggregated into the STTT Tracker. Partial mapping allows such aggregation.

NB: For partial mapping to work effectively, please ensure that the ‘Reset existing referrals during import’ checkbox is not checked. Please see the section ‘Reset existing referrals during import’ for more details on the use of this function.

However, in order to prevent duplicate referrals being generated, the import process for excel spreadsheets requires, as a minimum, the mapping of the ‘NHS no’ and ‘Date Screened’.

Creating a mapping Profile

Using the above mapping process on a regular basis can obviously be a time-consuming process and more importantly could result in inconsistent mapping and therefore introduce errors. To resolve this, the STTT tracker will ask the user whether they wish to create a ‘Profile’ after each mapping process:

Each profile must be given name. Any name can be applied however it is recommended to apply profiles names that sufficient reflect the nature of the import (e.g. partial) and the type of import file to which the profile will used (e.g. ‘Medisoft report’):
This profile will store the mapping configuration into a file called “STTT_IMPORT_PROFILESLOG.XLS”.

Once stored in a profile, an entire mapping configuration can be recalled quickly without the need to repeat the mapping of individual data items. To recall a profile for mapping see ‘Importing data from an excel spreadsheet (using Profile)’.

To change the name of a Profile see the section ‘Importing data from an excel spreadsheet (using Profile) -> Modify Profile name’.

To delete a Profile see the section ‘Importing data from an excel spreadsheet (using Profile) -> Delete Profile name’.

**Import progress**

Once all the necessary mapping has been completed, click on the ‘Import’ button to activate the import process. The import progress is demonstrated within a small progress window:

Because of the background validation processes and depending on the size of the import file, this may take a while to complete.

Upon completion, the Import Results window will be displayed (see the section ‘Import Results Window’). Click on ‘Ok’ and the ‘Options’ window will disappear and the user returned to the ‘Referrals’ spreadsheet.
Import mapping log
At the end of each mapping process the STTT Tracker will log the mapping applied as part of an audit trail facility and also as a record of events should mapping be applied incorrectly.

The mapping is logged to a file called ("STTT_IMPORT_MAPPINGLOG.XLS"). This file is an excel file and is created within the same folder as the STTT Tracker.

The following details are logged as a header within the file:

- **Date** - The date the mapping was applied
- **Time** - The time the mapping was applied
- **Version No** - The version number of the STTT Tracker in use.
- **Profile Name** - The name of the Profile (if used) during the mapping
- **< Name of each STTT column>**

Each row will then log the name of the columns mapped against STTT column during the import process: (Example)

![Importing data from an excel spreadsheet (using Profile)](image)

Importing data from an excel spreadsheet (using Profile)
In order to import from an excel spreadsheet using a profile; previous mapping configurations will need to have been saved (see ‘Creating a mapping Profile’) otherwise this option remains disabled within the Import Mode window.

To select a profile for import, tick the ‘Import from Excel Spreadsheet (Using Profile)’ checkbox. This will activate the ‘Profiles’ window and allow users to select a profile. To select a profile, click on the profile name - this will highlight the profile in blue (see example below):
Click on OK to begin the import. The STTT tracker will now follow the same steps as outlined within the section ‘ ‘ with the exception of the mapping process.

**WARNING:** Users must assure themselves that the profile selected is appropriate for the chosen import file. The STTT tracker will continue to search for a header row within the chosen excel file and present this to the user to aid appropriate mapping.

**Modifying & Deleting Profile Names**

Users can modify or delete profile names via the ‘Profiles’ button of the ‘Options’ window:
This will present the user with the Profiles management window:

To modify or delete a profile, select the required profile name and press either the delete or modify button accordingly.
Importing data from software supplier timeline report

Retinal screening software suppliers can often provide timeline reports for a programme to undertake its own performance analysis. In order to utilise the reporting features of the STTT Tracker the national team have been working with the suppliers to achieve a consistent format of the timeline reports that will enable import into the STTT Tracker. Progress with some suppliers is still on-going therefore please refer to the headings below which reference your current software supplier in order to understand the current ability of the STTT Tracker to import their timeline report.

Digital Healthcare Timeline Report

Digital Healthcare are currently working with the national team to assess the link between the STTT Tracker and their timeline report therefore the STTT is unable to import data from the DHC timeline report at this time.

HISL Timeline Report

The HISL timeline report is fully compatible with STTT Tracker. For this to work effectively it is recommended that the majority of data entry activity take place within the HISL system. The timeline report can then be generated and imported into the STTT tracker in order to assess performance.

The only two data fields not managed by HISL are the ‘Referred From’ and ‘Comments’ columns:

- To create data for the ‘Referred From’ column ensure that all the ‘Referring Centres’ have been setup via the ‘Options’ window. Once setup the STTT tracker will use the first Referring Centre in the list as the default and will insert this into the ‘Referred From’ column.

- Previously created comments will need to be imported using a partial import of an excel spreadsheet (See ‘Importing data from an excel spreadsheet’) by mapping the NHS number, Date Screened and Comments fields. Comments can then be maintained in the usual way within the STTT Tracker.

It is strongly recommended that the ‘Reset Existing Referrals During Import’ checkbox is left un-checked during import in order to prevent all previous comments from being lost.

Orion Timeline Report

The timeline report from Orion does not provide data in a format sufficient for import nor does it provide ophthalmology outcome data. Due to the merger with Digital Healthcare further development of Orion is currently suspended. For this reason the STTT Tracker does not currently recognise the Orion timeline report. However some
programmes have developed SQL queries which can access some of the Orion data tables and produce excel spreadsheets for import into the STTT. Please contact the national team if you would like further details.

