



Medicine Reconciliation

FREQUENTLY ASKED QUESTIONS

NATIONAL MEDICATION SAFETY PROGRAMME

The Process

What is medicine reconciliation?

Medicine reconciliation is an evidence-based process, which has been demonstrated to significantly reduce medication errors caused by incomplete or insufficient documentation of medicine-related information at vulnerable transfer of care points. The process is known to facilitate optimal use of medicines and reduce discrepancies that have the potential to cause an error and/or harm to the patient.

What are the core steps in the medicine reconciliation process?

The health practitioner performs three steps:

1. collects the most accurate medicines, allergies and adverse drug reactions (ADRs) list using a minimum of two different information sources.
2. compares:
 - a. the most accurate list against the prescribed information to identify any differences
 - b. any differences found against the patient's notes to identify any documented explanation for differences
3. communicates any discrepancies for reconciliation.

This process is often referred to in some literature as:

- verification
- clarification
- reconciliation.

Who is responsible for completing the reconciliation process?

Medicine reconciliation is the responsibility of all health care professionals with each having their own role in the process. Responsibility for the collection of the most accurate list may differ in each organisation, based on available resources. Prescribers are expected to use the most accurate list during the writing of medicine orders, prescriptions, discharge summaries and to communicate with health care professionals when prescriptions/orders differ from the most accurate list. The prescriber is ultimately responsible for ensuring reconciliation is completed.

When should medicine reconciliation be completed?

Medicine reconciliation should be completed as soon as possible at the point of admission, transfer and discharge. The Medicine Reconciliation Standard states medicine reconciliation should be undertaken within the first 24 hours of transfer of care¹. At discharge, medicine reconciliation should occur as part of discharge planning and be fully completed at the point of discharge.

It may be difficult to complete medicine reconciliation within 24 hours in every instance due to special circumstances (eg, patient is unconscious, has no fixed abode, no family, time of day, lack of GP or pharmacy contact details) but this should always be the goal. Any special circumstances for not completing medicine reconciliation within the required timeframe should be clearly documented with reconciliation taking place as soon as possible.

At which point in transfer of care should the medicine reconciliation process start?

Both literature and clinical practice suggest admission is the common place to start. If you start at discharge, then you will automatically end up doing the admission process anyway but it won't be timely information.

What type of clinical areas would you undertake transfer medicine reconciliation on if you had limited resources?

Emergency department and assessment units for all new admissions, Intensive care to ward or ward to rehabilitation facility transfers and discharges to residential aged facilities.

How do you complete medicine reconciliation on transfer?

The patient's most accurate medicines list at admission and the patient's current medication chart are compared to identify any differences. The patient's notes are reviewed for any explanations for the differences found. Any discrepancies are given to the prescriber to reconcile and clinical decisions eg, prescriber may have to determine if it is appropriate to restart a medicine previously put on hold.



How do you complete medicine reconciliation on discharge?

The discharge medication summary is compared with the patient's current medication chart or prescribed list and the most accurate list collected at admission. The patient's notes are reviewed for any explanations for the differences. Differences that can't be explained are presented as discrepancies to be reconciled by the prescriber before discharge. All medicine changes and the reason for the change should be clearly documented in the discharge summary so therapy can continue safely and effectively.

What is the medication reconciliation process for patients admitted from a rest home or residential care facility?

The overall process is the same: collect, compare, communicate (reconcile). The sources of information may differ depending on the patient's condition and availability of family etc. If your organisation regularly receives patients from rest homes or residential care facilities, you may want to work with them to develop a process for sending the latest version of the prescribing and administration record with the patient referral. However it is known that not all changes made to medicines are documented on these records so other sources are necessary.

What medicines need to be reconciled?

All prescription medicines should be reconciled. Information on over the counter (OTC), rongoā alternative, complementary, herbal medicines should also be collected and communicated even if the information may not be able to be verified.

What else needs to be included in the medicine reconciliation process?

Allergy and ADR information must be collected, communicated and documented as part of the process, even if the information is not able to be verified.

What is a discrepancy?

A medicine that is omitted, altered, added or substituted on the patient's medication chart without a documented explanation of why, even if clinically appropriate. A discrepancy can be:

- intentional (ie, deliberate decision by prescriber at time of prescribing)
- unintentional (ie, unaware or unknown to prescriber at time of prescribing).

Only a prescriber can classify the discrepancy as intentional or unintentional.

What is the distinction between a difference and a discrepancy?

