



General Practice Results Handling Module 2018-19

Every patient, every time



Adapted with permission



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Section 1: Introduction

1.1 Background

Internationally it is well recognised that the systems-based management of test results, and their communication to patients in primary care, is both complicated to manage and vulnerable to human error. The consequences can include avoidable harm and unnecessary distress, with suboptimal clinical management of illness and delayed treatments, poor experience of, and dissatisfaction with care, inconvenience of return appointments, repeat tests and complaints.

The World Health Organization identified that the rates of test follow-up remain suboptimal, resulting in serious lapses in patient care, delays to treatment and litigation¹. The Medical Protection Society reported, in a review of 400 practices, that 88% self-identified results handling as a key area of risk. Workload associated with managing results continues to increase in the order of 8-10% per year².

In its 2016 policy brief, "Managing patient test results", RNZCGP highlights that cases involving mismanagement of results within practices are an important source of complaints to the Health and Disability Commission. The brief refers to guiding principles for practices, initially outlined by the RNZCGP in 2005³, which encourage practices to:

1. Create a culture where patients and staff can raise concerns about problems with processes and errors, acknowledging that mistakes can happen. Be hard on systems, but easy on people.
2. Develop a system to audit and improve the management of patient test results.
3. Have a clear, documented policy covering:
 - a. Patient notification
 - b. The process for tracking and managing tests ordered including identifying missing results (particularly significant results)
 - c. Staff responsibilities (including results interpretation)
 - d. Actions and follow-up, all in a clinically appropriate and timely manner.

This audit and change package used by SiP has been developed from the Scottish Patient Safety Programme in Primary Care and has undergone over 6 years of development and testing with over 500 practices.

This module helps you measure how reliable your results handling system is and gives you insights into how and where to focus improvement efforts. This process opens up discussion about your current systems and generates ideas for change.

1.2 Aim

100% of all lab results will be actioned within seven days.

1.3 Equity

Reducing inequalities in outcomes between Maori and other high needs groups compared to the general population is a priority at all levels of the health system. They experience higher rates of chronic health conditions which require monitoring with laboratory tests, not only of the conditions themselves, but also for the medications that are used in management. They are therefore more at risk if practice processes are less than optimal for managing results and communicating them to patients in a timely and meaningful way.

While Safety in Practice is not a programme specifically focused on equity issues, it is well recognised that for those groups who are already experiencing poorer health outcomes, the very reasons that contribute to this also could make them more at risk of errors, oversights, miscommunications and receiving care that is less able to meet their needs. Working on processes to improve patient safety overall would be expected to have particular benefit for reducing risk for these groups, which would contribute to reducing inequity.

Practices may focus on specific groups using an equity lens. Some examples might be:

- Selecting test results only for particular groups and then selecting the sample of 10 patients randomly from these. Dr Info and Mohio both allow either selection by Maori, or by high needs, or ordering them according to ethnicity.
- Specifically seeking input from patients from these groups on their experience of the practice's Results Handling system.

1.4 Measures & rationale

Measure 1: Was a definitive decision recorded by a clinician on EACH test result within seven calendar days of being received?

Rationale

- Risk exists around the variability in how clinicians acknowledge receipt of results and then action/respond to them.
- Unclear or ambiguous test result communication by doctors can lead to uncertainty amongst other team members about how the result should be interpreted, what action needs to take place, and what should be communicated to the patient.
- Unclear processes and variability creates increased workload within teams which contributes to stress and the likelihood of errors.
- If new team members or locums do not understand the processes for the practice things are more likely to be missed.

Sources

RNZCGP (2016, April) Managing patient test results *Policy Brief, 6*

Measure 2: Have the decisions for EACH test result been 'actioned' by the practice including appropriate recalls and tracking of the actions? (If no actions are required record at N/A)

Rationale

- Inconsistent processes increase the risks of errors and oversights, so undertaking actions in a consistent manner on every occasion decreases risks.
- Communication between team members is a common area of risk – the practice's communication system need to be understood and effectively implemented by all participants.
- All incoming test results or other investigations must be sighted and actioned by the team member who requested them or a designated deputy.

