USER GUIDE

South Africa | 2026

AMBIUM CLOUD USER GUIDE

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PREPARED BY	Ambium Software

Productivity Simplified

Empowering occupational health clinics with reliable & intuitive software

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1 Logging in

Use this procedure to sign in to Ambium Cloud with your own account name and password.

1.1 Before you begin

Have your site identifier, account name and password available. Your site identifier can be obtained from your Ambium supplier.

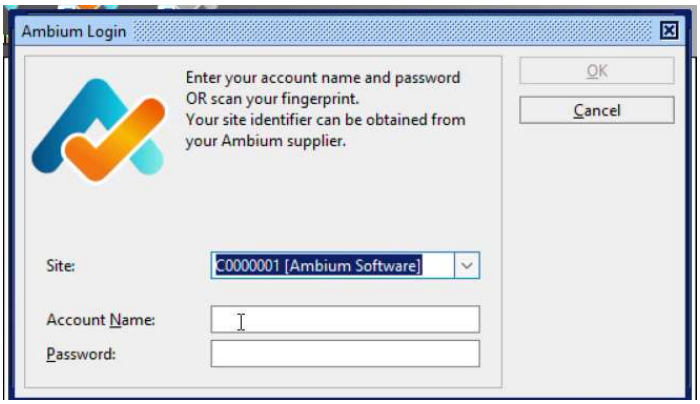


Figure 1 Ambium Login with Site, Account Name and Password fields

1.2 Signing in

Open Ambium - Wait for the Ambium Login window to appear.

Check Site - Use your organisation's site identifier. If the required site is already displayed, leave it selected.

Enter Account Name - Type the account name assigned to you.

Enter Password - Use the correct upper-case and lower-case letters. The characters are hidden as you type.

Click OK - Wait for Ambium to open. If a login error or offline database warning appears, follow the relevant troubleshooting instructions.

Once login completes, the main Ambium window opens. The title bar shows the signed-in user and clinic. The status bar shows online when connected to the Cloud database, or localhost or a server name when using the local database. See section 1.4 Checking your database connection.

1.3 Changing your initial password

When your account is created, you are given a generic password. Change this to your own password when you first log in.

Sign in - Use your account name and the generic password provided to you.

Open Change Password - From the menu at the top of the Ambium window, select Tools, then Change Password.

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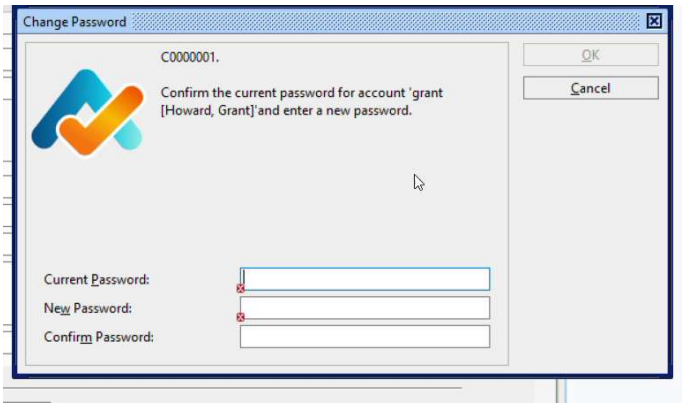


Figure 2 Change Password window

Enter Current Password - Enter the generic password you used to log in.

Enter New Password - Type the new password you want to use.

Enter Confirm Password - Type the same new password again.

Click OK - Wait for the "Update Complete" message confirming that your password has been updated.

Click Close - Close the Change Password window. Use your new password the next time you log in.

1.4 Checking your database connection

After logging in, check the status bar at the bottom right of the Ambium window to see which database you are using.

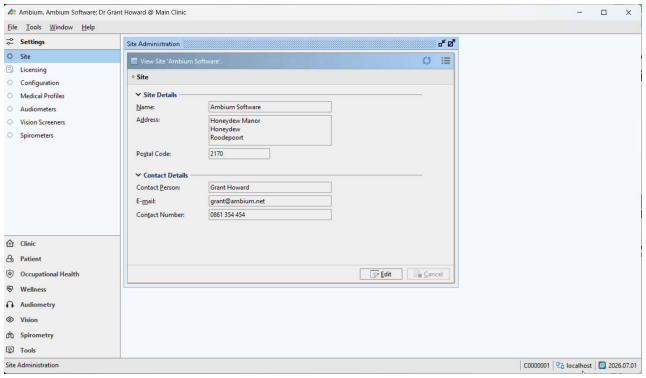


Figure 3 Ambium using the local database with localhost shown in the status bar

1.5 Read the connection status

online You are using the Cloud database.

localhost You are working offline using the local database on this computer.

Server name You are working offline using the local database on the named server.

If your computer is configured to work offline but cannot connect to the offline server, you will receive sync error notifications.



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2 System Settings

Required fields - A red cross beside a field indicates that it must be completed before you can save the record.

2.1 Site

A site identifies your organisation's tenant on the Ambium Cloud server. It is not a physical location. The clinics and their records are managed within that tenant, and one site can include multiple clinics.

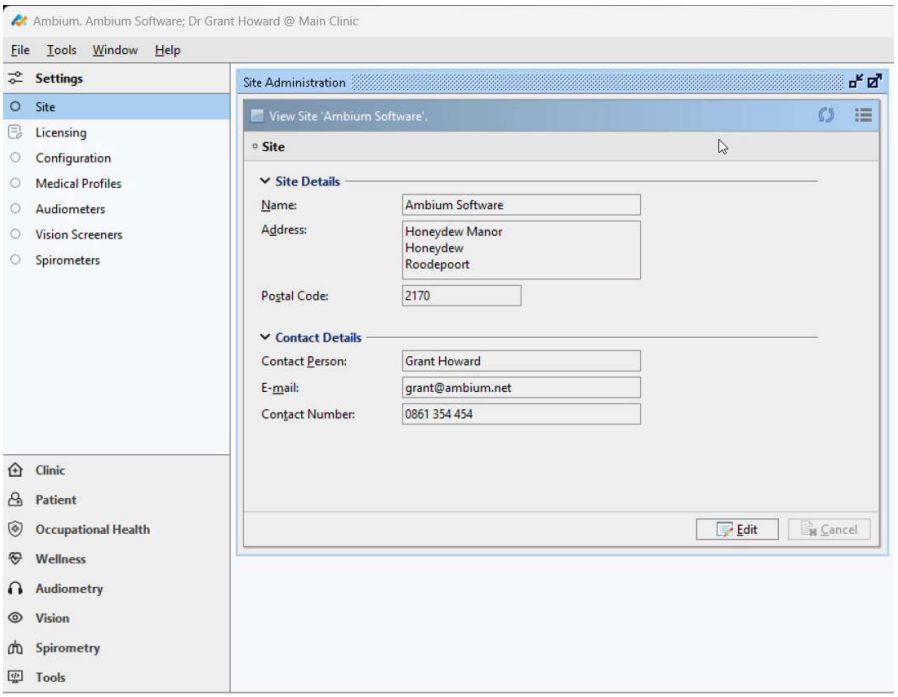


Figure 4 Site Administration with the left-hand navigation menu

2.2 Licensing

Ambium administration takes care of licensing for Ambium Cloud.

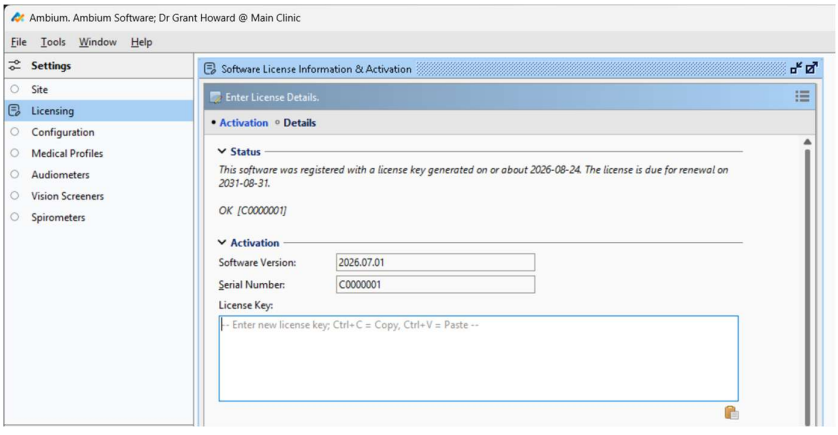


Figure 5 Licensing screen with the left-hand navigation menu

For licence expiry notices, see section 11.3 Licence expiry notice.

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2.3 Configuration

2.3.1 General

Regional Settings are normally configured for South Africa and do not usually need to be changed.

Printing Preferences do not normally need to be changed, as Ambium uses the printer settings already configured on the Windows computer.

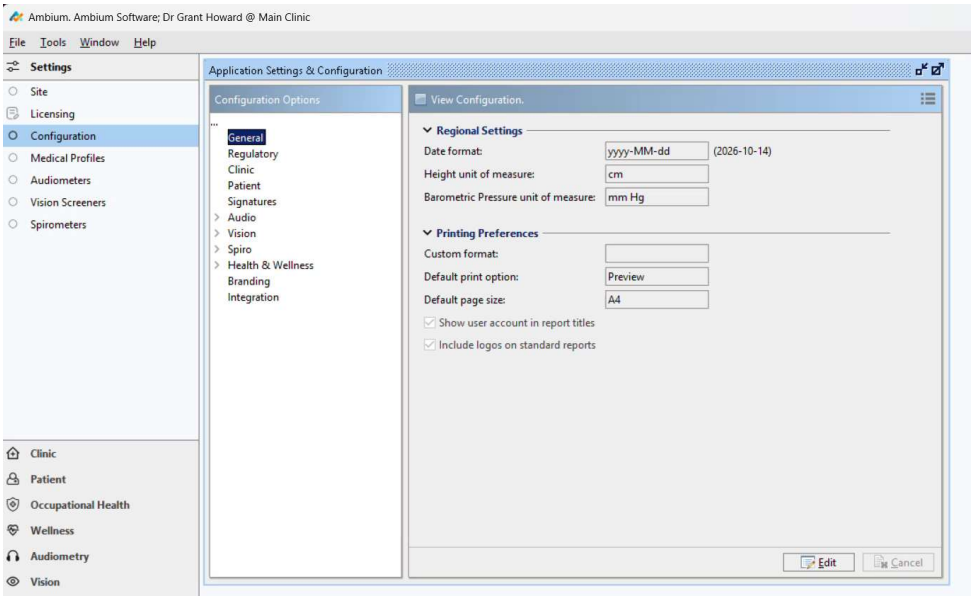


Figure 6 General configuration with the left-hand navigation menu

2.3.2 Regulatory

Do not change these settings - Changing the regulatory settings could alter how test data is interpreted.

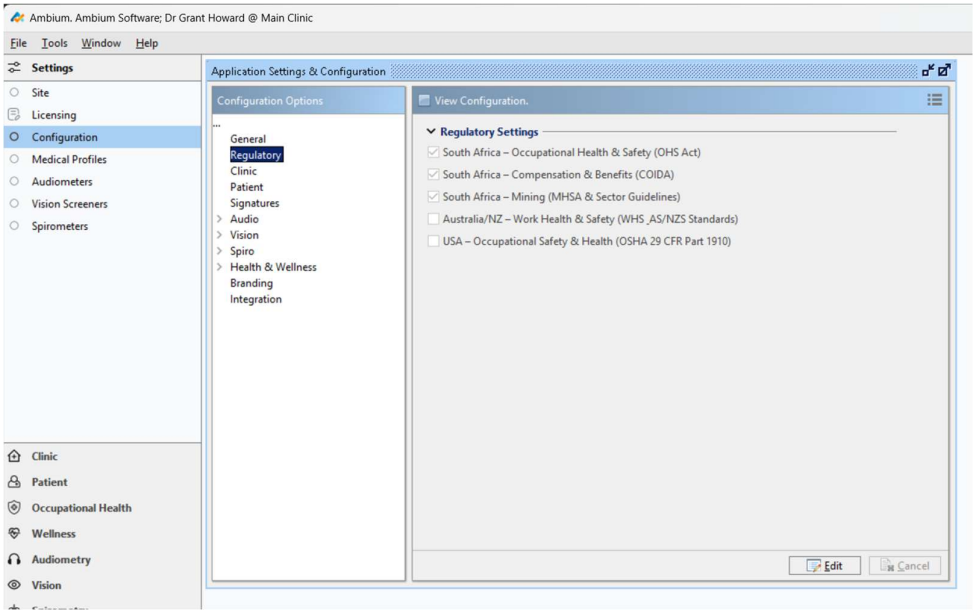


Figure 7 Regulatory settings with the left-hand navigation menu

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2.3.3 Clinic

Enable Employer must always remain selected - "Enable Company" is optional.

In Ambium, "Employer" identifies the entity responsible for the employee's health and safety for their Certificate of Fitness. "Company" identifies the organisation the employee works for. These are Ambium definitions, not regulatory definitions.

For example, the fictitious Big Mine is responsible for the health and safety of its own employees and subcontractor employees working at its site:

Employee	Employer in Ambium	Company in Ambium
Big Mine employee	Big Mine	Big Mine
Security Company employee working at Big Mine	Big Mine	Security Company

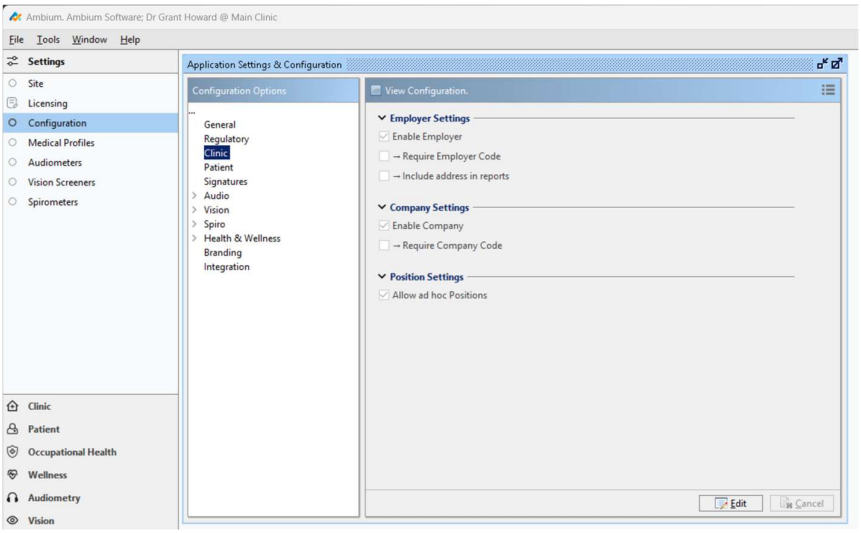


Figure 8 Clinic configuration with the left-hand navigation menu

2.3.4 Patient

Patient settings are preset for South African best practice but can be changed as you see fit.

Keep the identification requirements enabled - "Require Patient Number" should remain selected. "Identity number type" should be "SA ID Number". "Enable Passport Number" and "Require ID or Passport Number" should also remain selected, so each patient has either an ID number or a passport number.

Passport numbers accommodate foreign nationals on work permits who do not have a South African ID number.

Employment Settings - The "Require" options are optional configuration safeguards. When an option is selected, Ambium prompts the user to complete that field before saving the patient record.

Search Options - "Show extended patient details" displays additional information, such as "Company" and "Position", alongside the patient's name and ID. "Use advanced filter criteria" provides more search options, including first name, surname and "Employer".

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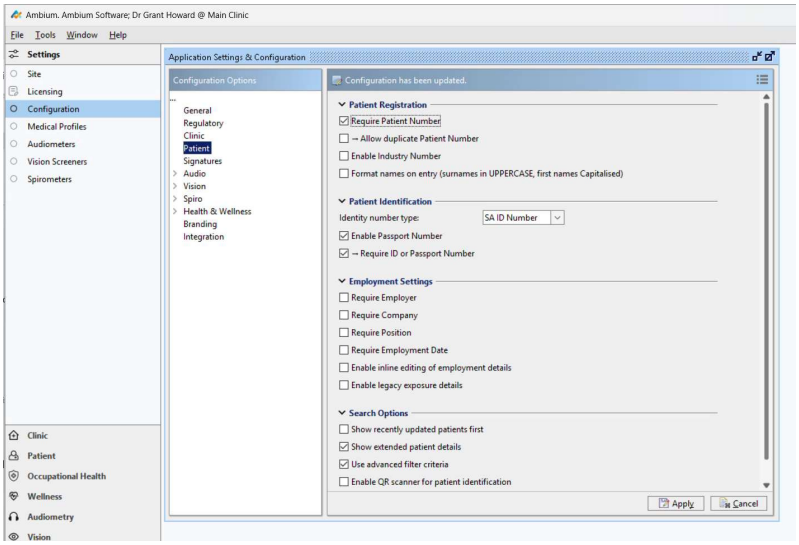


Figure 9 Patient configuration with the left-hand navigation menu

2.3.5 Signatures

Signature configuration lets you select who can sign each document. Your clinic can also choose to sign documents for which a signature is not legally required.

2.3.5.1 Document signatories

Choose the signatory - Click “Edit” and select the appropriate “Patient”, “Operator”, “OHP” or “OMP” tick boxes beside each document. The selected roles are enabled to sign that document.

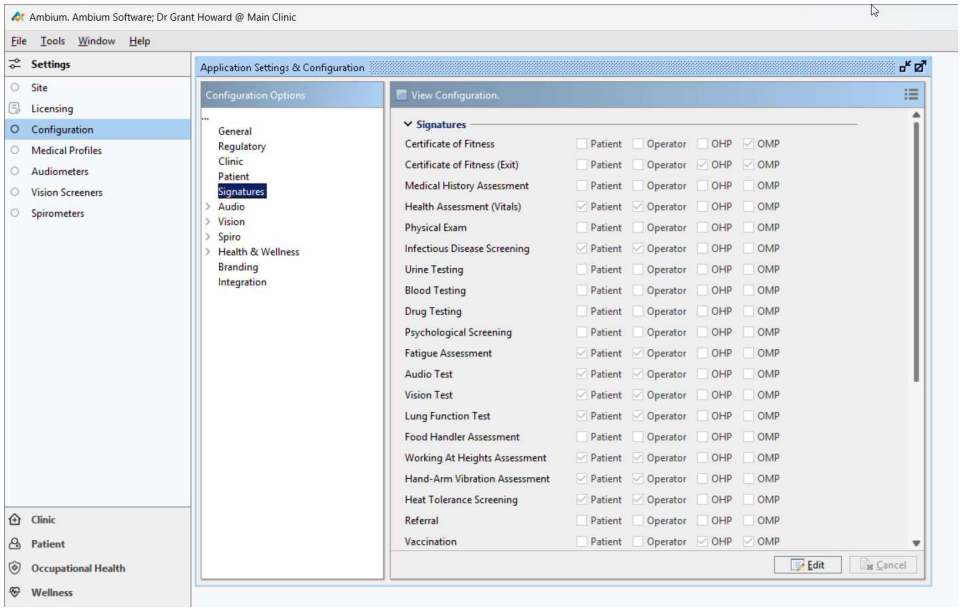


Figure 10 Signature options for documents with the left-hand navigation menu

Scroll down to see the remaining document rows, “Settings” and “Printing Preferences” shown in Figure 11.

2.3.5.2 Digital signatures and printing preferences

Enable digital signatures - Keep “Enable digital signatures” selected so users can sign documents.

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Configure QR code printing - Under “Printing Preferences”, select “Show QR code on printed documents”. Select “Include patient details and test results” to include the employee and medical details.

Configure the authentication notice - Select “Print QR authentication notice” to print the information encoded in the QR code as red text alongside the certificate. The option to print on both sides of the page provides an additional notice at the lower left.

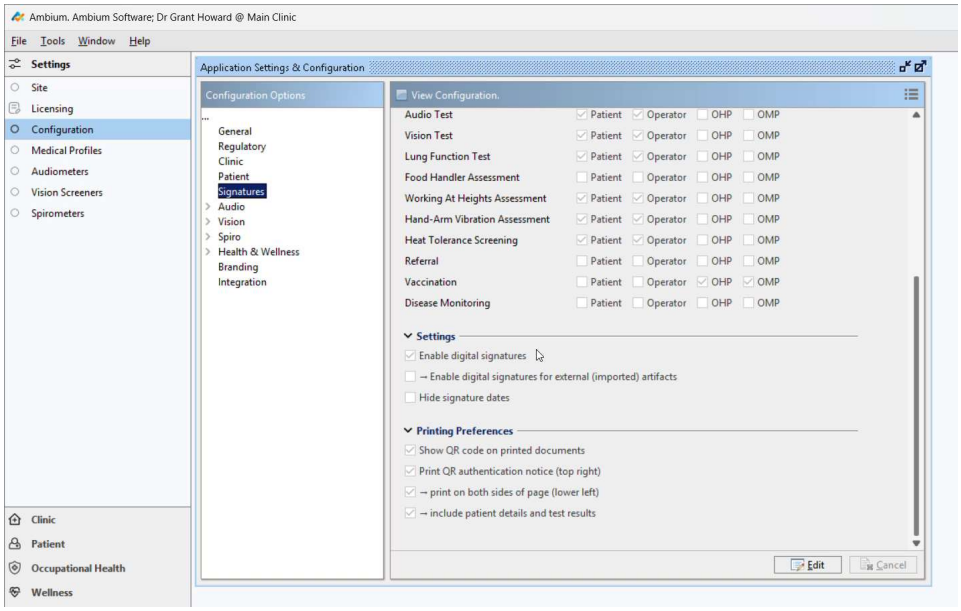


Figure 11 Remaining signature rows digital signature settings and printing preferences

Save any changes - Click “Apply”.

The QR code and authentication notice help verify certificate details and detect fraudulent copies. See the sample certificate in Figure 12.

2.3.5.3 QR code example

The highlighted QR code appears at the top right of the sample Certificate of Fitness. Scanning it provides employee and medical details for checking the certificate’s authenticity.

The red authentication notice runs down the right-hand side and displays the information encoded in the QR code.

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grant 2026-10-14 11:46:39
C0000001

Certificates of Fitness

Main Clinic
Nicola Pfab; 1138 Honeydew Manor, Honeydew, Gauteng, 2170
tel: +27 83 555 5717 e-mail: nikki@deepred.co.za
Practice No. 00198725

Scan the QR code to confirm authenticity: 2026-09-29 07:35 | 750227 | Howard, Grant | A13564 | Periodical | FIT fo

Patient Number	750227	**Employer**	Ambium Software
Patient Name	Howard, Grant	**Company**	Ambium Software
ID No.	A13564	**Position**	IT Support
Date of Birth	1975-03-27 (51)	**Service Date**	2024-01-02 (2y,8m)
Sex	Male		
Examination Date:	2026-09-29	**Exam Type:**	Periodical
Result:	FIT for duty	**Valid Until:**	2027-09-28

Expected Work Environments
Surface (Operational)

Possible Exposures
Cold, Dust, Fall Risk

Job Specific Requirements
Digging, Lifting, Mixing Cement

Protective Equipment
Booties, Dust Mask, Ear Plugs, Hard Hat

Examinations / Procedures Performed
Medical History Assessment, Health Assessment, Physical Examination, Drug Screening, Audio Test, Vision Test, Lung Function Test

Declaration
Grant Howard, ID number A13564, presented for a medical examination at Main Clinic on 2026-09-29.
Based on the results of the tests performed the subject has been found FIT for duty for the position of IT Support at Ambium Software.

Figure 12 Sample Certificate of Fitness showing the QR code and authentication notice

2.3.6 Audio

Optional Features - Select the options required for your clinic.

Display Settings - Select the options required for your clinic.

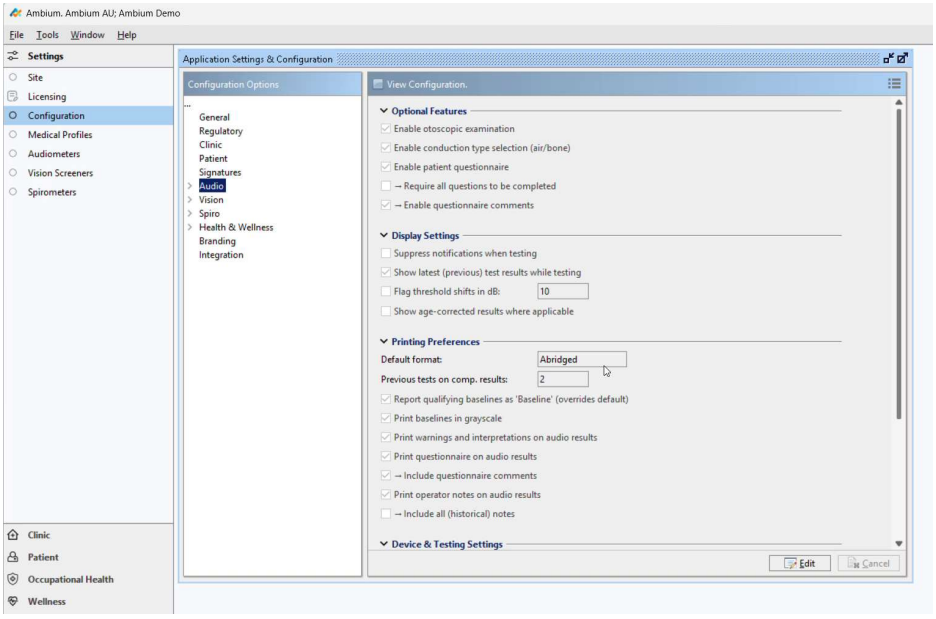


Figure 13 Audio optional features display settings and report format options

Printing Preferences - These options control the appearance of audiometry reports when printed or saved as a PDF.

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Default format - Choose “Abridged” for a simpler audiogram with fewer details and less clutter. Choose “Comprehensive” for a full audiogram showing all details.

Advanced Baseline Configuration - Ambium assigns audiometry baselines automatically; manual baseline assignment is not normally required.

Milestone baselines - Milestone baseline tracking is required for the mining sector. The option “Enable Milestone baseline tracking for all industries (not limited to mining)” extends this tracking to other industries.

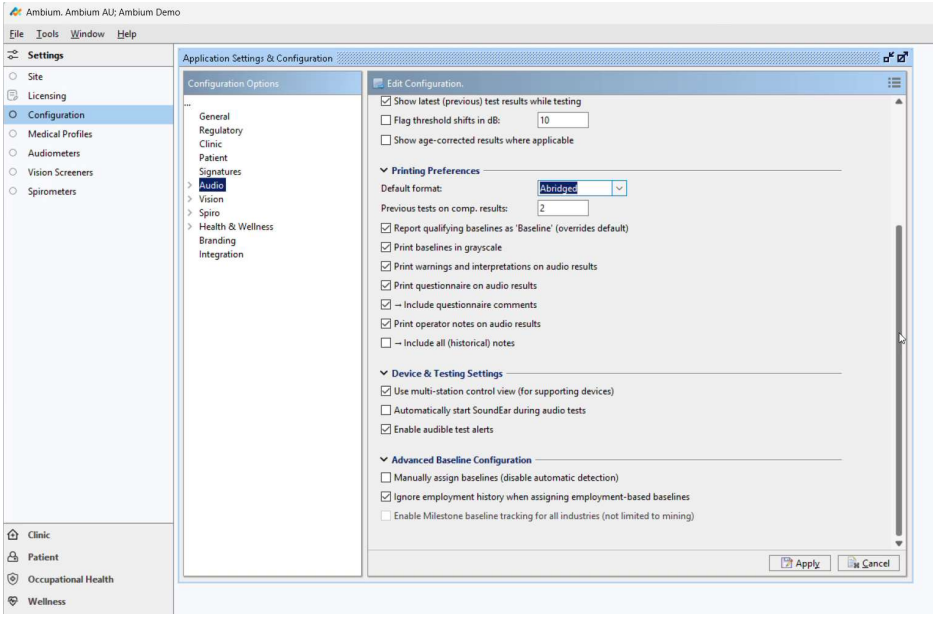


Figure 14 Audio printing preferences device settings and baseline configuration

Click “Apply” to save any changes.

2.3.7 Vision

Regional Settings - Select the required units under “Unit of measurement / scale type”. “British” uses feet, for example 20/20; “Metric” uses metres, for example 6/6. These represent equivalent visual acuity. Metric units are commonly used in South Africa.

Test Settings - Use “Test sequence” to choose whether the left or right eye is tested first. Leave “Always test naked eye (without glasses)” unselected so testing can accommodate patients who wear glasses. Select the remaining options to suit your clinic.

Display Settings - Select the options required for your clinic.

Printing Preferences - Select the options required for your clinic.

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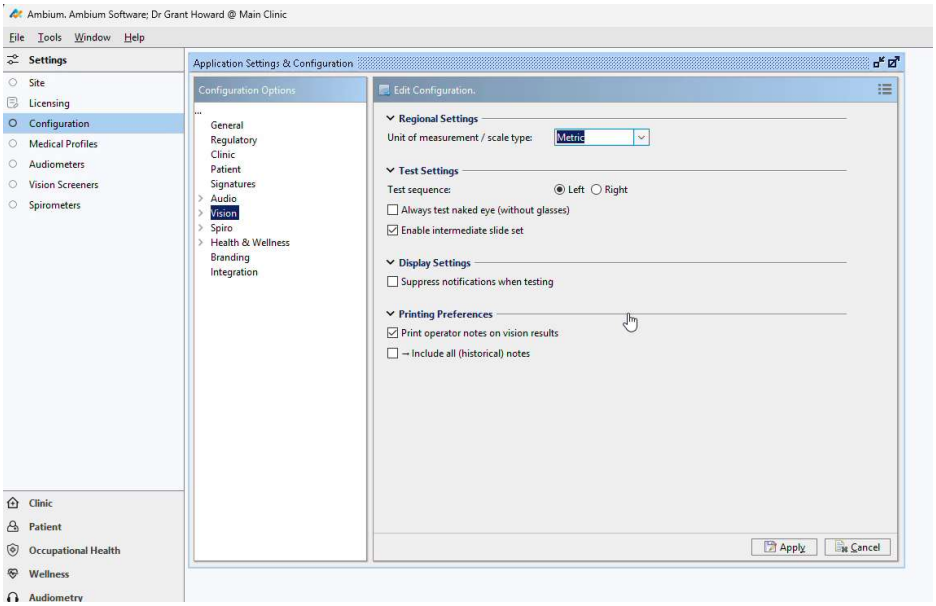


Figure 15 Vision configuration with the left-hand navigation menu

Click “Apply” to save any changes.

2.3.8 Spiro

Optional Features - The clinic administrator can select the options required for the clinic.

Display Settings - Select the options required for your clinic.

Printing Preferences - Select the report options required for your clinic.

Print unacceptable trials - Select “Print unacceptable trials” to include graphs from saved unacceptable trials in the report. Availability depends on whether the spirometry software saves these trials and makes them available to Ambium. This option allows attempts to be documented when a patient has difficulty performing the test and acceptable trials cannot be obtained. Printing a trial does not change its acceptability.

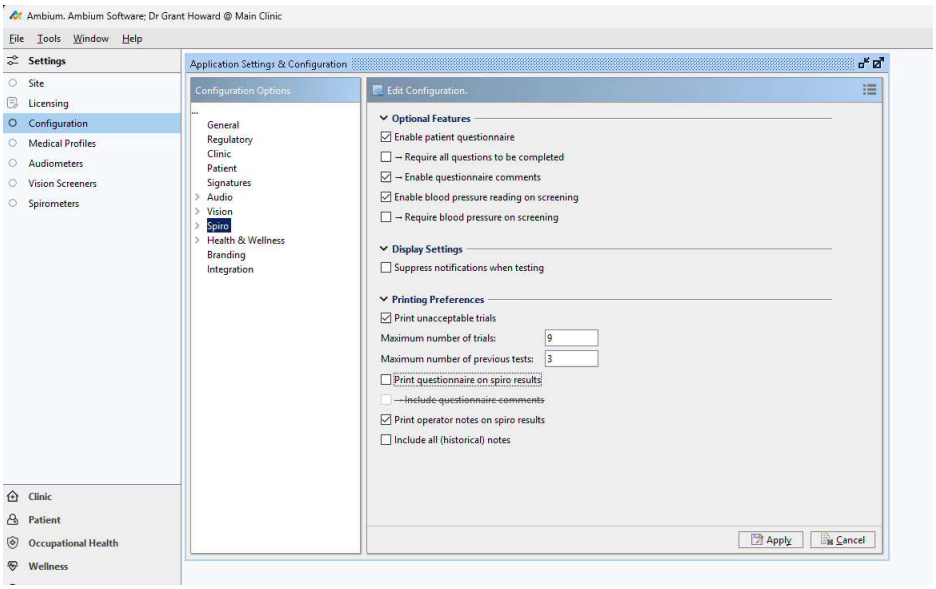


Figure 16 Spiro configuration with the left-hand navigation menu

Click “Apply” to save any changes.

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2.3.9 Health & Wellness

Expand “Health & Wellness” using the arrow beside it to view the individual screenings and tests. The clinic administrator can work through these options and select the settings that best suit the clinic.

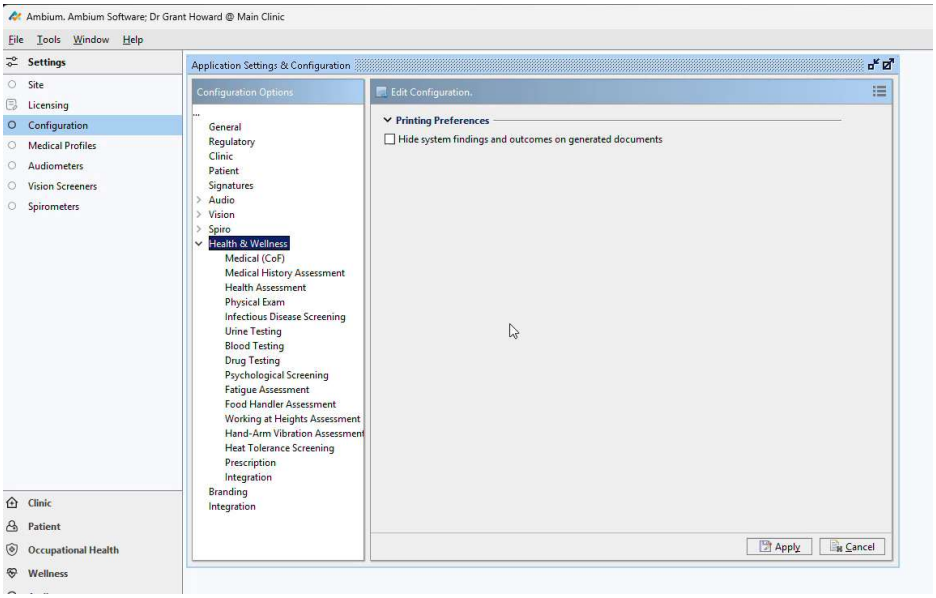


Figure 17 Health and Wellness configuration with the screening and test options expanded

Integration - Leave “Automatically export medical results” unselected. This option is for integration with other software, such as HR systems. Ambium administrators set up these integrations, usually for larger enterprise clinics.