**Medisoft Timeline Report**

The Medisoft software allows the generation of bespoke reports using many of the data items held within the Medisoft software system. Most of these data items match the STTT Tracker and therefore reports generated by Medisoft can be imported. It is important to remember that the format of the report generated by Medisoft is known as a CSV file (Comma Separated Values) which the STTT Tracker does not recognise at this time. However it is very easy to convert the Medisoft report into a format that the STTT Tracker will recognise.

Open the Medisoft CSV file using Excel and then using the ‘Save As’ function, save the file as an Excel worksheet. It is probably a good idea to give the file a slightly different name to distinguish this new file from the original CSV file (although excel will give the file a different file name extension, e.g. XLS). For further advice on how to achieve this please contact your local IT department.

Once the Medisoft report has been saved as an excel file, return to the STTT Tracker and import the data via the ‘Import data from external data source’ button and import as an excel spreadsheet.

**Selecting a software timeline report**

To import a timeline report from a software supplier, check the ‘Import from software supplier timeline report’ checkbox within the Import Type box of the import mode window:
This will activate the list of timeline reports available within the Software Supplier box of the Import Mode window.

Click on the checkbox of the software supplier timeline report to be imported.

In order to import data from your timeline report, the system needs to know the location of your timeline file. A window will be presented in order for you to navigate to the location of your file:

![Select HNL Timeline Report](image)

Having moved to the folder location of your timeline file, either click on the file name and click the ‘Open’ button or double-click the name of the file.

**Reset existing referrals during import**

**WARNING: This option needs to be used with great care and consideration.**

This tick-box enables the user to specify whether any referrals identified as already existing within the ‘Referrals’ spreadsheet during the import process, are completely cleared of all existing data (including comments) before any mapped data from an excel spreadsheet or timeline report are then written into the referral.

If this option is enabled then:

**For Excel Spreadsheets:**

- If the ‘Referred From’ column has NOT been mapped then the ‘Referred From’ column will default to the first Referring Centre in the current list of Referring Centres. If the referring centres have yet to be setup then the ‘Referred From’ column will remain blank. To rectify this, setup the referring centres and then repeat the import or modify each individual referral.
For timeline reports:

- The ‘Referred From’ column will default to the first Referring Centre in the current list of Referring Centres. If the referring centres have yet to be setup then the ‘Referred From’ column will remain blank. To rectify this, setup the referring centres and then repeat the import or modify each individual referral.

**Imported Areas, Referring Centres and Hospital Eye Services**

Any new Areas, Referring Centres and Hospital eye services will be uploaded into the appropriate list of the Options window during the import process.

**Import results window**

Following the completion of an import from either an excel file or software supplier timeline report, a results window is displayed outlining the name of the import file and how many of the referrals imported were either new, updated or invalid: for example -

![Import results window](image)

Each referral is uniquely identified based on the NHS number and Date Screened. No two referrals within the ‘Referrals’ spreadsheet should have the same NHS number and Date Screened although it is currently possible to create duplicate referrals (see the section on ‘Highlighting Duplicates’ for further details on managing duplicates).

**During the import process:**

- Any referral whose NHS number and Date screened DOES NOT already exist within the ‘Referral’ spreadsheet is counted as a ‘New’ referral.

- Any referral whose NHS number and Date screened DOES already exist within the ‘Referral’ spreadsheet is counted as an ‘Updated’ referral. See the section ‘Updated referrals’ for further details how existing referrals are updated.

- Any referral whose data does not meet the appropriate formatting criteria, is missing or is not within chronological order is considered INVALID and is not imported. See the section ‘Handling Import Errors’ for further details on the management of errors identified during import.
Updated referrals

If during the import process a referral is identified as already existing within the ‘Referrals’ spreadsheet (remember the STTT will use a combination of NHS number and Date Screened to distinguish between individual referrals) then the existing referral will be ‘Updated’. This will effectively overwrite (Update) each mapped data item within the existing referral. Please see the section on ‘Reset existing referrals during import’ for further details on resetting ALL data items within existing referrals during import.

It is important to note here the significance of ‘Updated’ referrals during the import of a previous macro-driven STTT Tracker:

When importing an STTT spreadsheet as part of an upgrade to a new version of the template and the import results show one or more ‘UPDATED’ referrals then this means duplicate referrals are present within the STTT tracker being imported.

The import process will only keep the last referral of the duplicates (i.e. if rows 10 and 11 of the import file happen to hold the same referral then only the data of row 11 will be imported and assumed to be the most up to date.

Please seek guidance from the national team should you have concerns that your previous STTT file contains duplicates.

Import record log

At the end of the import process a record of the results is logged to a file ("STTT_IMPORT_RECORDLOG.XLS"). This file is an excel file and is created within the same folder as the STTT Tracker.

The following details are logged:

- **Date** - The date the import process was completed
- **Time** - The time the import process was completed
- **Version No** - The version number of the STTT Tracker in use.
- **Import Type** - Describes whether an Excel spreadsheet, STTT Tracker or timeline report was imported.
- **New referrals** - Number of new referrals imported
- **Updated referrals** - Number of updated referrals imported
- **Invalid referrals** - Number of invalid referrals imported
- **Import file name** - The name and location of the import file
Handling Import Errors

During the import process each data item within each referral being imported is assessed for its validity and format. If at any time a data item does not meet the necessary format criteria, is missing, exceeds the expected data range or is simply not recognised then the referral is considered invalid and will not be imported.

Each time an invalid referral is identified the referral is logged to an import error log file ("STTT_IMPORT_ERRORLOG.XLS"). This file is an excel file and is created within the same folder as the STTT Tracker.

The following details are logged:

- **Date** - The date the invalid referral was identified
- **Time** - The time the invalid referral was identified
- **Version No** - The version number of the STTT Tracker in use.
- **Import row** - The row number within the import spreadsheet that caused the error
- **Import Error Description** - Description of the error that invalidated the referral
- **Import file name** - The name of the import file within which the error was identified

Please refer to ‘Appendix E - Import Error Messages’ for a complete list of error messages during import and the associated reasons for the referral being considered invalid.