Sources

"Aiming for Excellence" RNZCGP Indicator 23

Measure 3: Was the patient informed as instructed? (If no instruction record at N/A)

Rationale

- Unclear processes around notifying patients of their results creates confusion for patients and clinicians and are a common area of risk. This can be around who is responsible, along with how and when results will be conveyed and any actions required.
- When a clinical investigation is requested, it should be discussed with the patient why it is recommended as well as when and how they will learn of the results so that all parties understand their responsibilities clearly.
- Patients must be provided with information about the practice process for notification of test results – including, if standard practice is not to notify normal results, patient consent not to notify should be obtained.
- If results do need notifying it should be clear how this will occur and in what timeframe, along with a record of all communication (including unsuccessful attempts).

Sources

The management of clinical investigations Dr Ian St George. *Cole's Medical Practice in NZ – 2013*
Medical Council of NZ Chapter 14
“Aiming for Excellence” RNZCGP Indicator 23

Section 2: Instructions

2.1 Collect your baseline data



2.1.1 Identify patients

On the day of the data collection each month, run the query related to your module, available to download from <http://www.safetyinpractice.co.nz> in the Resources section.

Results Handling Tips & Tricks

MedTech-32 Query Builder

Designer View | Data Sheet View

Query Name: lab results CM

Table: Patient

Fields:

- Name First Name
- Name Full Name
- Name Internal Name
- Name Preferred Name
- Name Previous Surname
- Name Surname
- Name Title
- Account Balance
- Account Date Last Invoice
- Account Date Last Payment
- Account Date Last Statement
- Account Group
- Account Group Description
- Account Holder (is one)
- Address Home Residence

Where:

Column	Condition
Patient - Enrolment Funding Status Code	Equals Funded (F)
In Box - Date Received	Between Thu 02 Jan 2014 00:00:00 and Wed 02 Apr 2014
In Box - Subject	Equals complete blood count

☐ Build query in order as specified above (for advanced users only!)

Select:

- Patient - NHI No
- In Box - Provider Code
- In Box - Date Received
- In Box - Subject

☒ Output data in order specified above

Buttons: Query Store, Run Query, Run SMS Query, View SQL, Close, Help

Once you've imported the query you need to open it up and change the date parameter to the previous month (this will need to occur each time you run it) e.g. between 01/08/18 and 29/08/18 this should capture all the FBC results between this period. If you are finding there isn't 10 then use another measure e.g. LFT (a new query will need to be created for this)

2.1.2 Randomise

From the list generated in step 2.1.1 it is important to select a **random sample of 10 patients to audit**.

For sample sizes up to 10

1. Audit all 10 patients.

For sample sizes of 11 - 28

1. Select a random number between 1 and 10 by picking pieces of paper out of a hat.
2. If you select an odd number audit every other patient starting at 1 e.g. 1st, 3rd, 5th, 7th etc.
If you select an even number audit every other patient starting with the second patient e.g. 2nd, 4th, 6th, 8th etc.

For sample sizes 29+

1. Select a random number between 1 and 10 by picking pieces of paper out of a hat.
2. Audit every other patient starting at this number e.g. if 6 is drawn audit the 6th, 8th, 10th patient etc.

2.1.3 Audit

Review each of your 10 selected records against the following criteria. You can use the Paper Form provided on the resources section of our website to keep track or simply enter records directly onto the audit spread sheet.

2.1.3.1 Measures & guidance

Measure 1: Was a definitive decision recorded by a clinician on EACH test result within seven calendar days of being received?

Guidance

- The query for this module uses the FBC to generate a list of patients who have had blood test results done in the previous month.
- Once you have the patient list you are going to look at ALL of the blood test results that have come back for that patient from that test order. EACH of the results needs to meet the measures criteria in order to answer YES for that patient.
- Responses for this measure can only be 'YES' or 'NO'. If ANY of the results for a particular patient do not have a clear decision recorded by the clinician then the response will be NO.
- This is an 'All or Nothing' approach, "Every Patient Every Time".

Measure 2: Have the decisions for EACH test result been 'actioned' by the practice including appropriate recalls and tracking of the actions? (If no actions are required record at N/A)

Guidance

Laboratory test results may or may not require further action to be taken for a patient.
Examples of action might be:

- Recall the patient for a further follow-up test in 6 months.
- Contact the patient for review with the doctor.
- Contact the patient to adjust the dose of a medication.