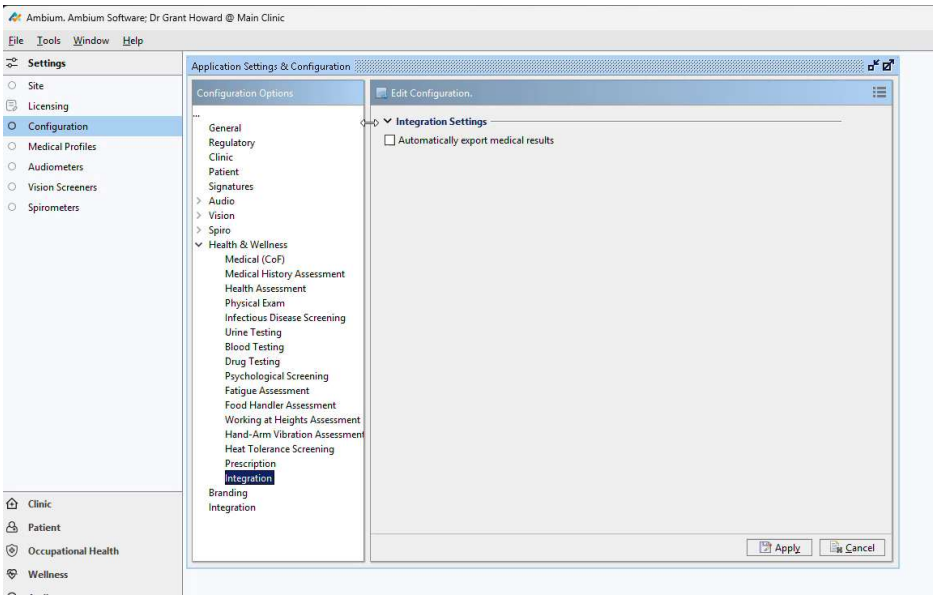


Figure 18 Health and Wellness integration settings

Click “Apply” to save any changes.

2.3.10 Branding

These settings define the branding for the main site. Individual clinics can have their own branding, which is covered in the clinic settings section.

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Logo - Use a small logo for audiometry, spirometry and other supporting screening reports and documents. The maximum recommended size is 120 × 60 pixels.

Letterhead - Use the larger logo for Certificates of Fitness. The maximum recommended size is 160 × 120 pixels.

Stamp - A company stamp can be added to certain documents if required. The recommended size is 160 × 160 pixels, with a transparent background.

Add or replace a logo - Click “Edit”, then click “select” beside the required logo. Choose the logo file from your computer and click “Open”. Check that the logo has the correct dimensions, then click “Apply” to save your changes.

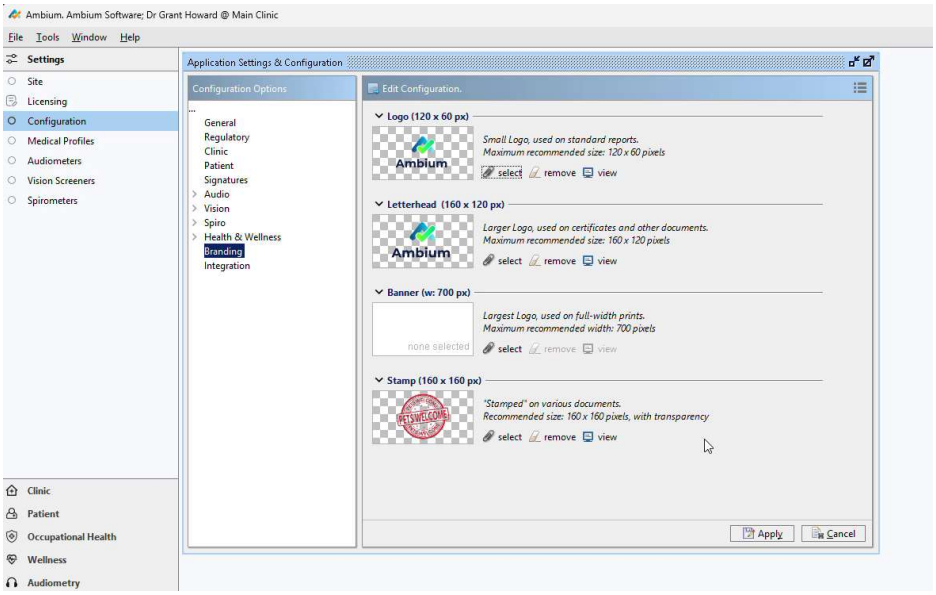


Figure 19 Main site branding with logo sizes and selection controls

If you need help inserting a logo at the correct size, see section 11.4 Branding logo size.

2.4 Medical Profiles

A medical profile defines the screenings and tests for a type of work, based on its risks. Profiles are not linked to a particular customer: for example, a driver medical profile can be used for drivers employed by several customers. The clinic administrator sets up these profiles.

2.4.1 Profile details

Create a profile - Click “New”. Enter a “Code” using your existing naming convention, a “Name” and a suitable “Description”. To amend an existing profile, select it and click “Edit”.

Industry - Select the relevant industry. For a construction medical, select “Construction” to activate the Annexure 3 certificate. Entering “Annexure 3” in “Description” alone does not activate it.

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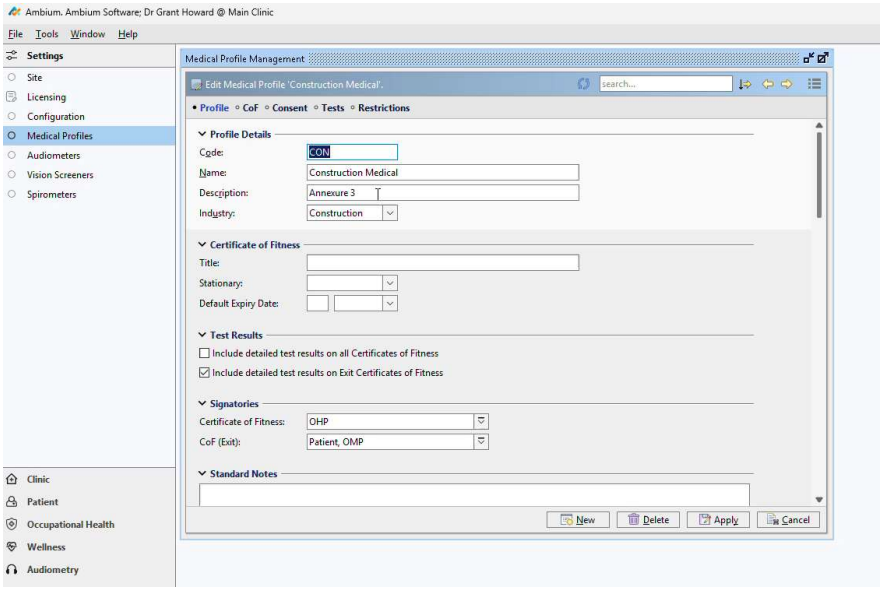


Figure 20 Medical profile details using Construction Medical as an example

2.4.2 Certificate of Fitness

Title - Enter a custom certificate title if required. If "Title" is blank, Ambium uses "Certificate of Fitness".

Test Results - Use "Include detailed test results on Exit Certificates of Fitness" for detailed results on exit certificates only. Leave "Include detailed test results on all Certificates of Fitness" unselected for this setup.

Signatories - Choose one or more signatories separately for "Certificate of Fitness" and "CoF (Exit)". For mining profiles, include "Patient" among the exit certificate signatories.

Standard Notes - Enter any standard wording to appear on certificates whenever this profile is used.

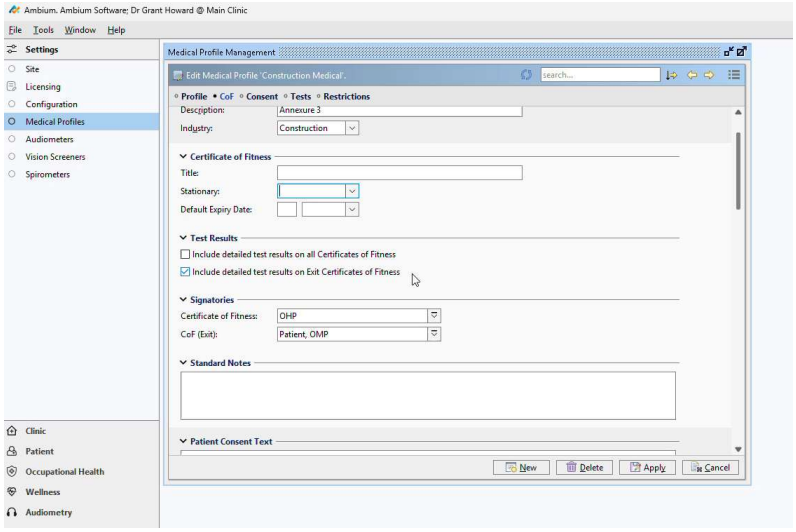


Figure 21 Certificate title test results signatories and standard notes

Patient Consent Text - Enter your own patient consent wording for this profile if required.

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2.4.3 Tests and assessment items

Tests Assessments and Questionnaires - Select the tick boxes for the screenings and tests required for the job and its risks. Clear the tick boxes for tests that are not required.

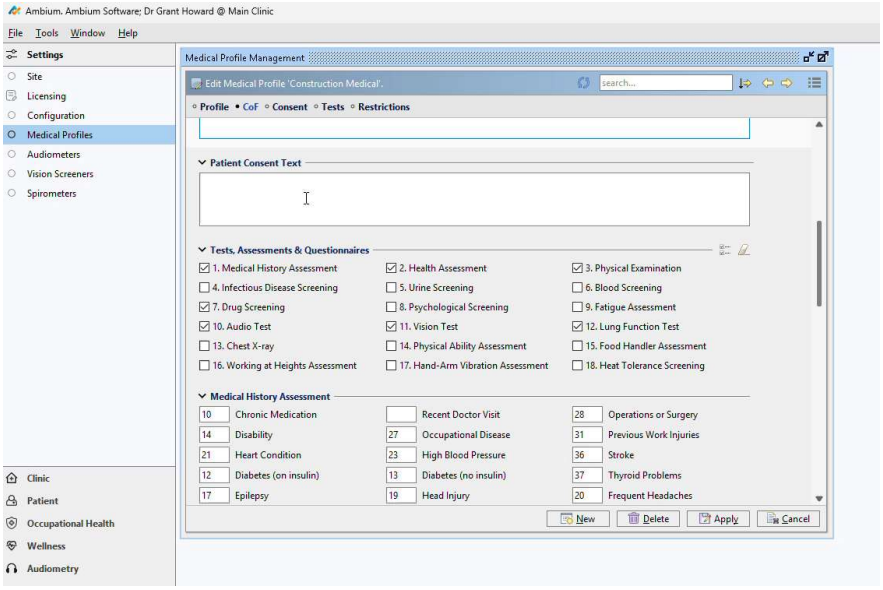


Figure 22 Patient consent text and selection of tests assessments and questionnaires

Question selection and order - In "Medical History Assessment", enter or change the number beside an item to include it and determine its position in the question list. Leave the number blank to exclude the item.

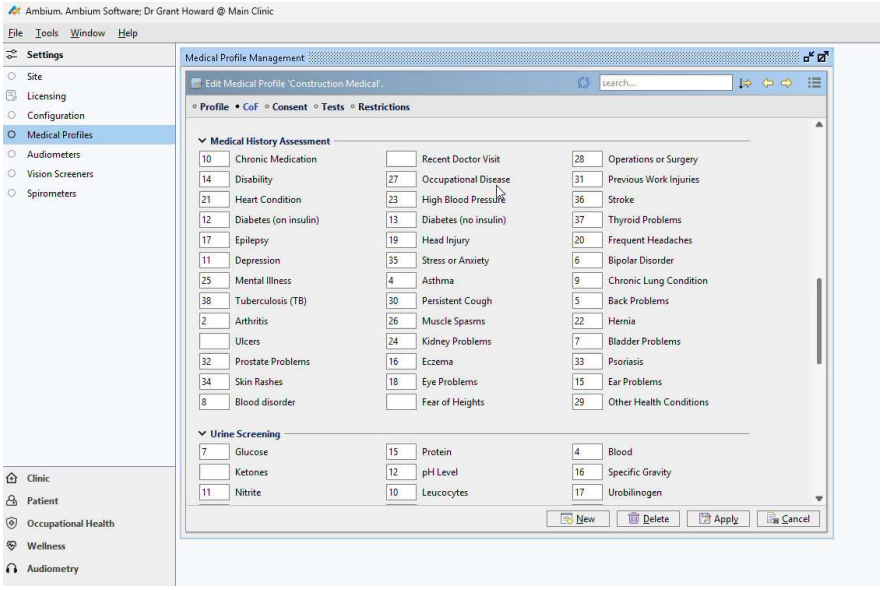


Figure 23 Medical history question selection and order

The same numbering method applies to items under "Urine Screening", "Blood Screening", "Drug Screening" and "Physical Examination". Scroll down to review these lists.

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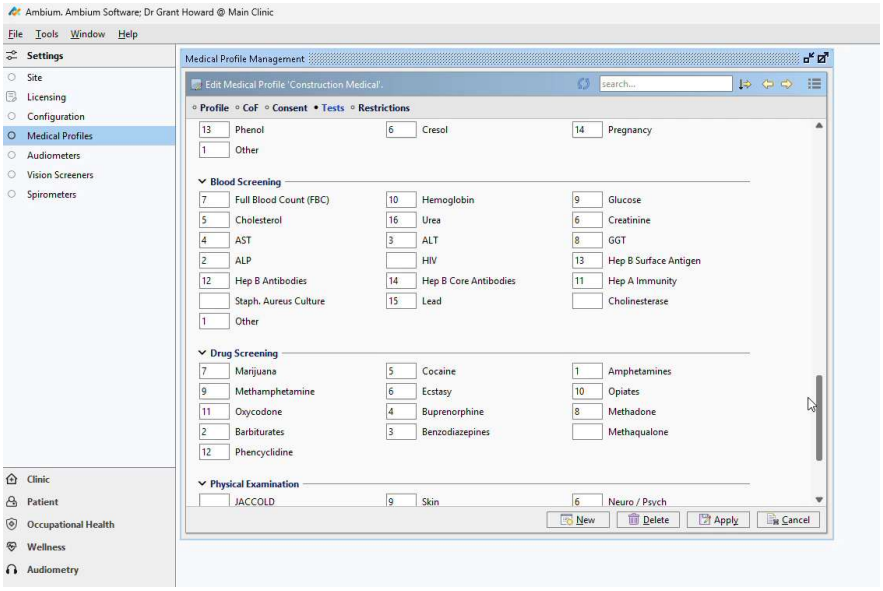


Figure 24 Blood and drug screening item selection and order

2.4.4 Usage restrictions and saving

Usage Restrictions - Use “Clinic” to specify which clinics can access the medical profile. This allows a profile to be limited to clinics working in the relevant industry.

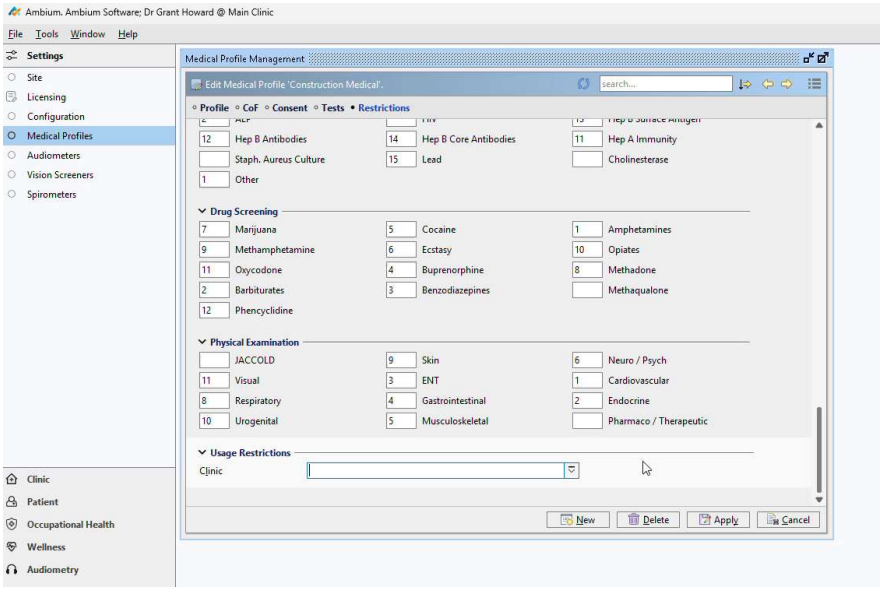


Figure 25 Physical examination items and clinic usage restrictions

Save the profile - Click “Apply”. The profile becomes available in the medical profile list for use when carrying out a medical for a patient or employee.

2.5 Audiometers

Register each audiometer and assign it to the computer it is connected to. This computer is the “Host”. The assignment allows the audiometer details to appear on the audiogram when a test is performed.

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2.5.1 Add and assign an audiometer

Device details - Click “New”. Select the “Make” and “Model”, enter the “Serial Number”, and select the “Clinic” to which the audiometer is assigned.

Host assignment - On the computer connected to the audiometer, click the green “Reset device settings” icon at the right of “Device Settings”. This assigns the current computer as the “Host”.

Port - If “Port” is not assigned automatically, select the port used by the connected audiometer. The port shown in the example is specific to that computer.

Save the assignment - Click “Apply”. If the device does not connect when testing, see section 11.5.1 Audiometer port not connected. If an existing assignment prevents saving, see section 11.5.2 Audiometer host and port conflict.

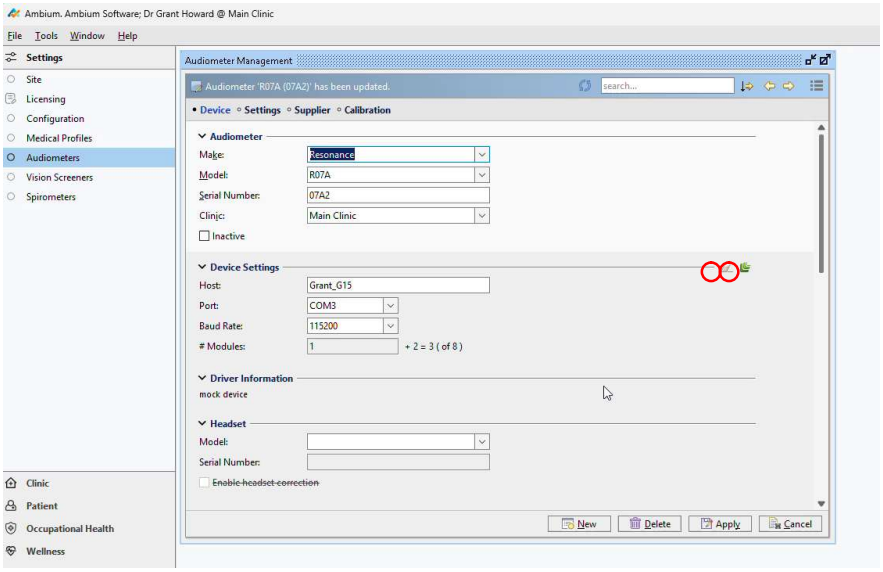


Figure 26 Audiometer details with host and port assigned

2.5.2 Remove a host assignment

If, for whatever reason, this computer is not the current host, select the audiometer and click “Edit”. Click the eraser icon to the left of the green icon beside “Device Settings”, then click “Apply”. This clears the host assignment; it does not delete the audiometer record.

2.5.3 Mark an audiometer inactive

If you no longer use an audiometer, select it and click “Edit”. Select the “Inactive” tick box directly below the clinic name, then click “Apply”.

2.5.4 Calibration records

Record the details from the audiometer’s calibration certificate so the calibration record appears on audiograms produced when employees are screened.

Select the audiometer - Click on “Calibration” in the top menu or scroll down to the calibration section. Click “Edit” to create the new record. Do not click “New” as this will create a new audiometer.

Calibration details - Set “Calibration Date” to the date the calibration was performed, as shown on the certificate. Under “Next Calibration”, select “3 months” for a mobile unit or “12 months” for a fixed clinic.

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Enter the calibration company and the name of the person who performed the calibration in "Calibrated By". Enter the certificate number in "Certificate".

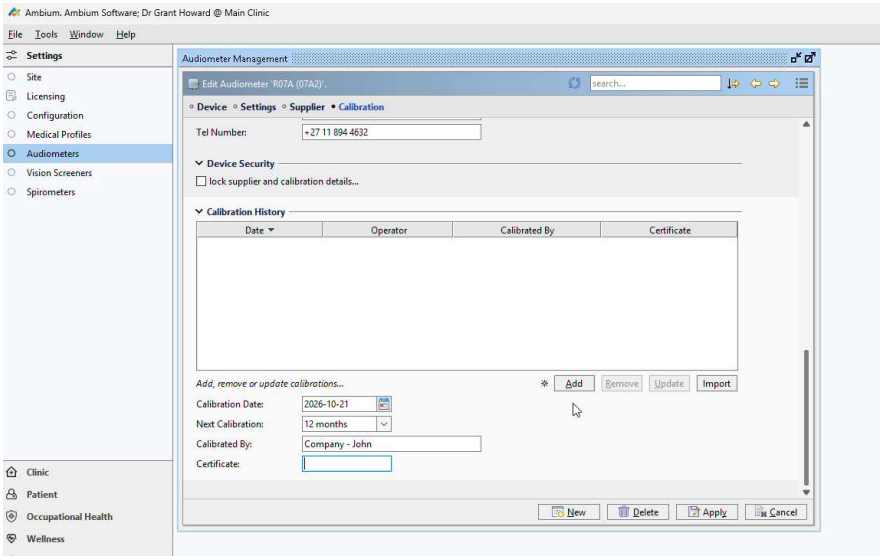


Figure 27 Entering audiometer calibration certificate details

Add the record - Click "Add". Check that the details appear in "Calibration History".

Save the changes - Click "Apply" to save the calibration record. Clicking "Add" alone does not complete the process.

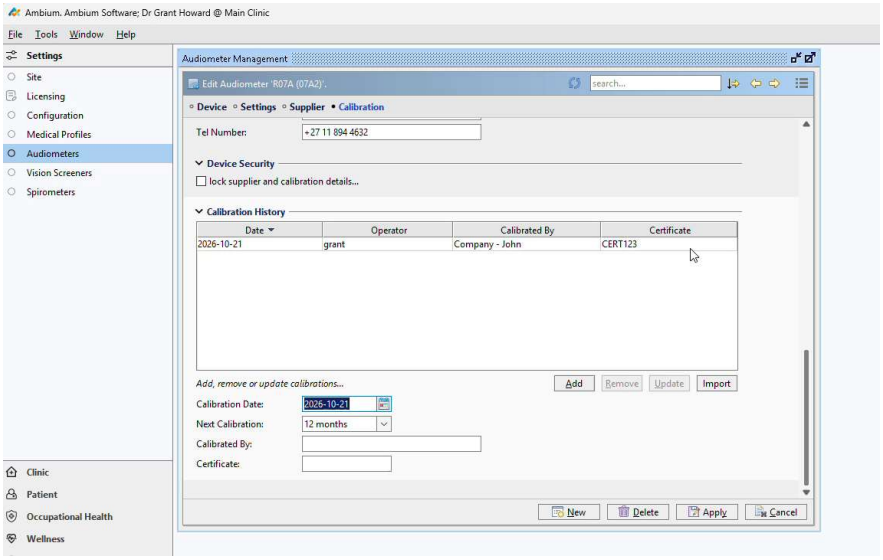


Figure 28 Calibration record added to Calibration History before clicking Apply

Retain the certificate - The clinic must retain the original calibration certificate. The entry in Ambium records the certificate details; it does not replace the certificate.

2.6 Vision Screeners

Vision screener management follows the same approach as audiometer management in section 2.5.

Device details - Click "New" to add a vision screener, or select an existing screener and click "Edit". Select the "Model", enter the "Serial Number" and select the "Clinic" to which the device is assigned.

Host assignment - On the computer connected to the vision screener, click the green "Reset device settings" icon beside "Device Settings" to assign that computer as the "Host".

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Connection - For all Keystone models, select “USB” under “Port” when the device is connected using a printer-style USB cable. A COM port is not required for this connection. Currently, other manufacturers use the port settings appropriate to their connection, as with audiometers.

Save the settings - Click “Apply” to save the device details and host assignment.

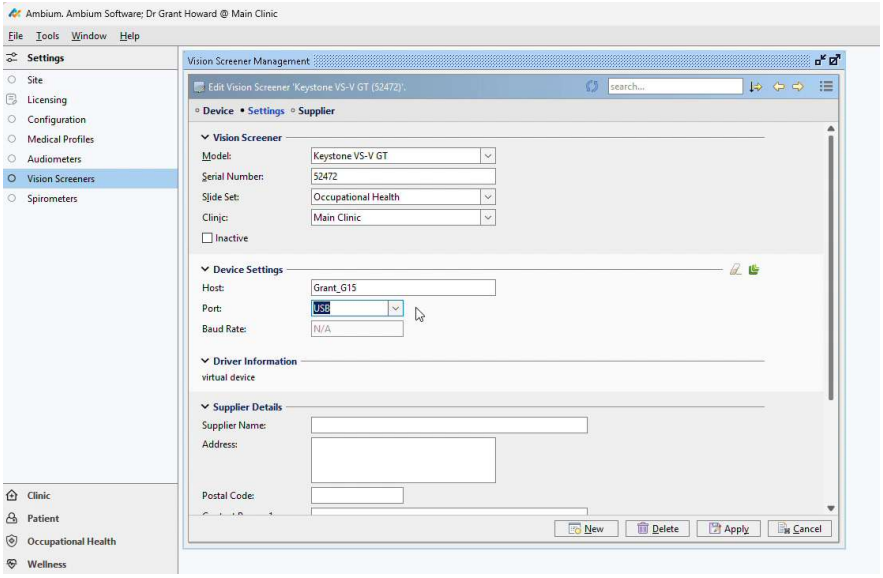


Figure 29 Vision screener details and Keystone USB connection settings

Calibration - No calibration record needs to be entered for vision screeners.

2.7 Spirometers

Device details - Select an existing spirometer and click “Edit”, or click “New” to add a spirometer. Select the “Model”, enter the “Serial Number” and select the “Clinic” to which it is assigned.

Host assignment - On the computer connected to the spirometer, click the green “Reset device settings” icon beside “Device Settings” to assign that computer as the “Host”. No port settings are required for spirometers.

Save the settings - Click “Apply” to save the device details and host assignment.

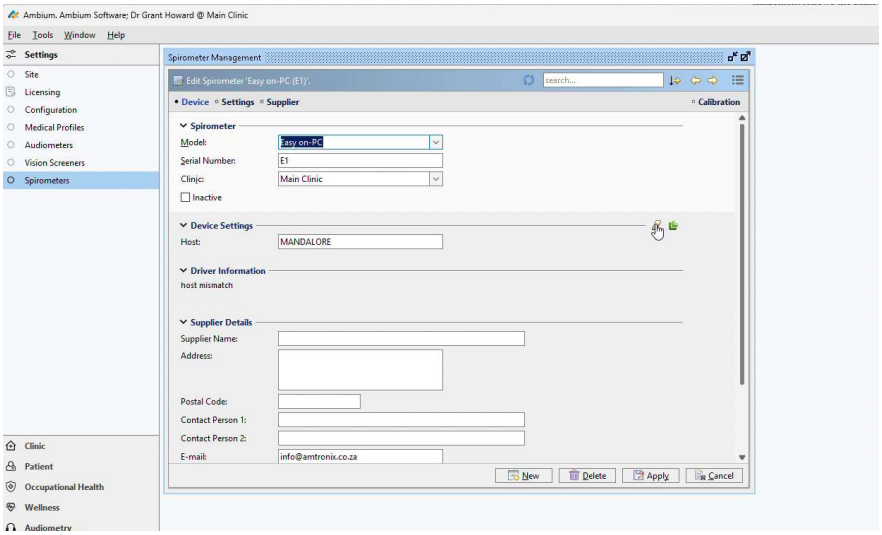


Figure 30 Spirometer details and host assignment controls

Calibration - Daily spirometer calibration is carried out and recorded from the spirometry testing screen. Do not enter calibration details during device setup in “Spirometer Management”.

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The “Calibration” section in device management displays “Calibration History”, containing the daily calibration records created from the spirometry testing screen.

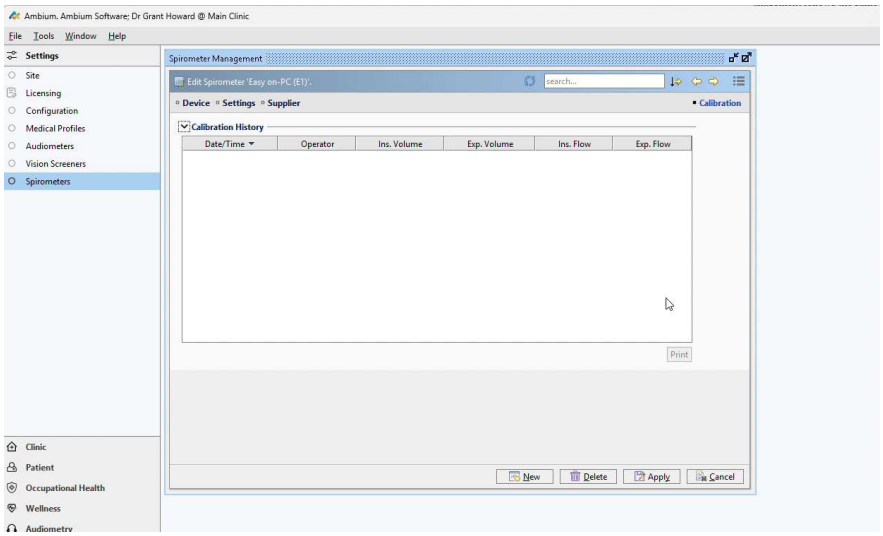


Figure 31 Spirometer Calibration History in device management

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3 Clinic

With System Settings configured, continue to the Clinic screen to set up the clinics that operate under your site.

3.1 Clinics

If you operate one clinic, its details will usually be the same as the site details. If several clinics operate under the site, create a separate clinic record for each, using its own name and details. You can add as many clinics as required.

3.1.1 Clinic details

Open Clinic Management - Select “Clinic” in the left-hand navigation, then “Clinics”. Click “New” to add a clinic, or select an existing clinic and click “Edit”.

Code and name - Enter a “Code” of your choice and the clinic’s “Name”.

Accent Colour - Choose a colour from the “Accent Colour” drop-down list to change the colour of certain parts of the interface. For sites with more than one clinic, assign each clinic a different colour so users can quickly identify which clinic they are working in.

Contact details - Under “Address & Contact Details”, enter the “Contact Person”, “E-mail”, “Contact Number”, “Address” and “Postal Code”.

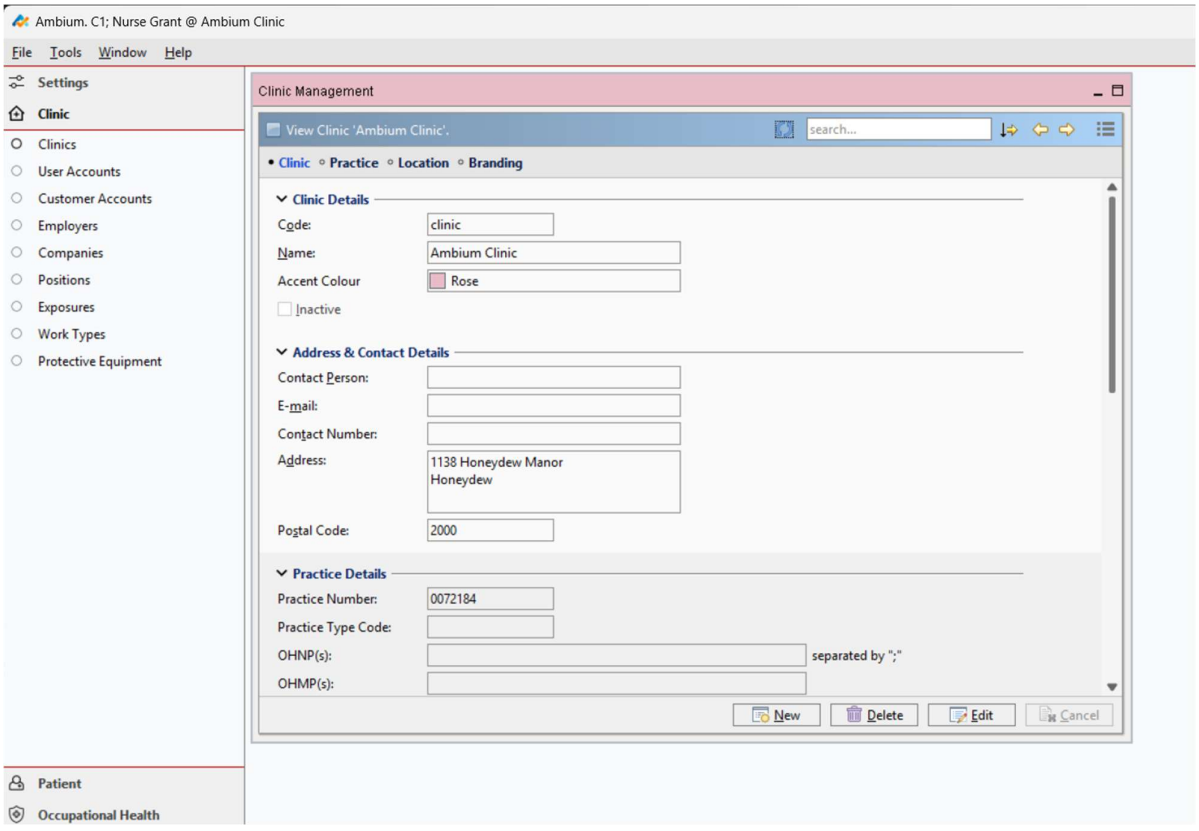


Figure 32 Clinic details Accent Colour and contact information in Clinic Management

3.1.2 Practice details

Practice information - Under “Practice Details”, enter the clinic’s “Practice Number” and other relevant practice details. Enter the clinic’s personnel in “OHNP(s)” and “OHMP(s)”. Separate multiple OHNP entries with a semicolon, as indicated on screen.

