

Use Case Scenarios

Medicines Reconciliation

Acute Care Admissions & Discharges

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# Document Approval

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# Medicines Related Communication & Reconciliation

Relevant information about medicines should be shared with patients, and their family members or carers, where appropriate, and between health and social care practitioners when a person moves from one care setting to another, to support high‑quality care. This includes transfers within an organisation or from one organisation to another.

Medicines Reconciliation, as defined by the Institute for Healthcare Improvement, is the process of identifying an accurate list of a person's current medicines and comparing them with the current list in use, recognising any discrepancies, and documenting any changes, thereby resulting in a complete list of medicines, accurately communicated. The term 'medicines' also includes over‑the‑counter or complementary medicines, and any discrepancies should be resolved. The medicines reconciliation process will vary depending on the care setting that the person has just moved from and / or into.

Within an acute care setting, as relevant to this use case, Medicines Reconciliation can be considered as a two stage process, comprising:

* Stage 1 Medicines Reconciliation, also known as Medicines Clerking or Basic Reconciliation, involves the collection and accurate identification of the medicines the patient was taking prior to admission or attendance. This stage is led by a suitably qualified clinician and completed at the earliest opportunity in the patient journey but no later than 24 hours after admission.
* Stage 2 Medicines Reconciliation, or Full Reconciliation, builds on Stage 1 by comparing this information to the list of medicines prescribed on the drug chart, identifying any discrepancies, resolving them and recording the outcome. This stage is led by a suitably qualified clinician, although this is typically a pharmacist. Stage 2 reconciliation is completed within 48 hours of admission or earlier if referred at stage 1, and at discharge.

Information for medicines reconciliation needs to be obtained from multiple sources in a timely manner, in addition to the patient / patient proxy being an immediate source, the patient’s Summary Care Record (SCR) can be readily obtained where facilities exist. An example SCR is included as Enclosure 1, to highlight the medication information that may be provided from a GP Clinical System utilising GP Connect.

The content, format and presentation of information transferred between any two clinical systems will conform to the following defined set of standards (included as Enclosures 2):

* Standards for structure and content of medications and medical device records: technical annex (April 2013)

## Medicines Reconciliation – Stage 1 Use Case (Current State)

| **Medicines Reconciliation Stage 1 (Medicines Clerking) – Current Situation** |
| --- |
| **Description** |
| Upon admission to or attendance at hospital, the attending clinician is responsible for consolidating a list of the patient’s medications. Information on medications listed within the GP System (SCR) is gathered, in paper format and then discussed with the patient / patient proxy for validation. Amendments, where required, are annotated on the paper copies. The Clinician then manually transcribes all appropriate medications into the hospital PAS / EPR system and the patient’s paper drug chart before completing the Admission / Consultation Process.See Appendix 1 for a complete process map. |
| **Actors** |
| * Patient.
* Clinician.
* PAS / EPR.
* Paper (Summary Care Record / Paper Drug Chart).
 |
| **Trigger** |
| * Patient is admitted to, or attends hospital for treatment.
 |
| **Preconditions** |
| * The patient’s details have been verified and entered on the hospitals PAS / EPR upon admission / attendance.
* The patient has a Summary Care Record (SCR).
* Hospital staff have the correct / appropriate system access rights.
 |
| **Basic Flow** |
| This scenario details the situation where all of the patient’s medications are correctly recorded within the Patients Summary Care Record.1. Patient attends/admitted to hospital.
2. Clinician identifies need to establish the patient’s medication history.
3. Clinician accesses PAS / EPR and retrieves SCR Record (View Only).
4. Clinician prints out SCR.
5. Clinician reviews and verifies GP medication list with patient / patient proxy.
6. Clinician manually integrates medication(s) into PAS / EPR.
7. Clinician duplicates medications on to the patient’s Paper Drug Chart.
8. Clinician completes the Admission / Consultation Process.
 |
| **Alternate Flow 6A – Discrepancies with the GP Recorded Medication** |
| This scenario details the situation where discrepancies are identified with one or more items of the patient’s medications recorded within the Patients Summary Care Record. This scenario also includes additional items which may be ‘over the counter’ medications.1. Clinician updates medication list.
2. Clinician manually integrates medication(s) into PAS / EPR.
 |
| **Inputs** |
| * Patient’s SCR.
* Patient provided information.
* Hospital records (PAS / EPR).
 |
| **Post Conditions** |
| * A full history of medication used by the patient on admission / attendance:
	+ Medication prescribed by the patient’s GP.
	+ Medication prescribed in other care settings.
	+ Medication obtained elsewhere, i.e. “Over the Counter”.
* Patients receive the correct medications when admitted.
 |
| **Business Rules** |
| * Stage 1 reconciliation to be completed as soon as possible and within 24 hours of admission.
 |