For those patients where there were any actions required following the result, the response would be YES if every required action was clearly completed for EACH of the test results. If only some of them were completed but others had not, then the response would be NO.

If there were no actions required for any of the test results for that patient then the response would be N/A.

Measure 3: Was the patient informed as instructed? (If no instruction record as N/A)

Guidance

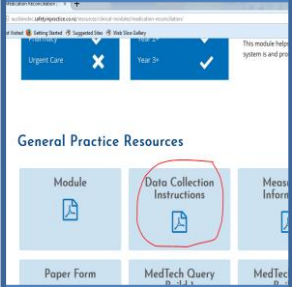
- Many practices have a policy that patients will not be specifically contacted if all the results are normal and do not require any actions. Patients need to clearly understand that this is the case, and if they want to be contacted regardless then this should be done. Therefore this is a good opportunity for practices to check on how patients are informed on this policy, and that they have the option to be contacted anyway.
- This measure is checking that patients are informed of their results in the way that has been agreed and arranged with them.
- If it was agreed that they would not be notified if the results were normal and they were all normal then choose N/A.

Overall Compliance

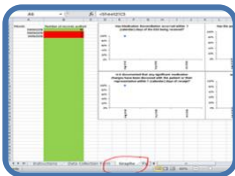
If the responses to all of the measures for a patient for all results are a YES or N/A then overall compliance will have been achieved for that patient for the audit.

2.1.4 Complete the spread sheet

Tip: Your first set of data is relating to the month of August so this is due on September 10th. For this data set record “August” in the first column.

	<table border="1"> <thead> <tr> <th>Review Date: please type date beside each individual record for current month</th> <th>Has Medication Reconciliation occurred within 7 (calendar) days of the EDS being received?</th> <th>Has the patient's regular medication list been updated?</th> </tr> </thead> <tbody> <tr> <td>01/08/2018</td> <td></td> <td></td> </tr> </tbody> </table>	Review Date: please type date beside each individual record for current month	Has Medication Reconciliation occurred within 7 (calendar) days of the EDS being received?	Has the patient's regular medication list been updated?	01/08/2018			<table border="1"> <thead> <tr> <th>Review Date: please type date beside each individual record for current month</th> <th>Has Medication Reconciliation occurred within 7 (calendar) days of the EDS being received?</th> <th>Has the patient's regular medication list been updated?</th> </tr> </thead> <tbody> <tr> <td>01/08/2018</td> <td>y</td> <td>n</td> </tr> </tbody> </table>	Review Date: please type date beside each individual record for current month	Has Medication Reconciliation occurred within 7 (calendar) days of the EDS being received?	Has the patient's regular medication list been updated?	01/08/2018	y	n	<table border="1"> <thead> <tr> <th>Has it been documented that any significant medication changes have been discussed with the patient within 7 (calendar) days of receipt?</th> <th>Overall Compliance</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> <tr><td></td><td>n</td></tr> <tr><td></td><td>n</td></tr> <tr><td></td><td>n</td></tr> <tr><td></td><td>n</td></tr> <tr><td></td><td>n</td></tr> </tbody> </table>	Has it been documented that any significant medication changes have been discussed with the patient within 7 (calendar) days of receipt?	Overall Compliance				n		n		n		n		n
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<p>Download the spread sheet for your module in the Resources section of www.safetyinpractice.co.nz</p>	<p>Record the month the data relates to in a DD/MM/YY format left column. For your first data set collected in September this is 1/8/18,</p>	<p>Mark y, n or n/a against for each measure and each patient according to your findings in the previous section.</p>	<p>The final measure "Overall compliance" will auto-populate.</p>																										

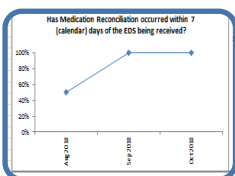
Tip: Please don't audit more than 10 patient for a given month or add or remove rows from the spread sheet as this will disrupt the formulas and cause the graphs to break.



Graphs will be automatically generated in the next tab in the spread sheet.