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3.1.3 Branding

Clinic logos - If a clinic uses different branding from the main site, add its own logos under "Branding". Click "select" beside the required logo, choose the file and click "Open".

Logo sizes - Use the same specifications as the site branding in section 2.3.10: a maximum recommended size of 120 × 60 pixels for "Logo" and 160 × 120 pixels for "Letterhead". The recommended "Stamp" size is 160 × 160 pixels, with a transparent background.

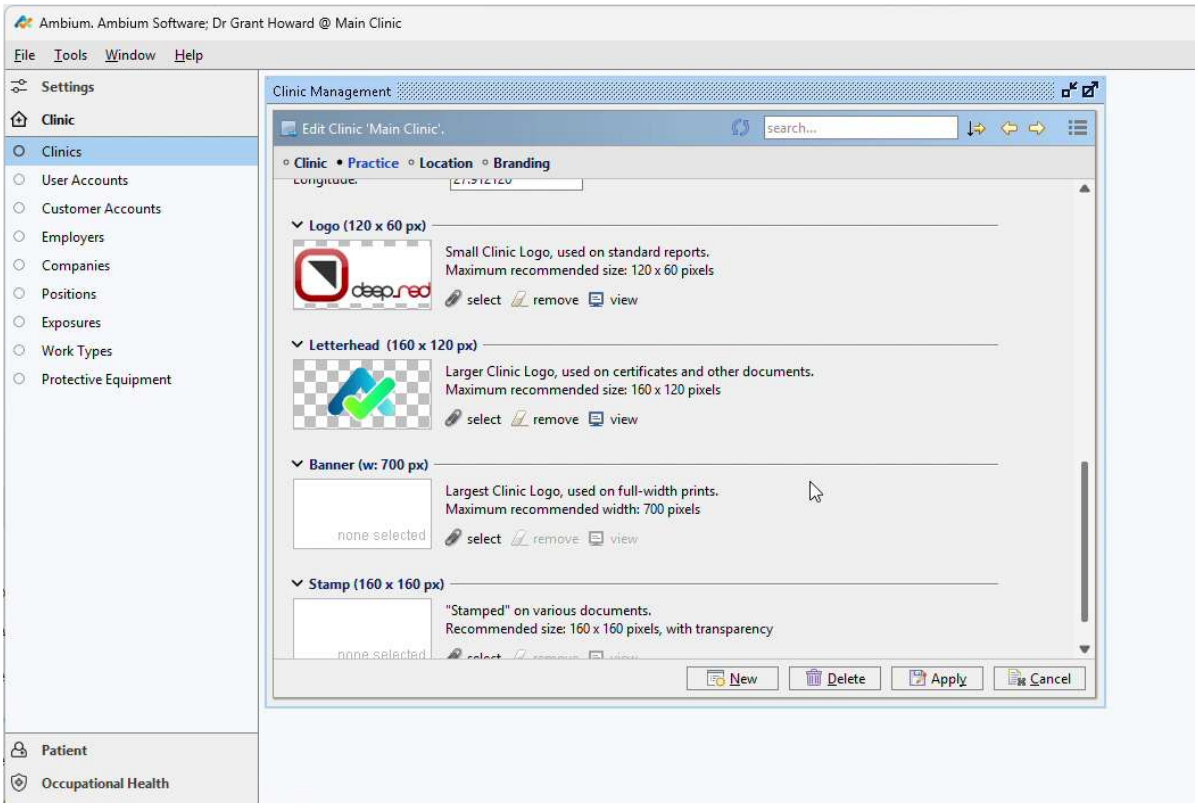


Figure 33 Clinic branding logo sizes and selection controls

Save the clinic - Click "Apply" to save the clinic details. Repeat the process for each additional clinic.

3.2 User Accounts

Use "User Accounts" to add users, maintain their details and control the clinics, modules and functions they can access. Select permissions to match each user's duties. The screenshots show a support account with broad access.

3.2.1 Account details and authentication

Open User Account Management - Select "Clinic", then "User Accounts". Click "New" to add a user, or select an existing user and click "Edit".

Account details - Enter "Account Name (login)" when creating the account and add a suitable "Description". The account name cannot be changed when editing an existing user. Capture the user's "ID Number", "Surname" and "First Names" under "Personal Details".

Make a user inactive - If a user no longer works for the organisation, select their account, click "Edit" and select "Inactive" under "Account Details". Click "Apply" to save. Accounts that have already been used cannot be deleted.

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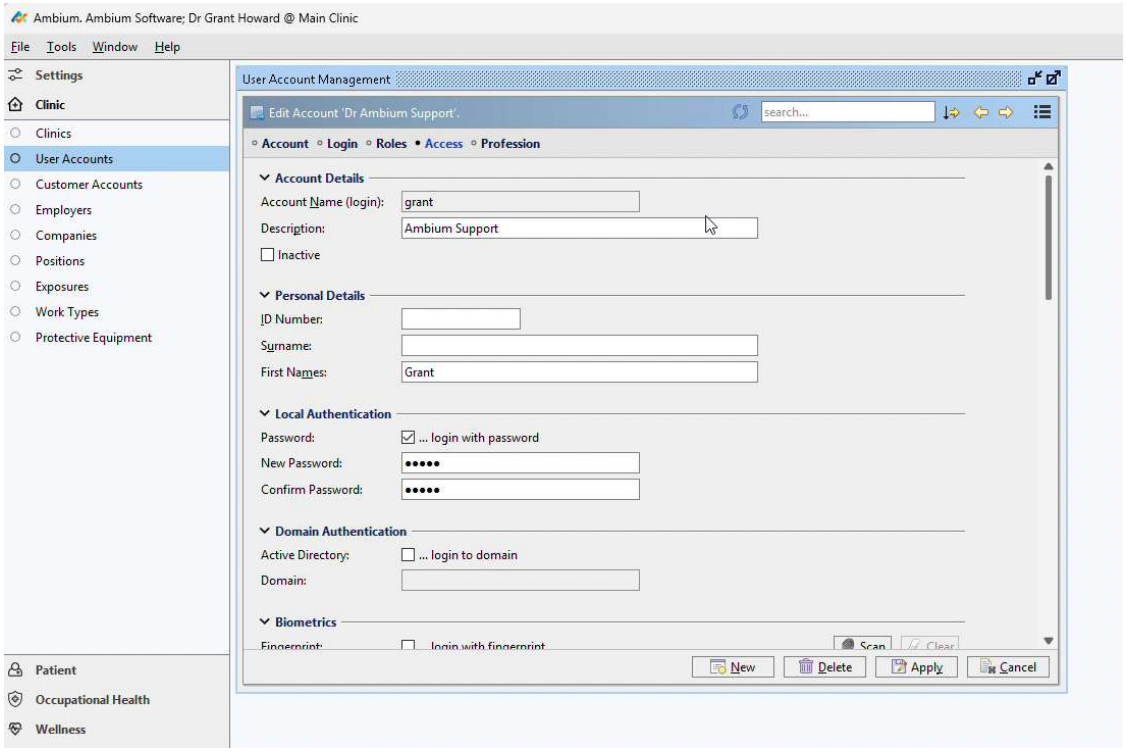


Figure 34 User account details personal details and password settings

Password login - Under "Local Authentication", select "login with password". Enter the password in "New Password" and repeat it in "Confirm Password". New users should change their generic password at first login, as described in section 1.3.

Domain login - "Domain Authentication" is for organisations using Active Directory. It allows users to sign in through the organisation's domain account. Use the domain details provided by your IT administrator.

Fingerprint login - Fingerprint login is available when the fingerprint module has been purchased. The "Biometrics" section includes "login with fingerprint" and a "Scan" control.

3.2.2 Account roles

Under "Account Roles", select the tick boxes for the responsibilities assigned to the user. A user may need more than one role. Roles determine what the user can do; "Allowed Modules" determines which clinical modules they can use.

Account role	What the role allows
System Administrator	Reserved for technical support. Gives access to system administration, licensing and system configuration.
Clinic Administrator	Administers clinic information such as site, employers and companies. Without User Administrator, this user can view user roles but cannot create, edit, delete or deactivate user accounts.

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Account role	What the role allows
User Administrator	Creates, edits and deletes user accounts. An account that has already been used cannot be deleted; it must be made inactive.
Patient Reader	Views patient details without editing them.
Patient Administrator (update)	Maintains patient details, with basic editing permissions.
Patient Administrator (delete)	Allows patient deletion when “Modify” is also selected under “Privileged Access”. Deleting a patient also deletes all tests and records linked to that patient. Permission to delete tests alone does not allow patient deletion.
Clinic Operator	Works with the selected clinical modules to capture and perform tests. For Audio, Vision and Lung Function, the user can perform manual and automated tests and edit manual tests.
Clinic Supervisor	Works with the selected clinical modules and provides extended editing permissions. For Audio, Vision and Lung Function, the user can perform and edit both manual and automated tests.
Calibrator	Adds and edits audiometers, vision screeners and spirometers, and records calibrations.

Combine roles and modules - Clinic Operator and Clinic Supervisor have no practical use on their own. Select the relevant clinical modules as well. For example, Clinic Operator with Audio allows audio testing and editing of manual audio tests; Clinic Supervisor with Audio also allows editing of automated audio tests.

3.2.3 Allowed modules and reporting

Allowed Modules - Select the modules the user needs. Use Clinic Operator or Clinic Supervisor with the relevant clinical modules to provide the appropriate testing and editing permissions.

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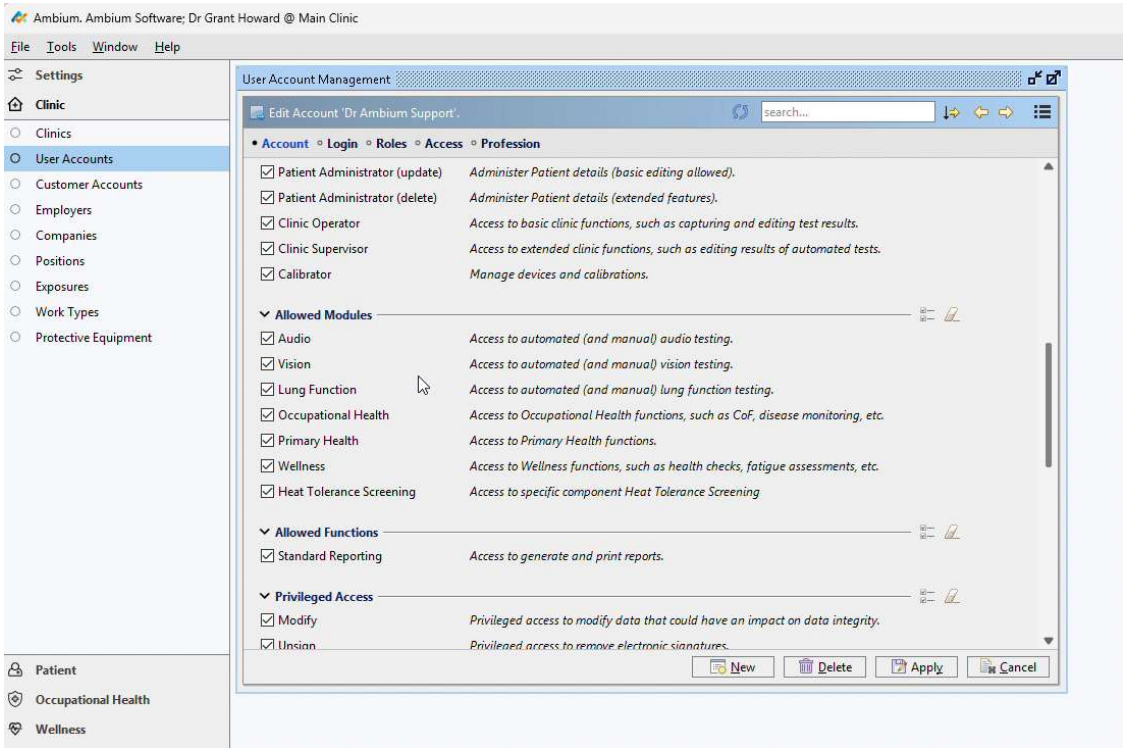


Figure 35 Allowed Modules Standard Reporting and permission selection controls

Module	Access provided
Audio	Manual and automated audiometry.
Vision	Manual and automated vision testing.
Lung Function	Manual and automated lung function testing.
Occupational Health	Occupational health functions, including Certificates of Fitness and disease monitoring.
Primary Health	Primary health functions.
Wellness	Wellness functions, including health checks and fatigue assessments.
Heat Tolerance Screening	Heat Tolerance Screening only. This is a separate module so clinics can give access to an outsourced HTS provider.

Standard Reporting - Under “Allowed Functions”, select “Standard Reporting” to allow the user to generate and print reports.

Selection controls - Use the eraser icon beside a permission group to clear that group’s selections. The select-all icon selects every item in that group. Individual tick boxes can then be selected or cleared as required.

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3.2.4 Privileged access and clinic restrictions

Privileged Access - These permissions allow changes that can affect existing records and data integrity. Select each permission according to the user's responsibilities.

Modify - Allows privileged changes such as merging records, deleting data and moving tests recorded against the wrong patient. To delete a patient, "Patient Administrator (delete)" must also be selected.

Unsign - Allows the user to remove electronic signatures.

Recalc - Allows recalculation of audiometry data, such as interpretations.

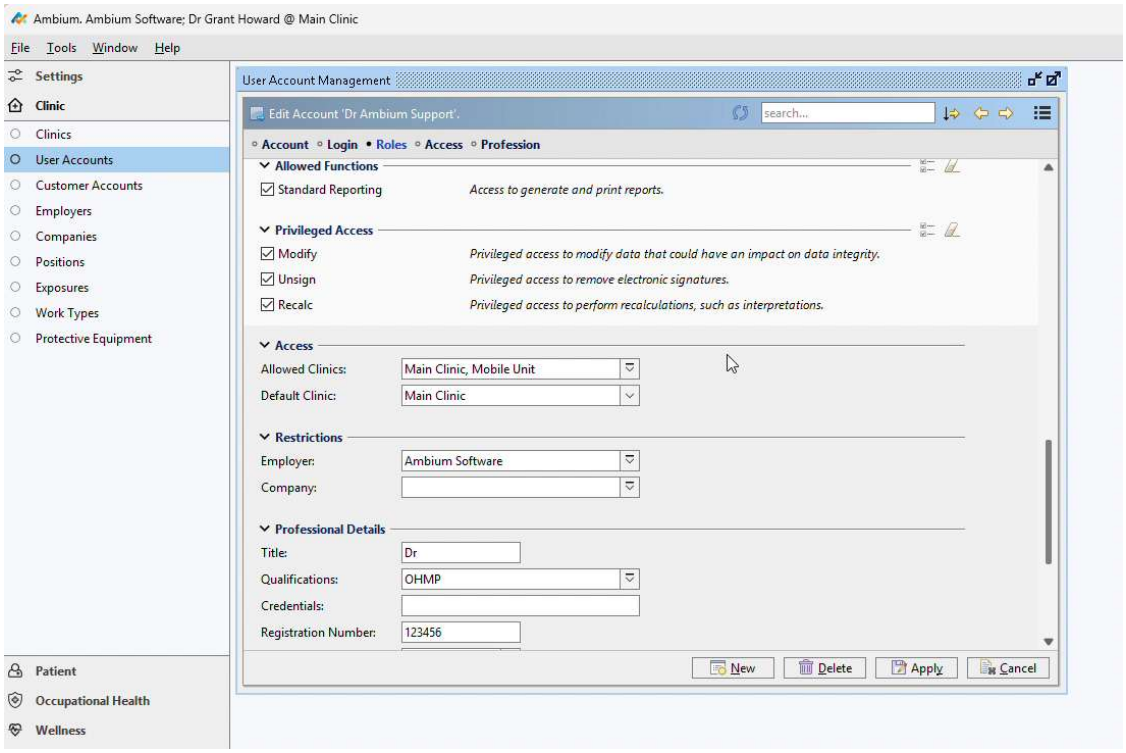


Figure 36 Privileged Access allowed clinics default clinic and employer restrictions

Allowed Clinics - Under "Access", select the clinics this user is allowed to access. Set the user's "Default Clinic" in the field below.

Employer restrictions - Under "Restrictions", use "Employer" to limit the user to the employers they need to access. For example, an occupational medical practitioner who signs certificates for one employer can be restricted to that employer rather than given access to the entire database. A "Company" restriction field is also available.

3.2.5 Professional details and account maintenance

Professional Details - Enter the user's "Title", "Qualifications", "Credentials", "Registration Number", "Registration Body" and "Dispensing License No" where applicable.

Contact Details - Add the user's address, postal code, email address and contact number if required.

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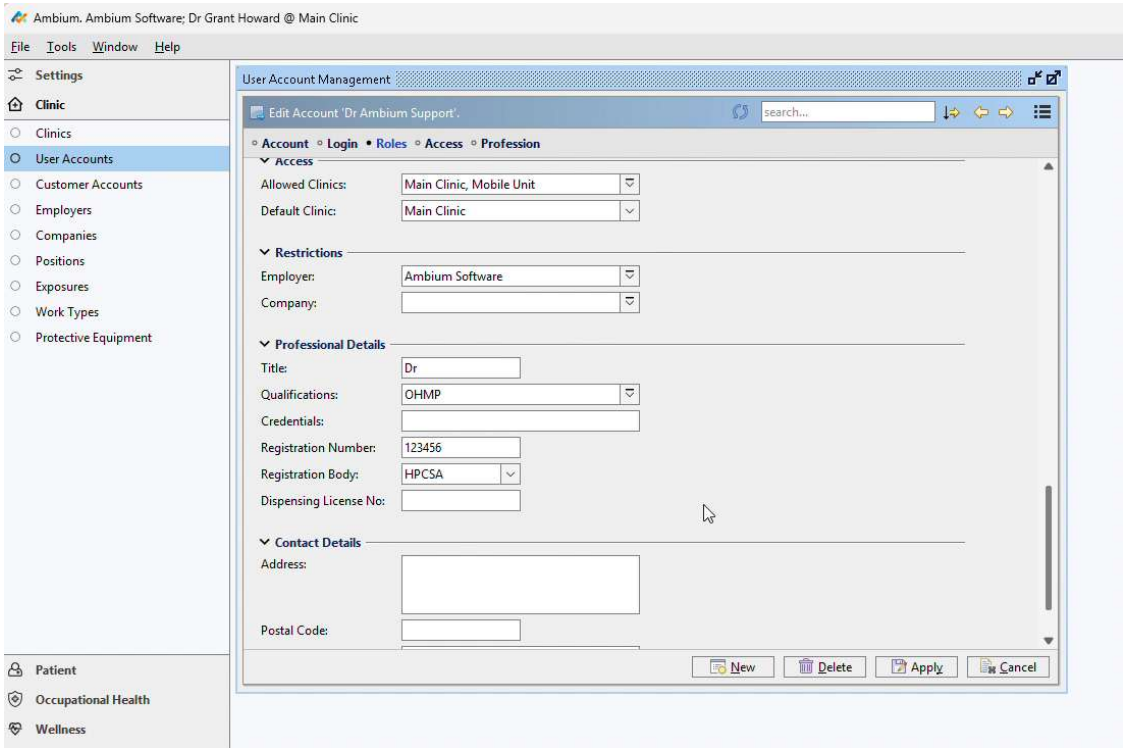


Figure 37 User professional details and the Contact Details section

Save the account - Click “Apply” when all details, permissions and access restrictions are complete.

3.3 Customer Accounts

Customer accounts allow the clinic’s customers to sign in to the Ambium portal and retrieve their employees’ Certificates of Fitness and medical records, according to the access and reporting permissions assigned to the account.

3.3.1 Account and contact details

Open Customer Account Management - Select “Clinic”, then “Customer Accounts”. Click “New” to create an account, or select an existing account and click “Edit”.

Account details - Enter an “Account Name (login)” and a suitable “Description”.

Personal details - Under “Personal Details”, capture the “ID Number”, “Surname” and “First Names” of the person who will use the account.

Contact details - Enter that person’s “E-mail” and “Contact Number” under “Contact Details”.

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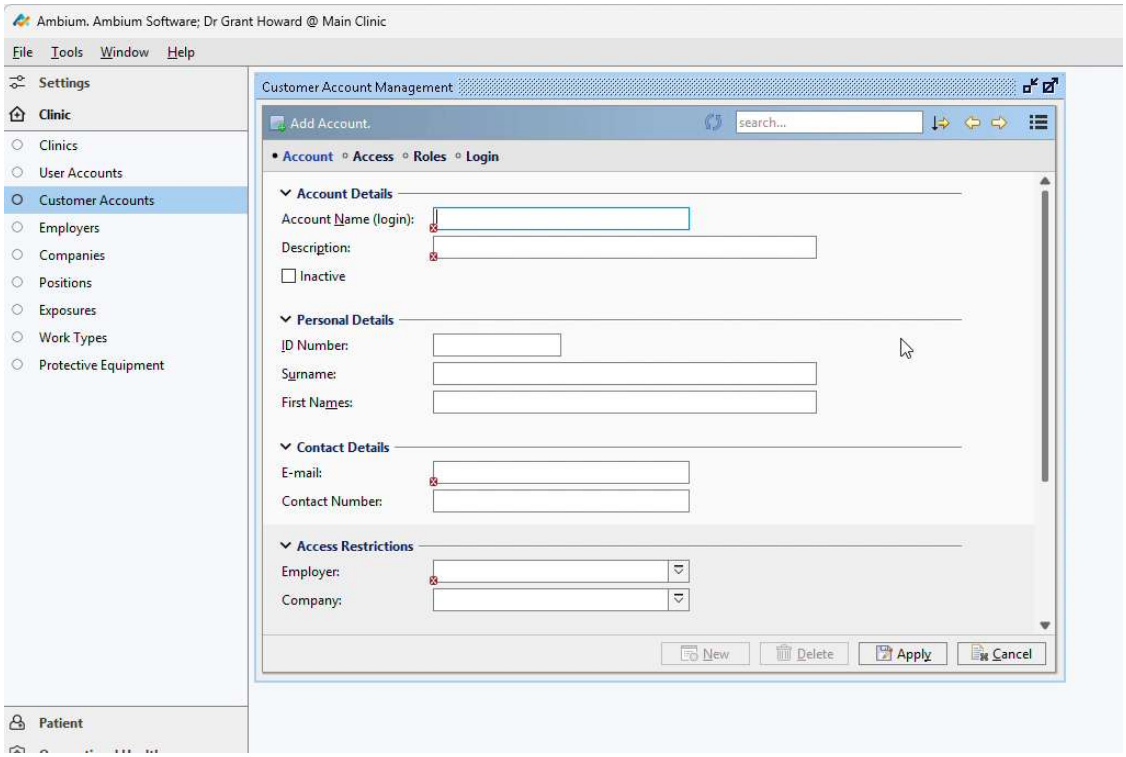


Figure 38 New customer account details contact information and required fields

3.3.2 Access restrictions reporting and authentication

Employer restriction - Under "Access Restrictions", select the customer's "Employer". Check carefully that the account is restricted to the correct employer so the customer can access only their own employees' records. Unrestricted access would expose records across the clinic's database. "Employer" is a mandatory field, marked with a red cross until completed.

Company restriction - Use the "Company" field where a company restriction is also required.

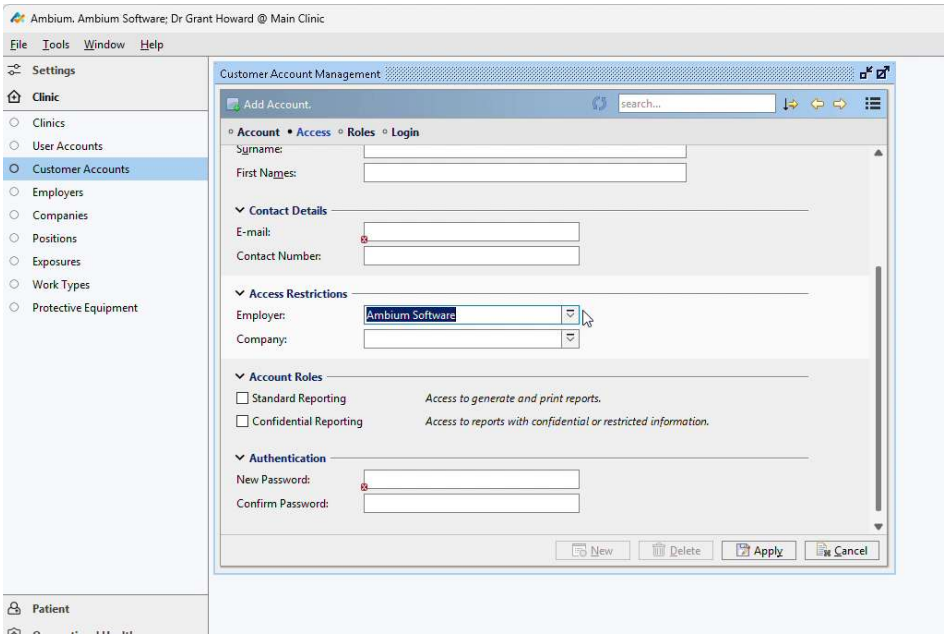


Figure 39 Customer employer restriction reporting roles and password fields

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Standard Reporting - Under “Account Roles”, select “Standard Reporting” to allow the customer to generate and print reports.

Confidential Reporting - This role allows access to reports containing confidential or restricted information. It is intended primarily for medical practitioners. Select it only where that level of access is appropriate for the account holder.

Password - Under “Authentication”, enter the password in “New Password”, then enter the same password in “Confirm Password”.

Save the account - Recheck the employer restriction and reporting permissions, then click “Apply” to save the account.

3.4 Employers

Employer records represent the clinic’s customers. Use “Employers” to maintain their details, group related branches, link former identities, record work sites and control which clinics can access each employer.

3.4.1 Employer details and history

Open Employer Management - Select “Clinic”, then “Employers”. Click “New” to add an employer, or select an existing employer and click “Edit”.

Employer details - Enter the employer’s “Name” and complete the relevant “Industry Details” and “Address & Contact Details”.

Group - Use “Group” to associate employers within the same group, for example a business with branches around the country.

Former Identity - If an employer changes its name, use “Former Identity” to link its previous identity to the current one. This keeps earlier medicals and results connected and helps maintain accurate historical records and employment history.

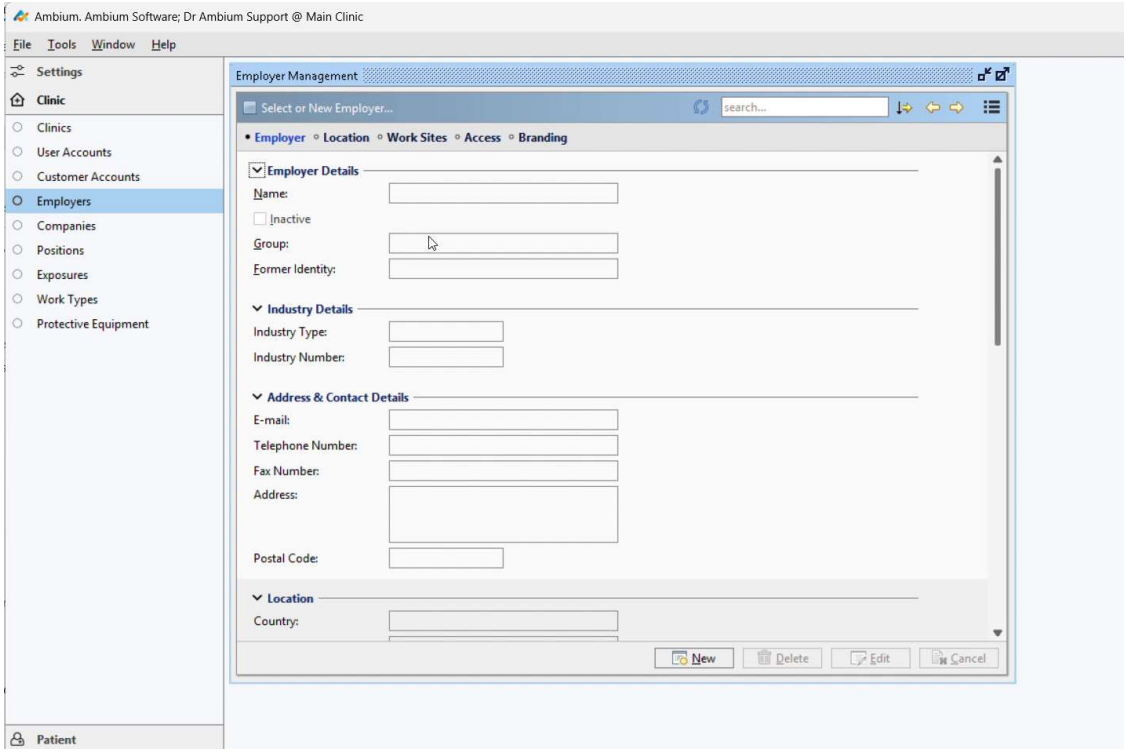


Figure 40 Employer details Group Former Identity and contact information

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3.4.2 Work sites clinic access and branding

Work sites - Add the employer's work sites under "Registered Work Sites". Enter the work site's "Name" and click "Add". Check that it appears in the list.

Clinic access - Under "Restrictions", use "Clinic" to select which clinics can access this employer. This allows access to be limited to the clinics that work with that customer.

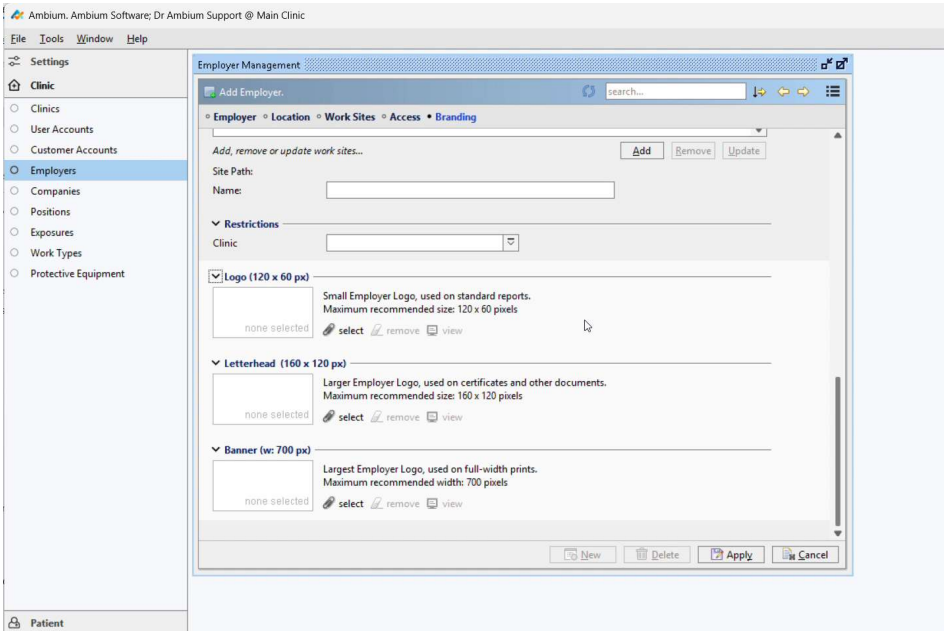


Figure 41 Employer work site controls clinic restrictions and branding

Employer logos - Add the employer's own logos where required on reports or Certificates of Fitness. For example, mining customers may require their employer logo on the Certificate of Fitness rather than, or in addition to, the clinic's logo.

Logo sizes - Use "Logo" for the small logo on standard reports, with a maximum recommended size of 120 × 60 pixels. Use "Letterhead" for the larger logo on certificates and other documents, with a maximum recommended size of 160 × 120 pixels. "Banner" is for full-width prints, with a maximum recommended width of 700 pixels.

Add a logo - Click "select" beside the required logo, choose the file and click "Open". Use the same preparation guidance as the site branding in section 2.3.10.

Save the employer - Click "Apply" to save the employer details, work sites, clinic access and logos.

3.5 Companies

Companies is an optional feature. If "Enable Company" is selected in the Clinic configuration described in section 2.3.3, use "Companies" to maintain company details, departments and clinic access.

Open Company Management - Select "Clinic", then "Companies". Click "New" to add a company, or select an existing company and click "Edit".

Company details - Enter the company's "Name" and complete the relevant "Business Details" and "Address & Contact Details".

Departments - Under "Registered Departments", enter the "Department Name" and click "Add". Check that the department appears in the list.

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Clinic access - Under “Restrictions”, use “Clinic” to specify which clinics can access the company, as with employer access restrictions in section 3.4.2.

Save the company - Click “Apply” to save the company details, departments and clinic access.