To resolve invalid referrals, rectify the problems within the import file and repeat the import process. This time you will see that the number of updated referrals is higher as these have already been successfully imported during the previous import. The number of new referrals will be the number of corrected referrals (assuming no further problems lie within these corrected referrals otherwise they will remain as invalid).

Archiving Import files

It is strongly recommended that programmes maintain an archive of the files imported into the STTT tracker. This could prove valuable for audit trails and also for data recovery should problems occur.
Exporting data

Due to the tight formatting restrictions within the STTT document some users may feel limited in their ability to implement their own analysis. Using the ‘Export referral data to another spreadsheet’ button via the 'Import/Export' tab within the Options window an unrestricted copy of the ‘REFERRALS’ worksheet can be generated into a separate workbook named "FAILSAFE_EXPORT.XLS". This will enable users to add their own formulas and analysis if required:
Performance Monitoring

Overview

Several additional worksheets have been implemented within the STTT tracking document in order to provide summary and graphical representation of the referral data. The summary data is presented in the form of ‘Pivot Tables’ and allow the user to obtain totals against different referring centres, hospital eye services and dates. Graphical representation is presented in the form of charts (or graphs) which presents the performance of your programme against several national standard objectives.

Pivot Tables

A Pivot Table is a way to present information in a report format. The idea is that you can click drop down lists and change the data that is being displayed. For example, choose just one month from a drop down list and view only the outcomes for that month:

This will present the user with a list of months from within which referrals have occurred:

Each pivot table has a corresponding chart that will reflect the data in a graphical representation. See Appendix A - Worksheets to identify the pairing of charts and pivot table worksheets.
Date Ranges
Filtering data within the pivot tables by date can be achieved by selecting the Year, Quarter and Month from the drop down lists at the top of the pivot table. The default for each of these categories is ‘All’; effectively summarising referral data for all years, all quarters and all months. Referral data will then be isolated based on the Date Screened within the selected date range.

Charts
Each chart within the STTT tracking document presents a bar-graph representation of the data within the associated pivot table. For example, clicking on the worksheet tab ‘C1’ will generate a bar-graph of the data within the ‘OBJ 7’ worksheet. See Appendix A - Worksheets to identify the pairing of charts and pivot table worksheets.

Each chart demonstrates your programme’s achievement against the specific national standard from each referring centre and against each hospital eye service and within the selected date range:

![Selected Date Range Chart](image_url)
Troubleshooting

Runtime Errors

What is a runtime error?

A ‘Runtime error’ is an error that occurs during the time that the STTT Tracker is running with macros operating in the background. Every effort has been made to ensure that the macros will be able to handle all the different ways users will operate the spreadsheet or the variations in data that will be imported from various data sources. However on occasions errors do occur and if not handled properly could cause the macros to stop running. This in turn could mean that validation processes will also cease to operate. This is what would have happened in Version 1.0 of the STTT Tracker.

The STTT Tracker has now been developed with improved runtime error handling. This means that runtime errors will be trapped, logged, a message displayed to the user and macros allowed to continue.

If a runtime error does occur the following message will appear:

The Runtime Error Log

In order to help the National Team identify where the runtime error has occurred, the STTT Tracker will now log the details of the error into a runtime error log. This is a separate file that will be created and maintained within the same folder as the STTT Tracker and will be named: “STTT_RUNTIME_ERRORLOG.XLS”. This is an excel spreadsheet and will show:

- Date of the error
- Time of the error
- Version No of the STTT Tracker in use
- Name of the macro where the error occurred
- An error number
- An error description
- The cell location within the STTT Tracker that was used prior to the error
Reporting errors

If on any occasion the STTT tracker fails to operate correctly or displays the runtime error message then it is advised to contact the NHS Diabetic Eye Screening Programme (NHS DESP) immediately via the NHS DESP website.

This message will be forwarded to the developers of the STTT Tracker. It is most likely that a request will be made by the developers for you to email (within the NHSNet domain in order to maintain confidentiality) a copy of both your STTT Tracker and the STTT Runtime Error log file. This will enable them to review the nature of the error and determine the most likely cause of the problem.
Frequently Asked Questions

General

Where can I find the Quality Assurance Standards for Diabetic Eye Screening?
Guidance on the Quality Assurance standards for Diabetic Retinopathy Screening can be found at the website for the NHS Diabetic Eye Screening Programme - http://diabeticeye.screening.nhs.uk/quality

Microsoft Excel

Do I need to have advanced knowledge of Microsoft Excel to use the STTT Tracker?
No, but a basic knowledge of how to navigate an excel spreadsheet would be beneficial. Many hospital Trusts offer courses on basic Excel skills and would benefit users unfamiliar in entering data into an Excel spreadsheet.

What version of Microsoft Excel do I need for the STTT to work properly?
For the STTT Tracker to work properly a version of Excel that is no older than ‘Excel 2000’ must be used.

How do I find out which version of Microsoft Excel I have on my PC?
With Microsoft Excel 2003, click on the ‘Help’ menu item at the top of the Excel screen, and then click on ‘About Microsoft Office Excel’. This should present you with a window that will detail the version of Microsoft Excel that you are currently using. Please consult with your local IT administrator or help desk if it is not clear how the version of Excel can be identified.

Can I run other spreadsheets at the same time as the STTT Tracker?
No. It is imperative that all other spreadsheets are closed as these may interfere with the macros.

Runtime Errors

A file named “STTT_RUNTIME_ERRORLOG.XLS” has appeared on our system - what is this?
This file is updated whenever a runtime error occurs. Please refer to the section ‘Troubleshooting -> Runtime Errors’ for further details on managing system errors that may occur.