Referral type (from service) which individual provided for current month	Has Medication Reconciliation occurred within 7 (calendar) days of the EDs being received?	Has the patient medication been reconciled?
01/08/2018	n	n
01/08/2018	n	n
01/08/2018	n	n
01/08/2018	n	n
01/08/2018	n	n
01/08/2018	n	n
01/08/2018	y	y
01/08/2018	y	y
01/08/2018	y	y
01/08/2018	y	y

Next month add your data to the same spread sheet.



This means you can track your progress over time.

2.1.5 Submit

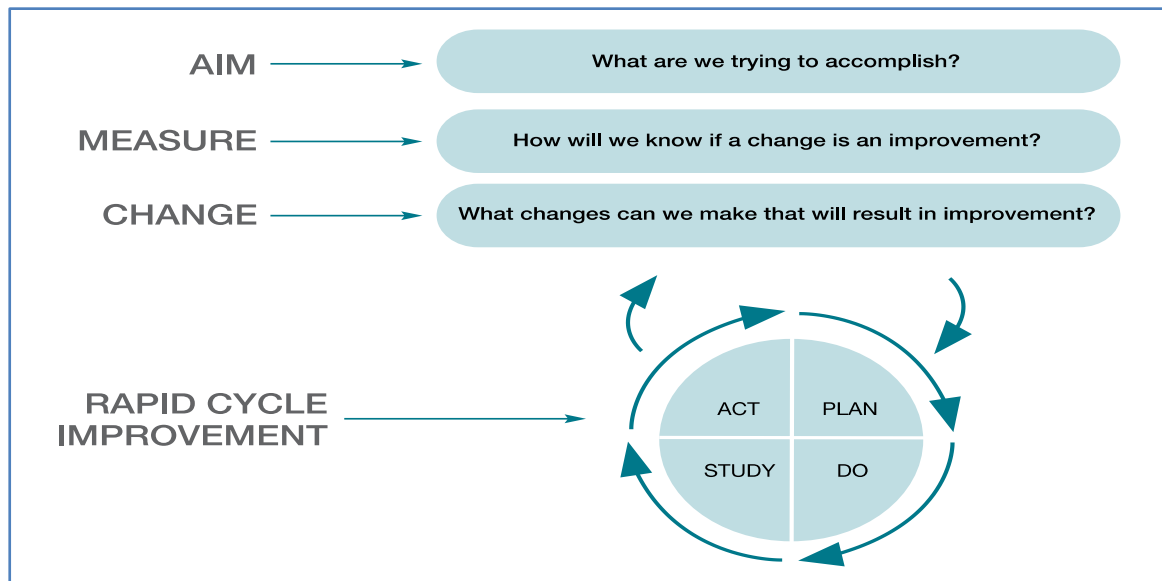
Submit your data on the 10th of each month to audit@safetyinpractice.co.nz

Tip: Please ensure all data sent to Safety in Practice in anonymized

Your data for the month is submitted by sending the complete spread sheet to audit@safetyinpractice.co.nz . You should SAVE the spread sheet somewhere and then next month add the new data to it, save and send it and repeat the process each month.

It is a good idea to also send a copy of your spreads heet to your PHO facilitator unless they have indicated otherwise.

Creating Change – Getting started



Before you start your plan phase:

- Bring together your team – these people will work with you to plan and carry out the test of change
- Select the process you wish to change

As a team answer the 3 questions above:

1. What are we trying to accomplish? (write an objective for this PDSA cycle)
2. How will we know if a change is an improvement?
3. What changes can we make that will result in improvement?

2.2 Plan

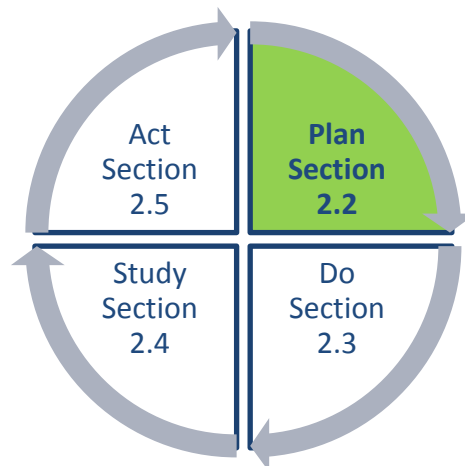
Plan how the changes will happen – ask yourselves and write down the following:

- What will we do?
- Who will carry out the plan?
- When will it take place?
- Where will it happen
- What data and information will we collect – i.e. what will help us determine if the change is an improvement?
- Do we need training or materials?