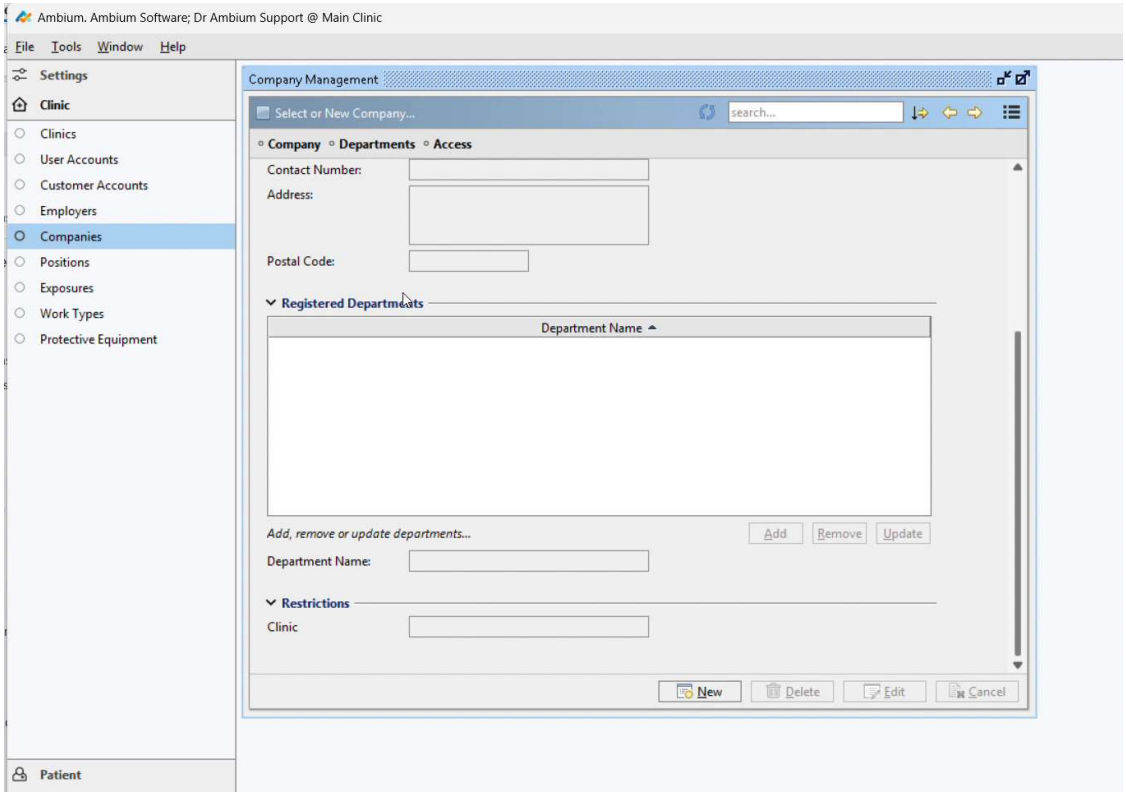


Figure 42 Company Management showing registered departments and clinic restrictions

3.6 Exposures, work types, and protective equipment

Use these lists to maintain the exposures, work types and protective equipment available when recording a patient’s medical assessment. Exposures and protective equipment are required in many industries. For the Construction Annexure 3 medical, all three are required: exposures, work types and protective equipment.

Choose the list - Under “Clinic”, select “Exposures”, “Work Types” or “Protective Equipment”. The same process applies to all three.

Add an item - Click “New”, then enter the item in “Description”. For example, enter “Radiation” when adding an exposure. Click “Apply” to save.

Add another item - After saving, click “New” before entering another item. Do not simply replace the description of the record you have just saved, as this changes that record rather than creating a new one.

Existing names - If a message says that an item with the specified name already exists, click “OK” and use the existing entry. You do not need to add it again.

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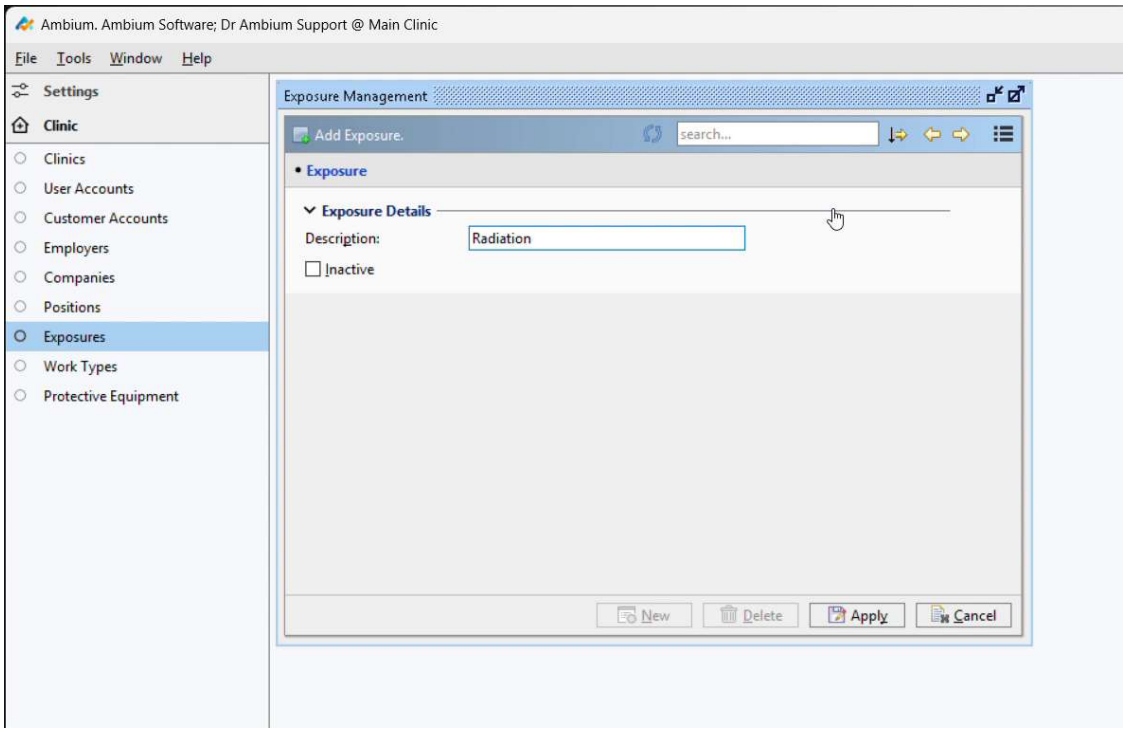


Figure 43 Adding an exposure using the Description field and Apply button

4 Patient Management

Use Patient Management to record and maintain each patient's identification, personal and contact details, medical aid information and general notes.

4.1 Capturing patient details

4.1.1 Identification and personal details

Open the patient record - Select "Patient", then "Patients". Click "New" to add a patient, or select an existing patient and click "Edit".

Patient Number - Enter the number used by your clinic to identify the patient. You can use your own numbering convention or the patient's South African ID number.

Identification - Enter the patient's South African "ID Number". If the patient does not have one, enter their "Passport Number" and select "Country". Passport and country details are not needed when a South African ID number is supplied.

Personal details - Enter "Surname" and "First Names". A valid South African ID number automatically populates "Date of Birth" and "Biological Sex". Check these details. If using a passport, enter them manually.

Ethnicity - Select the patient's "Ethnicity". This is required for spirometry.

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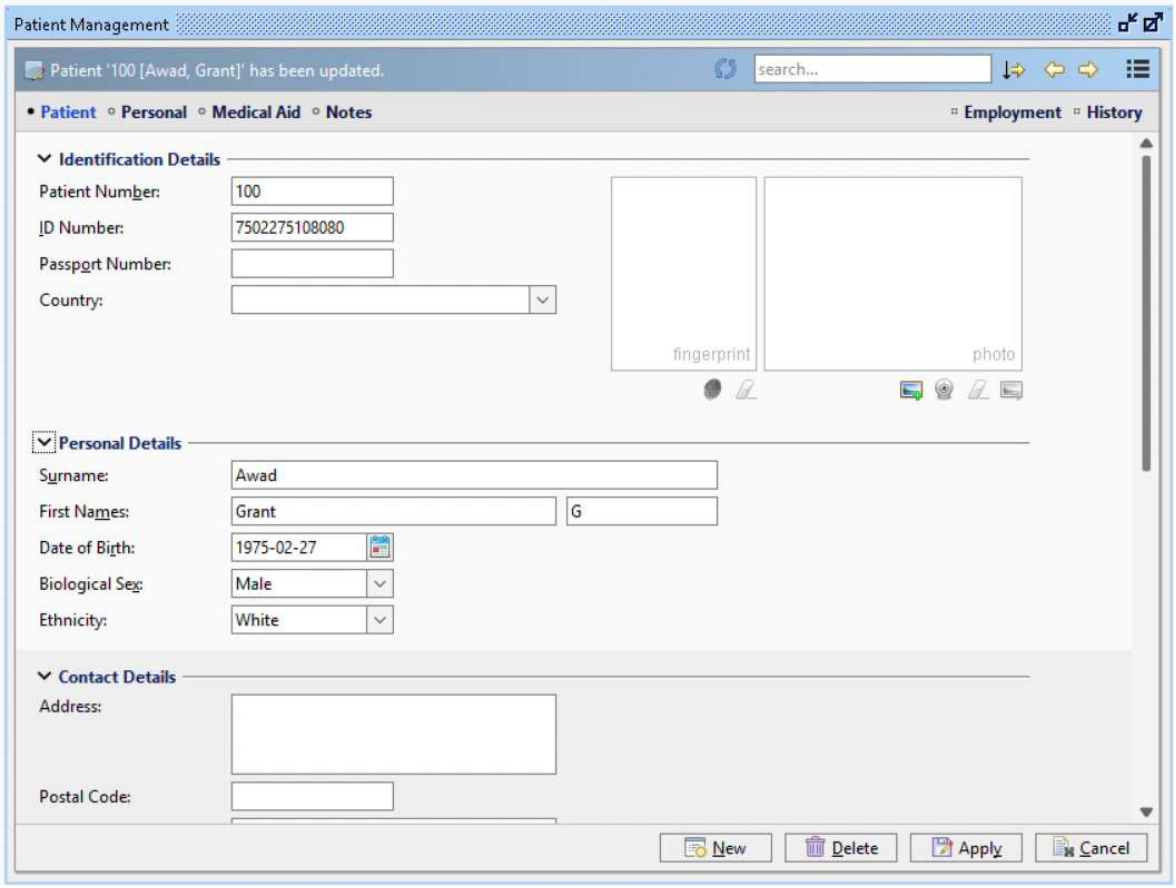


Figure 44 Patient identification and personal details

4.1.2 Contact details medical aid and notes

Contact and next of kin details - Complete the relevant address, postal code, email and telephone fields under “Contact Details”. Add the next of kin’s name and telephone number under “Next Of Kin Details” where applicable.

Medical aid details - For Discovery Vitality Health Checks, complete “Medical Scheme” and “Policy Number”, then enter the policy holder’s surname in “Owner Surname” and their initials in “Initials”. These are the policy holder’s details, who may be someone other than the patient.

Patient notes - Use “Notes” for general information specific to the patient. These notes are separate from employment details.

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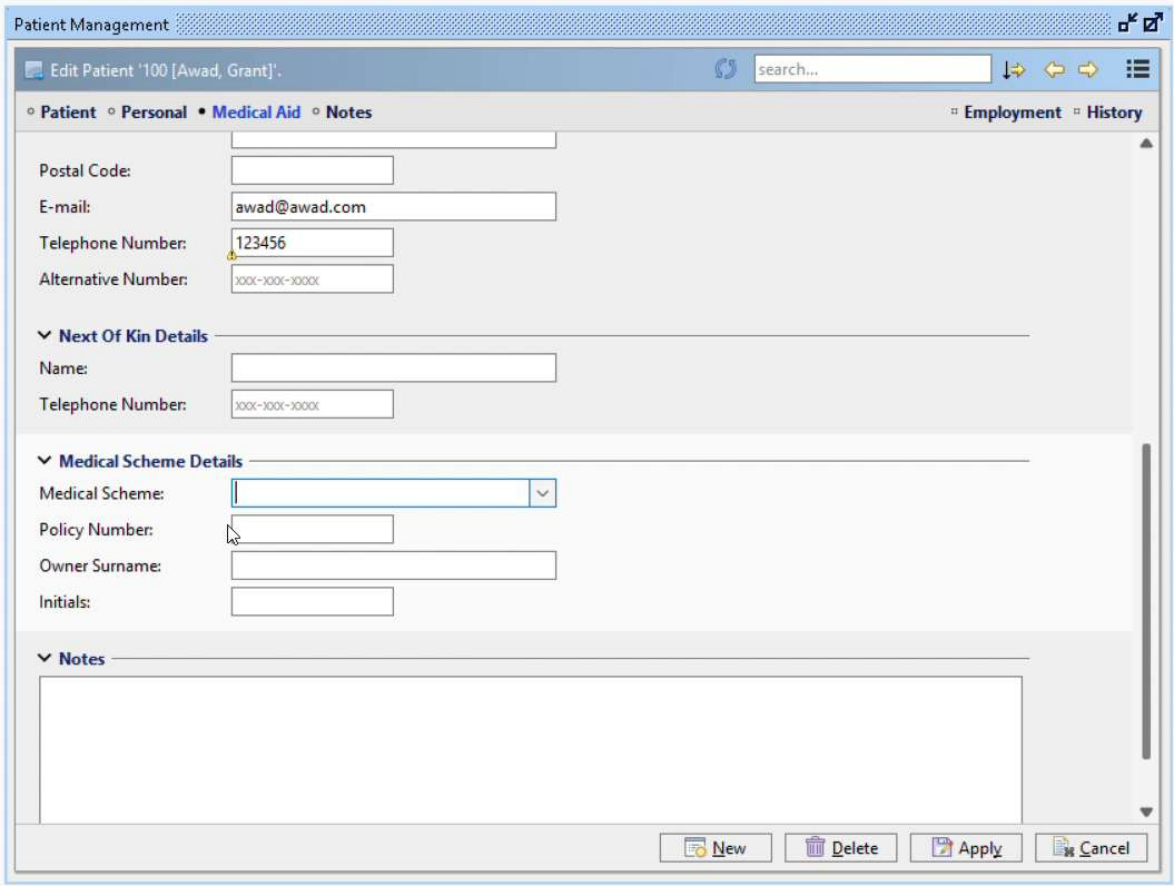


Figure 45 Patient medical scheme details and general notes

4.1.3 Photos and fingerprints

You can store a photo of the patient's face or identification document for identification and security purposes. The photo and fingerprint controls are shown in Figure 44.

Take a photo - Click the camera icon beneath the photo area ("Take Photo"). Position the patient or identification document in the camera view, click "Capture", then click "OK" to accept the image.

Attach a photo - To use an existing image, such as an employee photo supplied by the employer, click the picture icon with the green plus beneath the photo area and select the image file from the computer.

Fingerprint identification - If your clinic has purchased the fingerprint module, a patient's fingerprint can also be stored. At each screening station, scanning the patient's fingerprint brings up their details for the operator to carry out the next screening or test.

Save the record - Click "Apply" to save the patient's details.

4.2 Employment details and history

Use "Employment Details" to maintain a patient's employment records and history. "Employment History" lists the recorded jobs. The current job is marked "current" in brackets; an ended job shows its termination date.

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4.2.1 Correcting an existing employment record

Correct a record - Select “Patient”, then “Employment Details”, and check that the correct patient is selected. Select the job under “Employment History” and click “Edit”. Correct the relevant details, such as “Employment Type”, then click “Apply”.

Change of employment - When the patient moves to another employer or company, end the previous employment and create a new record. Do not replace the previous job’s details with those of the new job.

4.2.2 Ending employment

Record the end date - Select the previous job and click “Edit”. Enter the date the patient stopped working there in “Termination Date”. Select “Termination Reason” if the employer requires it, and record “Work Environment” where relevant.

Save the change - Click “Apply”. The termination date replaces “current” in brackets in “Employment History”.

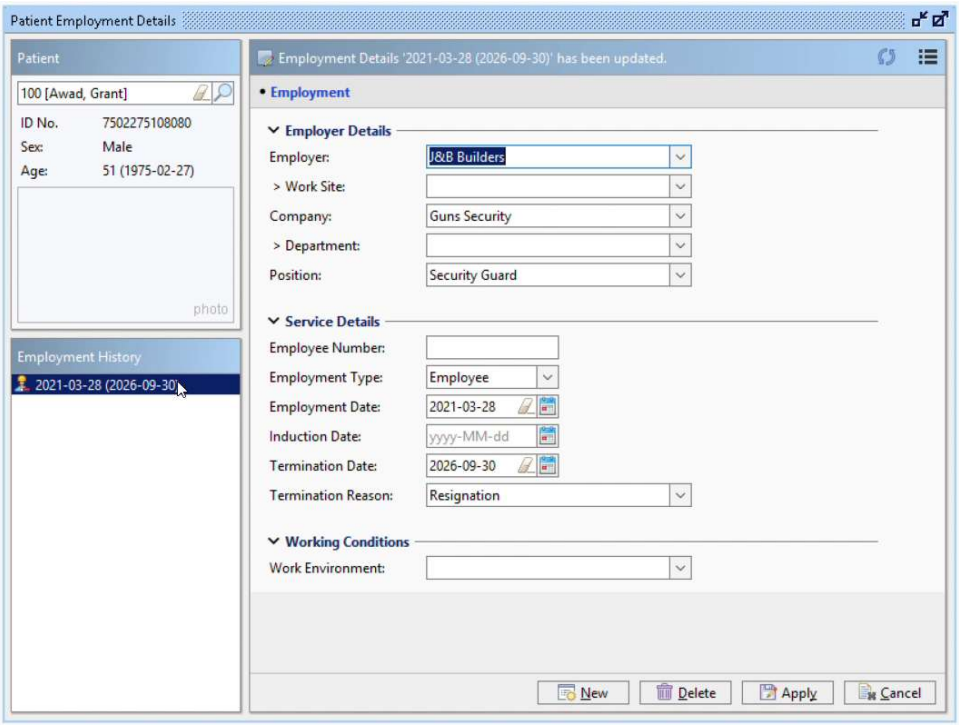


Figure 46 Ended employment showing the termination date in Employment History

4.2.3 Adding new employment

Add the current job before testing - After the previous employment has ended, add the new job before recording the medical or screening for that job. Until a new current employment record is added, the patient is treated as unemployed.

Employer details - Click “New”. Select “Employer” and, where enabled, “Company”. These can be the same entity. Complete “Work Site”, “Department” and “Position” where applicable.

Employee Number - Enter the number assigned to the employee by this employer or company in “Employee Number”. This may differ from the “Patient Number”, which identifies the patient in your clinic.

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Service details - Select “Employment Type” and enter the job’s start date in “Employment Date”. Complete “Induction Date” and “Work Environment” where relevant.

Save and check the history - Click “Apply”. Check that both jobs appear under “Employment History” and that the new job is marked “current”. Earlier medicals and audiometry tests remain linked to the previous employment.

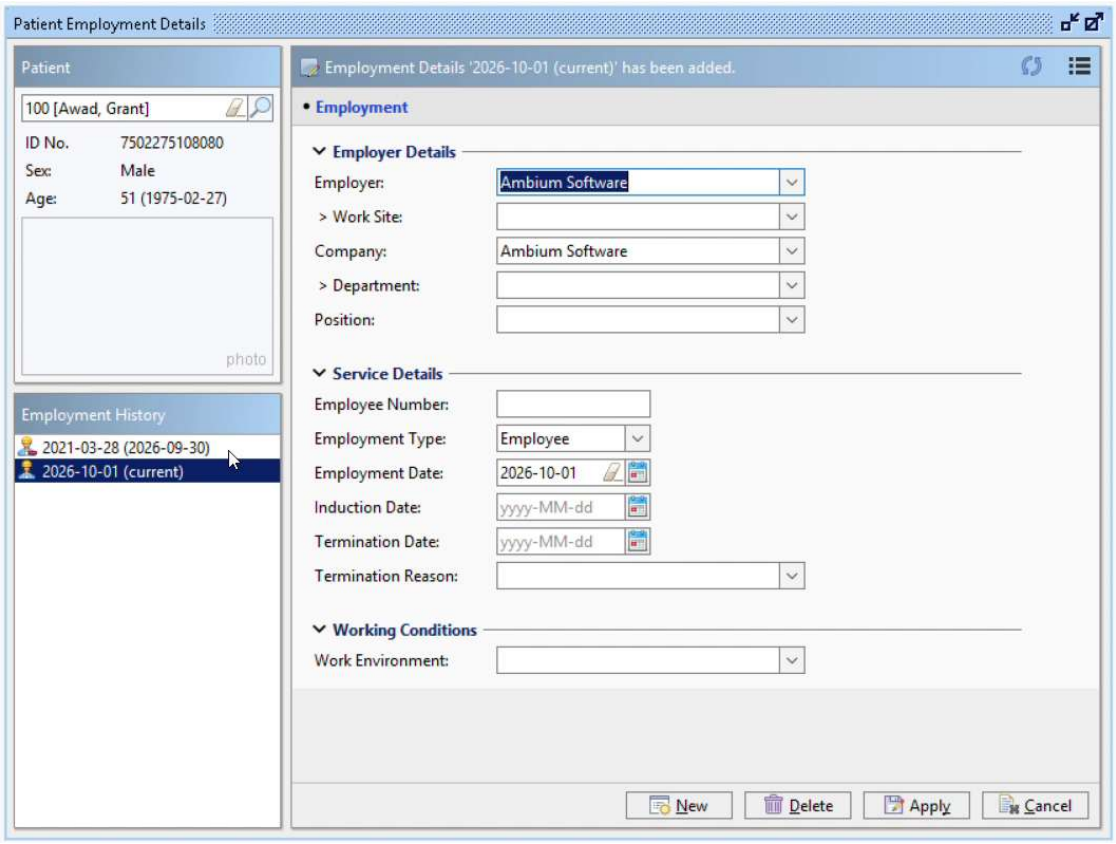


Figure 47 New current employment listed alongside the previous employment

4.3 Clinical notes

Clinical notes are linked to the patient and are independent of any particular medical. Use them to record clinical information that needs to remain available across visits.

Create a note - Select “Patient”, then “Clinical Notes”. Check that the correct patient is selected and click “New”.

Enter the details - Enter a clear “Subject” and the details in “Notes”. For example, use “Chronic Hypertension” as the subject and record a reminder to monitor the patient’s blood pressure at each visit.

Save and review - Click “Apply”. The saved note records the date and time, its subject and the “Operator” who entered it. Select a note under “History” to view its details.

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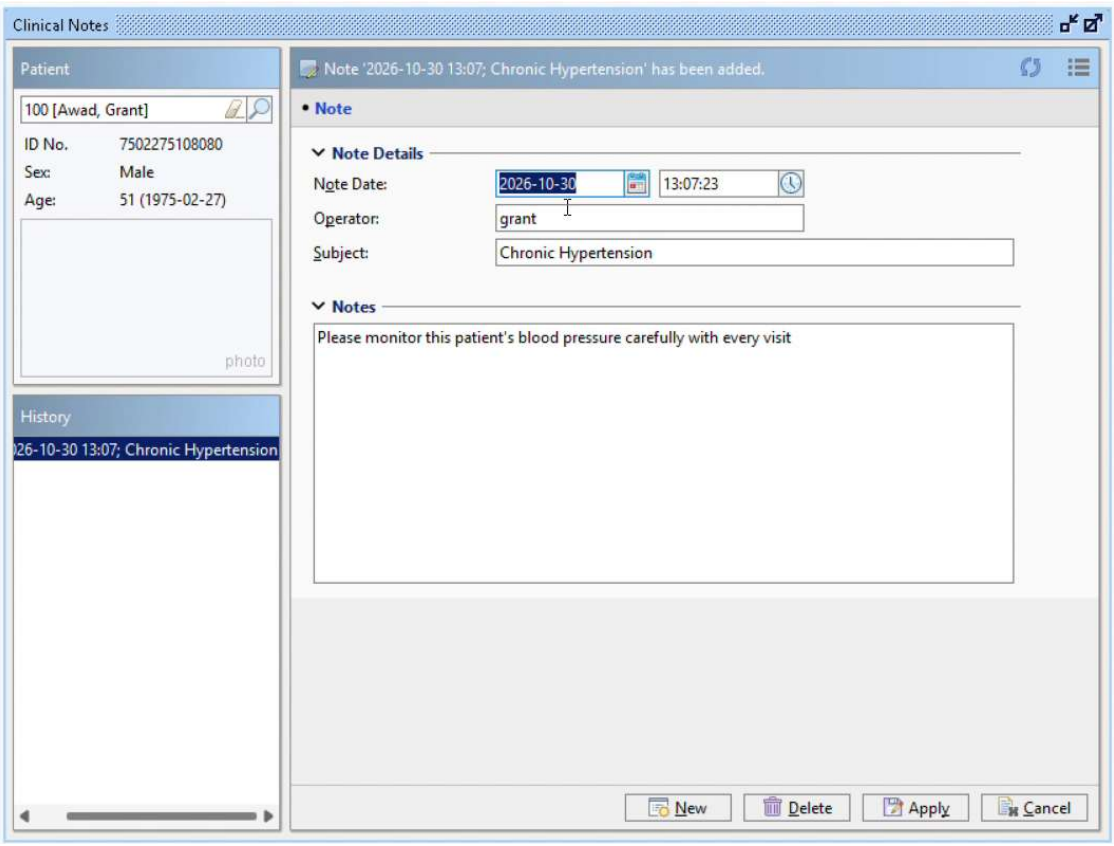


Figure 48 Saved clinical note showing the date time operator subject and note history

4.4 Health assessments

Health assessments are also available in the Occupational Health and Wellness modules and are covered in the chapters that follow.

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5 Audiometry

Use the Audiometry module to perform screenings through a connected audiometer and review a patient's test history. The screenshots use demonstration data and a Resonance R07A in demo mode.

5.1 Screening with a connected audiometer

5.1.1 Patient and test details

Select the patient - Select "Audiometry", then "Screening". Confirm that the correct patient is selected before starting the test. Check the patient's current employment details before recording a screening for that job.

Test details - Check the test date and time under "Test Details", and select the appropriate "Test Type".

Exposure details - Complete "Noise Free Period" and "Protective Equipment"; both are mandatory. Choose the noise-free period that applies to the patient, using the options below 16 hours or 16 hours and above, and select the hearing protection used.

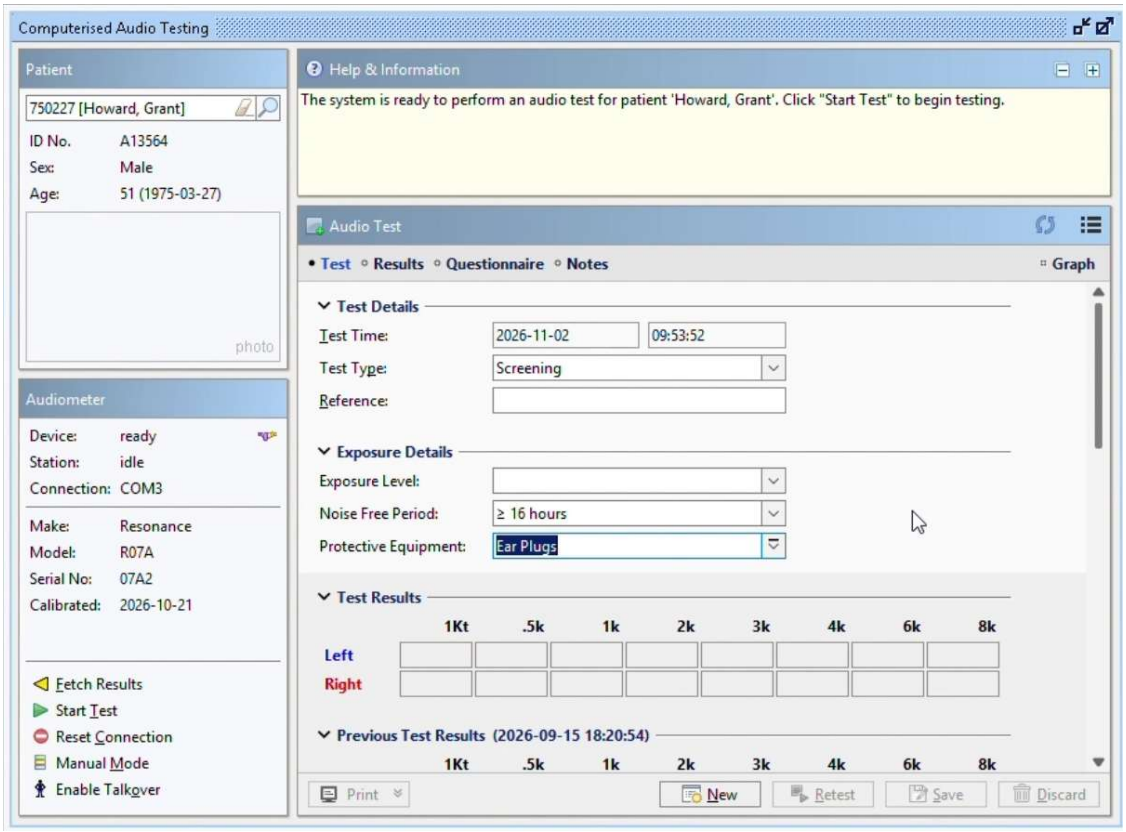


Figure 49 Computerised audio testing with mandatory exposure details and audiometer controls

5.1.2 Otoscopic examination and questionnaire

Otoscopic examination - Perform the otoscopic examination before starting the screening. Select "Otoscopic examination performed" when the examination has been completed. Under "Otoscopic Observations", select each finding and choose "Left", "Right" or "Both" to identify the affected ear. Select "Patient referred" when a referral has been made.

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Patient questionnaire - Record the patient's answers under "Patient Questionnaire" before starting the screening. Whether the questionnaire is mandatory or optional depends on the configured settings.

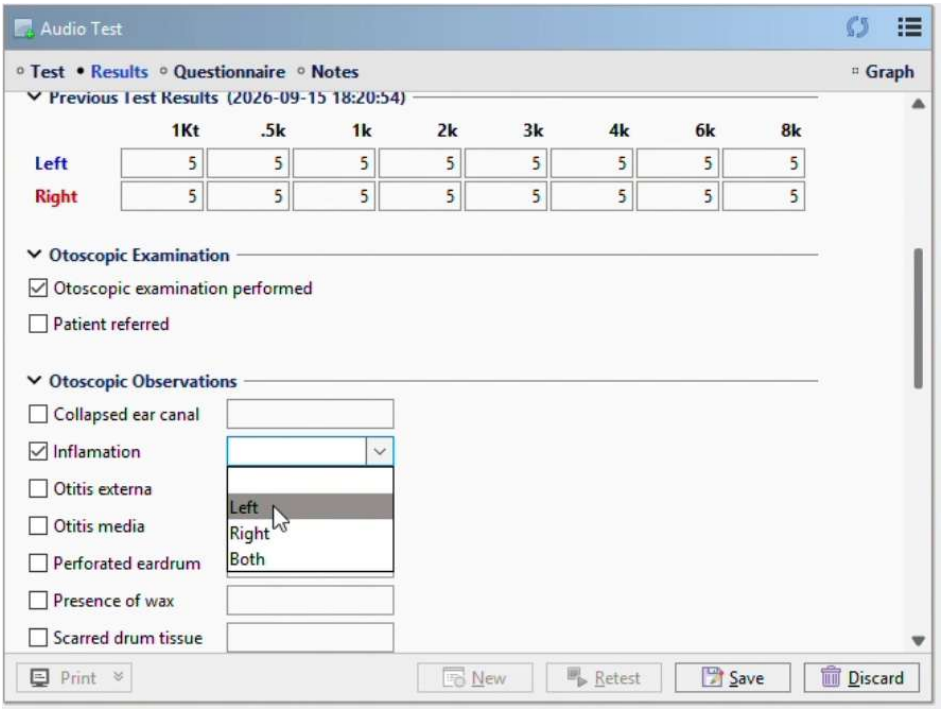


Figure 50 Otoscopic examination and observations with the affected ear selection

5.1.3 Performing and reviewing the screening

Run the screening - The testing process varies with the audiometer model, firmware and integration. Use the procedure for your connected device. For device-specific instructions, contact support@ambium.net.

Review the results - The screen shows the current results and the previous test results, where available. Use "Graph" to view the audiogram.

Test notes - Use "Notes" to record information specific to this audiometry test.

5.1.4 Saving, notifications, and retesting

Save the test - Confirm the details and click "Save". Read the notifications displayed after saving. These provide information about the test and findings; they do not mean that saving has failed.

Review notifications - Use the information and notification icons at the top of the test panel to review the messages in more detail. The related information can also appear on the printed audiogram, depending on your settings.

Continue testing - Click "Retest" where another test is required for the same patient. Click "New" to prepare a test for another patient, and confirm the selected patient before testing.

Sign the document - Use the three-line menu at the top right of the test panel and select "Sign Document" to sign the saved document. Follow section 10.1 to apply the signature.

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5.2 Test results and history

Open a saved test - Select “Audiometry”, then “Test Results”. Select the patient and choose a test under “Test History”. The newly saved test appears alongside the patient’s earlier tests.

Review the record - Use the links across the top of the record to review its results, questionnaire, classification, notes, assessment and graph. Information and notification icons provide further details about the selected test.

Reports and histories - Click “Print” for the selected test’s report, or open the three-line menu for the available reports and histories. These include comprehensive and summary reports, PLH and STS summaries, baseline and milestone histories, and the PLH calculation sheet.

Sign from Test Results - The same menu includes “Sign Document”, so a saved test can also be signed from this screen.

Cloning a test - “Clone” copies an existing test when its results are to be reused for a subsequent medical. The copy is identified as a clone of the earlier test; it does not represent a newly performed screening. Use this only when reuse is appropriate for that medical.

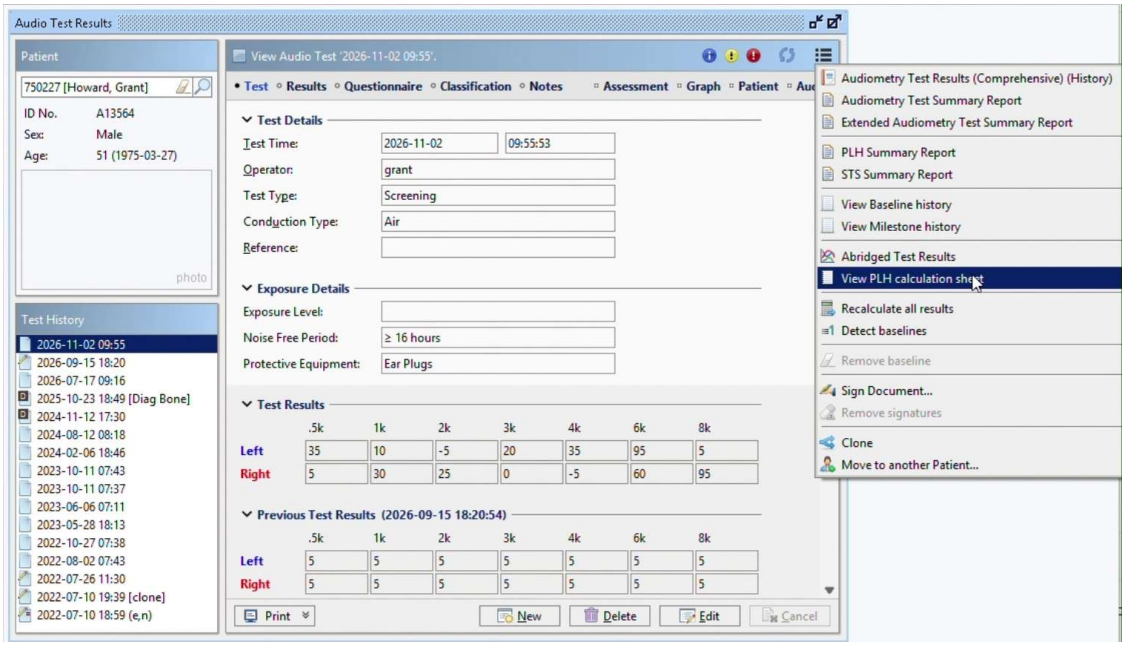


Figure 51 Audio test history and the menu of reports signing and maintenance functions

5.3 Baseline classification and administrative flags

Baseline classification - Under “Classification”, “Baseline Classification” shows whether the selected test is a National, Entry or Milestone baseline. Ambium identifies system-calculated baselines automatically. A baseline assigned manually is identified as manual.