A runtime error occurs when I click on the pivot table or chart tabs
This runtime error has previously occurred when there are blank rows between referrals. Please ensure that there are no blank rows. Sorting the referrals worksheet prior to using the pivot tables and charts should resolve this issue.

Should I delete the “STTT_RUNTIME_ERRORLOG.XLS”
It is not necessary to delete the runtime error log file although deleting the file will not have any effect on the STTT tracker. This log file has been created purely to assist the NHS DESP in
trying to pinpoint the causes of any errors should they occur. It is recommended to leave this file in place.

The spreadsheet no longer appears to be validating the referral information I enter - Why?
It is likely that an error has occurred and the macros have stopped working. Please close the STTT tracking document, save changes if necessary and then re-open the document.

Maintaining the STTT Tracker

Who is responsible for maintaining this spreadsheet?
The development of the STTT tracking spreadsheet is intended to be used by each screening programme to monitor their referrals to hospital eye services. In most cases it is perceived that the failsafe element of the programme (e.g. Failsafe Officer) will maintain a single copy of this spreadsheet. Distributing multiple copies of the spreadsheet for completion is not advised. Having several copies in existence at any one time is both complicated to manage and to reconcile and increases the risk of administrative error and could affect patient safety.

Do we have to use this template provided by the NHS DESP?
No, however it is imperative that your screening programme is able to demonstrate suitable recording and tracking methods that enable robust internal quality assurance of patients referred to hospital eye services. Such alternatives will be assessed during an External Quality Assurance (EQA) visit.

Can I record patients already under the care of an ophthalmologist?
No. The STTT tracking spreadsheet has been developed as a tool for the purposes of monitoring the receipt, timely referral & consultation and timely first laser at a hospital eye service following a referral from a screening programme. Patients already under long-term care of an ophthalmologist for diabetic retinopathy and who have either never been screened or who will have prolonged care under a hospital eye service following a screening programme’s referral, will need to be tracked by a screening programme using alternative tracking methods.

Which referrals should I record within the spreadsheet?
The STTT tracking spreadsheet allows three types of referrals to be recorded:

- Referrals related to sight-threatening Diabetic Retinopathy
- Referrals related to Non-Diabetes related eye conditions
- Patients with ‘Ungradeable’ digital images being referred to a Slit-Lamp Biomicroscopy (SLB) clinic.

Some of our ungradables are referred directly for cataract surgery rather than the SLB clinic - can we modify the STTT Tracker to reflect this.
No. The STTT tracking spreadsheet has been developed to align itself with both National Service Objectives and pathways. Local pathways cannot be accommodated.

Should referrals to the HES from the SLB clinic be placed into the STTT tracker?
No. The STTT tracking spreadsheet has been developed to align itself with both National Service Objectives and pathways. There are currently no specific timelines that extend from referrals from SLB clinics. However it is suggested that a separate STTT tracker is maintained to track patients from SLB into hospital eye services although there are currently no specific National timeline standards for these patients.

Manipulating data

**Can I copy and paste cells within the spreadsheet?**
No. Unfortunately copying and pasting cells can overwrite the validation set up within the cells of the spreadsheet. It also increases the complexity of the spreadsheet in its ability to maintain valid data entry, therefore copy and paste has been deactivated.

**Can I insert and Delete rows within the spreadsheet?**
No. Inserting or deleting rows within the spreadsheet adds complexity to the validation process.

**Can I sort on any columns within the spreadsheet?**
Yes. Please see the section ‘Organising your referral information -> Sorting’

**Why is the spreadsheet so restricted?**
It is imperative that data quality is maintained in order to improve validation of any data entered and that accurate and robust analysis can be performed. For that reason it is essential that the spreadsheet is limited in the variation that could occur within each cell, which could ultimately affect analysis.

**The R0 value appears to have disappeared from the drop down menu - Why?**
If the Maculopathy level (Mx) of the eye being recorded has already been entered and is equal to ‘M1’ then an ‘R0’ value is not permitted as a level of M1 reflects the existence of at least R1 retinopathy.

**What information needs to be completed for the Status to be green?**
Please see Appendix C - Information required for completed referrals.

Performance Monitoring

**Can I print the charts and pivot tables?**
Yes. There are several ways to print the charts and pivot tables:
- Use Ctrl-P
- Click on ‘File’ from the menu and then select ‘Print’
- Click on the printer icon of the toolbar

**How do I reset a pivot table to its original settings?**
Simply click on another pivot table spreadsheet and click back to the pivot table spreadsheet that you are working on.

**Do the performance pivot tables and chart include breaches against the current date?**
No.
Import

A file named “STTT_IMPORT_ERRORLOG.XLS” has appeared on our system - what is this?
This file is updated whenever an invalid referral is identified during import. Please refer to the section ‘Importing data - > Handling Import Errors’ for further details on referrals considered invalid during import.

Should I delete the “STTT_IMPORT_ERRORLOG.XLS”
It is not necessary to delete the import error log file although deleting the file will not have any effect on the STTT tracker. This log file has been created for users to identify any referrals that have not been successfully imported and to aid with the correction of these referrals. It is strongly recommended to leave this file in place.

A file named “STTT_IMPORT_RECORDLOG.XLS” has appeared on our system - what is this?
This file is generated at the end of every import of data. Please refer to the section ‘Importing data - > Import Record Log’ for further details on referrals considered invalid during import.

Should I delete the “STTT_IMPORT_RECORDLOG.XLS”
It is not necessary to delete the import record log file although deleting the file will not have any effect on the STTT tracker. This log file has been created to aid users in maintaining a log of all import processes and the success of each import. It is strongly recommended to leave this file in place.

A file named “STTT_IMPORT_MAPPINGLOG.XLS” has appeared on our system - what is this?
This file is updated whenever an excel spreadsheet is mapped into the STTT tracker. The mapping is recording within the file for programmes to refer back to. Please refer to the section ‘Importing data from an excel spreadsheet - > Mapping Data into the STTT tracker’ for further details on mapping during import.