Make predictions –what do you think will happen when you test the change and why?

Ask yourself:

- What do we hope to learn by



testing the change?

- What will happen when we test the change?
- How will the change be carried out?

2.2.1 Change ideas

General

- Have a doctor and nurse champion in the practice.

Ideas around practice processes

- Ensure patient 'preferred contact' info up to date – front desk and other team members
- Text (or post letter) for normal results.
- Enforce INBOX standards sent to doctors.
- Allocating other doctors to monitor inbox of absent doctors.
- Result forwarded to nurse to follow-up if result is not normal/stable.
- Integration with use of patient portal.
- Update results management policy and processes as a result of work in module.

Ideas around recording process in patient management system

- Use of "key words" within Medtech to speed up process and ease of writing comments that commonly used.
- Agree as a practice on a selection of standardised INBOX comments.
- Comments section used to advise nurses on action desired.

Ideas around practice team roles and responsibilities

- Education of doctors in barriers to dealing with results in a timely manner.
- Individual feedback to doctors to not include both interpretation and action required.
- Lead clinician audited inboxes/results daily.

Ideas around patient education

- Communication with patient at each visit as to how result will be communicated.
- Update information on 'results process' for patient education.
- Poster in waiting room advising patients to check for results if it has not been communicated to them within seven days of performing tests.

Ideas around patient involvement

- Survey patients on their knowledge of current process.
- Involving patients in the change process – provide good feedback on what they think works best from their perspective.

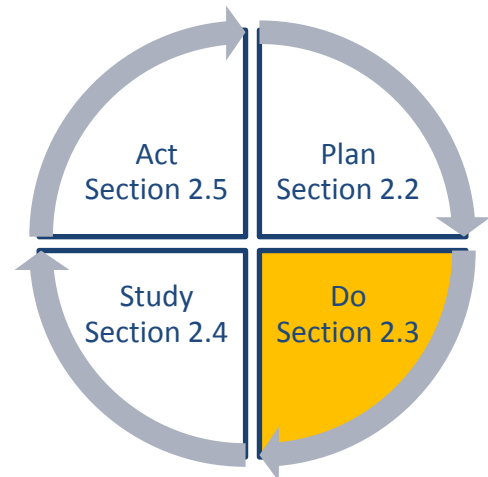
Most common key words practices found useful

Key words relating to common results	
.n	normal – within normal range
.,	normal (easier to type)
.n	normal no action required
.a	abnormal but acceptable
.a	acceptable
.a	acceptable, no action required
.aa .ar	acceptable, repeat in ...
.an	acceptable no action required
.abn	abnormal
.neg	negative no action required
.nad	no abnormality detected
.nar	no action required
.st	stable, continue to monitor in
.stn	stable no action required
.str	stable recall in:
.sim .s	similar to previous - no current action required
Key words for timeframe of action:	
.disc .d	non-urgent, can discuss at next clinic visit
.tci	to come in (for review) pt to make appt to come in within 2 weeks
.tc	patient to come in to see doctor urgently
.tc2	patient to make appt to come in to discuss – not urgent
.tciu	to come in to see doctor URGENTLY pt to make appt to come in URGENTLY
.tci	to come in (for review) pt to make appt to come in within 2 weeks
.rgp	routine GP appointment
.ugp	urgent GP appt within XX days (where the X's need replaced with a number)
.1w	repeat in 1 week
.2w	repeat in 2 weeks
.1m	repeat in 1 month
.3m	repeat in 3 months
.6m	repeat in 6 months
.1y	repeat in 1 year
Key words specific for advice to patients:	
.let	to send letter with explanation and advice
.life	please discuss appropriate lifestyle advice + recall in:
.pa	advise patient (<i>specify message to patient</i>)
.rt	repeat test form at reception for collection
Results ordered by providers external to practice:	