Administrative flags - The reviewing medical professional can record the relevant flags under “Administrative Flags”, including whether compensation has been claimed or the test represents a reportable case of occupational NIHL.

Excluding a test - The option to ignore a test excludes its results from calculations and reports. Select it only when that exclusion is intended.

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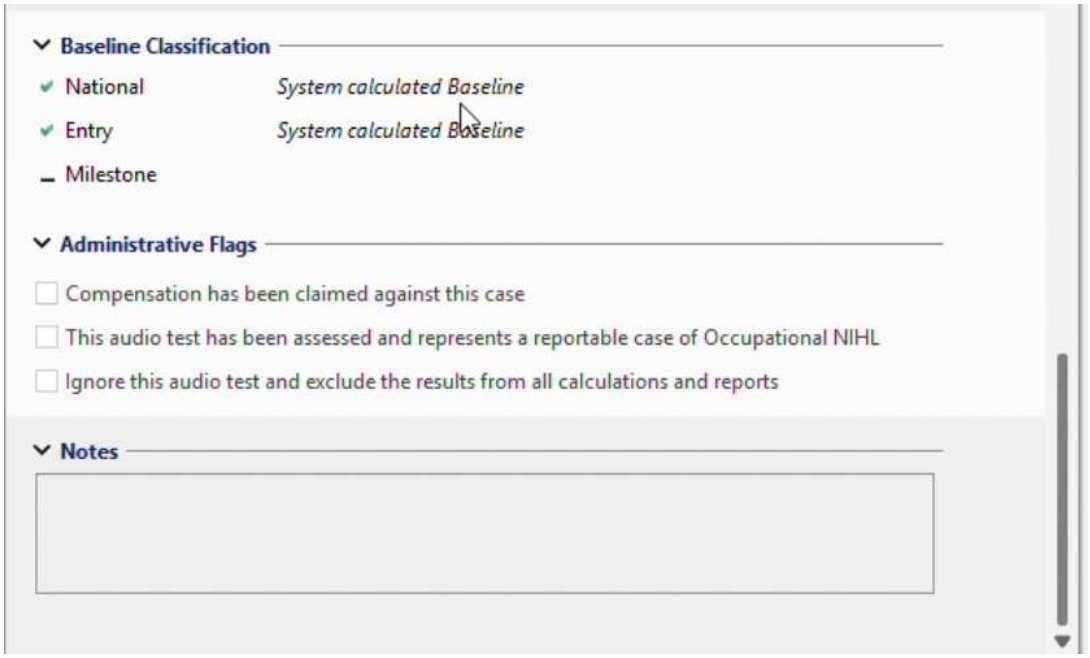


Figure 52 System calculated baseline classification and administrative flags

5.4 Audiometry configuration

"Audiometry", then "Configuration", lists the registered test types and their settings. These are preset for standard South African use and do not normally need to be changed.

If a change is required, select the relevant test type and click "Edit" to review its code, name, description, frequencies and whether it applies to online testing, manual capture or both. Check the settings carefully before saving.

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6 Vision

Use the Vision module to review screening standards, capture results manually or screen with a connected vision screener, and review a patient's test history. Device setup is covered under System Settings, Vision Screeners.

6.1 Vision standards

Available standards - "Standards" lists the vision profiles available in Ambium. These include manufacturer (OEM) profiles and Regulation 102 profiles for South African driver screening. Select a standard to review its test types and pass criteria.

Pass criteria - The standard defines which tests are included and the result required to pass each one. In the "Regulation 102 Advanced" example shown, the settings include "Binocular Vision: 3 cubes" and "Depth Perception: 80%". These are settings for the selected profile.

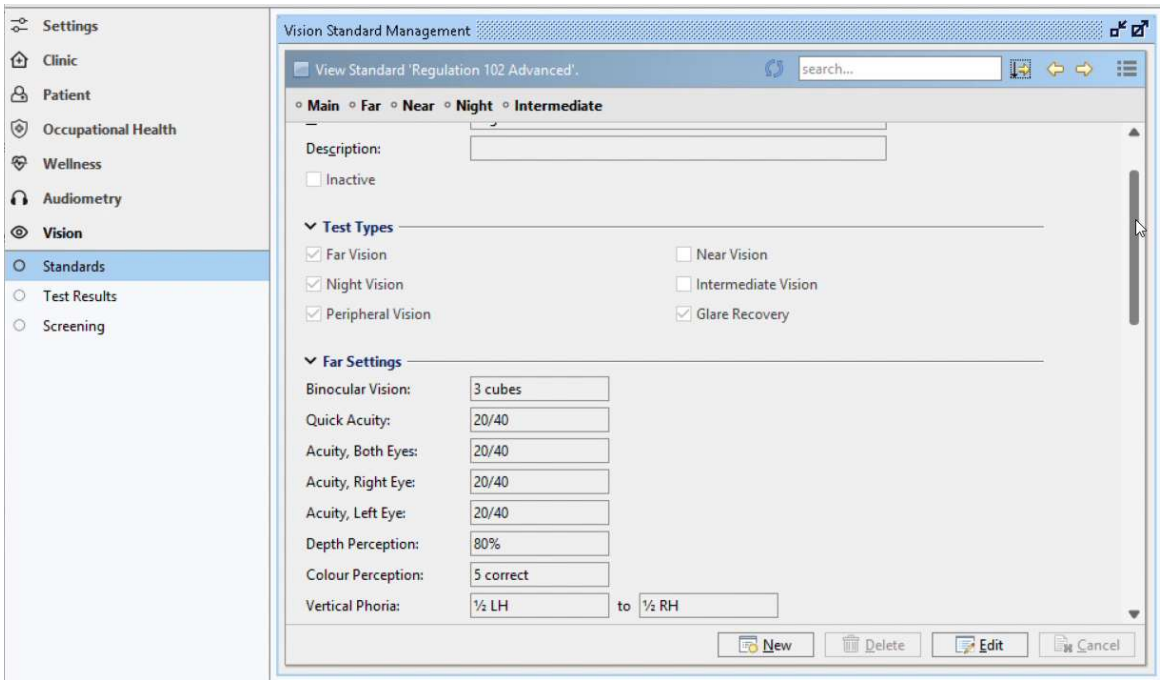


Figure 53 Vision standard test types and pass criteria

Custom standards - Click "New", enter a "Code" and "Name", select the required test types, and set the pass criteria. A custom profile can be used for a particular role, such as an administrative role. Click "Apply" to save it.

6.2 Test results and history

Review a test - Select the patient under "Test Results", then choose a record from "Test History". Review the test details, results and notes. The layout follows the same pattern as Audiometry.

Print and report - Click "Print" for the selected test. The three-line menu also provides "Vision Test Results (History)", "Vision Test Summary Report" and "Extended Vision Test Summary Report".

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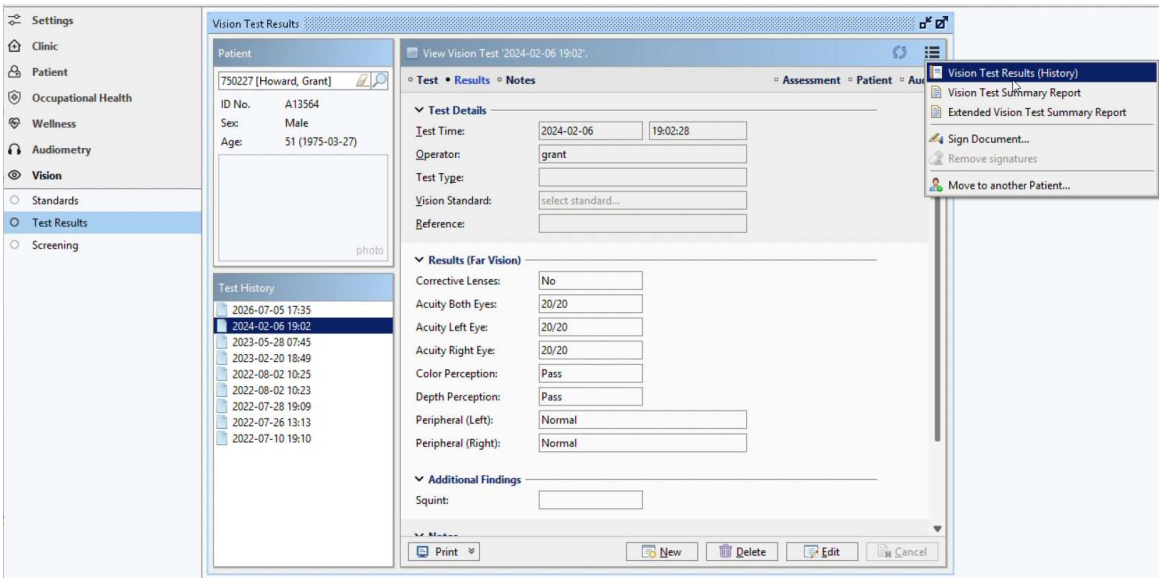


Figure 54 Vision test history results and report menu

6.3 Manual screening

Use manual capture to record results obtained without an integrated vision screener, for example when using a Snellen chart.

Test details - With the correct patient selected under “Test Results”, click “New”. Check the test date and time, select the “Test Type”, and choose the “Vision Standard”.

Capture the results - Select “Yes” or “No” for “Corrective Lenses”. Complete the applicable result fields using the patient’s measured results, selecting the appropriate option from each list. Record any additional findings and notes where applicable.

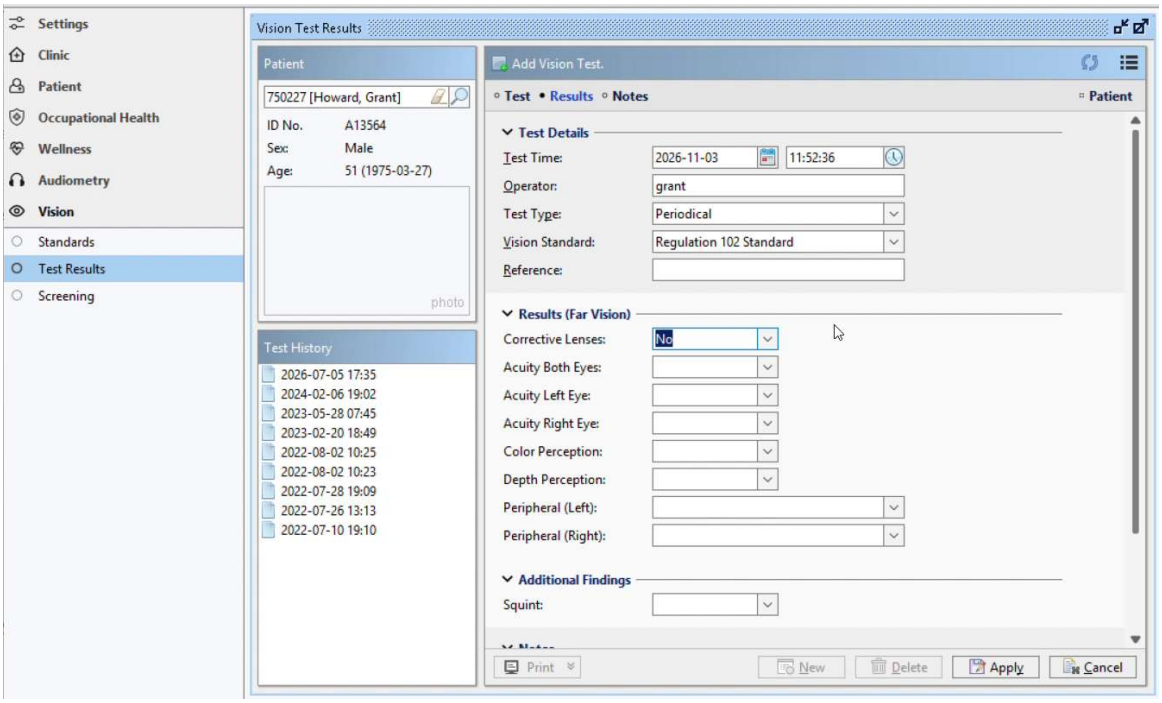


Figure 55 Manual vision test capture and corrective lens selection

Save the record - Click “Apply” to save the manually captured test.

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6.4 Screening with a connected vision screener

Prepare the test - Select the patient under “Screening” and check the patient details. Choose the “Vision Standard”. Ambium selects the test types for that standard; review the selection before starting. Select the relevant “with lenses” options when testing with corrective lenses.

Test selection - In the example shown, “Regulation 102 Advanced” selects far, night and peripheral vision, together with glare recovery where the device supports it. Near and intermediate vision are not selected in this example. Some screeners do not support glare recovery.

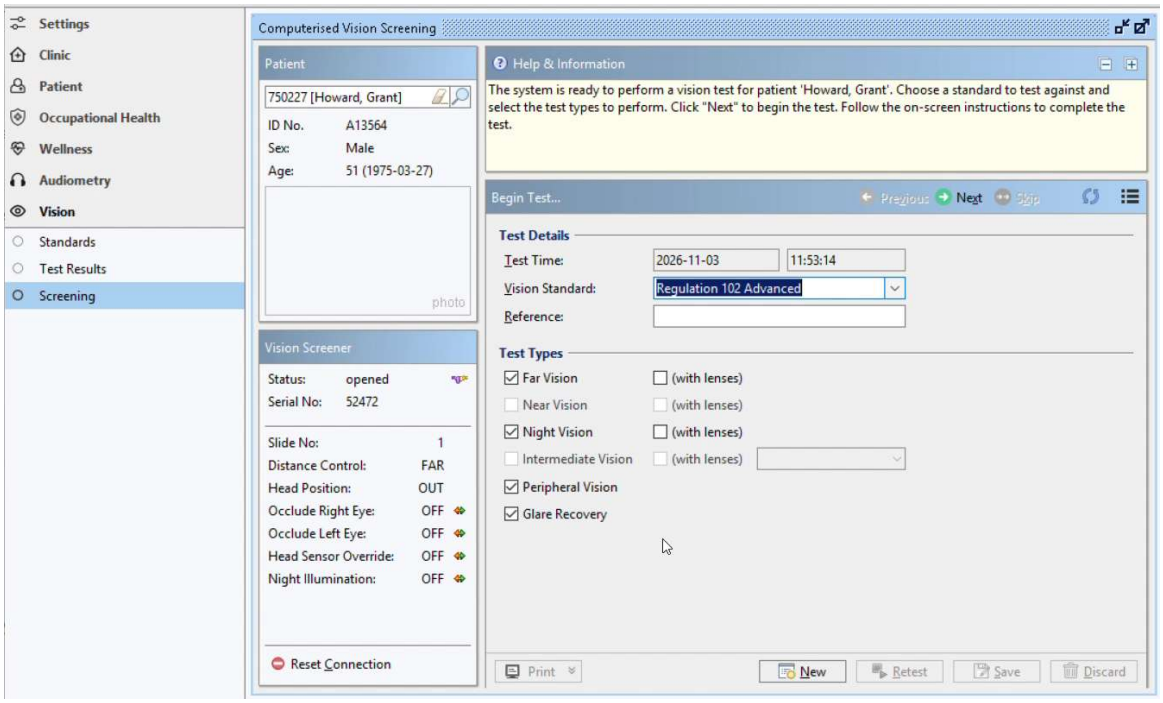


Figure 56 Connected vision screening standard and test type selection

Begin screening - Position the patient at the screener and click “Next”. Read the “Patient Instructions” aloud and follow the “Operator Notes” for that slide when recording the patient’s response.

Record responses - On the acuity slide shown, the operator notes say to select the first correct response and stop after one correct response. If the patient gets the first block wrong and the second block right, select the second block; Ambium automatically ticks the remaining blocks. Follow the instructions for each slide, as the response method varies between tests.

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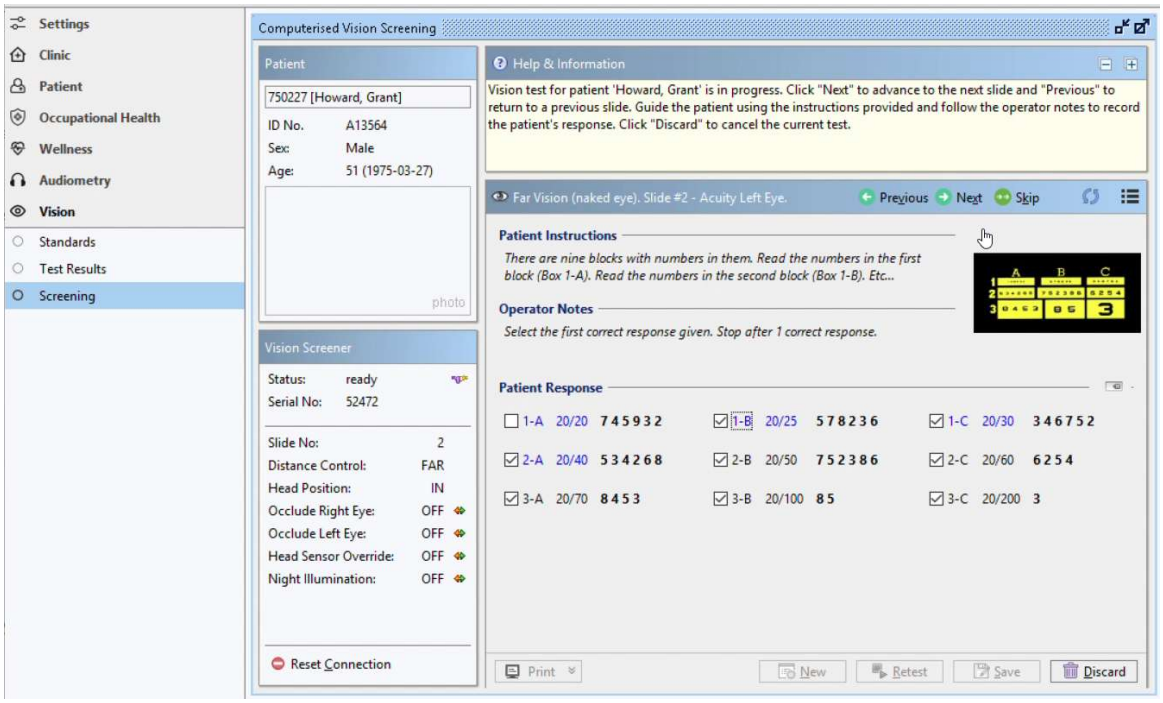


Figure 57 Patient instructions operator notes and automatically selected acuity responses

Continue the screening - Click “Next” to advance through the slides. Use “Previous” to return to an earlier slide. Continue reading the patient instructions and following the operator notes throughout the test.

Save the test - When screening is complete, click “Save”. The saved record can be reviewed and printed under “Test Results”. For document signing, follow section 10.1.

Device errors - If the screener reports a hardware or device driver error, follow the vision screener procedure in Troubleshooting, section 11.9.2.

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7 Spirometry

Start spirometry from Ambium. Ambium launches the connected spirometer's software, where the test is performed. When the test is saved in that software, the results return to Ambium for saving, review and reporting. Spirometer registration and host settings are covered under System Settings, Spirometers.

7.1 Daily calibration check

Complete the calibration check each morning before patient testing. This routine check is separate from the device and calibration-certificate setup covered under System Settings.

Calibration data - Under "Calibration Check", enter the syringe serial number and volume, together with the temperature, barometric pressure and relative humidity. The syringe volume is normally 3 litres; enter the actual volume of the syringe used.

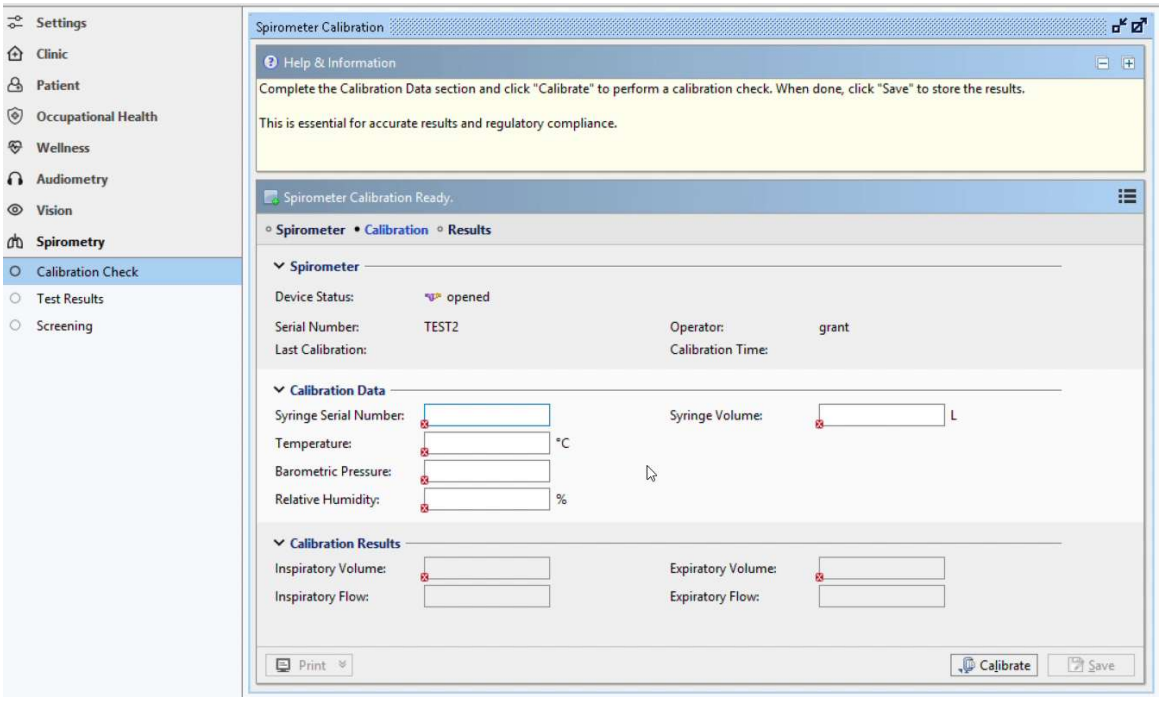


Figure 58 Spirometer calibration data and inspiratory and expiratory volume fields

Run the check - Click "Calibrate" to launch the spirometer software and complete the calibration check there.

Record the volumes - Enter the measured "Inspiratory Volume" and "Expiratory Volume" manually under "Calibration Results" when they are not returned automatically. These are volumes, not flow measurements. "Inspiratory Flow" and "Expiratory Flow" are not required for this check.

ndd EasyOne - When using the ndd EasyOne software, saving the calibration check sends the results back to Ambium automatically. Check the returned results.

Save the check - Click "Save" in Ambium to store the calibration results.

7.2 Preparing a screening

Patient and test details - Select the patient under "Screening" and click "New". Confirm the correct patient, check the test date and time, select the "Test Type", and record the body position used.

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Check copied information - Ambium may copy height, weight and blood pressure from earlier records or from vitals captured at another station during the medical. Smoking and medical history may also be copied from a previous spirometry test. Verify the copied information and update it where necessary.

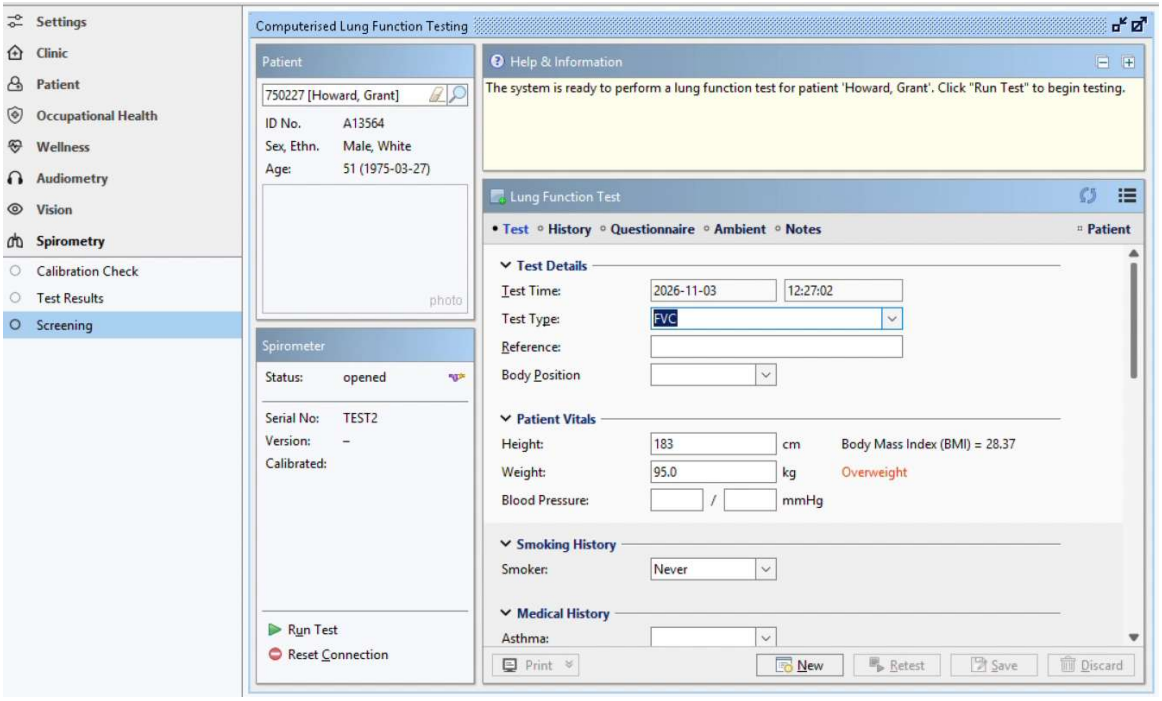


Figure 59 Spirometry screening test details patient vitals and smoking history

History and questionnaire - Record the smoking history and relevant medical history, then complete the patient questionnaire. Use the section links across the top of the form or scroll through the fields.

Ambient conditions - Record the temperature in degrees Celsius, barometric pressure in mmHg, and relative humidity as a percentage. Add relevant notes.

7.3 Running and saving a test

Run the test - Click “Run Test”. The connected spirometer’s software opens. Perform the test in that software and save it so the results are sent back to Ambium.

Calibration warning - If Ambium warns that calibration is overdue, follow section 11.9.3 in Troubleshooting before continuing.

Save in Ambium - When the results have returned, click “Save”. Confirm the saved notification and check that the test appears under “Test Results”. For document signing, follow section 10.1.

7.4 Test results and history

Review a test - Select the patient under “Test Results”, then choose the relevant entry from “Test History”. Review the test details, patient vitals, smoking and medical history, questionnaire and notes.

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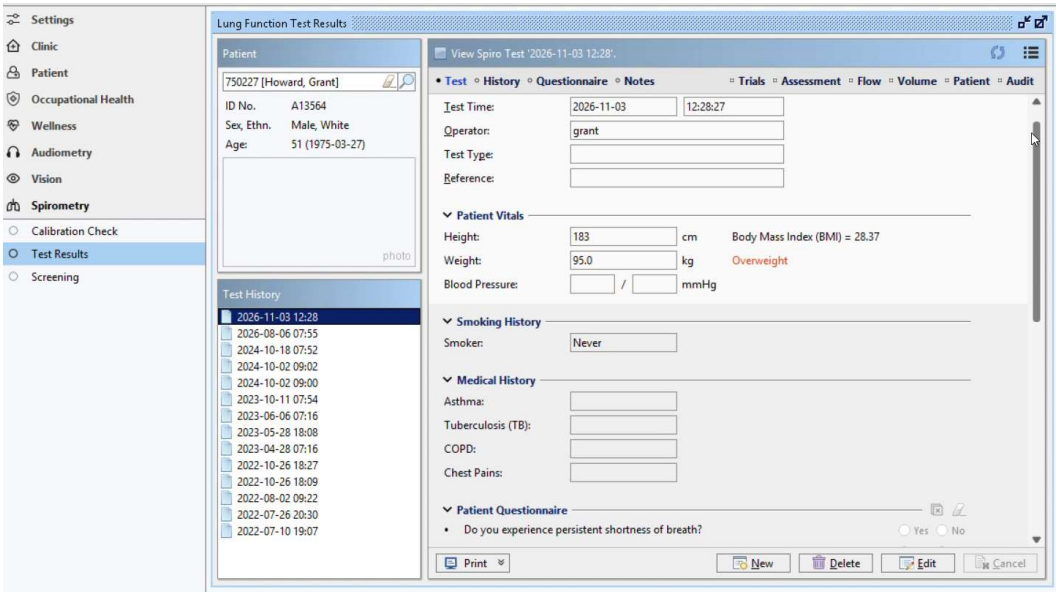


Figure 60 Saved spirometry test selected in the patient test history

Correct details - Click "Edit" to correct captured details or complete an outstanding questionnaire. Click "Apply" to save the changes.

Trials and assessment - Use "Trials" to review the individual trial results and "Assessment" to review the assessment information. Use "Flow" and "Volume" to view the available graphs.

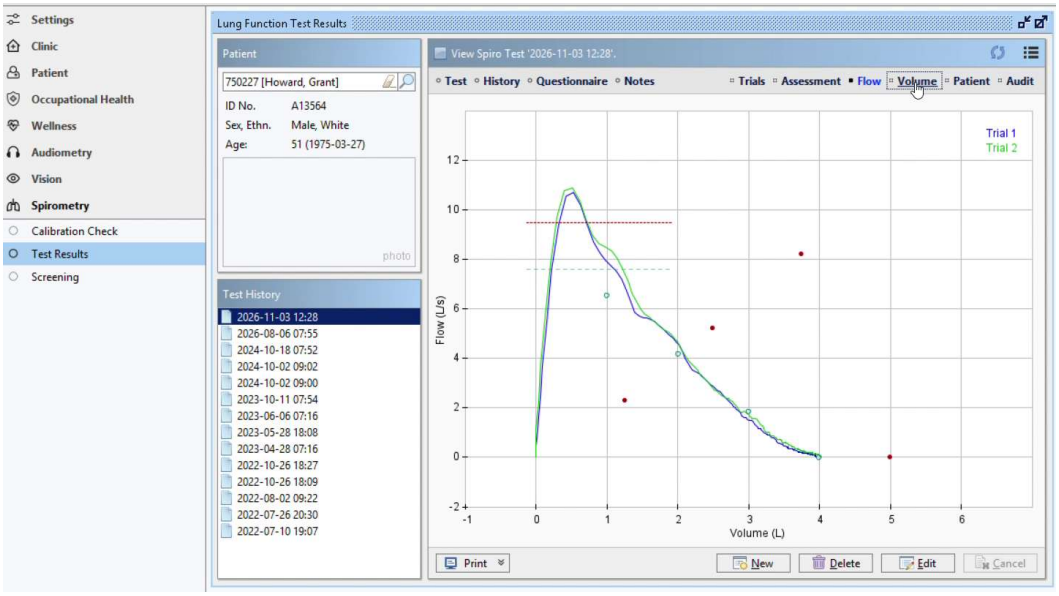


Figure 61 Spirometry flow volume graph with individual trial curves

Patient and audit details - "Patient" shows the patient details associated with the test. "Audit" shows information about the record, including its clinic, test source, creation and update times, export history and digital signature history.

Print and report - Click "Print" for the selected test. Additional reports are available from the three-line menu.

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8 Occupational Health Screens and the Medical Workflow

The “Medical Exams (CoF)” screen is the dashboard for the patient’s occupational health medical. It brings together the tests, assessments and questionnaires required by the medical profile. Previous medicals appear under “Exam History”.

8.1 Starting a medical

Start the exam - Under “Occupational Health”, open “Medical Exams (CoF)” and select the patient. Confirm that the patient details are correct, then click “New”.

Exam details - Check the exam date and time, then select the “Exam Type”, for example “Periodical”.

Medical profile - Select the appropriate “Profile” to determine which tests, assessments and questionnaires are included. Profiles are configured under System Settings, Medical Profiles. The example shown uses “Construction Medical”.

Health care practitioners - Select the appropriate “OHNP” and “OHMP” from the available practitioners recorded under Clinic.

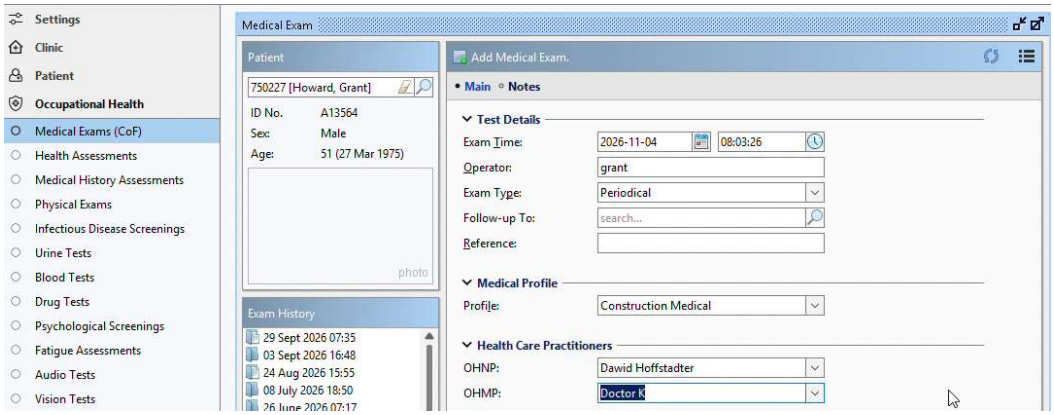


Figure 62 New medical exam with exam type profile and health care practitioners selected

Create the medical - Click “Apply”. Ambium creates the medical exam and adds it to “Exam History” under its exam date and time.

Review the required tests - Review the items listed under “Tests, Assessments & Questionnaires”. These are the tests required by the selected profile for this medical.

