

Step-by-Step Guide to Setting Up and Using Auto-Review Pathology in SystmOne

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Introduction

This guide explains how to set up and use the SystmOne Auto-Review Pathology Rules Engine. The feature allows practices to automate the processing of routine pathology and radiology results. By applying clearly defined rules, normal or expected results can be safely filed automatically from the path inbox, leaving clinicians free to focus on results that truly need review. To access the TPP guide, visit <https://tpp-uk.com/wp-content/uploads/2024/10/SystmOne-Result-Auto-filing.pdf>.

Benefits for practices

- Improved efficiency – reduces time spent manually reviewing normal results.
- Consistency – ensures the same rule is applied to all patients, reducing variation.
- Safety – rules can be combined with clinical reports (e.g. known diagnoses, age, or sex) to ensure context is taken into account.
- Scalability – rules can be shared across teams, practices, or PCNs to standardise workflows.

Important disclosure

I am sharing this guide and providing template rules to help practices get started. However, I take no clinical or legal responsibility for how these rules are used. Each practice must review, amend, and validate rules locally to ensure they are safe, clinically appropriate, and compliant with governance requirements. There is an excel file provided (Auto-review log) which has notes on all the rule sets, and some recommendations on how you can amend the rule set, and rule sets you should not use without configuring the rule beforehand. Without much configuration, your practice will be able to reduce the pathology filing by 30% on average. With further set up, you could auto-file 50-60% of pathology.

Staying updated

The LMC will circulate any changes to the templates. Please ensure they have the correct email addresses to share this information with.

If you would like advice or further support, please feel free to contact the LMC who can pass on your queries to myself:

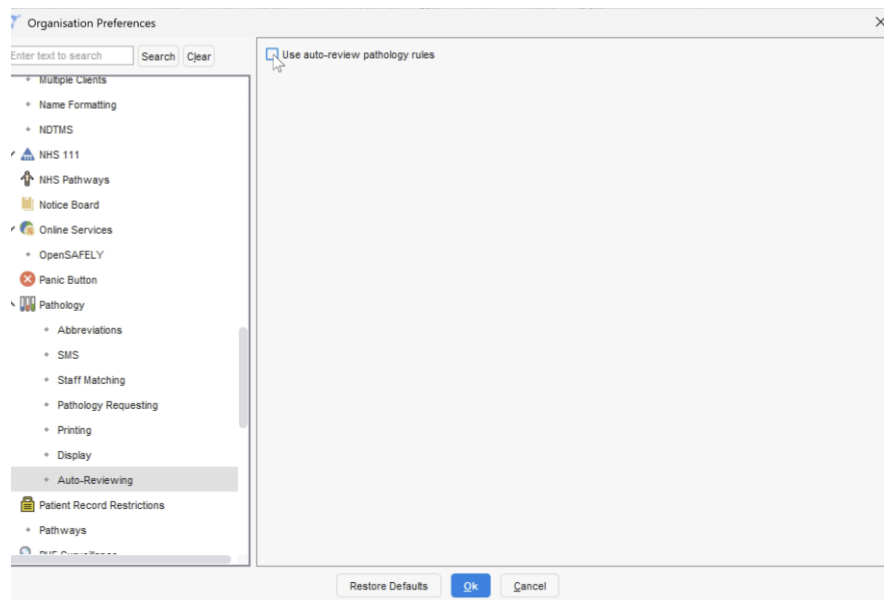
enquiries@llrlmc.co.uk

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1. Enabling Auto-Review

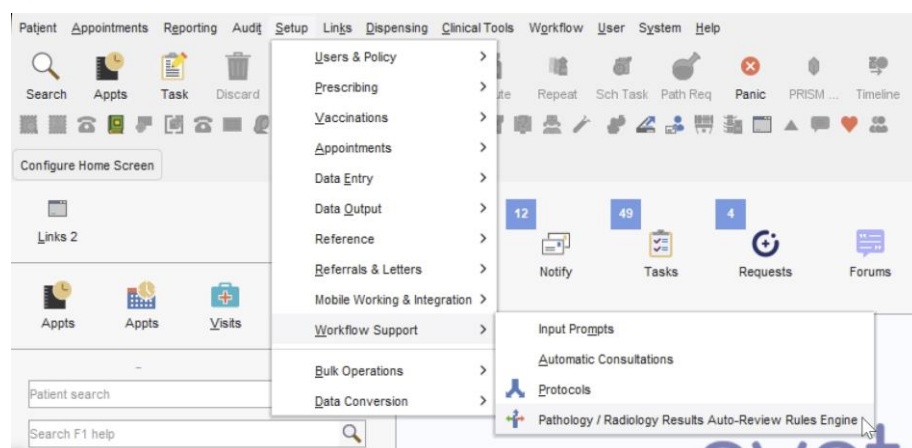
1. Log in as a System Administrator.
2. Go to: Setup → Users & Policy → Organisation Preferences → Pathology → Auto-Reviewing
3. Tick the box: Use auto-review pathology rules.



4. Decide which staff can create, amend, or delete rules by selecting the staff member from the left column and using the right arrow to move them to the right column. I would recommend only having select members directly involved in implementation and configuration of the auto-review pathology.

This unlocks the Auto-Review Rules Engine under:

Setup → Workflow Support → Pathology/Radiology Auto-Review Rules Engine.



You will then be able to access the Auto-Review Rules dashboard.

2. Creating Rule Sets

- A rule set applies to one investigation header (e.g. “Full Blood Count”).
- You can only have one rule set per investigation header, but it can contain multiple rules.
- Use the Active tickbox to switch a rule set on or off.

New Rule Set	Amend Rule Set	Delete Rule Set	Publish Rule Set	Import Rule Set	Export Rule Set
Rule Sets					
Investigation	Availability ▾	Active			
Blood test ABO - ABO blood grouping (XE24w)	Arden's Ltd	☐			
Blood test ANA - ANA SCREEN	Arden's Ltd	☐			
Blood test Blood group - Blood group antibody screening test (XaEXR)	Arden's Ltd	☐			
Blood test Calcium - Calcium profile (X77WF)	Arden's Ltd	☐			
Blood test Coag - Clotting screening test (XaEXO)	Arden's Ltd	☐			
Blood test Coeliac - Anti-tissue transglutaminase level (XaINX)	Arden's Ltd	☐			
Blood test CRP - Serum C reactive protein level (XaINL)	Arden's Ltd	☐			
Blood test ESR - Erythrocyte sedimentation rate (XE2m7)	Arden's Ltd	☐			
Blood test FBC - Full blood count (424..)	Arden's Ltd	☐			
Blood test Folate - Serum folate level (42U5.)	Arden's Ltd	☐			
Blood test HbA1c (Free Text) - HBA1C	Arden's Ltd	☐			
Blood test HbA1c (XabrE) - Haemoglobin A1c (diagnostic reference range) (XabrE)	Arden's Ltd	☐			
Blood test HbA1c (XabrF) - Haemoglobin A1c (monitoring ranges) (XabrF)	Arden's Ltd	☐			
Blood test HbA1c (XaPbt) - Haemoglobin A1c level - IFCC standardised (XaPbt)	Arden's Ltd	☐			
Blood test INR - International normalised ratio (42QE.)	Arden's Ltd	☐			
Blood test LFTs (Free Text) - Liver profile	Arden's Ltd	☐			
Blood test LFTs (X77WP) - Liver function tests (X77WP)	Arden's Ltd	☐			
Blood test NT-proBNP - Serum N-termina	Arden's Ltd	☐			
79 Rule sets					

Rules	
...	Title

From this screen, you can create new rules, amend existing rules, import or export rules. Only rules which have been ticked as active will be used. When previewing rules (shown later on), all inactive and active rules can be checked.