.os	ordered by specialist/external provider
.s	test ordered by external specialist or provider
.sp	test arranged by specialist
.sp	test arranged by specialist. Follow up by specialist.
.ex	ordered and being f/u by external provider
.ext	external request – no action required
.ix	further investigations arranged further investigations organised – patient informed
Key words relating to warfarin INR:	
.inr .i	INR result has been actioned
.wm	patient under warfarin management
Key words relating to changes in medications:	
.me	note change in medications

2.3 Do

- Prepare to test; gather resources
- Try out your change idea – it's usually best to try it out on a small sample or area of your practice. Starting on a small scale might mean 1 or 2 patients – that way if it doesn't work it's easier to remove the step or process
- While you are testing keep track of what happens in real time – don't wait to write it up



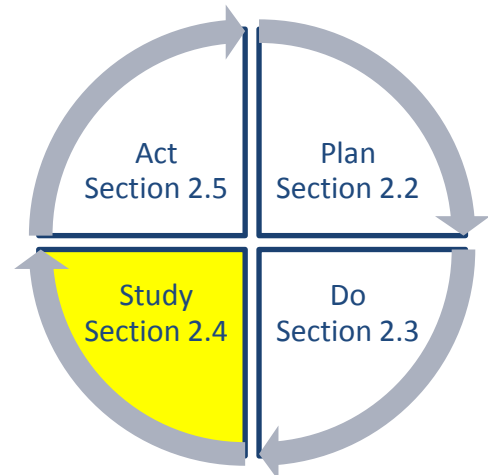
2.4 Study

Complete the analysis of the data.

Ask yourself:

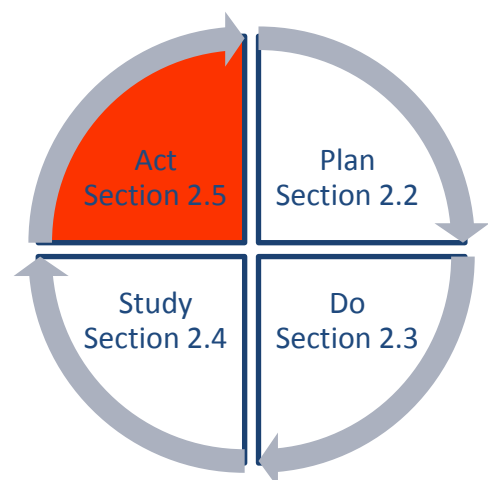
- What has changed
- Who was affected
- Are the effects positive or negative
- Are they worth keeping or removing, adapting or developing

Compare the data to your predictions.



2.5 Act

- Summarise and reflect on what was learned.
- Refine the change based on what was learned.
- Are you going to adopt the change, adapt and retest, or abandon?
- Prepare a plan for your next PDSA cycle – back to step 2.2 Plan for your next cycle!



Previous teams' experiences

Benefits	Challenges
<ul style="list-style-type: none"> •Streamlined, efficient systems. •Buy-in from all staff. •Aided integration of patient portal. •Medical staff now check inboxes prior to leaving for the day and during the day as appropriate. •Alerts and recalls set routinely. •Quicker communication of results to patients. •Strong drivers to doctors continuing to consistently annotate and try to improve. •Decreased nurses workload. •Better awareness within team of others' roles. •Less interruptions to do with interpreting someone's results. •Springboard to addressing other systems issues within the practice. 	<ul style="list-style-type: none"> •May takes longer to annotate results. •'Key-word drift' - can develop too many to be useable.

Section 3: Resources

3.1 Patient engagement

Example from patient experience questions

In order to try to improve the services we provide our patients, please can you take a few minutes to answer these questions about your experience of having blood tests taken and receiving the results?

1. What went well with your experience of having a blood test and receiving your result?
2. What did not go well with your experience of having a blood test and receiving your result?
3. How could your experience of having a blood test and receiving your result be improved?
4. What matters to you most when you have blood tests taken and receive your results?

3.2 Additional Resources

BPAC, 2014. Best tests. Available at: <https://bpac.org.nz/BT/2014/August/testresults.aspx>

Practice Self-Assessment Questions

These questions might usefully guide a practice meeting about how to make your results handling systems safer.