Should I delete the “STTT_IMPORT_MAPPINGLOG.XLS”
It is not necessary to delete the mapping log file although deleting the file will not have any effect on the STTT tracker. This log file has been created for users to review previous mapping of imported files and to assure themselves that the mapping was accurate. It is strongly recommended to leave this file in place.
## Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breach</td>
<td>Failure to maintain a specific timeline standard surrounding a referral to a hospital eye service for diabetic retinopathy.</td>
</tr>
<tr>
<td>Chart</td>
<td>A chart is a graphical representation of data, in which the data is represented by symbols, such as bars in a bar chart, lines in a line chart, or slices in a pie chart.</td>
</tr>
<tr>
<td>Diabetic Retinopathy</td>
<td>A micro-vascular complication of Diabetes that affects the retina of the eye and can seriously impair eye-sight.</td>
</tr>
<tr>
<td>External Quality Assurance</td>
<td>A process of self-regulation through evaluation involving qualified individuals (peer review) from within the screening industry. Peer review methods are employed to maintain standards, improve performance and provide credibility</td>
</tr>
<tr>
<td>Grade, Grading</td>
<td>The diagnostic interpretation of digital retinal images.</td>
</tr>
<tr>
<td>Failsafe</td>
<td>A series of administrative processes within a diabetic retinopathy screening programme that ensures a patient is not lost for follow up in the event there is a failure in a programmes routine screening or treatment pathway.</td>
</tr>
<tr>
<td>Filter</td>
<td>A function that allows the user to only display information that contains certain pieces of information.</td>
</tr>
<tr>
<td>Hospital Eye Service</td>
<td>Ophthalmology services</td>
</tr>
<tr>
<td>Internal Quality Assurance</td>
<td>An internal organisational process of self-checking that ensures quality outcomes meet the necessary minimum standards</td>
</tr>
<tr>
<td>Laser</td>
<td>A method of treatment for sight-threatening Diabetic Retinopathy</td>
</tr>
<tr>
<td>Macro</td>
<td>A set of instructions that tells Excel what to do and are written in a computer programming language called Visual Basic Applications (VBA) and operate in the background to perform specific tasks.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>---------------------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Non-DR referral</td>
<td>A referral to a hospital eye service where the primary reason for referral is not diabetic retinopathy related</td>
</tr>
<tr>
<td>Ophthalmology,</td>
<td>Medical study and treatment of eyes</td>
</tr>
<tr>
<td>Ophthalmological</td>
<td></td>
</tr>
<tr>
<td>Pathway</td>
<td>The route a patient takes between different GP, Screening and hospital examinations and consultations</td>
</tr>
<tr>
<td>Pivot-Table</td>
<td>A pivot table is a data summarization tool found in data visualization programs such as <strong>spreadsheets</strong>. Among other functions, pivot-table tools can automatically sort, count, total or give the average of the data stored in one table or spreadsheet. It displays the results in a second table (called a &quot;pivot table&quot;) showing the summarized data.</td>
</tr>
<tr>
<td>Referral</td>
<td>A formal request for assessment and/or treatment within a specialist healthcare service.</td>
</tr>
<tr>
<td>Referring Centre</td>
<td>The name of a centre or screening programme that submits referrals to one or more hospital eye services.</td>
</tr>
<tr>
<td>SLB</td>
<td>Slit-Lamp Biomicroscopy</td>
</tr>
<tr>
<td>Spreadsheet</td>
<td>A spreadsheet is a <strong>computer application</strong> that simulates a paper, accounting <strong>worksheet</strong>. It displays multiple cells usually in a two-dimensional matrix or grid consisting of rows and columns.</td>
</tr>
<tr>
<td>Timeline</td>
<td>The chronological ‘journey’ a patient takes between different GP, Screening and hospital examinations and consultations</td>
</tr>
<tr>
<td>Ungradeable</td>
<td>A classification placed against a digital screening encounter if graders are unable to sufficiently visualise the retina from the images taken.</td>
</tr>
<tr>
<td>Microsoft Excel Workbook</td>
<td>A series of spreadsheets held under one file name.</td>
</tr>
<tr>
<td>Microsoft Excel Worksheet</td>
<td>Alternative name for a Spreadsheet</td>
</tr>
</tbody>
</table>
### Appendix A - Worksheets