## Medicines Reconciliation – Stage 1 Use Case (Future State)

| **Medicines Reconciliation Stage 1 (Medicines Clerking) – Future Situation** |
| --- |
| **Description** |
| Upon admission to or attendance at hospital, the attending clinician is responsible for consolidating a list of the patient’s medications. The clinician accesses the PAS / EPR and requests an up to date list of medication recorded within the GP Clinical System via GP Connect. The PAS / EPR receive this information and a copy is stored directly for future reference. The information is then presented within a ‘User Interface’ (UI) for manipulation and discussed with the patient / patient proxy for validation. Where the clinician selects medications from within the UI for “Direct Inclusion” within the EPR these will be copied across in their existing format. Where the clinician selects medications from within the UI for “Inclusion with Amendment” within the EPR these will opened in an amendment window for manipulation before being copied across. Where a medication is identified as no longer in use, the clinician can mark it as stopped along with the reason for stoppage before being copied across. The clinician can also include additional items of medication which do not appear in the supplied list. After completing ‘clerking’ of GP Listed Medications the clinician then completes the Admission / Consultation Process.See Appendix 2 for a complete process map. |
| **Actors** |
| * Patient.
* Clinician.
* PAS / EPR.
* GP Connect.
* GP Clinical System.
 |
| **Trigger** |
| * Patient is admitted to, or attends hospital for treatment.
 |
| **Preconditions** |
| * The patient’s details have been verified and entered on the hospitals PAS / EPR upon admission / attendance.
* Hospital staff have the correct / appropriate system access rights.
* The patient’s GP has agreed to share patient information via GP Connect.
* The patient allows this shared information to be viewed / used by hospital staff.
* Electronic Interactions between Hospital System(s) / GP Connect / GP Clinical System have been correctly configured.
* An Electronic Prescribing & Medicines Administration (EPMA) system is in use and integrates with the PAS / EPR.
 |
| **Basic Flow** |
| This scenario details the situation where all of the patient’s medications are correctly recorded within the GP Clinical System and are presented within the PAS / EPR Integrated View.* Patient attends/admitted to hospital.
* Clinician identifies need to establish the patient’s medication history.
* Clinician accesses the hospital PAS / EPR system to retrieve GP medication history. PAS requests GP medication list from GP Connect.
* GP Connect requests GP medication list from the GP Clinical System.
* GP Clinical System provides the defined medication list to GP Connect.
* This medication information will be the same as that provided in the SCR / SCR AI and will be subject to the same exclusion criteria:
	+ Acute Medications (with a prescribed date in the last 12 months)
		- Prescribed date
		- Medication Item
		- Dosage Instructions (including day of administration where applicable)
		- Quantity
		- Source (the organisation that issued the prescription)
	+ Current Repeat Medications (with an end date in the future)
		- Last issued date
		- Medication Item
		- Dosage Instructions (including day of administration where applicable)
		- Quantity
		- Reason for medication
		- Source (the organisation that issued the prescription)
	+ Discontinued Repeat Medications (with an end date in the past and the last scripts prescribed date in the last six months)
		- Last Issued
		- Medication Item
		- Dosage Instructions (including days of administration where applicable)
		- Quantity
		- Reason for Medication
		- Date Discontinued
		- Source (the organisation that issued the prescription)
	+ For all three categories above:
		- Include mixtures
		- Includes medications recorded on the GP record that were prescribed by another organisation (example an hospital)
		- Do not include medications where the script was cancelled before being prescribed (example entered in error)
	+ GP Connect API Search Criteria
		- Search MedicationStatement by:
			* Patient (using NHS Number)
			* Status (active and completed)
			* LastIssueDate (see above for timeframes)
		- Include MedicationOrder by:

All Medication Orders linked to the MedicationStatement |
| * GP Connect presents the GP medication list to the hospital PAS / EPR.
* PAS / EPR saves a copy of the GP medications list directly to PAS / EPR.
* PAS / EPR presents an integrated view of GP medications to the clinician for manipulation into the EPMA.
* Clinician reviews and verifies GP medication list with Patient / Patient Proxy.
* Clinician marks medication for ‘Inclusion As-Is’ into the PAS / EPR.
* Medication is integrated into the PAS / EPR as “Medication on Arrival”.