Systems issues

- ❖ Does our practice have a results handling system outlined in a protocol?
- ❖ How does our practice ensure the results are reviewed and acted on in a timely manner?
- ❖ How does our practice handle results when a clinician is absent from the practice (e.g. on leave or due to illness) and/or when a locum orders a test?
- ❖ How does our practice action emergency test results communicated by the laboratory?
- ❖ How does our practice track tests that are ordered and results received so that missing results are identified and chased up?
- ❖ How does our practice monitor the reliability of its result handling system?
- ❖ How does our practice ensure laboratory results are reviewed and commented on by the appropriate clinician?
- ❖ What is the system in our practice to ensure laboratory results are seen by the clinician who ordered them?
- ❖ Do we have standards for reviewing abnormal and/or normal results within clinically appropriate timescales agreed within the practice?

Training issues

- ❖ How are our staff, including locums, trained in the results handling system?

Communication issues

- ❖ Has our practice agreed on the nature of wording used to communicate test results? (e.g. 'no action' or 'normal' comments are often not of assistance to administrative staff in communicating effectively and safely with the patient)
- ❖ How do we review these phrases to ensure they are appropriate?

Patient Engagement

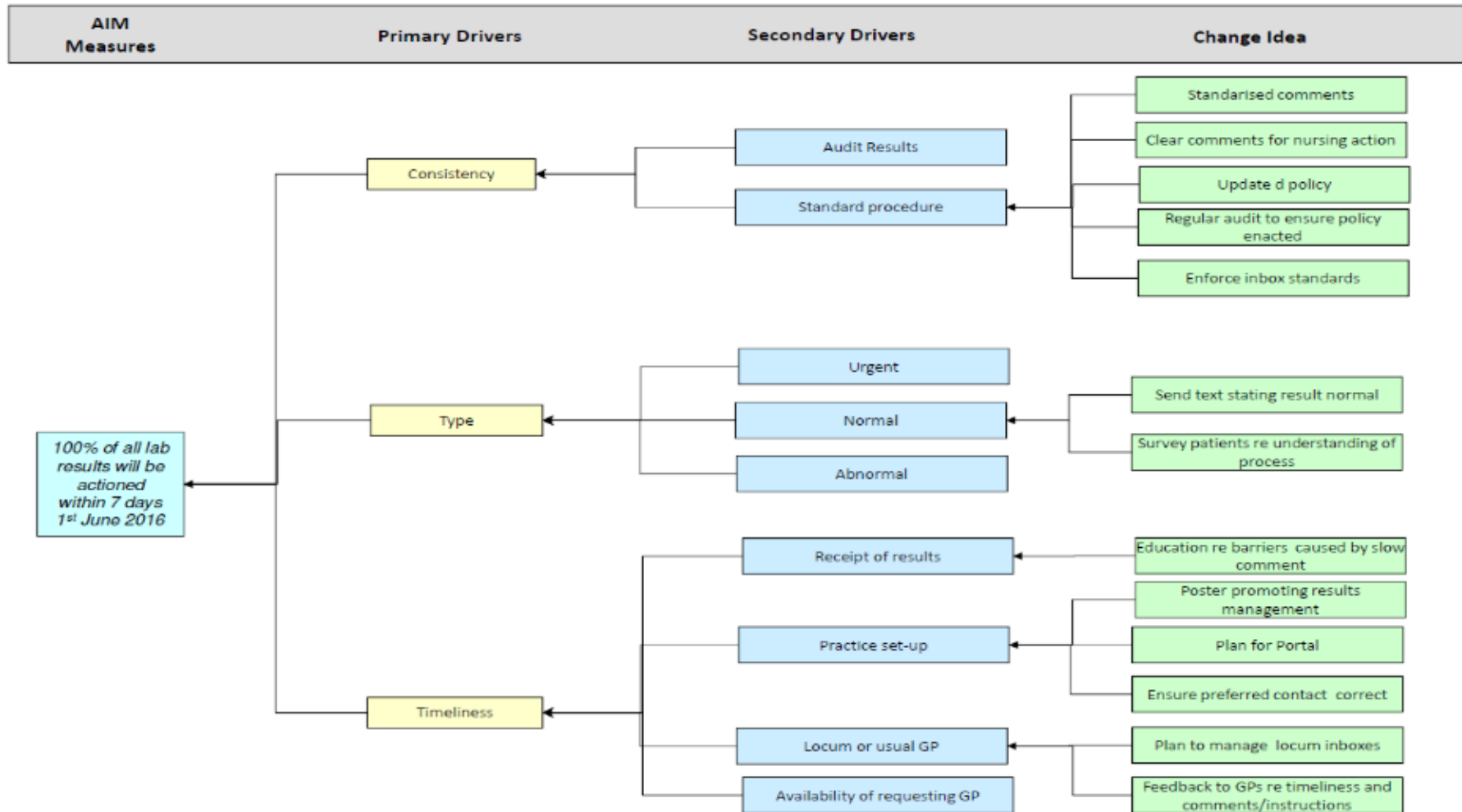
- ❖ How does our practice inform our patients about the different steps involved in how, when and how to access their test results?
- ❖ How well informed do we feel our patients are about the process?
- ❖ How does our practice record that it has notified patients of their results and actions required?
- ❖ How does our practice identify patients who do not make appointments for tests or who do not attend for a related appointment?