<table>
<thead>
<tr>
<th>Worksheet</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referrals</td>
<td>Main data entry spreadsheet</td>
</tr>
<tr>
<td>OBJ 7</td>
<td>A Pivot table demonstrating the achievement of Quality Assurance Standard 7</td>
</tr>
<tr>
<td>C1</td>
<td>Chart 1 - Graphical representation of the ‘OBJ7’ worksheet</td>
</tr>
<tr>
<td>OBJ 8 (R3)</td>
<td>A Pivot table demonstrating the achievement of Quality Assurance Standard 8 for R3 referrals</td>
</tr>
<tr>
<td>C2</td>
<td>Chart 2 - Graphical representation of the ‘OBJ 8 (R3)’ worksheet</td>
</tr>
<tr>
<td>OBJ 8 (R2, M1)</td>
<td>A Pivot table demonstrating the achievement of Quality Assurance Standard 8 for R2 &amp; M1 referrals</td>
</tr>
<tr>
<td>C3</td>
<td>Chart 3 - Graphical representation of the ‘OBJ 8 (R2, M1)’ worksheet</td>
</tr>
<tr>
<td>OBJ 10</td>
<td>A Pivot table demonstrating the achievement of Quality Assurance Standard 10</td>
</tr>
<tr>
<td>C4</td>
<td>Chart 4 - Graphical representation of the ‘OBJ 10’ worksheet</td>
</tr>
<tr>
<td>OBJ 11 (R3)</td>
<td>A Pivot table demonstrating the achievement of Quality Assurance Standard 11 for R3 referrals</td>
</tr>
<tr>
<td>C5</td>
<td>Chart 5 - Graphical representation of the ‘OBJ 11 (R3)’ worksheet</td>
</tr>
<tr>
<td>OBJ 11 (R2, M1)</td>
<td>A Pivot table demonstrating the achievement of Quality Assurance Standard 11 for R2 and M1 referrals</td>
</tr>
<tr>
<td>C6</td>
<td>Chart 6 - Graphical representation of the ‘OBJ 11 (R2, M1)’ worksheet</td>
</tr>
<tr>
<td>OBJ 12 (R3)</td>
<td>A Pivot table demonstrating the achievement of Quality Assurance Standard 12 for R3 referrals</td>
</tr>
<tr>
<td></td>
<td>Description</td>
</tr>
<tr>
<td>---</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>C7</td>
<td>Chart 7 - Graphical representation of the ‘OBJ 12 (R3)’ worksheet</td>
</tr>
<tr>
<td>OBJ 12 (R2, M1)</td>
<td>A Pivot table demonstrating the achievement of Quality Assurance Standard 12 for R2 and M1 referrals</td>
</tr>
<tr>
<td>C8</td>
<td>Chart 8 - Graphical representation of the ‘OBJ 12 (R2, M1)’ worksheet</td>
</tr>
<tr>
<td>Non-DR</td>
<td>A Pivot table demonstrating the number of referrals against each Non-diabetic retinopathy category.</td>
</tr>
</tbody>
</table>
### Appendix B - Referral Information Definitions

<table>
<thead>
<tr>
<th>Data Fields</th>
<th>Description</th>
<th>Data Type</th>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
<td>Shows the current status of the referral (See section ‘The Status Column’)</td>
<td>Cannot be edited</td>
<td>Cannot be edited</td>
</tr>
<tr>
<td>NHS Number</td>
<td>Patient’s NHS Number</td>
<td>Number</td>
<td>Maximum 10 digits – lead zeros will be added automatically</td>
</tr>
<tr>
<td>Area</td>
<td>An area (such as a PCT) that can be associated with the referral</td>
<td>Predefined List</td>
<td>User-defined via ‘Options’</td>
</tr>
<tr>
<td>Date Screened</td>
<td>Date of patient’s screening encounter from which the referral occurred</td>
<td>Date</td>
<td>dd/mm/yyyy</td>
</tr>
<tr>
<td>Final Grade Date</td>
<td>The date of the grading level that produces the final grade date. This will be either the:</td>
<td>Date</td>
<td>dd/mm/yyyy</td>
</tr>
<tr>
<td></td>
<td>• arbitration grade date</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• secondary grade date if in agreement with primary grade</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• referral grade date if referral grade is part of screening pathway</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Grade RX (RE)</td>
<td>Retinopathy Level at the final grade digital screen outcome for the right eye.</td>
<td>Predefined List</td>
<td>R0, R1, R2, R3, RU</td>
</tr>
<tr>
<td>Final Grade MX (RE)</td>
<td>Maculopathy Level at the final grade digital screen outcome for the right eye</td>
<td>Predefined List</td>
<td>M0, M1, MU</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
<td>Predefined List</td>
<td>Notes</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>Final Grade RX (LE)</td>
<td>Retinopathy Level at the final grade digital screen outcome for the left eye</td>
<td>R0, R1, R2, R3, RU</td>
<td></td>
</tr>
<tr>
<td>Final Grade MX (LE)</td>
<td>Maculopathy Level at the final grade digital screen outcome for the right eye</td>
<td>M0, M1, MU</td>
<td></td>
</tr>
<tr>
<td>Type of Referral</td>
<td>Identifies whether the referral is related to diabetic retinopathy or not</td>
<td>DR, Non-DR, SLB</td>
<td>Cannot be edited</td>
</tr>
<tr>
<td>Non-DR Referral Category</td>
<td>A category can be assigned to those referrals which are not related to diabetic retinopathy. These categories can be setup via the Options window (See section ‘’).</td>
<td>User-defined via ‘Options’</td>
<td></td>
</tr>
<tr>
<td>Referred From</td>
<td>Identifies the centre that sends the referral. These centres can be setup via the Options window (See section ‘Referring Centres’).</td>
<td>User-defined via ‘Options’</td>
<td></td>
</tr>
<tr>
<td>Referred To (Name of HES)</td>
<td>Identifies the hospital eye service receiving the referral. Each hospital eye service can be setup via the Options window (See section ‘Hospital Eye Services’).</td>
<td>User-defined via ‘Options’</td>
<td></td>
</tr>
<tr>
<td>Date referral received @ HES</td>
<td>Date the hospital eye service acknowledged receipt of the referral</td>
<td>Date</td>
<td>dd/mm/yyyy</td>
</tr>
<tr>
<td>Date Allocated for first appt within HES following ‘Date Screened’</td>
<td>The first date given to the patient for assessment/treatment.</td>
<td>Date</td>
<td>dd/mm/yyyy</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
<td>Type</td>
<td>Predefined List</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>--------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Appointment cancelled by hospital, patient or DNA (Assessment)</td>
<td>If the first appointment given for assessment is cancelled by the hospital or patient or if the patient Does Not Attend (DNA) then this needs to be indicated within this data field.</td>
<td></td>
<td>‘Canx by patient’, ‘Canx by hospital’, ‘DNA’</td>
</tr>
<tr>
<td>First Attended Consultation date within HES following ‘Date Screened’ (Standard 8 &amp; 10)</td>
<td>Date patient attended first consultation following Date Screened.</td>
<td>Date</td>
<td></td>
</tr>
<tr>
<td>Ophthalmology Grade Rx (RE)</td>
<td>Retinopathy Level from the ophthalmological assessment associated with this screening encounter for the right eye</td>
<td></td>
<td>R0, R1, R2, R3, RU</td>
</tr>
<tr>
<td>Ophthalmology Grade Mx (RE)</td>
<td>Maculopathy Level from the ophthalmological assessment associated with this screening encounter for the right eye</td>
<td></td>
<td>M0, M1, MU</td>
</tr>
<tr>
<td>Ophthalmology Grade Rx (LE)</td>
<td>Retinopathy Level from the ophthalmological assessment associated with this screening encounter for the left eye</td>
<td></td>
<td>R0, R1, R2, R3, RU</td>
</tr>
<tr>
<td>Ophthalmology Grade Mx (LE)</td>
<td>Maculopathy Level from the ophthalmological assessment associated with this screening encounter for the left eye</td>
<td></td>
<td>M0, M1, MU</td>
</tr>
<tr>
<td>Date decision made to laser</td>
<td>Date the patient was listed for laser treatment</td>
<td>Date</td>
<td></td>
</tr>
<tr>
<td>Date allocated for first laser following ‘Date Screened’</td>
<td>The first date given to the patient for laser treatment. This decision to laser must have been listed as part of this referral.</td>
<td>Date</td>
<td></td>
</tr>
<tr>
<td>Appointment cancelled by hospital, patient or DNA (Laser)</td>
<td>If the first appointment given for laser is cancelled by the hospital or patient or if the patient Does Not Attend (DNA) then this needs to be indicated within this data field.</td>
<td>Predefined List</td>
<td>‘Canx by patient’, ‘Canx by hospital’, ‘DNA’</td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Date first lasered following ‘Date Screened’ (Standards 11 &amp; 12)</td>
<td>Date patient received laser treatment as part of this referral.</td>
<td>Date</td>
<td>dd/mm/yyyy</td>
</tr>
<tr>
<td>Comments</td>
<td>Any comments applicable to this referral</td>
<td>Text</td>
<td>Any</td>
</tr>
</tbody>
</table>
### Appendix C - Information required for completed referrals