Clinician completes the Admission / Consultation Process. |
| **Alternate Flow 10A – Discrepancies with the GP Recorded Medication, Additional Medication Identified** |
| This scenario details the situation where medications are identified in addition to those recorded within the GP Clinical System and are not present within the PAS / EPR Integrated View. This scenario includes items which may be ‘over the counter’ medications.1. Clinician selects ‘Add New Medication’.
2. Clinician manually enters new medication details.
 |
| **Alternate Flow 10B – Discrepancies with the GP Recorded Medication, Change to Medication is Required** |
| This scenario details the situation where discrepancies are identified with one or more items of the patient’s medications recorded within the GP Clinical System and are presented within the PAS / EPR Integrated View but the medication is still in use.1. Clinician marks medication for ‘Inclusion with Amendment’ into the PAS / EPR.
2. Clinician amends medication details.
 |
| **Alternate Flow 10C – Discrepancies with the GP Recorded Medication, Medication No Longer in Use** |
| This scenario details the situation where discrepancies are identified with one or more items of the patient’s medications recorded within the GP Clinical System and are presented within the PAS / EPR Integrated View but the medication is no longer in use.1. Clinician marks medication as ‘Stopped’.
2. Clinician adds the reason for the medication being stopped.
 |
| **Inputs** |
| * Medication history from patients GP Clinical System.
* Patient provided information.
* Hospital records (PAS / EPR).
 |
| **Post Conditions** |
| * A full history of medication used by the patient on admission / attendance:
	+ Medication prescribed by the patient’s GP.
	+ Medication prescribed in other care settings.
	+ Medication obtained elsewhere, i.e. “Over the Counter”.
* Patients receive the correct medications when admitted.
 |
| **Business Rules** |
| * Stage 1 reconciliation to be completed as soon as possible and within 24 hours of admission.
 |

# Business Benefits – Stage 1

## Clinical and Administration:

* Access to accurate information at the point of care reducing the opportunity for errors to occur.
* Reduction in transcription between systems and paper to IT, leading to a reduction in prescribing errors.
* Reduction in clinical time wasted, away from the patient, collecting and collating information.
* Reduction in clinical time wasted, away from the patient, manually updating IT systems.
* Reducing the paper flow through departments by utilising the systems workflow to manage tasks using staff time efficiently.

## Patient Focused:

* Security of patient information is maintained and improved through the reduction of paper-based “Patient Identifiable Documents” in use within departments.
* Increased patient / clinician time due to reduction in clinician time spent collecting and transcribing information away from the patient.
* Increased patient safety due to the reduction in manual transcription errors.
* Better patient experience as they are not being asked for information which should already be available to the clinician.

## Cost Reduction:

* Reduction in printing supplies.