3.3 MOPs & Cornerstone

The Results Handling Audit is endorsed by the RNZCGP for Maintenance of Professional Standards.

The audits and PDSA cycles found on the Resources section of our website can be used for Cornerstone as a Quality Improvement activity.

3.4 Theory of improvement



3.5 Glossary

ACE-inhibitor	Angiotensin converting enzyme inhibitor such as lisinopril. An anti-hypertensive medication.
ADE	Adverse Drug Event
ADHB	Auckland District Health Board
ALT	Alanine aminotransferase, a marker of liver function.
AST	Aspartate aminotransferase, a marker of liver function.
ARB	Angiotensin receptor blocker such as candesartan. An anti-hypertensive.
Bundle	Each of the areas identified as presenting the highest risk to patients within the community have been developed into modules. Each module is structured to include a change package and a bundle.
CARM	Centre for Adverse Reaction Monitoring New Zealand
CoX-2 inhibitors	A form of NSAID that, unlike e.g. ibuprofen, only works on the CoX-2 enzyme.
CPAMS	Community Pharmacy Anticoagulation Monitoring Service
CKD	Chronic kidney disease
Change package	A collection of change ideas known to produce a desired outcome in a process or system.
Cytotoxic	A drug that is toxic to living cells.
Dr Info	A clinical information platform used by general practices. Data is extracted and analysed from practices PMS'.
DMARDs	Disease modifying anti-rheumatic drugs. These medications are used in autoimmune diseases such as rheumatoid arthritis.
EDS	Electronic Discharge Summary
eGFR	Estimated glomerular filtration rate, renal function test
FBC	Full blood count
GI	Gastro-intestinal
IHI	Institute of Health Improvement
INR	International Normalised Ratio. This is a marker of coagulability in the blood used to guide warfarin dosage.
H2 antagonists	Gastro-intestinal protective medication
HQSC	Health Quality & Safety Commission of New Zealand
LFTs	Liver function tests
Medication Reconciliation	The process of collecting, comparing, and communicating the 'most accurate' list of medicines that a patient is taking, together with details of any allergies and/or adverse drug reactions (ADRs), with the outcome of providing correct medicines for a given time period
Module	A structured way of improving the processes around patient care: a small, straightforward set of evidence-based practices, generally three to five, that, when performed collectively and reliably, have been proven to improve outcomes.
Mohio	A clinical information platform used by general practices. Data is extracted and analysed from practices PMS'.

NSAIDs	Non-steroidal anti-inflammatory drugs used for pain and inflammation. Examples include ibuprofen, naproxen and diclofenac.
Opioids	Strong pain medications such as codeine, morphine and fentanyl.
OTC	Over the counter
PPI	Proton pump inhibitor such as omeprazole. These medicines reduce stomach acid.
PMS	Patient management system e.g. MedTech, MyPractice, ToniQ
PHO	Primary health Organisation e.g Auckland, Alliance Health Plus, Comprehensive Care, East Health Trust, Total Healthcare, National Hauora Coalition, Procure
TFTs	Thyroid function tests
RNZCGP	Royal New Zealand College of General Practitioners
WBC	White blood cells. Used as a marker of infection and immune system functioning.
WDHB	Waitemata District Health Board
SIP	Safety in Practice

3.6 References

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³ Managing Patient Test Results. RNZCGP 2005