3. Adding Rules

- Within a rule set, create rules that decide whether a test needs review.
- Each rule outcome is either:
 - Review Required
 - Review Not Applicable

Example:

- If an FBC comes back entirely normal, the system can automatically mark it as Review Not Applicable and remove it from the path inbox.
- If a test is abnormal, it will stay in the inbox for manual review.

Amend Rule Set

Title: MSU

Only applies to batteries under investigation headers matching: ☐ Code ☒ Free text: UAS Urine Microscopy

Title	Description
1 Normal	Set - review status to Review Not Applicable when: - Result from report is Unknown/Normal/Abnormal and All the following apply and no other codes or free text exist: - Investigation UAS Urine Microscopy has comment containing 'Culture not performed' - Investigation UAS Urine Microscopy has textual result 'RESULT'
2 Abnormal	Set - review status to Review Not Applicable when: - Result from report is Unknown/Normal/Abnormal and All the following apply and no other codes or free text exist: - Investigation UAS Urine Microscopy has comment containing 'Urine culture performed' - Investigation UAS Urine Microscopy has textual result containing 'RESULT'

2 Rules

Ok Cancel

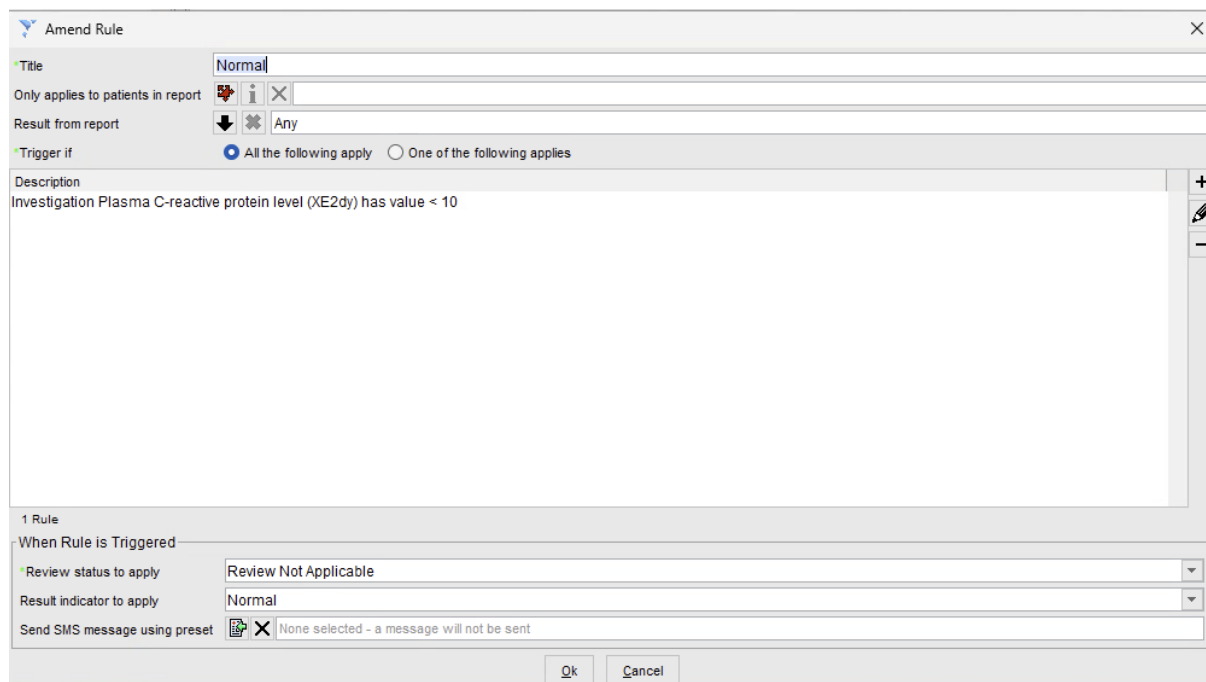
4. Setting Parameters

Each rule can be customised with parameters (the conditions). Common types include:

- Numeric range – e.g. WCC between 4–11.
- Lab range – e.g. lower band/upper band limits
- Code exists – check if a specific code is present.
- Textual result equals/contains – match lab text exactly or partially.
- Ignore rules – tell the system to ignore certain results or comments.