A discrepancy is when the difference found is not accounted for (ie, there is no documented communication of the prescriber's intention). Up to the point of checking in the clinical notes for an explanation, it is still a difference.

What is a reconciled medicine?

Where each discrepancy has been categorised by the prescriber as unintentional or intentional and action has been undertaken to resolve the discrepancy (including completion of documentation). As part of action undertaken, each discrepancy must have a time, date and signature documented for accountability.

What is an unreconciled medicine?

Where each discrepancy has not been categorised by the prescriber as unintentional or intentional and action has not been undertaken to resolve the discrepancy (including completion of documentation).

Do you reconcile intravenous fluids as well?

Not normally. However fluids with a medicine added to it (eg, dopamine in 5% glucose) would be relevant on transfer if it was to be continued (eg, ICU to a ward).

How do you track formulary/preferred medicine list substitutions and then on discharge, reinstate the medicine the patient took prior to admission?

A note can be made on the admission medicine reconciliation form (paper or electronic) to indicate a therapeutic substitution has been made to the patient's medicine whilst in hospital. As the discharge process has to reconcile all the medicines the patient was taking prior to admission, it will be picked up as long as it was part of the admission and/or transfer process.

When comparing the prescribed medicine to the clinical notes – does this mean just what is in the admitting doctor's medication history?

It depends on how quickly the medicine process is started after admission but you do normally have to check the patient records for more than the admitting medication history as medicine changes can be made at any time (eg, post admission



plans, by on-call doctor, during a ward round or multi-disciplinary meeting).

I have an example where the medication chart and admitting doctor's medication history correlate, but the GP's referral letter is at a variance.

The GP letter is considered to be a source depending on the date of the GP letter. If the source is at a variance to the patient's record and the medication chart, then another source is required to verify the details. However if the process is followed correctly, the patient and the patient's own medicines would have been primary sources and this may resolve the difference(s) found. If the sources continue to be at variance then additional sources need to be used, including a discussion with the GP (not the same as the GP letter) until the difference is solved. Some may not be able to be solved.

How do you reconcile a vaccine that is given once?

If the vaccine forms part of the most accurate list on admission and has already been administered, it will not need to be reconciled by a prescriber because there is no discrepancy. However if there is a series of vaccines due in the current admission, then it does need to be reconciled by the prescriber. Any vaccines administered during the current admission should be documented in the discharge summary under other medicine information so that the GP is aware.

How would you reconcile chemotherapy, contrast agents and radiopharmaceuticals?

This should not be a focus when first starting the medicine reconciliation process unless you are a specialty service dealing with chemotherapy, radiopharmaceuticals or patient is on regular oral chemotherapy. In this case, it is essential to know what radiopharmaceuticals or chemotherapy the patient must continue to receive during hospitalisation. Radiopharmaceuticals or chemotherapy not required to be administered during the hospital admission will not appear on the medication chart but should be documented as part of the patient's notes for completeness. The admission medicine reconciliation form is a suitable place to do so with a note explaining when next dose or cycle is due so that the prescriber knows they do not need to reconcile the information.

How does medicine reconciliation process sign-off occur?

It can occur in one of three ways:

1. no differences identified – signed off by health practitioner undertaking medicine reconciliation
2. differences identified but clearly documented – signed off by health practitioner undertaking medicine reconciliation
3. differences identified not documented = discrepancies – signed off by prescriber to indicate reconciliation.

What does 'medicine reconciliation initiated' mean?

The process of collecting, comparing and communicating has occurred.

What does 'medicine reconciliation completed' mean?

The process of collecting, comparing, communicating **and reconciling** has occurred.

How do you define admission, transfer and discharge?

There are no standardised definitions for admission, transfer and discharge in New Zealand and therefore they may differ from organisation to organisation depending on funding arrangements. Check with your Planning and Funding department. Below are some examples.

- **Admission** – any patient admitted to specialities, physical areas and/or hospital locations within the same organisation and inpatient episode of care.
- **Transfer** – any patient transferred between specialities, physical areas and/or hospital locations within the same organisation and inpatient episode of care.
- **Discharge** – any patient discharged from an inpatient episode of care to a new inpatient episode of care within same organisation (eg, ward to rehab facility or an inpatient episode of care) to another organisation (eg, ward to general practitioner).

What is the average time required per patient to collect the most accurate medicines list?