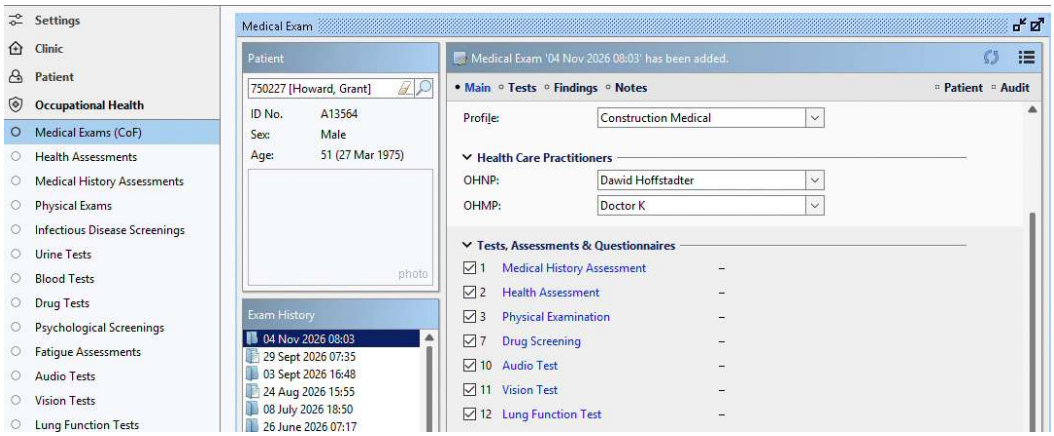


Figure 63 Saved medical exam with the tests assessments and questionnaires required by the profile

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8.2 Patient consent

After creating the medical, obtain the patient's consent before proceeding with the assessments.

Patient consent - Open the three-line menu at the top right of the medical exam and select "Sign patient consent form...". Ambium opens the "Patient Consent" PDF. Have the patient review the form and sign at the bottom using the procedure in section 10.1.

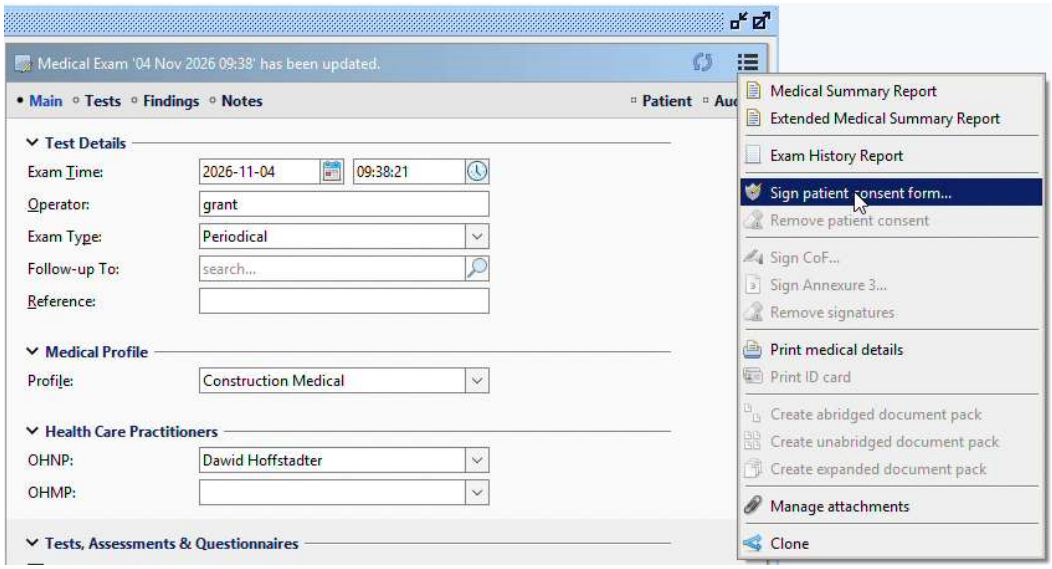


Figure 64 Sign patient consent form option in the medical exam menu

8.3 Working Conditions for the Construction Annexure 3 Medical

Patient and employment details - Open "Patient" within the medical exam and click "Edit". Review the employer, position and service details displayed for this medical.

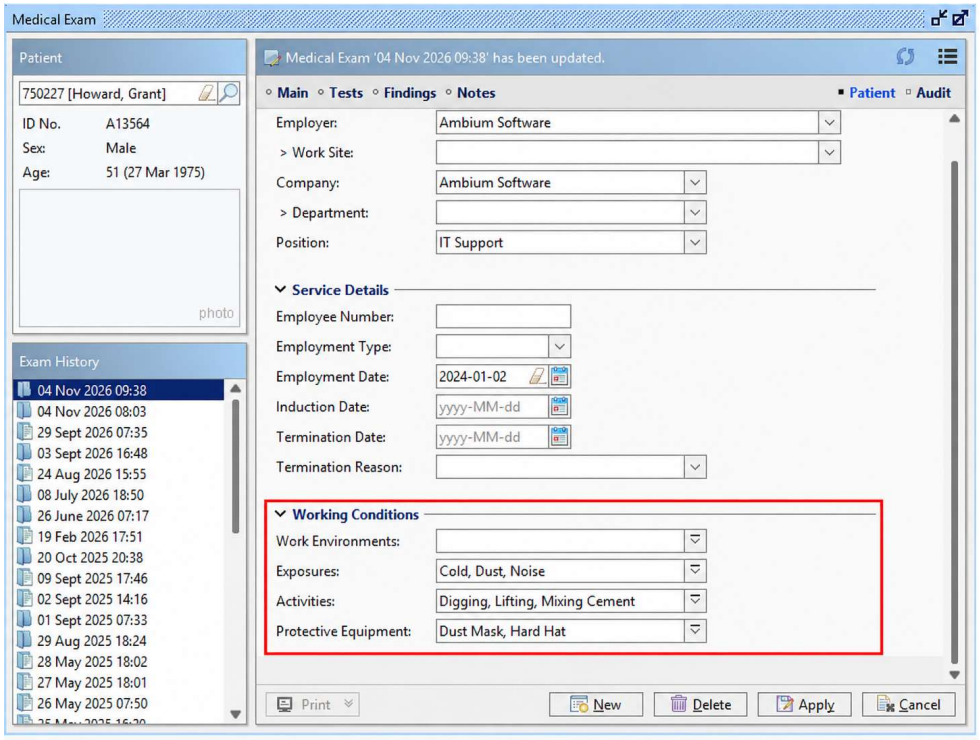


Figure 65 Medical exam Patient screen with Working Conditions highlighted

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Working conditions - Under “Working Conditions”, select the relevant “Exposures”, “Activities” and “Protective Equipment”. “Activities” contains the work types, such as digging, lifting or mixing cement. Select the protective equipment the patient uses while working.

Construction Annexure 3 - Exposures, work types and protective equipment are all required for the Construction Annexure 3 medical. These selection lists are maintained under Clinic, as described in section 3.6.

Save the details - Click “Apply” to save the working conditions.

Employment details do not match - If the employment details in the medical do not match the patient’s employment record, follow section 11.10 in Troubleshooting.

8.4 Medical history assessment

Work through the items required by the medical profile using the relevant screens under “Occupational Health”. The first item in the example is “Medical History Assessment”.

Start the assessment - Select “Medical History Assessments” in the left-hand menu. Confirm the patient and click “New”.

Check the medical link - Ambium links the new assessment to the medical exam automatically. Check “Assessment Date” and the selected “Medical Exam”. Correct the assessment date and time where necessary. If the assessment belongs to another medical, use the search button beside “Medical Exam” to select the correct exam.

Complete the questionnaire - Answer each question under “Medical Conditions”. Scroll through the full questionnaire so that all questions are completed.

Copy previous responses - The document icon with the green plus copies responses from the previous assessment. Review and update the copied responses against the patient’s current history.

Set or clear responses - The X icon selects “No” for all responses. Review every question with the patient and change any answers that should be “Yes”. Use the eraser icon to clear all responses if you need to start again.

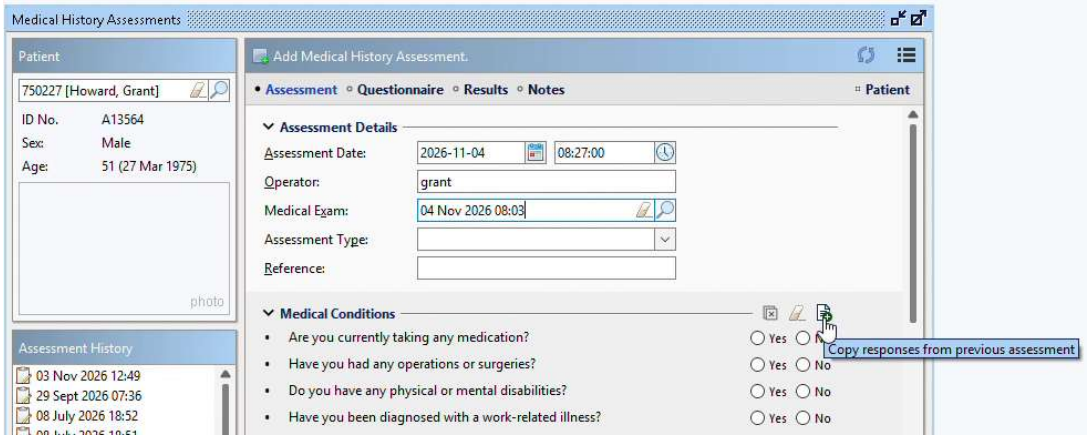


Figure 66 Medical history assessment linked to the medical exam with questionnaire response controls

Record comments - Selecting “Yes” displays a comment field below the question. Enter the relevant details or additional notes.

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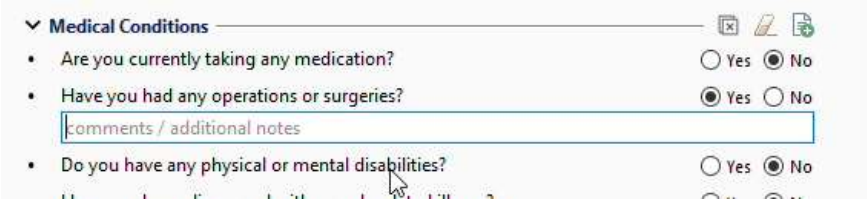


Figure 67 Comment field displayed beneath a Yes response

Save the assessment - Click "Apply" when the questionnaire is complete. Ambium saves the assessment and calculates a rating; the example shown returns "Low Risk".

Review the rating - Review the calculated rating under "Assessment Results". The medical professional can override it by selecting a rating under "Overall Rating", then clicking "Apply" to save the change.

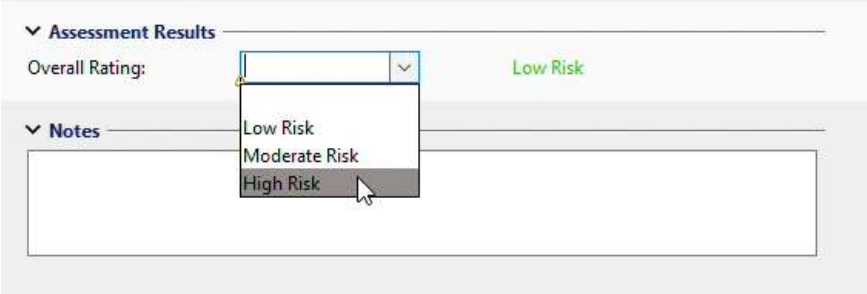


Figure 68 Calculated Low Risk rating and the Overall Rating override options

Confirm completion - Return to "Medical Exams (CoF)". The medical history assessment now shows its date and time and its result. In the example shown, the result is "Clear".



Figure 69 Medical dashboard showing the completed medical history assessment date time and result

8.5 Health assessment

Start the assessment - Select "Health Assessments" under "Occupational Health". Confirm the patient and click "New".

Check the medical link - Check the assessment date and time and confirm that "Medical Exam" shows the correct medical. When the assessment is linked to a medical, "Assessment Type" can be left blank because the type is already recorded in the medical.

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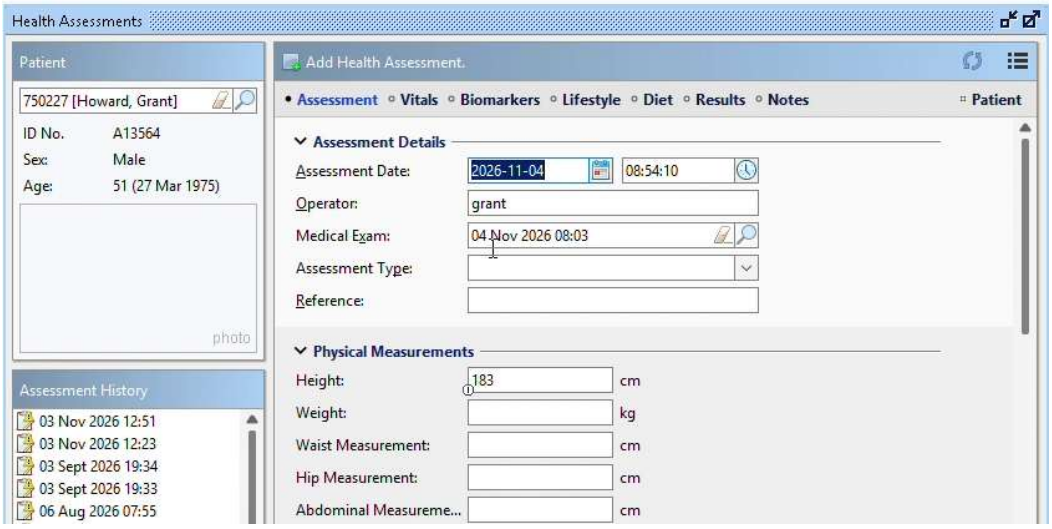


Figure 70 New health assessment linked to the medical exam

Physical measurements - Enter the height, weight and relevant waist, hip and abdominal measurements. Use the units shown beside each field: height and body measurements are in centimetres and weight is in kilograms.

Vital signs - Record the required temperature, pulse, blood pressure and blood oxygen readings. The form provides fields for up to three blood pressure readings.

Clinical readings and other information - Work through the remaining sections and record the information required for the medical. “Clinical Readings” includes cholesterol, triglycerides and blood sugar, with an option to indicate whether the patient was fasting. Other sections include physical activity, smoking habits and alcohol intake. Scroll through the form or use the section links at the top.

Review automatic ratings - Ambium displays calculated values and ratings beside applicable measurements as they are entered. For example, entering height and weight produces a “Body Mass Index (BMI)” and classification. Review these values and ratings before saving.

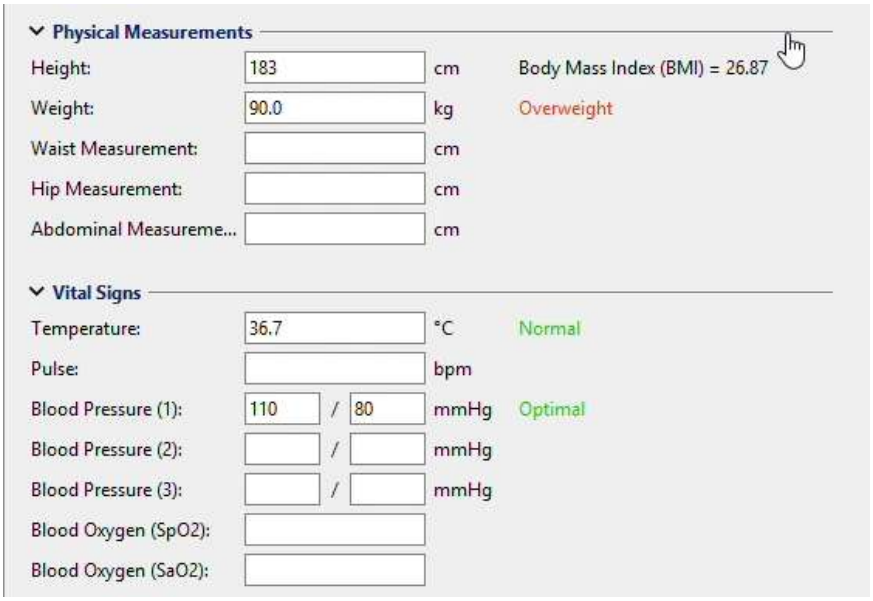


Figure 71 Health assessment measurements with calculated BMI and automatic ratings

Save the assessment - Click “Apply” when the required information has been captured.

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Confirm completion - Return to “Medical Exams (CoF)”. The health assessment now shows its date and time and a finding. In the example shown, the finding is “Review Required”.



Figure 72 Medical dashboard showing the health assessment date time and Review Required finding

8.6 Physical examination

Start the examination - Select “Physical Exams” under “Occupational Health”. Confirm the patient and click “New”. Check the test date and time and the linked “Medical Exam”.

Set default results - Click the blue downward-arrow icon beside “Test Results” to set all results to “NAD” (no abnormality detected). Review every result against the examination findings and change any that should not be “NAD”.

Record examination findings - Use the list beside each examination area to select “NAD”, “Abnormal” or “Not Tested”, as appropriate. Enter relevant comments or additional notes in the field alongside the result.

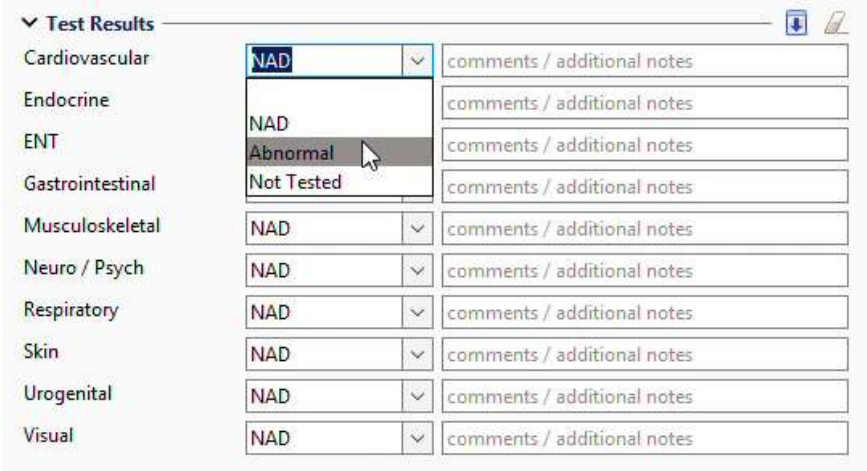


Figure 73 Physical examination NAD defaults result options and comment fields

Save the examination - Click “Apply”. Ambium saves the examination and displays a calculated finding under “Findings”. The example shown returns “Clear”.

Accept or override the finding - Review the finding. To accept it, select the same value under “Outcome”; to override it, select the appropriate alternative. Click “Apply” again to save the outcome.

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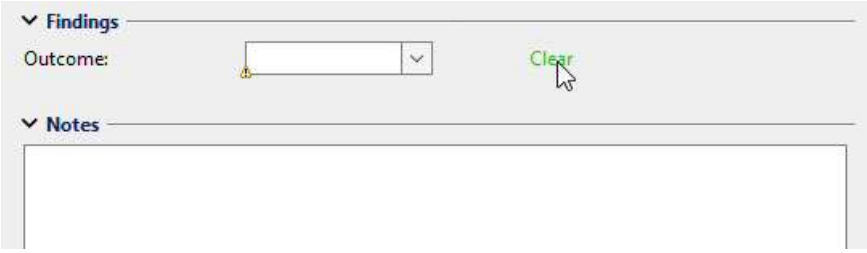


Figure 74 Calculated Clear finding beside the Outcome field

Confirm completion - Return to "Medical Exams (CoF)". The physical examination now shows its date and time and its finding. In the example shown, the finding is "Clear".

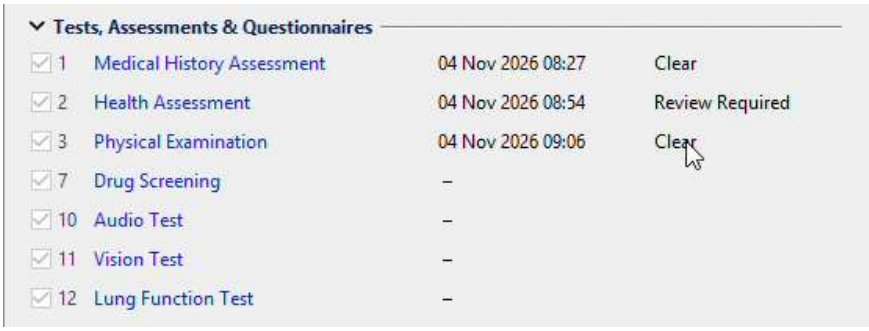


Figure 75 Medical dashboard showing the physical examination date time and Clear finding

8.7 Completing the remaining tests

Complete the remaining tests, assessments and questionnaires required by the medical profile. Follow the applicable instructions and requirements on each screen, then save each record.

Audio, Vision, Spiro Manual Results - "Audio Tests", "Vision Tests" and "Lung Function Tests" under "Occupational Health" allow manual capture of results. These screens do not run screening through a connected device.

Connected-device screening - For connected-device testing, open "Screening" in the relevant "Audiometry", "Vision" or "Spirometry" module. Select the patient, complete the required fields, perform the test and save it using the procedures in Chapters 5, 6 and 7 respectively.

Copied vitals - Spirometry may copy height, weight and blood pressure from the health assessment captured earlier in the medical. Check the copied values before testing, as described in Chapter 7.

Link the test records - Return to "Medical Exams (CoF)" and select the relevant medical. Click "Edit". Ambium automatically selects available test records and displays "Autoselect" notifications identifying the records linked to the medical. Check the selected records and their dates to confirm they are appropriate for this medical.

Save and check the medical - Click "Apply" to keep the selected links. The "Tests, Assessments & Questionnaires" list is populated with the linked tests' dates and times and their findings where available. Check that all required items have been completed and linked correctly.

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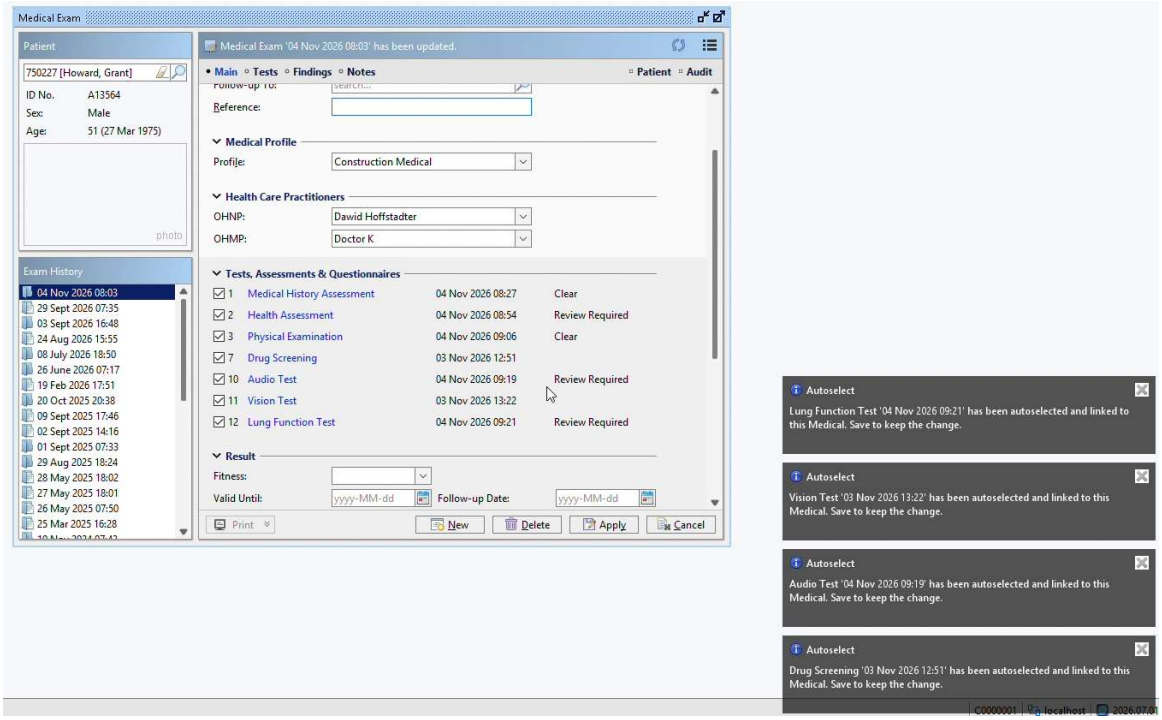


Figure 76 Medical exam with linked screening results and automatic selection notifications

8.8 Reviewing and signing the Certificate of Fitness

The doctor or occupational health nurse practitioner responsible for signing the Certificate of Fitness (CoF) reviews the completed medical before signing.

Review the results - In the medical, click a linked result under “Tests, Assessments & Questionnaires” to open its review screen. Review each test or assessment and its findings. Use “Back” and “Forward” to move between the linked records. Where available, the report icon opens a PDF view of the assessment; Figure 78 shows the medical history assessment report icon.

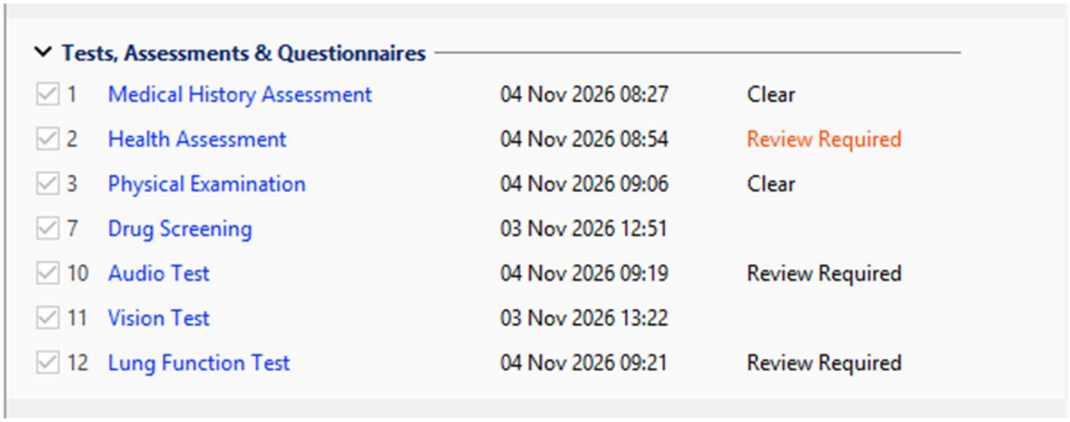


Figure 77 Click a blue linked test or assessment name to open its review screen

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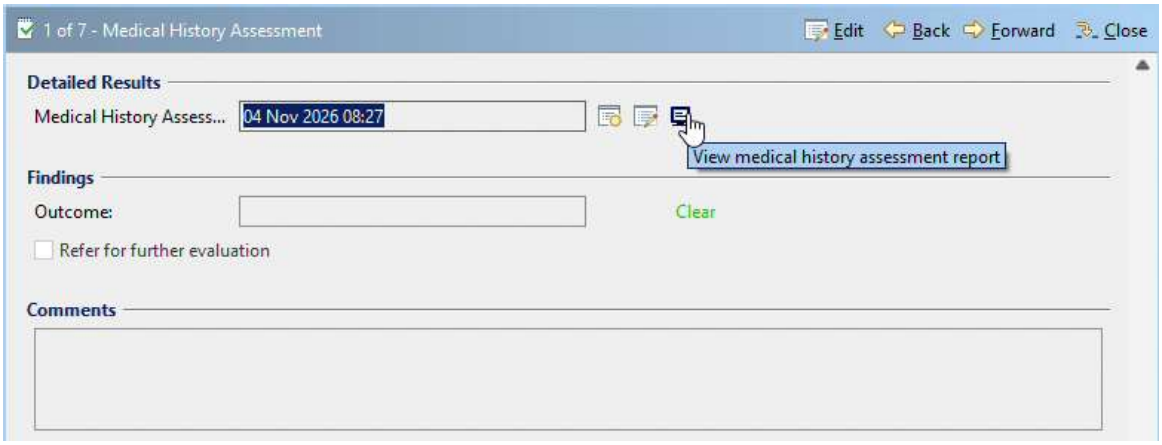


Figure 78 Reviewing a linked assessment and opening its report

Record the fitness decision - Close the review screen and click "Edit" in the medical. Under "Result", select the appropriate "Fitness" outcome. If "Fit" is selected, the "Valid Until" date is automatically 12 months later. In this example, "Unfit (to review)" was selected. The "Valid Until" date should be selected and, where required, "Follow-up Date" added. These values must reflect the practitioner's decision. The "Unfit (to review)" outcome and dates shown in Figure 79 are demonstration values.

Complete and save - Complete the applicable fields under "Allowances" and "Restrictions". Click "Apply" to save the medical.

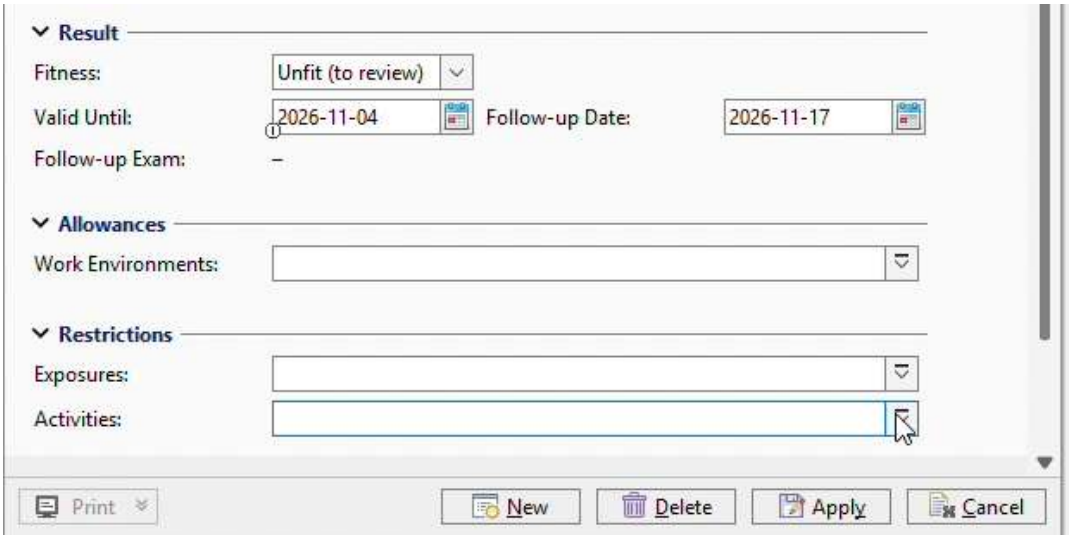


Figure 79 Fitness outcome, validity and follow-up dates, allowances and restrictions

Sign the certificate - Open the medical's menu and choose "Sign CoF...". The Certificate of Fitness opens as a PDF. Check the certificate, apply the required signatures using section 10.1, then close the PDF to store it securely in Ambium. The demonstrated signing process requires Adobe Acrobat Reader with the ProSense Impression plugin.

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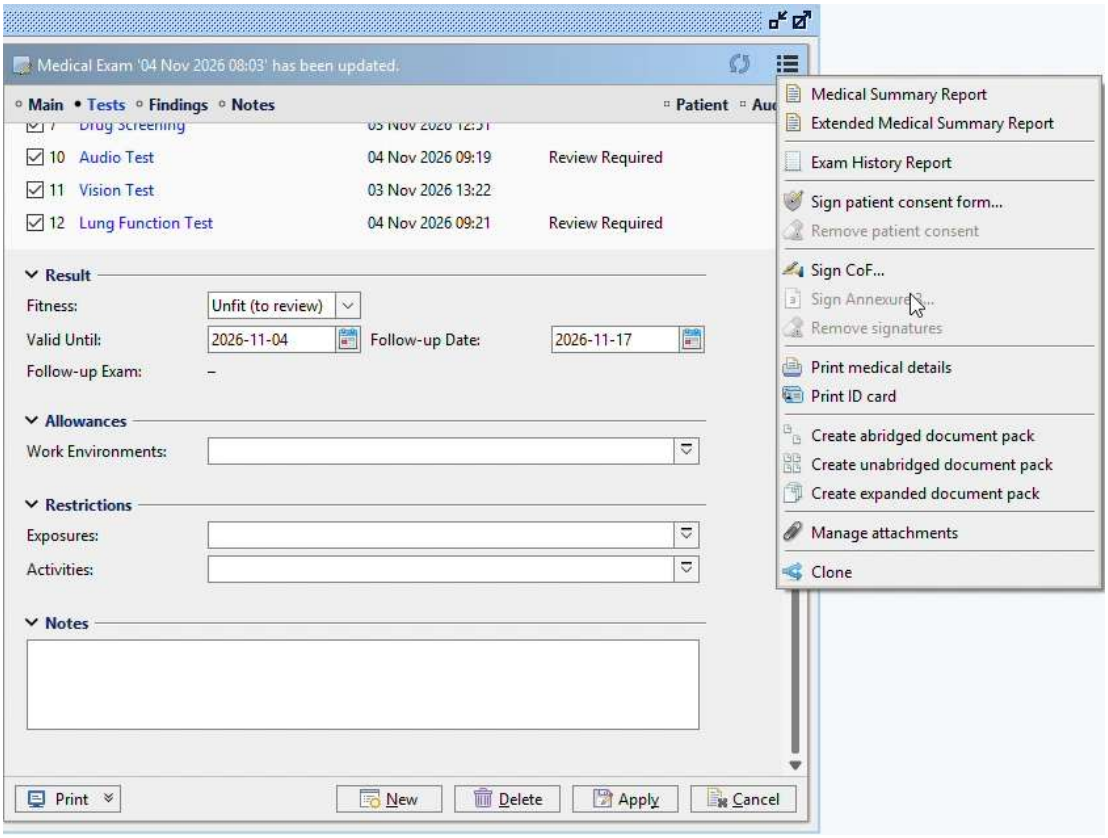


Figure 80 Medical exam menu with the Sign CoF option

Confirm completion - After signing, “Edit” is greyed out and the medical cannot be edited. Use “Open signed CoF” in the same menu to view the signed certificate. If a correction is needed, follow section 11.11, “Correcting a signed medical”.

8.9 Completing a follow-up medical

Create a follow-up medical when the patient returns for reassessment. Link it to the earlier medical and include only the tests or assessments being repeated.

Create and link the follow-up - With the patient selected in “Medical Exams (CoF)”, click “New”. Enter the actual examination date and time under “Exam Time”, then set “Exam Type” to “Follow-Up”. In “Follow-up To”, select the medical being followed up. Check its date and type to ensure the correct record is linked.

Confirm the medical details - Select the appropriate medical profile and health care practitioners, then click “Apply”. The demonstration keeps the “Construction Medical” profile used for the original medical.