You can decide whether:

- All parameters must be met, or
- Any one parameter is enough.



The 'Amend Rule' dialog box is used to configure a rule. It includes fields for Title, patient applicability, result source, trigger logic, description, review status, result indicator, and an SMS message preset. The 'Trigger if' section has two radio buttons: 'All the following apply' (selected) and 'One of the following applies'. The 'Description' field contains the text 'Investigation Plasma C-reactive protein level (XE2dy) has value < 10'. The 'When Rule is Triggered' section has dropdowns for 'Review status to apply' (set to 'Review Not Applicable') and 'Result indicator to apply' (set to 'Normal'). The 'Send SMS message using preset' field is currently empty, showing 'None selected - a message will not be sent'. 'Ok' and 'Cancel' buttons are at the bottom.

Amend Rule

Title: Normal

Only applies to patients in report: [icon] [icon] [icon]

Result from report: [icon] [icon] Any

Trigger if: ☒ All the following apply ☐ One of the following applies

Description: Investigation Plasma C-reactive protein level (XE2dy) has value < 10

1 Rule

When Rule is Triggered

Review status to apply: Review Not Applicable

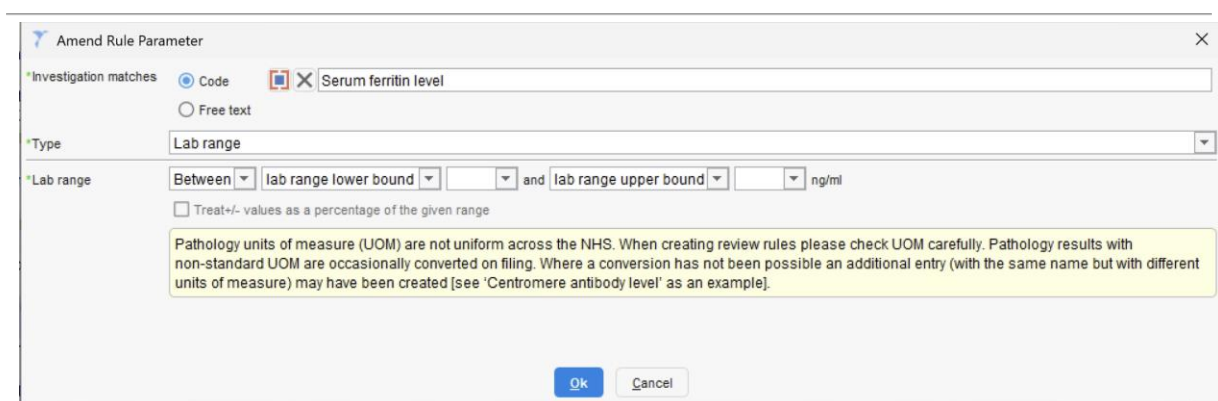
Result indicator to apply: Normal

Send SMS message using preset: [icon] [icon] None selected - a message will not be sent

Ok Cancel

The bottom option allows preset SMS to be sent to the patient for the desired rule-set.

Select the parameter and click the pencil icon to amend it. From this screen, you can amend existing ranges and tweak the values to suit your practice workflow.



The 'Amend Rule Parameter' dialog box is used to edit a specific parameter. It includes options for 'Investigation matches' (Code or Free text), 'Type' (Lab range), and 'Lab range' (Between, lower bound, upper bound, and unit). A checkbox 'Treat +/- values as a percentage of the given range' is also present. A yellow warning box at the bottom states: 'Pathology units of measure (UOM) are not uniform across the NHS. When creating review rules please check UOM carefully. Pathology results with non-standard UOM are occasionally converted on filing. Where a conversion has not been possible an additional entry (with the same name but with different units of measure) may have been created [see 'Centromere antibody level' as an example]'. 'Ok' and 'Cancel' buttons are at the bottom.