Organisations in New Zealand undertaking medicine reconciliation have estimated it takes around 30 minutes per patient to complete the collect, compare and communicate steps. The reconciliation step may take longer but the aim is to have it medicine reconciliation process completed within 24 hours of the transfer of care.



What time frame is acceptable for information sources used in the collecting step of the process?

The information sources are not be older than three month old should cover a period of six weeks prior to the present day¹.

Is it prudent to check the indication for each medicine as you are doing this process?

This is not part of the medicine reconciliation standard and is considered supplementary information. However, it is expected on the medication chart for all medicines that are prescribed on a 'as required' basis.² A prescriber may also wish to know the indication when reconciling a medicine when making the decision to continue the medicine or not.

Why use a form?

Forms are tools (paper or electronic) to assist the documentation and communication of the medicine reconciliation process. It enables the information to be presented and transferred in a standardised way.

Can forms be adapted by other facilities?

The templates are a starting point but can be modified as appropriate to fit your local clinical environment as long as they meet the minimum documentation requirements as stated in the Medicine Reconciliation Standard.¹

Is the electronic form different to the paper form?

Yes, in terms of physical display of information, efficiency and speed to allow the sharing of medicine information across the health.

No, in terms of generic process (ie, collect, compare, communicate and reconcile), which is specified by the Medicine Reconciliation Standard and applies to the electronic form.¹

How have organisations prevented paper medicine reconciliation forms from being 'buried' in the clinical record?

Organisations have adopted a variety of solutions to this problem to fit into local policy and procedures:

1. having a specific location for the medicine reconciliation form in the clinical record
2. having a coloured form that stands out from other documents but is placed within the clinical notes for action

3. inserting the form or documentation requirements of the process into existing electronic systems, clinical pathways, pre-assessment notes or documentation process.

The Most Accurate Medicines List

What is the most accurate medicines list?

This is the collected medicines list that has been reconciled at each point of transition, using at least two different information sources.

- **Admission** – the list of 'most accurate' medicines the patient was actually taking prior to admission.
- **Transfer** – the list of 'most accurate' medicines the patient was actually taking prior to admission as well as accounting for any subsequent changes (start, stop, change) that have occurred prior to the transfer.
- **Discharge** – the list of 'most accurate' medicines the patient was actually taking prior to admission as well as accounting for subsequent changes (start, stop, change) that have occurred prior to the discharge. This will also result in a final list of medicines that the patient should be taking on discharge.

How important is it to have a complete and accurate medicines list?

A complete and accurate list is necessary to provide good patient care. However, this has been a challenge for all organisations. The goal is to develop the best list possible (ie, most accurate). Waiting until you have the perfect list will only delay the medicine reconciliation process. As the process improves and reconciliation becomes more wide spread, it will become easier to collect a more complete and accurate list.

What sources of information should be used for the patient's current medicines list?

The patient is the primary source and where possible should be consulted first. Patients may also have their own medicines lists or bring in their medicines physically when coming to the hospital. This will provide more information. Other sources of information include: family member, parent, care provider, GP, community pharmacy or aged residential care facility. The Medicine Reconciliation Standard does provide additional guidance.¹



What about small hospitals with only a small team in Pharmacy – who will do the medicine reconciliation?

The medicine reconciliation process does not need to be pharmacist-led. The process should not rely on one particular health practitioner. Some organisations have used nurses, pharmacy and anaesthetic technicians. Use all available resources and health practitioners able to complete this process reliably. Medicine reconciliation belongs to all.

If you are unable to complete the list on admission, is follow-up required to complete the list during the patient's stay?

For some patients, the list of current medicines may not be completed on admission, transfer or discharge for many reasons. However a process should be included in your organisational policy on how to follow-up further information and what to do with it when it becomes available.

How do you document medicines that have been tried but failed?

It is beyond the scope of the medicine reconciliation process to collect this information. If this information is available, it should be documented in the patient's notes. And then communicated at discharge, with reasons why the treatment failed if possible.

What if the patient gets medicines by mail? How can you contact that Pharmacy?

You may not be able to contact the Pharmacy or distributor unless the patient has more details.

There are often two 'initial' medicines lists: what the doctor prescribed and what the patient is taking. Which should be considered the correct baseline?

This is exactly why medicine reconciliation is required as in some cases neither is completely correct. While the patient is considered the primary source, it is known that patients may omit or not disclose all details. Both of these lists can be used as a source of information to develop an accurate and complete medicines list.

If information isn't available from the patient or family, and the admission occurs at the weekend, how can the medicines list be obtained?