The following table demonstrates what data is required to switch the status arrow to green:

<table>
<thead>
<tr>
<th>Referral Information</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
<td>N/A</td>
</tr>
<tr>
<td>NHS Number</td>
<td>Yes</td>
</tr>
<tr>
<td>Date Screened</td>
<td>Yes</td>
</tr>
<tr>
<td>Area</td>
<td>No</td>
</tr>
<tr>
<td>Final Grade Date</td>
<td>Yes</td>
</tr>
<tr>
<td>Final Grade RX (RE)</td>
<td>Yes</td>
</tr>
<tr>
<td>Final Grade MX (RE)</td>
<td>Yes</td>
</tr>
<tr>
<td>Final Grade RX (LE)</td>
<td>Yes</td>
</tr>
<tr>
<td>Final Grade MX (LE)</td>
<td>Yes</td>
</tr>
<tr>
<td>Type of Referral</td>
<td>Yes (completed automatically)</td>
</tr>
<tr>
<td>Non-DR Referral Category</td>
<td>No</td>
</tr>
<tr>
<td>Date referred</td>
<td>Yes</td>
</tr>
<tr>
<td>Referred From</td>
<td>No</td>
</tr>
<tr>
<td>Referred To (Name of HES)</td>
<td>No</td>
</tr>
<tr>
<td>Date referral received @ HES</td>
<td>Yes</td>
</tr>
<tr>
<td>Event</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Date Allocated for first appt within HES following ‘Date Screened’</strong></td>
<td>For DR and SLB referrals only</td>
</tr>
<tr>
<td><strong>Appointment cancelled by hospital, patient or DNA (Assessment)</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>First Attended Consultation date within HES following ‘Date Screened’</strong></td>
<td>For DR and SLB referrals only</td>
</tr>
<tr>
<td><strong>Ophthalmology Grade Rx (RE)</strong></td>
<td>For DR and SLB referrals only</td>
</tr>
<tr>
<td><strong>Ophthalmology Grade Mx (RE)</strong></td>
<td>For DR and SLB referrals only</td>
</tr>
<tr>
<td><strong>Ophthalmology Grade Rx (LE)</strong></td>
<td>For DR and SLB referrals only</td>
</tr>
<tr>
<td><strong>Ophthalmology Grade Mx (LE)</strong></td>
<td>For DR and SLB referrals only</td>
</tr>
<tr>
<td><strong>Date decision made to laser</strong></td>
<td>Yes, if a value has been entered for either the date allocated for first laser or date actual laser and for DR referrals only.</td>
</tr>
<tr>
<td><strong>Date allocated for first laser following ‘Date Screened’</strong></td>
<td>Yes, if a value has been entered for either the date decision made to laser or date actual laser and for DR referrals only</td>
</tr>
<tr>
<td><strong>Appointment cancelled by hospital, patient or DNA (Laser)</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Date first lasered following ‘Date Screened’</strong> (Standards 11 &amp; 12)</td>
<td>Yes, if a value has been entered for either the date decision made to laser or allocated for first laser and for DR referrals only</td>
</tr>
<tr>
<td><strong>Comments</strong></td>
<td>No</td>
</tr>
</tbody>
</table>
## Appendix D – Retinopathy Grading Standard

<table>
<thead>
<tr>
<th>Retinopathy (R)</th>
<th>Severity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>R0</td>
<td>None</td>
<td>Normal</td>
</tr>
</tbody>
</table>
| R1              | Background | Micro-aneurysm(s)  
Retinal haemorrhage(s) ± any exudate not within the definition of maculopathy |
| R2              | Pre-Proliferative | venous beading  
venous loop or reduplication  
intra-retinal microvascular abnormality (IRMA)  
multiple deep, round or blot haemorrhages  
(CWS - careful search for above features) |
| R3              | Proliferative | new vessels on disc (NVD)  
new vessels elsewhere (NVE)  
Pre-retinal or vitreous haemorrhage  
Pre-retinal fibrosis ± tractional retinal detachment |
| RU              | Ungradeable | Retina cannot be adequately graded |