Amend Rule Parameter

Investigation matches: ☒ Code ☐ Free text Serum ferritin level

Type: Lab range

Lab range: Between [dropdown] lab range lower bound [dropdown] and lab range upper bound [dropdown] ng/ml

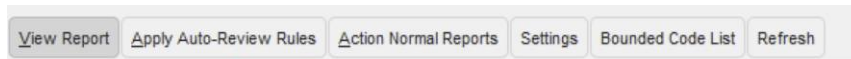
☐ Treat +/- values as a percentage of the given range

Pathology units of measure (UOM) are not uniform across the NHS. When creating review rules please check UOM carefully. Pathology results with non-standard UOM are occasionally converted on filing. Where a conversion has not been possible an additional entry (with the same name but with different units of measure) may have been created [see 'Centromere antibody level' as an example].

Ok Cancel

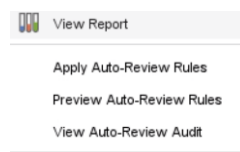
5. Running the Rules Engine

- Go to your path inbox.
- Click Apply Auto-Review Rules.

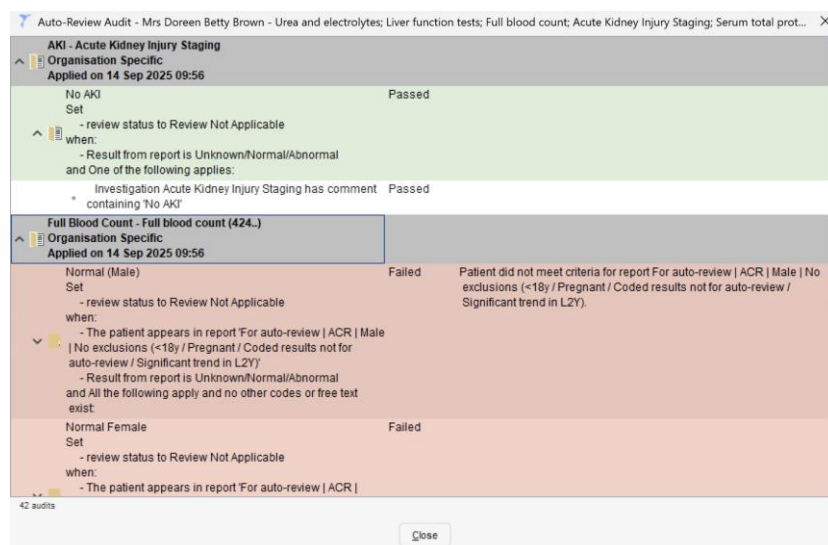


- Reports that have been through the engine will show the flag Auto-review Rules Applied.

If you want to test out your rule, right click on any pathology report and click preview auto-review. You can right-click any report and select View Auto-Review Audit to see which rule was applied.



You will then see either green or red boxes indicating pass or fail of the rule. Click the down arrows to expand the boxes to see where the rule passed or failed.



6. Using Templates and Clinical Reports for Safer Use

To make this easier, I will provide template rule sets for common batteries (e.g. U&Es, LFTs, HbA1c). Practices can:

- Import and adapt them rather than starting from scratch. (Note you can only import one rule at a time)
- Link them to clinical reports so that rules consider patient context.
 - Example: HbA1c may be auto-reviewed differently if the patient has diabetes coded.
 - You can also exclude patients under a certain age, sex, or new registrations. (E.g. for FBC, male and female ranges are different, for PSA, the ranges differ on age and whether they are on certain medication)

This combination of templates + clinical reports provides safer, more tailored use across different patient groups.

7. Tips for Success

- Start simple (e.g. auto-file clearly normal results).
- Gradually expand as you gain confidence.
- Keep a record of all rules in case you need to audit.
- Regularly review and update rules as lab formats or clinical priorities change