This is a challenge but a national programme of work has begun on shared care medicine information (eg, clinical data repositories of GP

and community pharmacy information for viewing). The list should be as accurate as possible within the information sources available. There will be occasions when medicine reconciliation may not be able to be completed within the required 24 hours.

Is medicine reconciliation recommended for emergency departments (ED) and intensive care units (ICU)?

A most accurate medicines list is essential for patients who come to the ED or ICU, as they may receive medicines that interact with those they are already taking. However, when you start working on admission reconciliation, you need to evaluate whether the ED or ICU is the right place to start for you. It has worked for some organisations, but many others have found it easier to start first on a ward and include ED or ICU in the medicine reconciliation process later.

Can medicine reconciliation be done before a doctor has seen the patient (ie, there is no admitting medication history and no medication chart written yet)?

Yes, technically this is called obtaining the best possible medication history and is known as a proactive form of medicine reconciliation because the medicine orders on the medication chart occur after this has occurred. However it is important that someone goes back to check that the prescribed medicines matches up to the best possible medication history (ie, differences found are accounted for and discrepancies reconciled found).

Allergy and Adverse Drug Reactions (ADRs)

What is an allergy and/or ADR difference?

A difference involving allergies and/or ADRs is where the section on the medication chart is left blank and there are known allergies or ADRs or if the documented allergy and ADR information is unclear or incorrect. The Medicine Reconciliation Standard states that the details required should include the product name, reaction type and date of reaction. However it is extremely difficult to get all three retrospectively unless these were detailed at the time of first reaction.

What happens if a patient has allergy to a medicine but the reaction is not known?

This is one of the reasons why allergies and ADRs are unable to be reconciled as the



information is difficult to verify. It doesn't mean the person taking the allergy history did something wrong, just that this is all the information they have to work with. If a medicine listed as an allergy does not have all required information and does not state reasons why (eg, patient does not know the reaction type or date), then this should be treated as a difference.

Do you count the number of spaces on the medication chart where the allergies and ADRs should have been recorded as a difference?

No, as long as the information is recorded in at least one place on the medication chart.

Does it count as a difference if the quality of allergies and ADR documentation varies?

This decision would need to be made locally especially as it is not always possible to verify the information with other sources easily and will be dependent on the local policy (ie, what details need to be recorded). For example, what the minimum information is you would expect to be collected, compared and communicated.^{1,2} It is unlikely in all cases that you would get a date of the reaction or even a reaction type. The best may be the name or class of medicines the patient had an ADR or allergy to.

The Stakeholders

How do we encourage all health professionals to become involved in medicine reconciliation?

Medicine reconciliation is a process that should occur for all patients for whom medicines are prescribed. It should reduce rework, eliminate unnecessary steps, and fit into the workflow of all staff. By designing medicine reconciliation so that it is part of daily work and fits into the flow of care, teams are more likely to adopt and spread the process. Most importantly, it is vital that all staff understand the goals and medicine reconciliation process design. As a minimum, the principles of good medication history taking should be part of all health professionals' induction.

How do we involve patients?

The patient and their family/caregiver play a major role in the creation of the most accurate medicines list and ensuring it is kept up-to-date as they visit multiple health care providers. Patients should be informed about the process, including how they can participate and be involved in the collection of the medicines list. Family

members/caregivers sometimes have better information about the medicines the patient is taking than the patient themselves and certainly should be asked. During discharge, inclusion of patients and their families in the reconciliation process can serve as a great education tool and can help promote adherence to medicine therapy.

Who is the owner of the medicine reconciliation process?

All health care professionals own the medicine reconciliation process. For it to be successful, a team approach is required. Where, how and by whom the process is initiated needs to be determined by each individual organisation. This can be cemented by having an organisational policy that clearly outlines accountabilities and responsibilities as well as having a standard operating procedure for medicine reconciliation.

References

1. Health Quality & Safety Commission. 2012. Medicine Reconciliation Standard, Version 3. Wellington: Health Quality & Safety Commission. Last accessed on 18 December 2012 http://www.hqsc.govt.nz/assets/Medication-Safety/Med-Rec-PR/Medication_Rec_Standard_v3.pdf
2. Health Quality & Safety Commission. 2012. Medication Charting Standard, Version 3. Wellington: Health Quality & Safety Commission. Last accessed on 18 December 2012 http://www.hqsc.govt.nz/assets/Medication-Safety/Med-RecPR/Medication_Chart_Standard_v3.pdf