<table>
<thead>
<tr>
<th>Maculopathy (R)</th>
<th>Severity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M0</td>
<td>None</td>
<td>Normal</td>
</tr>
<tr>
<td>M1</td>
<td></td>
<td>exudate within 1 disc diameter (DD) of the centre of the fovea</td>
</tr>
<tr>
<td>MU</td>
<td>Ungradeable</td>
<td>Retina cannot be adequately graded</td>
</tr>
<tr>
<td>--------</td>
<td>-------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>circinate or group of exudates within the macula</td>
</tr>
<tr>
<td></td>
<td></td>
<td>retinal thickening within 1DD of the centre of the fovea (if stereo available)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>any microaneurysm or haemorrhage within 1DD of the centre of the fovea only if associated with a best VA ≤ 6/12 (if no stereo)</td>
</tr>
</tbody>
</table>
## Appendix E - Import Error Messages

The following are a series of error messages, and their explanations, that may be recorded in the import error log file as a result of importing data from an external data source:

<table>
<thead>
<tr>
<th>Error Message</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Screened missing</td>
<td>A ‘Date Screened’ has not been supplied. The NHS Number and the Date screened are used as the ‘unique identifier’ for each referral in order to distinguish between referrals. No two referrals should hold the same NHS Number and Date Screened. Without this piece of data the import process cannot determine whether the referral already exists and therefore will not import in order to prevent duplicates.</td>
</tr>
<tr>
<td>Date Screened is not a valid date</td>
<td>The import process does not recognise the ‘Date Screened’ supplied.</td>
</tr>
<tr>
<td>Date Screened is out of range</td>
<td>The year within the ‘Date Screened’ cannot be less than 1900.</td>
</tr>
<tr>
<td>Final Grade Outcome Date is not a valid date</td>
<td>The import process does not recognise the ‘Final Grade Date’ supplied.</td>
</tr>
<tr>
<td>Final Grade Outcome Date is out of range</td>
<td>The year within the ‘Final Grade Date' cannot be less than 1900.</td>
</tr>
<tr>
<td>Date referral received is out of range</td>
<td>The year within the ‘Date referral received’ cannot be less than 1900.</td>
</tr>
<tr>
<td>Date referral received is not a valid date</td>
<td>The import process does not recognise the ‘Date referral received’ supplied.</td>
</tr>
<tr>
<td>Date first allocated appointment is out of range</td>
<td>The year within the ‘Date first allocated appointment’ cannot be less than 1900.</td>
</tr>
<tr>
<td>Date first allocated appointment is not a valid date</td>
<td>The import process does not recognise the ‘Date first allocated appointment’ supplied.</td>
</tr>
<tr>
<td>Error Description</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Date first attended is out of range</td>
<td>The year within the ‘Date first attended’ cannot be less than 1900.</td>
</tr>
<tr>
<td>Date first attended is not a valid date</td>
<td>The import process does not recognise the ‘Date first attended’ supplied.</td>
</tr>
<tr>
<td>Date allocated to laser is out of range</td>
<td>The year within the ‘Date allocated to laser’ cannot be less than 1900.</td>
</tr>
<tr>
<td>Date allocated to laser is not a valid date</td>
<td>The import process does not recognise the ‘Date allocated to laser’ supplied.</td>
</tr>
<tr>
<td>Date actually lasered is out of range</td>
<td>The year within the ‘Date actually lasered ’ cannot be less than 1900.</td>
</tr>
<tr>
<td>Date actually lasered is not a valid date</td>
<td>The import process does not recognise the ‘Date actually lasered’ supplied.</td>
</tr>
<tr>
<td>NHS Number is out of range for a valid NHS number</td>
<td>The number supplied for the NHS Number exceeds the possible limits for an NHS Number.</td>
</tr>
<tr>
<td>NHS Number is not a valid number</td>
<td>The NHS number supplied is invalid.</td>
</tr>
<tr>
<td>NHS Number missing</td>
<td>A ‘NHS Number’ has not been supplied. The NHS Number and the Date screened are used as the ‘unique identifier’ for each referral in order to distinguish between referrals. No two referrals should hold the same NHS Number and Date Screened. Without this piece of data the import process cannot determine whether the referral already exists and therefore will not import in order to prevent duplicates.</td>
</tr>
<tr>
<td>Consultation appointment cancellation not recognised</td>
<td>The cancellation type is not recognised. See Appendix B - Referral Information Definitions</td>
</tr>
<tr>
<td>Laser appointment cancellation not recognised</td>
<td>The cancellation type is not recognised. See Appendix B - Referral Information Definitions</td>
</tr>
<tr>
<td>Final Grade Rx</td>
<td>Right eye not recognised</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Final Grade Mx</td>
<td>Right eye not recognised</td>
</tr>
<tr>
<td>Final Grade Rx</td>
<td>Left eye not recognised</td>
</tr>
<tr>
<td>Final Grade Mx</td>
<td>Left eye not recognised</td>
</tr>
<tr>
<td>Ophthalmology Grade Rx</td>
<td>Right eye not recognised</td>
</tr>
<tr>
<td>Ophthalmology Grade Mx</td>
<td>Right eye not recognised</td>
</tr>
<tr>
<td>Ophthalmology Grade Rx</td>
<td>Left eye not recognised</td>
</tr>
<tr>
<td>Ophthalmology Grade Mx</td>
<td>Left eye not recognised</td>
</tr>
</tbody>
</table>