## Medicines Reconciliation – Stage 2 Use Case (Current State)

| **Medicines Reconciliation Stage 2 (Full Reconciliation) – Current Situation** |
| --- |
| **Description** |
| When a patient is eligible for discharge, the clinician will initiate the process and prescribe medications for the patient after discharge. Upon receiving the prescription, the pharmacist will clinically validate the prescription to ensure correct and appropriate medications are being prescribed. The pharmacist also completes stage 2 reconciliation and updates the patient records. Once the patient has received discharge medication, Ward Staff complete the discharge processing resulting in a Discharge Summary Report being sent to the patient’s GP.See Appendix 3 for a complete process map. |
| **Actors** |
| * Patient.
* Clinician.
* Pharmacist.
* Ward Staff.
* PAS / EPR.
* Paper (Patient’s Paper Drug Card).
* GP Clinical System.
 |
| **Trigger** |
| * It is deemed clinically appropriate for the patient to be discharged / transferred to another case setting.
 |
| **Preconditions** |
| * Stage 1 reconciliation / medication clerking has been completed.
* Patient Paper Drug Card is fully updated.
 |
| **Basic Flow** |
| This scenario details the situation where a patient is discharged and the pharmacist, in addition to clinical verification and medicines reconciliation, dispenses discharge medications directly to the patient.1. Clinician approves and initiates discharge / transfer of care.
	* PAS / EPR creates a TTO (To Take Out) Prescription.
	* PAS / EPR creates an Electronic Discharge Summary.
	* Clinician notifies Pharmacy Team of pending Discharge.
2. Pharmacist completes Clinical Verification of TTO.
3. Pharmacist prepares the TTO Medication.
	* Patients Paper Drug Chart Updated / Annotated.
4. Pharmacist completes Medicines Reconciliation with the Patient / Proxy.
	* Pharmacist reviews Patient’s Paper Drug Chart.
	* PAS / EPS retrieves Stage 1 Reconciliation List.
5. Pharmacist updates the Electronic Discharge Summary.
6. Pharmacist dispenses medication directly to patient.
	* Pharmacist notifies the Ward Staff of Completed Actions.
7. Ward Staff discharge the patient.
8. Ward Staff complete the discharge summary.
9. PAS / EPR finalises the Discharge Summary.
10. PAS / EPR sends Discharge Summary to the Patient’s GP.
	* GP Clinical System receives the Discharge Summary.
 |
| **Alternate Flow 6A – Medication Dispensed via Ward Staff** |
| This scenario details the situation where the pharmacist prepares discharge medications but they are dispensed to the patient through the ward staff.1. Pharmacist delivers TTO Medication to Ward Staff.
2. Ward Staff receive and verify patients TTO Medication.
3. Ward Staff dispenses TTO Medication to Patient.
	* Patient’s Paper Drug Chart Updated / Annotated.
 |
| **Inputs** |
| * Medication prescribed for discharge.
* Patients Paper Drug Chart.
* Stage 1 Reconciliation List.
 |
| **Post Conditions** |
| * Patient Receives Correct Medication
* A full history of medication relevant to the episode of care:
	+ New Medication.
	+ Unchanged Medication.
	+ Changed Medication.
	+ Stopped Medication.
	+ Medication Administered.
 |
| **Business Rules** |
| * Clinical validation to be completed for all discharge medications.
* Stage 2 reconciliation to be completed prior to patient discharge.
 |

## Medicines Reconciliation – Stage 2 Use Case (Future State)

| **Medicines Reconciliation Stage 2 (Full Reconciliation) – Future Situation** |
| --- |
| **Description** |
| When a patient is eligible for discharge, the clinician will initiate the process and prescribe medications for the patient after discharge. Upon receiving the prescription, the pharmacist will clinically validate the prescription to ensure correct and appropriate medications are being prescribed. The pharmacist also completes stage 2 reconciliation and updates the patient records. Once the patient has received discharge medication, Ward Staff complete the discharge processing resulting in a Discharge Summary Report being sent to the patient’s GP.See Appendix 4 for a complete process map. |
| **Actors** |
| * Patient.
* Clinician.
* Pharmacist.
* Ward Staff.
* PAS / EPR.
* GP Clinical System.
 |
| **Trigger** |
| * It is deemed clinically appropriate for the patient to be discharged / transferred to another case setting.
 |
| **Preconditions** |
| * An Electronic Prescribing & Medicines Administration (EPMA) system is in use and integrates with the PAS / EPR.
* Stage 1 reconciliation / medication clerking has been completed.
 |
| **Basic Flow** |
| This scenario details the situation where a patient is discharged and the pharmacist, in addition to clinical verification and medicines reconciliation, dispenses discharge medications directly to the patient.1. Clinician approves and initiates discharge / transfer of care.
	* PAS / EPR creates a TTO (To Take Out) Prescription.
	* PAS / EPR creates an Electronic Discharge Summary.
	* Clinician notifies Pharmacy Team of pending Discharge.
2. Pharmacist completes Clinical Verification of TTO.
3. Pharmacist prepares the TTO Medication.
4. Pharmacist completes Medicines Reconciliation.
	* PAS / EPR retrieves original GP Medications List.
	* PAS / EPR presented Integrated View for manipulation by the Pharmacist.
5. Pharmacist updates the Electronic Discharge Summary.
6. Pharmacist dispenses medication directly to patient.
	* Pharmacist notifies the Ward Staff of Completed Actions.
7. Ward Staff discharge the patient.
8. Ward Staff complete the discharge summary.
9. PAS / EPR finalises the Discharge Summary.
10. PAS / EPR sends Discharge Summary to the Patient’s GP.
	* GP Clinical System receives the Discharge Summary.
 |
| **Alternate Flow 6A – Medications Dispensed via Ward Staff** |
| This scenario details the situation where the pharmacist prepares discharge medications but they are dispensed to the patient through the ward staff.1. Pharmacist delivers TTO Medication to Ward Staff.
2. Ward Staff receive and verify patients TTO Medication.
3. Ward Staff dispenses TTO Medication to Patient.
 |
| **Inputs** |
| * Medication prescribed for discharge.
* Patients Electronic Drug Chart.
 |
| **Post Conditions** |
| * Patient receives the correct medication.
* A full history of medication relevant to the episode of care:
	+ New Medication.
	+ Unchanged Medication.
	+ Changed Medication.
	+ Stopped Medication.
	+ Medication Administered.
 |
| **Business Rules** |
| * Clinical validation to be completed for all discharge medications.
* Stage 2 reconciliation to be completed prior to patient discharge.
 |