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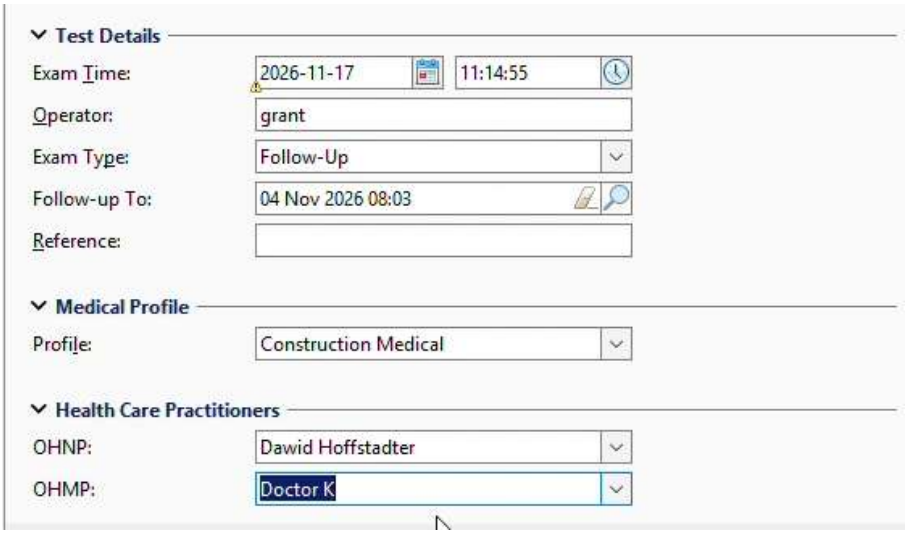


Figure 81 Follow-Up exam type linked to the earlier medical

Select only the follow-up tests - Click “Edit” and, under “Tests, Assessments & Questionnaires”, untick every test or assessment that is not being repeated. Leave only the relevant items ticked. Click “Apply” to save the selection. Check these boxes again before finalising the medical so unused tests do not appear unnecessarily on the Certificate of Fitness.

Complete the reassessment - Complete and save the required test or assessment using its usual procedure. In this example, only a health assessment is repeated to reassess blood pressure; the other tests are unticked. Check that the follow-up medical links to the new assessment and shows its date, time and result.

Record the follow-up decision - The practitioner reviews the follow-up findings and selects the appropriate “Fitness” outcome. Check and set “Valid Until” and any required “Follow-up Date”, then click “Apply”. The example shows “Fit”; the outcome and validity period must reflect the practitioner’s decision. Review and sign the Certificate of Fitness using section 8.8.



Figure 82 Follow-up medical with only Health Assessment selected and all other tests unticked

8.10 Cloning a medical

Cloning creates a copy of an existing medical so its information can be reused. For example, a patient may need an exit medical and a pre-employment medical for a new company without repeating the entire medical from scratch.

Clone the medical - Select the patient and the medical to copy in “Medical Exams (CoF)”. Open the medical’s menu and choose “Clone”. The confirmation identifies the medical that will be cloned. Check that it is the correct record, then click “Yes”.

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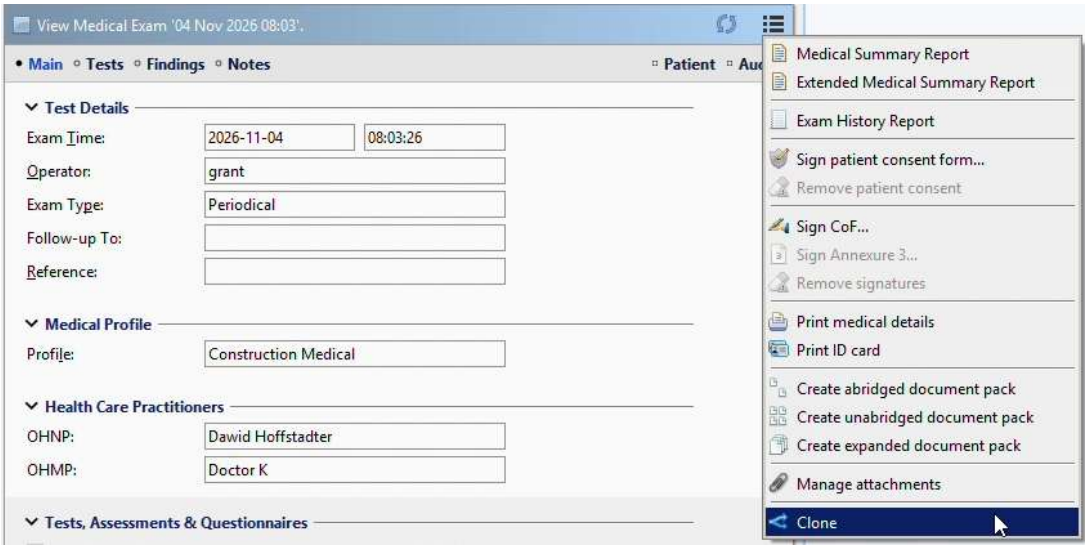


Figure 83 Clone option in the medical exam menu

Update the copied medical - Ambium opens the copied medical for editing. The demonstration shows "[clone]" in its title and exam history entry, with "clone" in "Reference". Change "Exam Type" to the required type, such as "Pre-Employment". If the new medical takes place on another day, update the date under "Exam Time" to the actual examination date.

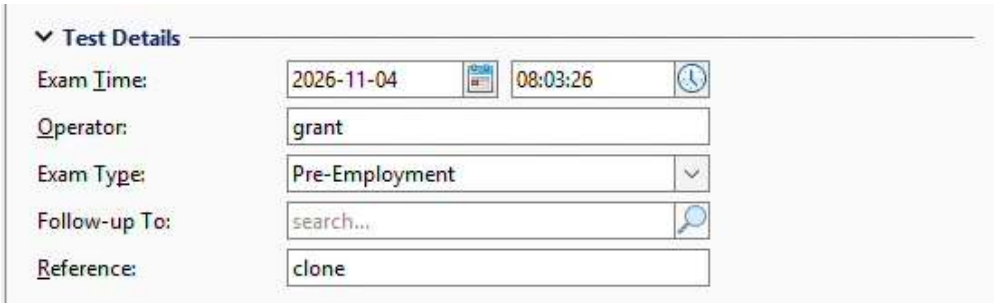


Figure 84 Cloned medical with Exam Type changed to Pre-Employment

Review and save - Check that the copied information and linked tests are appropriate for the new medical, then click "Apply" to save it.

8.11 Attachments for a medical

Attach supporting documents, such as a referral return slip, to the relevant medical. These attachments belong to that particular medical rather than the patient record as a whole.

Open attachments - Select the medical, open its menu and choose "Manage attachments".

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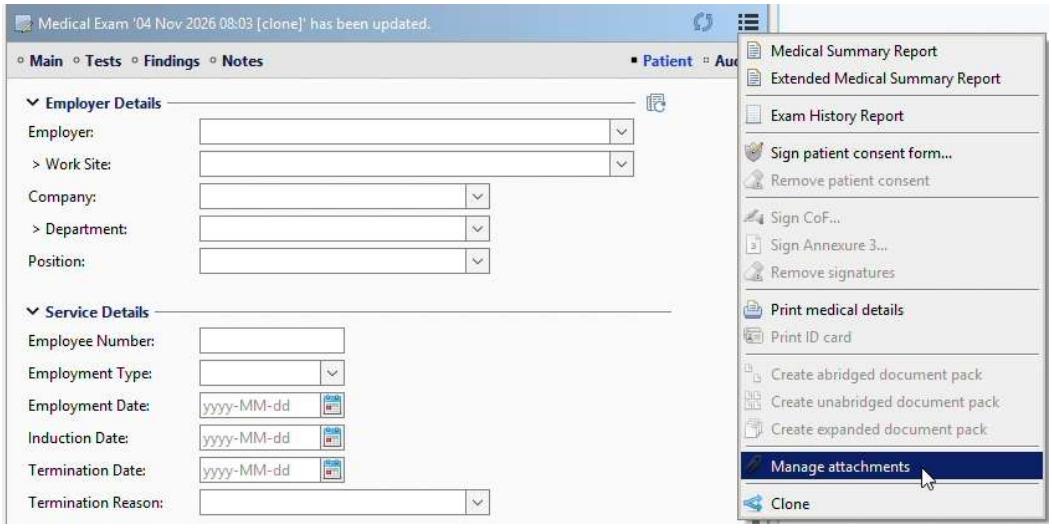


Figure 85 Manage attachments option in the medical exam menu

Add an attachment - Under "New/Selected Attachment Details", click the paperclip "Select attachment" button beside "File". Choose the required file in the file selection window. Check the displayed filename and enter an optional "Description", such as "Referral return slip". Click "Add" to place the attachment and its description in the list, then click "Save" at the top of the window.

Update attachment details - Select the attachment in the list and change its details below. Click "Update" to apply the changes to the selected row, then click "Save".

View an attachment - Select the attachment in the list, then click "View attachment", the screen-shaped button beside the paperclip. Click "Close" when finished managing attachments.

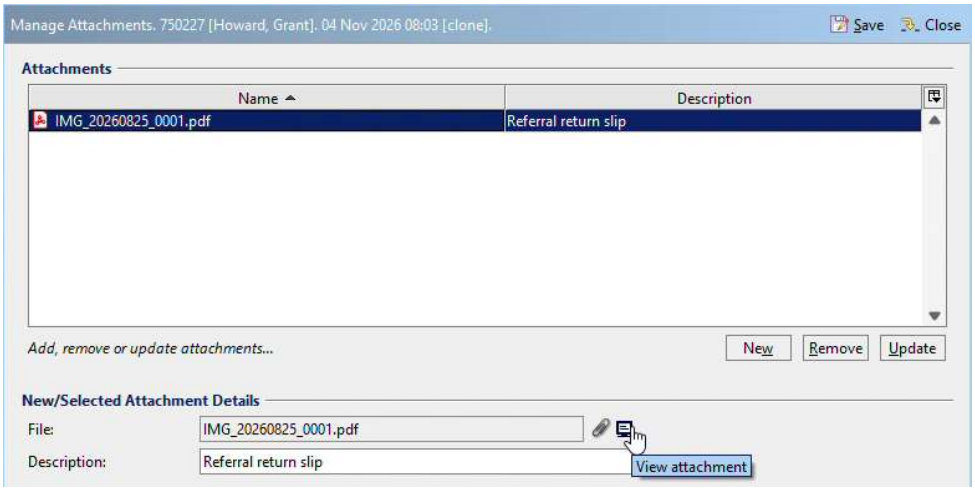


Figure 86 Attachment list, description, Update and Save controls, and View attachment button

9 Tools

9.1 Importing patients from a spreadsheet

Use Patient Upload to import a list of patients supplied by an employer or customer in a CSV or Excel spreadsheet.

Load the spreadsheet - Select "Tools", then "Patient Upload". Click "Import", select the spreadsheet saved on your computer and click "Open". Ambium displays the records from the file.

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Select the patients - Review the displayed details and tick the box in the first column for each patient you want to import. Use “Select / Unselect All” to select or clear the whole list.

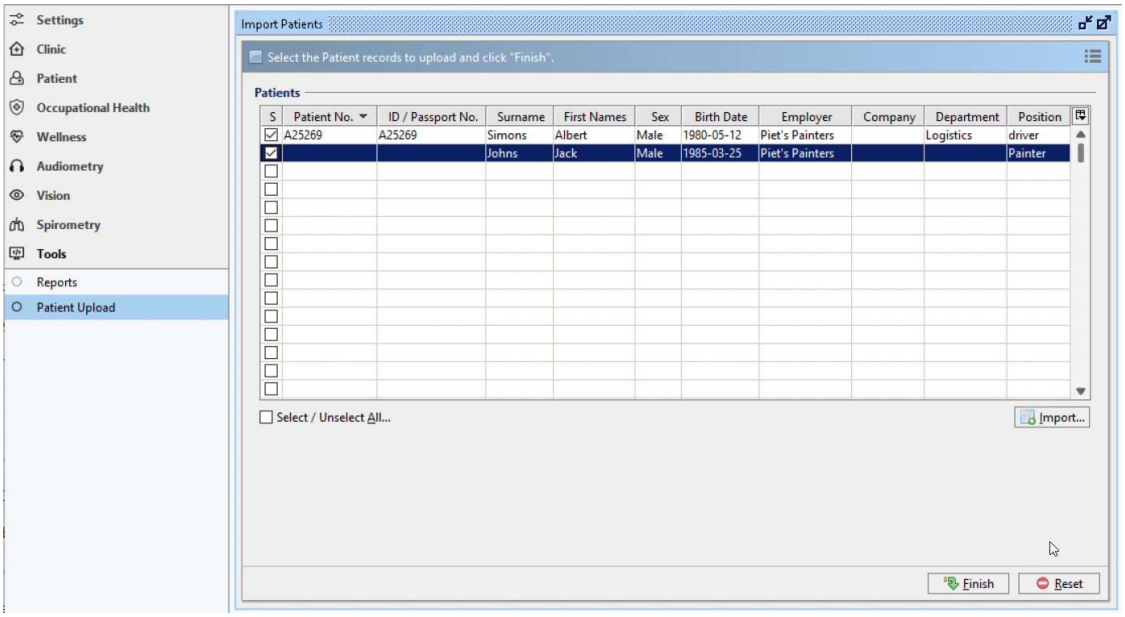


Figure 87 Patient Upload with the required patient records selected

Confirm the import - Click “Finish”. Check the number of patients shown in the confirmation message, then click “Yes” to proceed. The import may take several minutes.

Check completion - Wait for the “Import Complete” message showing how many patients have been added, then click “OK”.

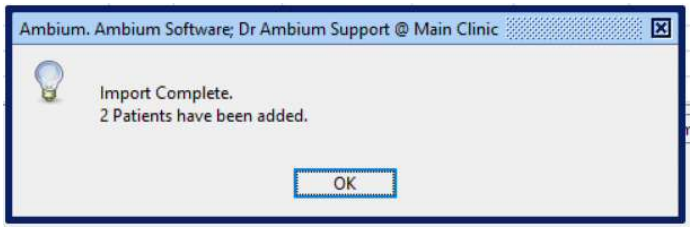


Figure 88 Import Complete message confirming that two patients have been added

Spreadsheet format - The spreadsheet format required will be supplied by Ambium Software on request to support@ambium.net.

9.2 Reports and reporting

Ambium provides a wide range of reports and statistics. This section uses a Medical Exam (CoF) Executive Summary to demonstrate the reporting process. The clinic administrator can explore the available categories and reports to find those that best suit the clinic’s needs.

Choose the report - Select “Tools”, then “Reports”. Under “Report Category”, choose “Medical and CoF”, then select “Medical Exam (CoF) Executive Summary”. Other categories provide reports for other areas of Ambium.

Set the reporting period - Enter the “From” date. Enter a “To” date if required; leave it blank to include records up to today. Click “Next” to set the report criteria.

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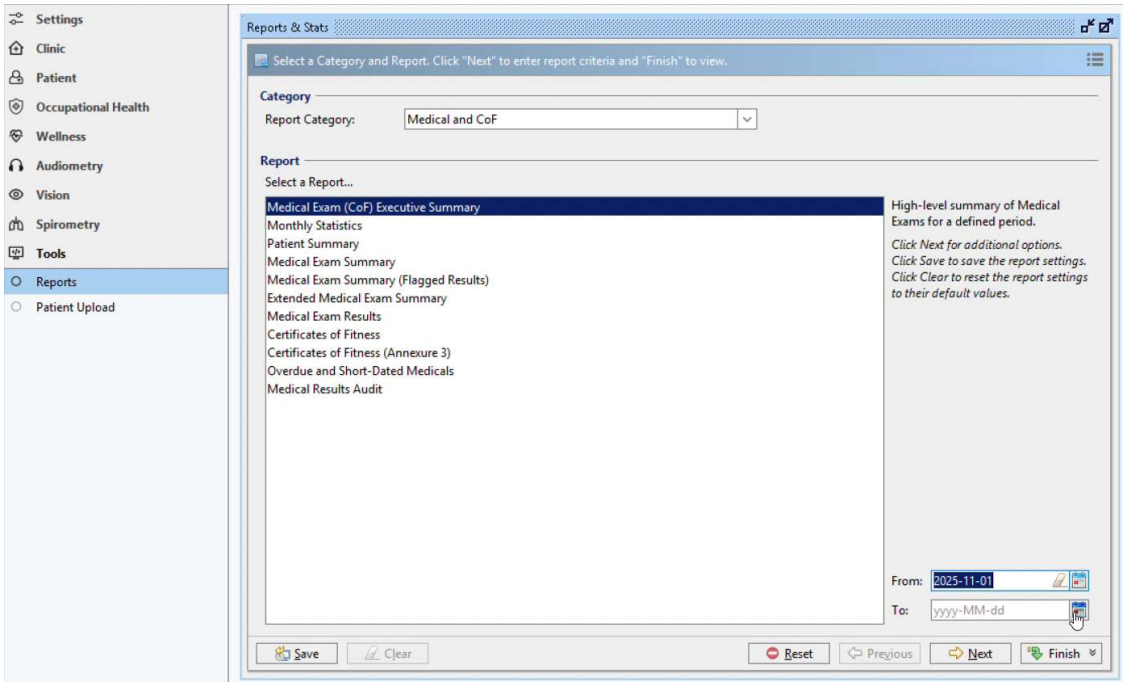


Figure 89 Medical and CoF report selection with the executive summary and date fields

Limit the records - Tick the criteria you want to use, then select the relevant values. You can filter by clinic, employer group, employer, company, department or position. Type in a selection field to find a matching entry. Click “Next” to continue.

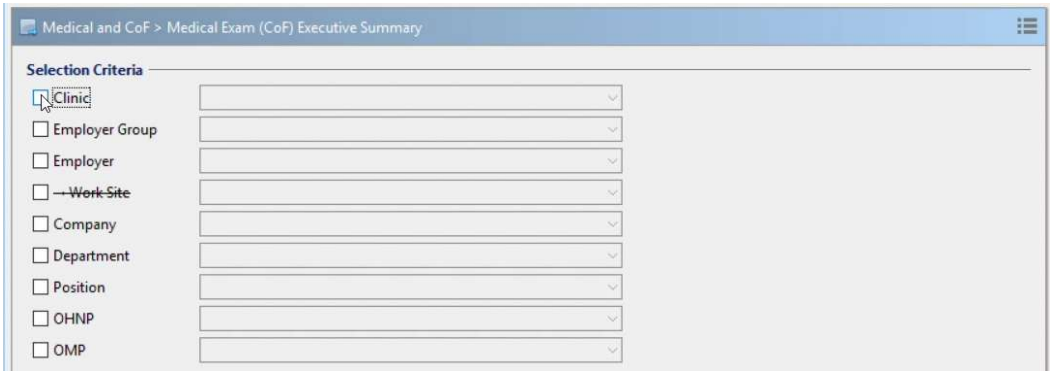


Figure 90 Selection criteria for limiting the records included in a report

Apply further filters - Use the next screen to filter by “Sex”, “Employment Type”, “Work Environment”, “Industry Type” or “State”, where required. Click “Next”.

Review report options - Review the report’s “Advanced Configuration”. For this executive summary, options include “Print summary page [yes/no]”, “Patient age (min)” and “Patient age (max)”. Enter age limits if required.

Generate and review - Click “Finish” to generate the report. Review it in the report viewer and use “Print” if a printed copy is required. The figures shown in the demonstration are sample data; your report reflects the records and criteria selected.

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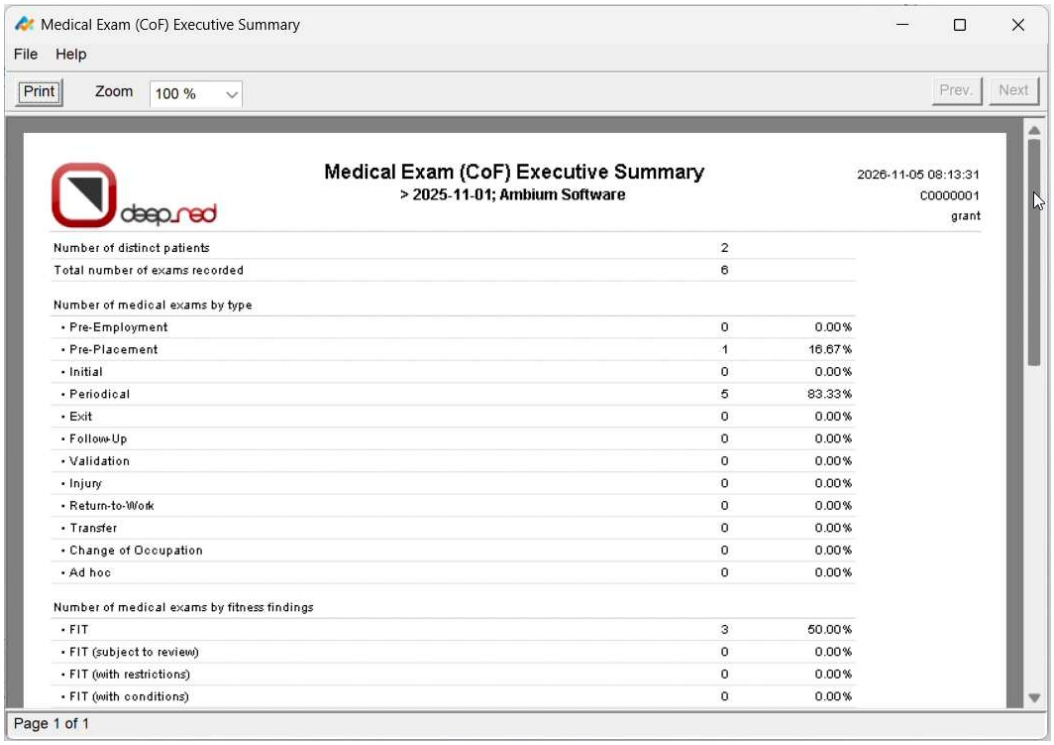


Figure 91 Medical Exam (CoF) Executive Summary displayed in the report viewer

Reporting support - Contact support@ambium.net if you need help choosing or generating a report.

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10 Signing documents

The same signing process applies to documents that support electronic signatures across Ambium. This example uses a patient consent form. The setup uses Adobe Acrobat Reader (32-bit only) with a signature plugin that is supplied by Ambium Software, but is not part of Ambium Software. Please do not upgrade your version of Adobe to the paid version as this is not compatible with the signature plugin.

10.1 Signing a document

Open the document - Select the relevant record and open its three-line menu. Choose the signing option for the document. For a medical consent form, choose “Sign patient consent form...”. The PDF opens in Adobe Acrobat Reader.

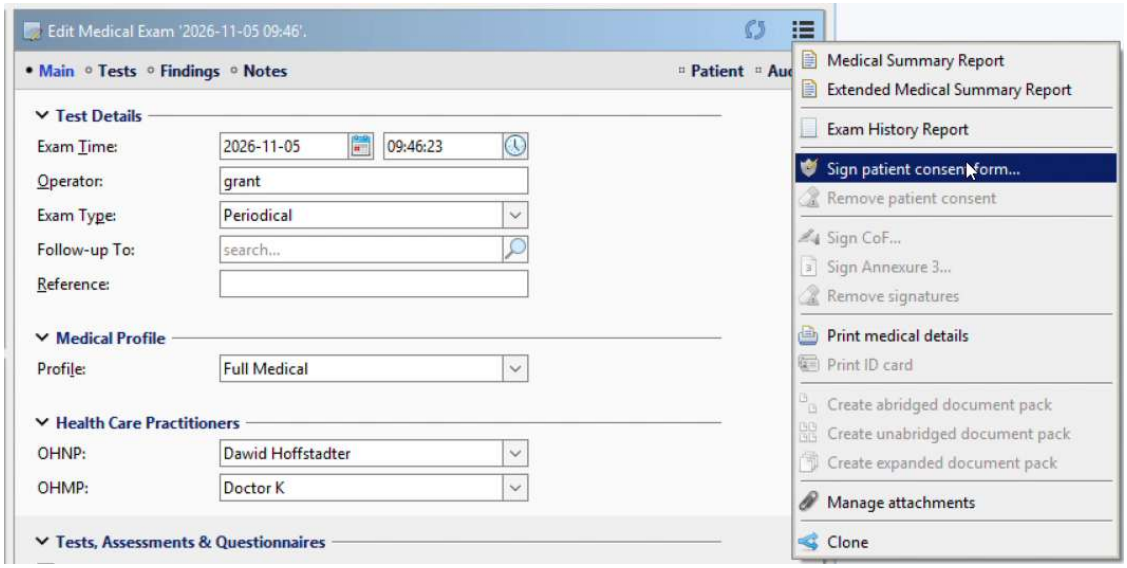


Figure 92 Open three-line menu with Sign patient consent form selected

Open the signature field - Review the document and scroll to the signature field. Single-click inside the field to open the “Impression” signature window. If a device connection message appears, follow section 11.12.1 in Troubleshooting. If Adobe Acrobat Reader asks to download the signature plugin, follow section 11.12.2.



Figure 93 Unsigned signature field to single-click in the PDF

Capture the signature - Have the appropriate signatory sign on the signature tablet. For a patient consent form, the patient signs. If the signature needs to be repeated, click “Clear” and have the person sign again.

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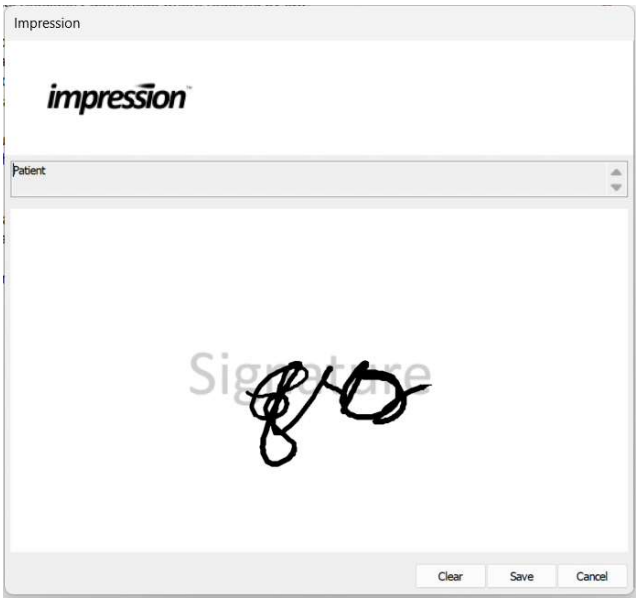


Figure 94 Impression signature window with the captured signature and Clear Save and Cancel buttons

Save and check - Click “Save” in the signature window. The signature is embedded in the document with its date and time. Check that it appears in the correct field, then close the PDF to complete the process.

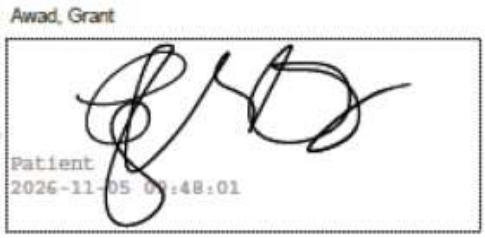


Figure 95 Patient signature embedded in the consent form with its date and time

10.2 Viewing a signed document

Return to the record’s three-line menu and choose the option to open the signed document. For patient consent, choose “Open signed patient consent form”. The saved PDF opens with the signature included. Close the PDF when you have finished reviewing it.

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11 Troubleshooting

11.1 Login failed

The message “Login Failed. Please try again.” means that the sign-in attempt was unsuccessful.

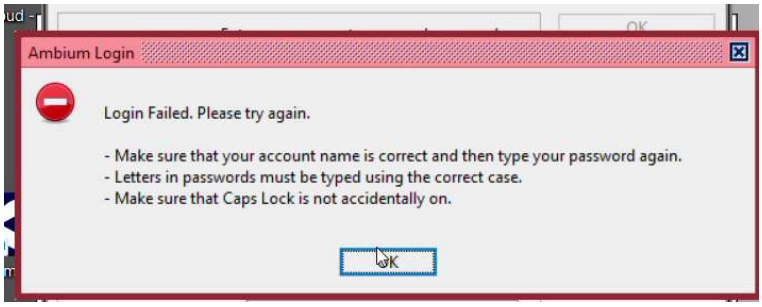


Figure 96 Login failure message

Click OK and try again, making sure that your account name and password are correct. If you cannot confirm your login details, contact your account administrator to confirm your account name and reset your password.

11.2 Database connection and sync errors

11.2.1 Offline database unavailable

This warning appears when Ambium is configured to use an offline database but cannot access it.

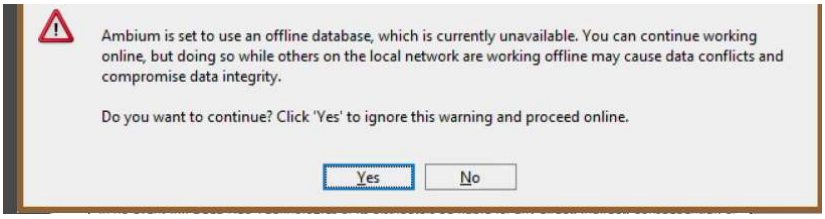


Figure 97 Offline database warning with Yes and No buttons

The message offers the option to continue online. It warns that continuing online while other users on the local network are working offline may cause data conflicts and compromise data integrity.

Check the server computer - Confirm whether Ambium launches there. If there are login errors on the server, contact support@ambium.net. If there are no errors on the server, contact your own IT department or IT consultant to confirm the network status.

Check how colleagues are working - Before continuing online, establish whether other users on your local network are working offline. If you are unsure, obtain guidance before continuing.

Choose an action - Click No to cancel the login. Click Yes to ignore the warning and proceed online only once you have established that it is appropriate to do so.

Do not treat continuing online as a routine response to this warning. Resolve the connection problem with the appropriate support contact.

11.2.2 Sync error when the server cannot be reached

A Sync Error message may appear at the bottom right of the screen after you have logged in.

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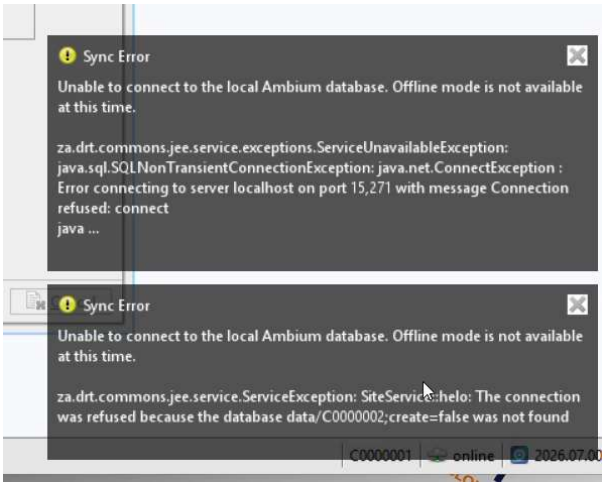


Figure 98 Sync Error messages at the bottom right of the Ambium window

This error confirms that this computer is not connected to the server. Work done on this computer will not sync to the server, which may cause data conflicts later.

Follow the server and network checks in section 11.2.1 Offline database unavailable to resolve the connection problem.

11.2.3 Offline sync engine data error

This "Sync Error" warning states that the offline sync engine is reporting errors and that Ambium will be disabled if the issue is not resolved.



Figure 99 Offline sync engine warning about data integrity and Ambium being disabled

Continue working - You can continue using Ambium when this warning appears.

Report urgently - Report the error to support@ambium.net as soon as possible. The Ambium technical team needs to log in remotely to the clinic's server PC to resolve the data error.

Report within one week - If the error is not reported within one week, the offline database will lock down.

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If the lockout message below appears, the date in brackets at the end of the error is the date the initial error occurred. Contact support@ambium.net for assistance.

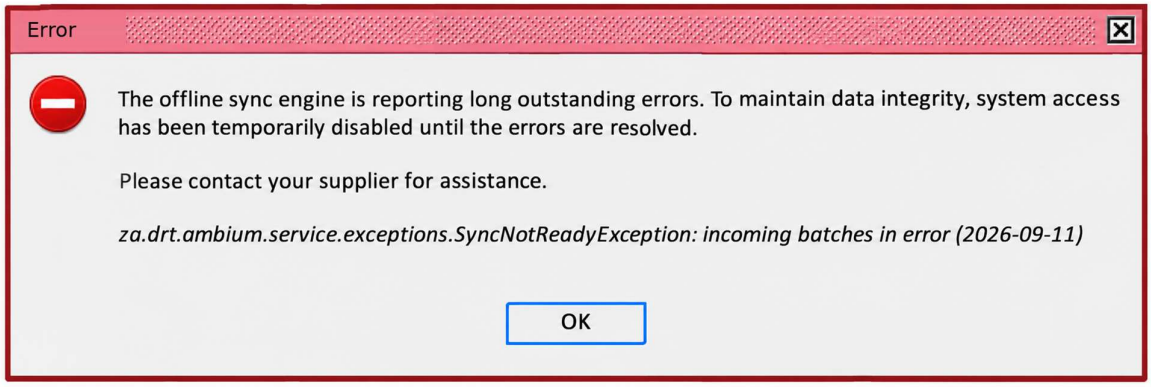


Figure 100 Offline sync lockout message showing the initial error date

NOTE: Ambium provides advance warning before the offline database locks down. Ambium Support will assist in line with our standard Service Level Agreement (SLA).

11.2.4 Unable to connect when hybrid mode is off

If hybrid mode is off and Ambium cannot connect to the required database, an Error window may appear stating “Ambium is currently not available”. The message indicates a network, database or other connection problem.

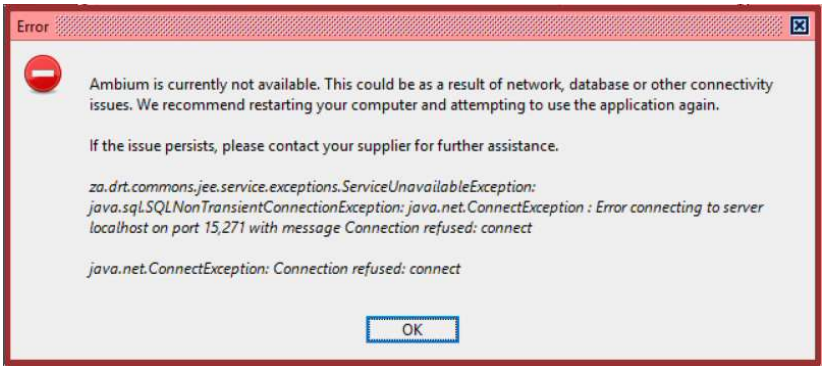


Figure 101 Unable to connect error message

Click OK - Dismiss the error message.