# Business Benefits – Stage 2

## Clinical Safety:

* Increased patient safety due to the reduction of unintentional discrepancies.
* Increased patient safety as information relating to GP medication is available at any time.

# Enclosures

## Enclosure 1 – Sample Summary Care Record



## Enclosure 2 – Standards for structure and content of medications and medical device records: technical annex



# Appendices

**List of Appendices**

1. Key Questions
2. Medicines Reconciliation Stage 1 Admission (AS IS)
3. Medicines Reconciliation Stage 1 Admission (TO BE)
4. Medicines Reconciliation Stage 2 Discharge (AS IS)
5. Medicines Reconciliation Stage 2 Discharge (TO BE)
6. Key Questions

| **Medicines Reconciliation – Key Questions to Qualify the Use Cases** |
| --- |
| **What level of medication history is required?***Do you just require the patient’s current medication (i.e. medication within its prescription period) or a history of medication for a length of time into the past? If historic medication is required, how far back should it go.**For reference the SCR shows all acute prescriptions in the last 12 months, all active repeat prescriptions and any repeat prescriptions discontinued in the last 6 months.**If required what would be the historic information be used for.* |
|  |
| **What would be the impact, if mixtures prepared by the pharmacist are not included in the list of medications?** |
|  |
| **Dosage is not recorded as coded information in primary care systems. It is only available as a text description. If the data is to be held as coded information on the hospital system it will require a person to translate the dosage information into a coded form and record it. Does this significantly affect the benefits of importing the medication?** |
|  |
| **Day of the week (where applicable) is not recorded as coded information in primary care systems. It is only available as part of the patient directions supplied with the prescription. If the data is to be held as coded information on the hospital system it will require a person to translated the day of week and record it onto the hospital system. Does this significantly affect the benefits of importing the medication?** |
|  |
| **If we were unable to supple day of week in any way what would be the impact. Does this significantly affect the benefits of importing the medication?** |
|  |
| **Where a DM&D code is not available for an item a text description will be supplied. This is expected to be a rare occurrence. However when it does occur if the data is to be held as coded information it will require a person to translate the medication into a coded form and record it. Is that acceptable?** |
|  |
| **The Royal College of Physicians wrote a paper on what medication information should be available on electronic systems (included with this document). We are currently looking at the paper to see what items GP connect may be able support. Are there any items of medication data mentioned in the paper that we should be trying to include for medication reconciliation (in addition to the items already identified)?** |
|  |
| **Should we include medications that were not prescribed by the GP practice but are recorded on the clinical record?***That is prescriptions written by another clinician (hospital, dentist, etc.) and recorded on the GP practice record for information.* |
|  |
| **Should we include medications that were prescribed but cancelled before they were dispensed?***That is prescriptions that were written in error then cancelled either before the patient was handed them or before they were dispensed.* |
|  |
| **Is the requirement for drugs information only or should it include devices as well?** |
|  |
| **If device information is provided, what would the information be used for?** |
|  |

1. Medicines Reconciliation Stage 1 Admission (AS IS)



1. Medicines Reconciliation Stage 1 Admission (TO BE)



1. Medicines Reconciliation Stage 2 Discharge (AS IS)



1. Medicines Reconciliation Stage 2 Discharge (TO BE)