Restart your computer - Open Ambium and try to log in again.

Check the server computer if the error continues - Confirm whether Ambium launches there. If there are login errors on the server, contact support@ambium.net. If there are no errors on the server, contact your own IT department or IT consultant to confirm the network status.

11.3 Licence expiry notice

A notice may appear at the bottom right of the screen stating that the licence is due to expire at the end of the month.

Notify Ambium support - The clinic administrator should notify support@ambium.net.

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11.4 Branding logo size

If you have difficulty inserting a branding logo at the correct size, contact support@ambium.net.

11.5 Audiometer connection settings

11.5.1 Audiometer port not connected

If no connected port is shown when you start an audio test, return to the audiometer record and click “Edit”. Check “Port”, select a different available port, and click “Apply”. Try the test again.

11.5.2 Audiometer host and port conflict

The message “Active Audiometer for the host and port specified already exists.” means that another active audiometer record is already assigned to the same computer and port.

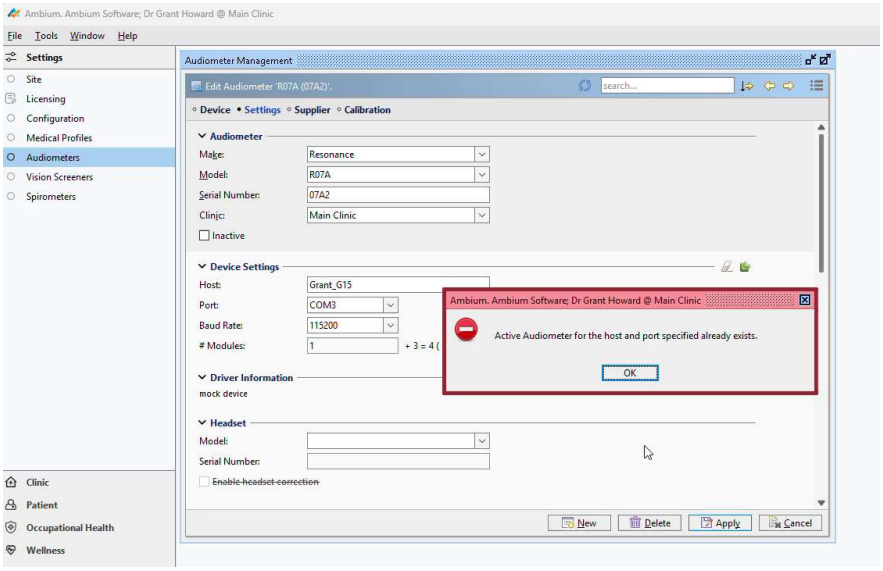


Figure 102 Existing audiometer host and port assignment conflict

Identify the existing assignment - Click “OK”. Find the audiometer record already assigned to that “Host” and “Port”. Check its serial number to distinguish it from the audiometer you are setting up.

Clear the old assignment - Select the existing record and click “Edit”. Click the eraser icon beside “Device Settings” to clear its host assignment, then click “Apply”.

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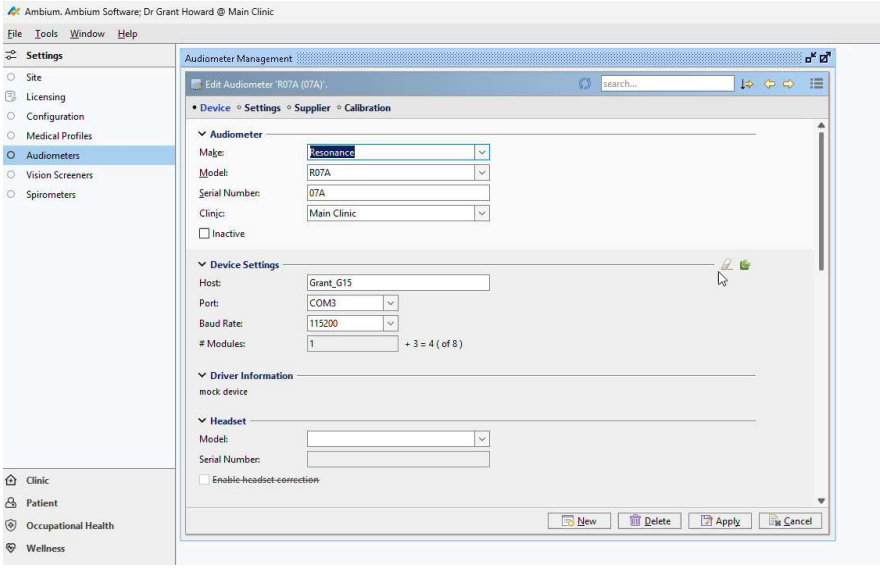


Figure 103 Existing audiometer record with the eraser icon beside Device Settings

Assign the required audiometer - Return to the audiometer you want to use and click "Edit". Click the green "Reset device settings" icon to assign the current computer as its "Host", select the required "Port", and click "Apply".

11.6 Merging duplicate records

Duplicate records can occur when the same item is entered twice or captured with different spellings. Use "Find and merge duplicates" to combine these entries into the correct record. You can merge Patients, Employers, Companies, Positions, Exposures, Work Types and Protective Equipment. The example below merges duplicate positions into "Cleaner".

Merging is permanent - Merged records cannot be unmerged. The operation cannot be undone. This is why merging requires "Modify" privileged access. Before continuing, you must be absolutely certain that the selected records are duplicates and that you have chosen the correct record to retain.

Choose a suitable time - Carry out the merge when the system is not busy. It may update many records and take several minutes.

11.6.1 Find and select duplicate records

Select the record to retain - Open the correctly named record first. In the example, this is "Cleaner". The duplicates you select will be merged into this record. If you start from the wrong record, that is the record the merge will retain.

Open the merge function - Click the three-line menu at the top right of the record window, then select "Find and merge duplicates".

Search for matches - The matching slider controls how closely the names must match. Start with the default of 80%, then click the search arrow to the right of the percentage. Lower the percentage to find more loosely matching names, or raise it for closer matches. Click the search arrow again after adjusting the slider.

Select the duplicates - Review the results and tick only the records that represent the same item as the record you are retaining. Similar names may be legitimate separate records: for example, "Pool Cleaner" should not be merged into "Cleaner" merely because it appears in the results.

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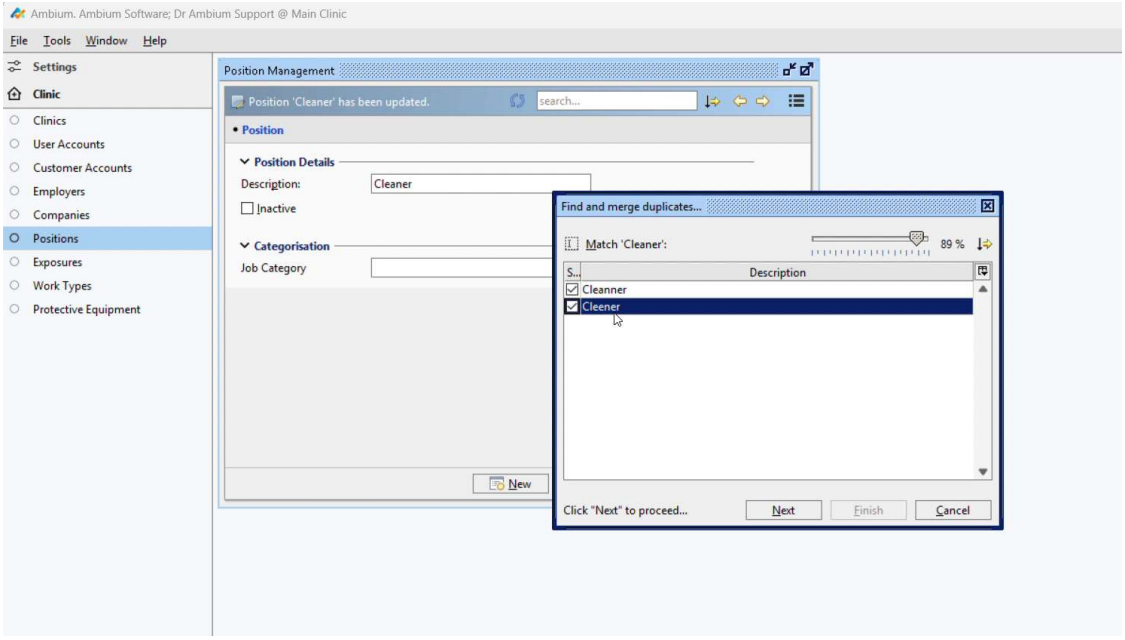


Figure 104 Duplicate position spellings selected for merging into Cleaner

11.6.2 Confirm and complete the merge

Review the confirmation - Click “Next”. Check the name after “The following items will be merged into” and each record listed under “from”. Confirm that the destination is the correct record and that every selected record is a duplicate. Use “Back” to correct the selection, or “Cancel” to stop.

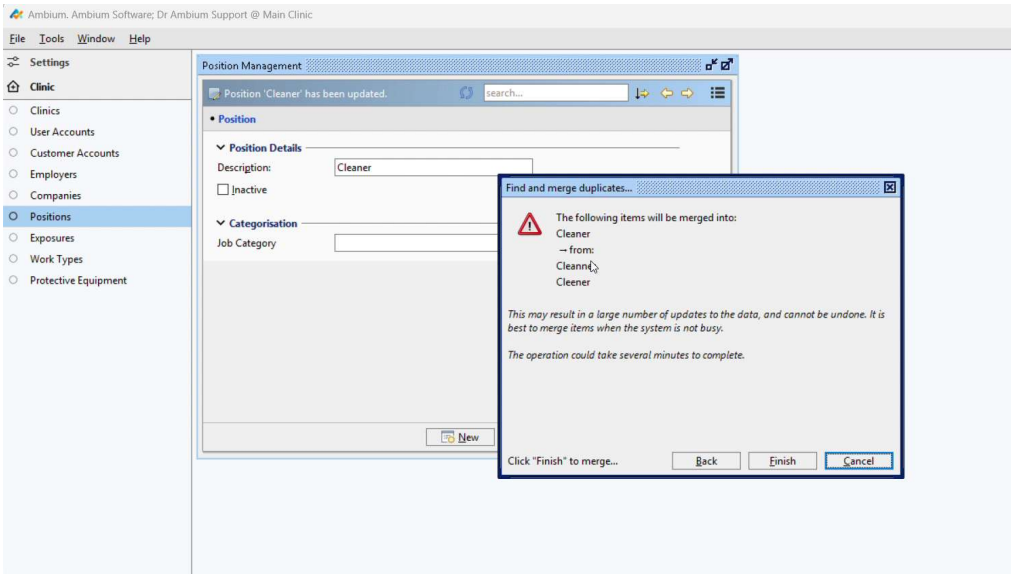


Figure 105 Merge confirmation showing the destination source records and warning

Merge the records - Click “Finish” only when you are absolutely certain that the destination and every selected duplicate are correct. **Once completed, the merged records cannot be unmerged.** Wait for the operation to complete, then click “Close”.

Check the result - Open the selection list again and confirm that the correct record remains and the duplicate entries are no longer listed. In the example, “Cleaner” remains and the two incorrect spellings have been removed.

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11.7 Invalid patient identification or telephone number

Invalid ID number - If an “ID Number” is invalid, the red cross beside the field remains. Clicking “Apply” displays a message identifying the invalid value. Check the number against the patient’s identification document, correct it and click “Apply” again.

Invalid telephone number - Ambium also checks telephone numbers. A value such as “123456” is flagged as invalid. Check and correct the number before saving.

11.8 Correcting audiometry records and baselines

These functions are available from the three-line menu in “Audiometry”, then “Test Results”. They affect existing test records or calculations and require the appropriate access permissions. Confirm the selected patient and test before making changes.

Test recorded against the wrong patient - If a screening was recorded against the wrong patient, select the test and use “Move to another Patient”. Check the intended patient carefully before completing the move.

Recalculate results and detect baselines - Use “Recalculate all results” and “Detect baselines” where results or baseline allocations need to be recalculated, for example after correcting a test recorded against the wrong patient.

Remove a baseline before deleting a test - If an incorrect test is assigned as a baseline, that assignment must be removed before the test can be deleted. Select the test, use “Remove baseline”, then delete the incorrect test if required.

11.9 Screening device errors

11.9.1 Audiometer hardware or device driver error

A message under “Help & Information” may state that a hardware or device driver error has occurred. The “Audiometer” panel shows “Device: error”, and an error notification may also appear at the bottom right of the screen.

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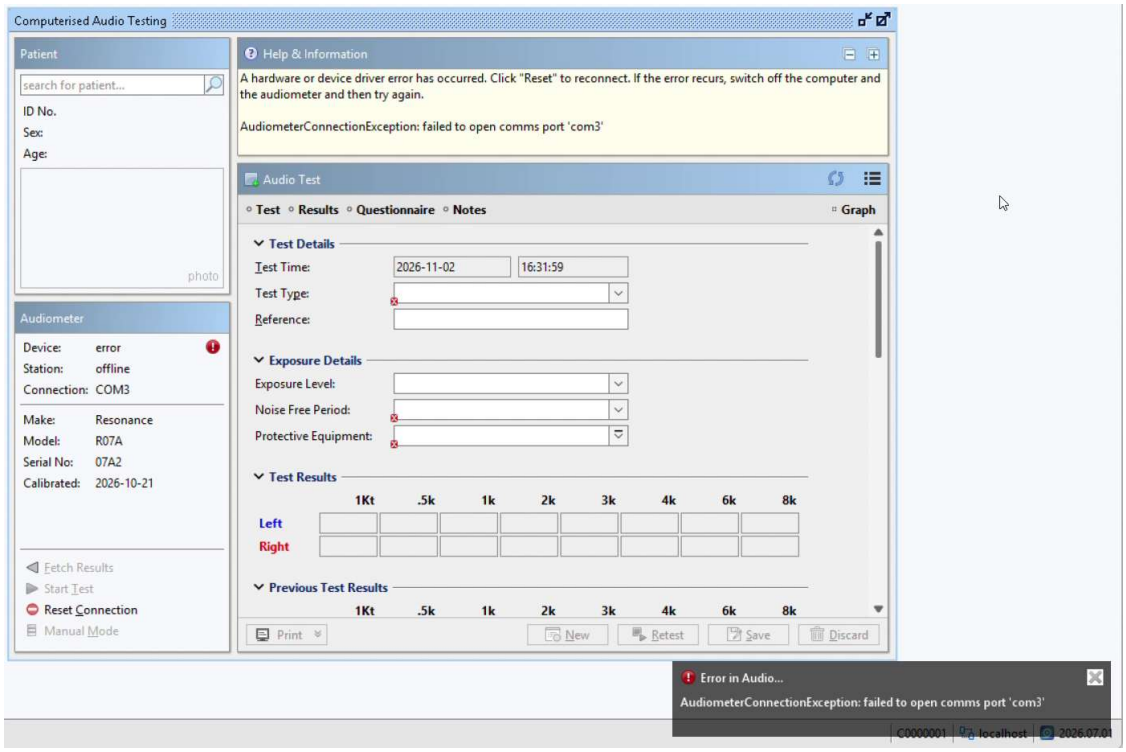


Figure 106 Hardware or device driver error in the audiometry screening screen

Check power and cable - First check that the audiometer is switched on and correctly connected to the computer using the correct cable. Check that the connections are secure. If you have a spare compatible cable, try it.

Reset the connection - Click “Reset Connection” in the “Audiometer” panel. If the device still shows an error, check its host and port settings.

Check the host and port - Select “Settings”, then “Audiometers”. Select the correct device and click “Edit”. On the computer connected to the audiometer, click the green “Reset device settings” icon to assign that computer as the “Host”. Check that a “Port” is selected. If the selected port does not work and another is available, try the other port; the port assignment may have changed after devices were unplugged and reconnected. Click “Apply”, then return to “Audiometry”, “Screening”, and try again.

Restart the equipment - If the error continues, follow this sequence:

Disconnect and switch off - Disconnect the audiometer from the computer, then switch off the audiometer.

Restart the computer - Wait for Windows to restart.

Reconnect and switch on - Reconnect the audiometer to the computer, then switch on the audiometer.

Try again - Log in to Ambium and return to the screening screen.

Further assistance - If these checks do not resolve the error, contact support@ambium.net.

Equipment supplier - In around 9 out of 10 cases, this error is caused by an issue with the audiometer or its cable and is likely to require attention from your equipment supplier.

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11.9.2 Vision screener hardware or device driver error

A message under “Help & Information” may state that a hardware or device driver error has occurred. The “Vision Screener” panel shows “Status: error”, and an error notification such as “device not found” may also appear at the bottom right of the screen.

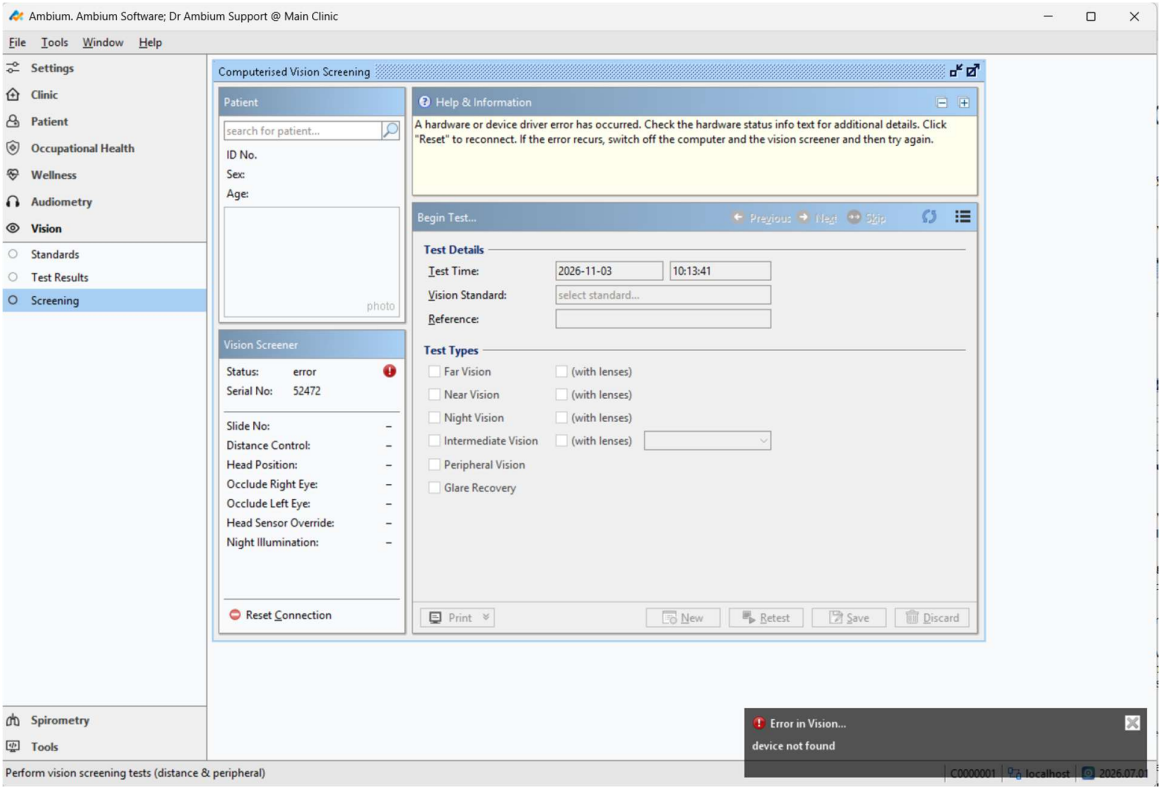


Figure 107 Hardware or device driver error in the vision screening screen

Check the viewing position and power - Place your head in position to view the screening slides. If the slides do not light up or you cannot hear the slide drum turning, the device is either not connected to a power source, switched off at its power switch, or damaged.

Check power and cable - Check that the vision screener is switched on and correctly connected to the computer using the correct cable. Check that the connections are secure. If you have a spare compatible cable, try it.

Reset the connection - Click “Reset Connection” in the “Vision Screener” panel. If the device still shows an error, check its host and port settings.

Check the host and port - Select “Settings”, then “Vision Screeners”. Select the correct device and click “Edit”. On the computer connected to the vision screener, click the green “Reset device settings” icon to assign that computer as the “Host”. For all Keystone models connected using a printer-style USB cable, select “USB” under “Port”; a COM port is not required. For other manufacturers, check the port settings appropriate to their connection, as described under System Settings. Click “Apply”, then return to “Vision”, “Screening”, and try again.

Restart the equipment - If the error continues, follow this sequence:

Disconnect and switch off - Disconnect the vision screener from the computer, then switch off the vision screener.

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Restart the computer - Wait for Windows to restart.

Reconnect and switch on - Reconnect the vision screener to the computer, then switch on the vision screener.

Try again - Log in to Ambium and return to the screening screen.

Further assistance - If these checks do not resolve the error, contact support@ambium.net.

Equipment supplier - In around 9 out of 10 cases, this error is caused by an issue with the vision screener or its cable and is likely to require attention from your equipment supplier.

11.9.3 Spirometer calibration overdue

When “Run Test” is selected, Ambium may warn that calibration for the spirometer is overdue and that tests performed using the device may be invalid.

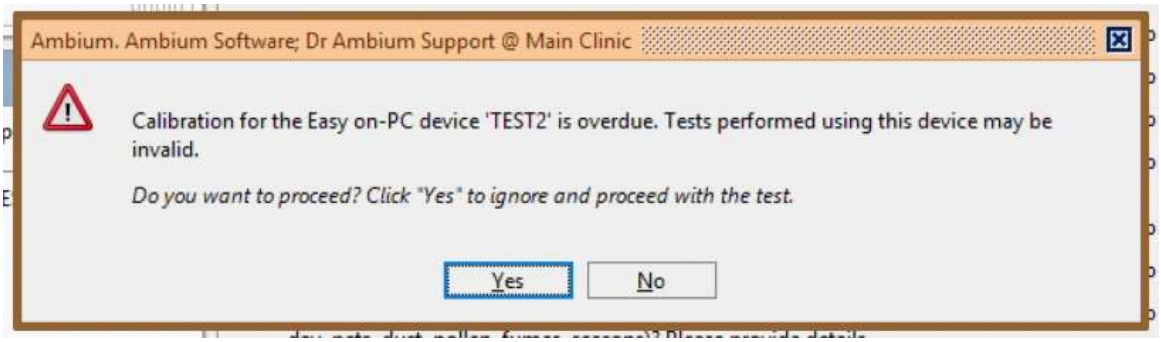


Figure 108 Overdue spirometer calibration warning

Stop and calibrate - Click “No”. Return to “Calibration Check” and complete and save the calibration check described in section 7.1 before returning to patient screening.

Do not routinely override the warning - Clicking “Yes” ignores the warning and allows the test to proceed. Complete the calibration check before testing patients.

11.10 Employment details in a medical do not match

Use this procedure when the employment details shown under “Patient” in a medical do not match the patient’s employment record.

Check the employment record - Review the patient’s employment record under Patient Management and confirm that the employment information is correct.

Reload the details - Return to “Medical Exams (CoF)”, select the affected medical, open “Patient” and click “Edit”. Click the “Reload employment details” icon beside “Employer Details” to update the medical from the patient’s most current employment record.

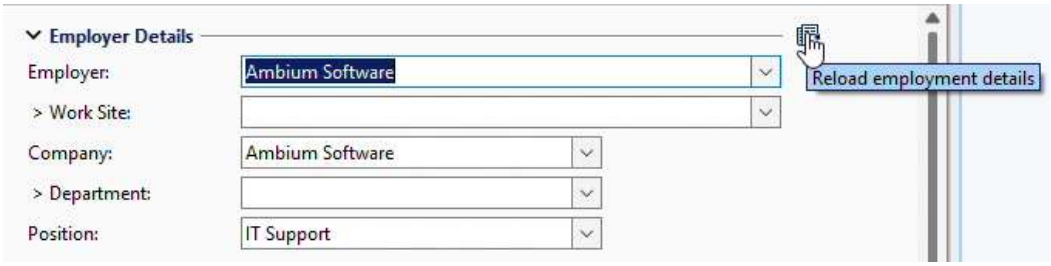


Figure 109 Reload employment details icon and tooltip in the medical Patient screen

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Review and save - Check the updated employment details and the working conditions, then click “Apply” to save.

11.11 Correcting a signed medical

A signed medical is locked and “Edit” is greyed out. If it was signed in error or information needs correcting, remove the signatures before editing.

Remove the signatures - Open the medical’s menu and select “Remove signatures”. This requires the appropriate “Unsign” permission, covered under Clinic user accounts.

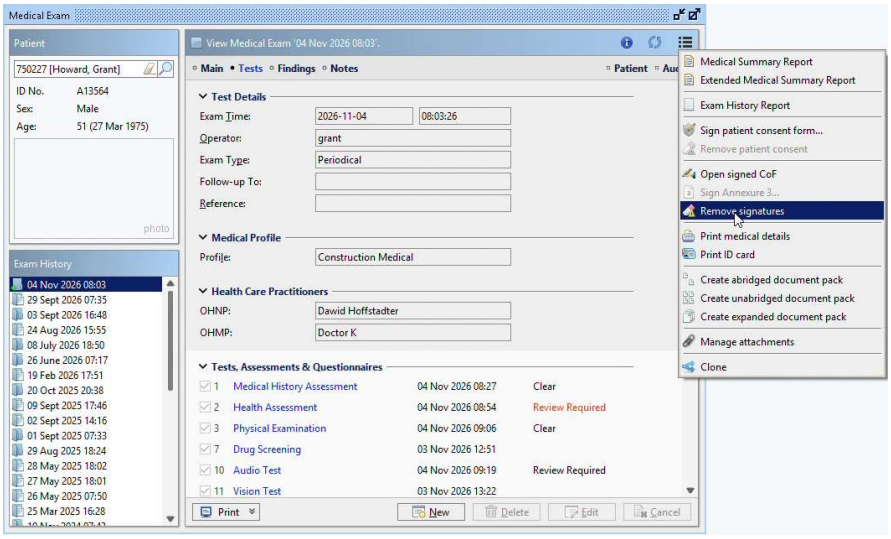


Figure 110 Remove signatures option on a signed medical with editing disabled

Correct and re-sign - Click “Edit”, make the required corrections and click “Apply”. Review the corrected medical and sign the Certificate of Fitness again as described in section 8.8.

Signature timestamp - When the certificate is signed again, its signature date and time are replaced by the new signature timestamp. The previous signature timestamp is not retained on the re-signed Certificate of Fitness.

11.12 Signature errors

11.12.1 Signature pad not connected

When you click a signature field, an “Attempting to connect” message may state: “Your Wacom device is not connected. Please, connect your device now and press 'OK' to continue.” The signature plugin cannot detect the signature pad.



Figure 111 Signature pad connection message displayed when clicking a signature field

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Check the connection - Make sure the signature pad is plugged into the computer and the cable is securely connected. If it is already connected, try another USB port. Once connected, click “OK” in the message to try again.

Test on another computer - If the error continues, plug the signature pad into another computer that you **ordinarily use for signing documents**. Try signing a document on that computer. If it works, the computer that displayed the error could have faulty USB ports. If signing does not work on the second computer, the signature pad or cable may be faulty. Contact your IT department or IT consultant to investigate the hardware.

11.12.2 Signature plugin not installed

When you click a signature field, Adobe Acrobat Reader may display a message that the “Prosense.Impression” plugin must be used and ask whether you want to download it. This indicates that the required signature plugin is not installed on the computer.

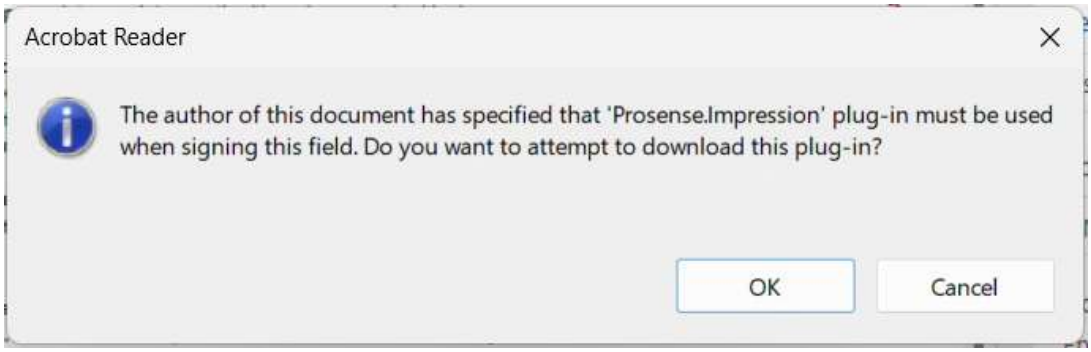


Figure 112 Adobe Acrobat Reader message asking to download the required signature plugin

Cancel and contact support - Click “Cancel”, then contact support@ambium.net for assistance with installing the signature software.

11.12.3 Signature plugin expired

If Adobe Reader reports that the Prosense Impression plugin has expired, the signature driver needs to be reinstalled.

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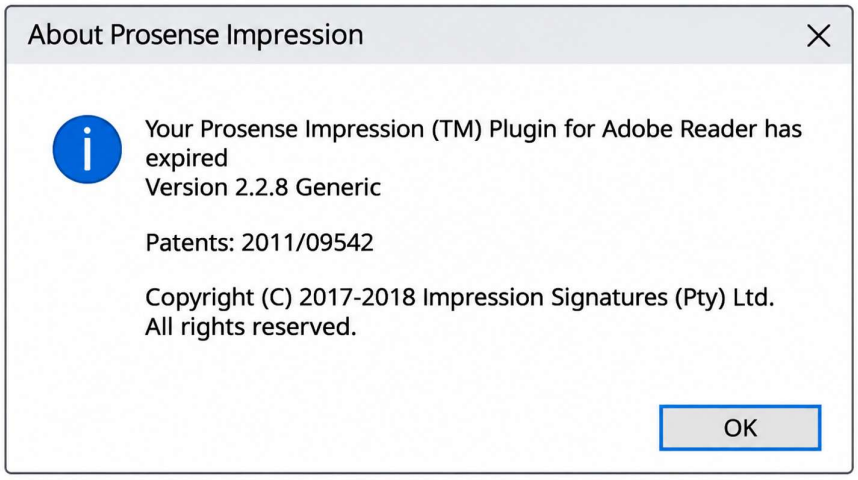


Figure 113 Prosense Impression plugin expiry message

Contact support - Email support@ambium.net for assistance with reinstalling the signature driver.

11.13 General error message

Ambium may display “An error has occurred” during different operations.

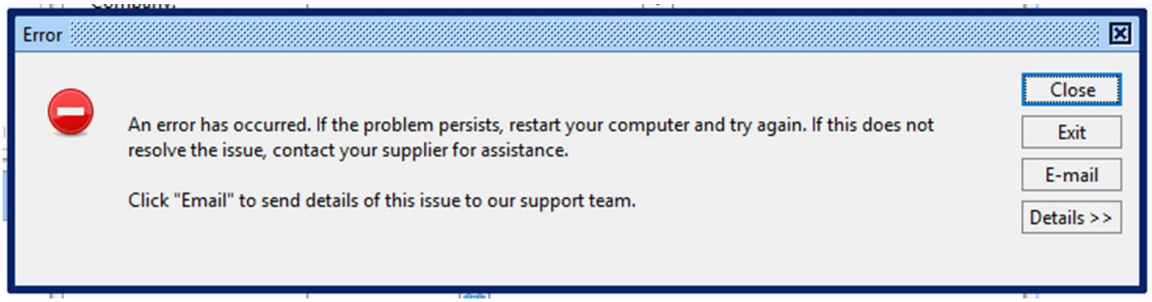


Figure 114 General error message with Close and E-mail buttons

Close and retry - Click “Close”, then repeat the operation you were performing.

Email the error to support - If the error appears again, click “E-mail”. Ambium opens a draft in your default email application with the error details included. Send the draft to Ambium Support.

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Copy the error details - If you do not use the default email application, click “Details >>” and then “Copy” to copy the error details to the clipboard. Paste the details into an email and send it to support@ambium.net.

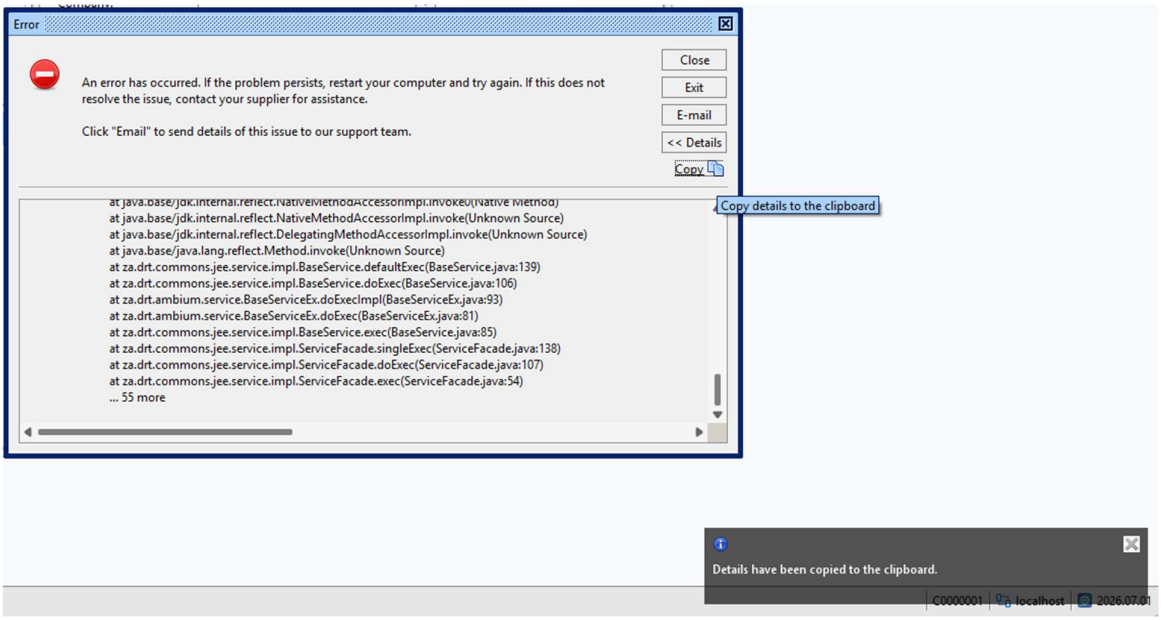


Figure 115 Copying error details to the clipboard

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