

ROOT CAUSE ANALYSIS

Diagnostics



Root cause analysis

What you assume to be the cause of a problem or issue may not always be the case. That's why it's important to do a root cause analysis (RCA), so you can identify and understand the true (or root) cause/s of the problem or issues and implement the right solution.

Diagnostics

The purpose of this phase is to gain a comprehensive understanding of the current state from different perspectives. Once you know the issues you can prioritise them and establish the root causes, so you develop the right solutions.

Key points

1. Engage stakeholders

RCA works best when conducted with people representing areas and roles within your organisation who are affected by your project. These people may each provide a different perspective which you hadn't considered. Only if the problem or issue is small and doesn't impact many stakeholders, you may be able to conduct the RCA alone. In this case, it's best to validate your findings with other relevant stakeholders.

2. Discuss key issues

Ensure your stakeholders are aware of the key issues you found in the diagnostics phase, including the supporting qualitative and quantitative data and process you followed to identify the key issues.

3. Ask why

The 'Five Whys' requires you to ask why an issue is occurring and drill down to the potential root cause. Each time an answer is given, ask 'Why?' again, up to five times. As you dig deeper, you'll find the answers become more thought-provoking and useful.

4. Record results

The 'Why-Because' diagram can be a useful tool to record the causes of issues as you go, particularly if there are multiple causes. You can then drill down into each cause until that particular path is exhausted. The Ishikawa or fishbone diagram is another useful way of plotting the causes of the issues when there are multiple causes.

Considerations and tips

To discover the root cause of any issue, be sure to be positive, encouraging, empathetic and aware of any personal biases (including your own). Be willing to be objective when you validate the causes.

Prepare your team

Be clear on what the session is trying to achieve. Have a plan on how to address any disagreements or lack of understanding as soon as they arise. Listen to others, ask questions and encourage equal participation.

Gather ideas

To complete a successful RCA, consider a brainstorming session. It is important to get your key stakeholders involved, as their input is vital to uncovering the root cause.

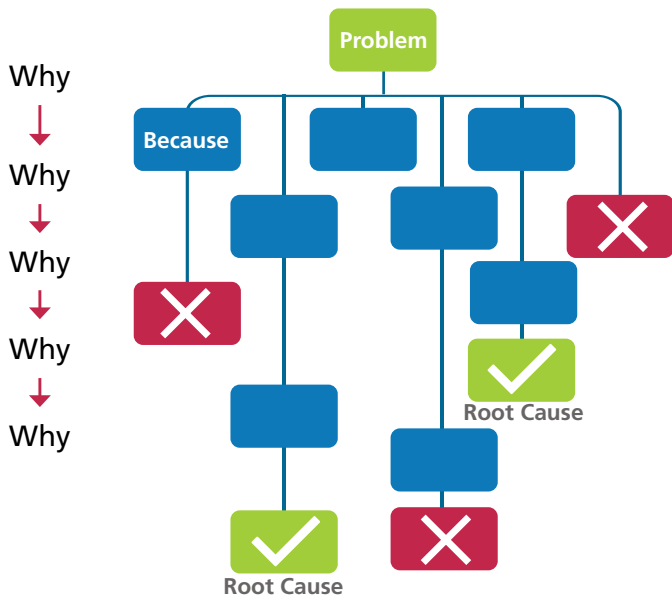
Investigate further

Consider what further investigation you will need to validate your root causes. There may be a need for further diagnostics around the root causes you and your team uncover.

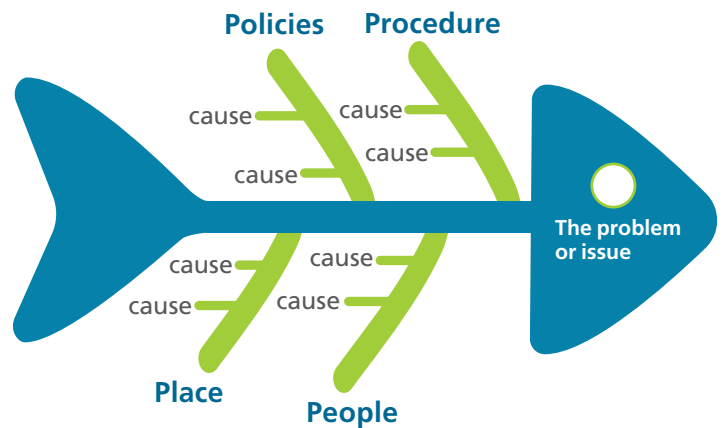
Look for multiple root causes

You will often find you discover multiple root causes and it may not be possible to address them all. Be clear with your stakeholders that the plan will be to prioritise and target the key root causes.

The 'Why, Because' diagram



The Ishikawa or fishbone diagram



Further information

[My Health Learning Log in Form](#) – Redesign Diagnostics (202464432): Root Cause Analysis

Next steps

Next you need to think about prioritising your key root cause issues by determining how much weight each has on your project. Utilise a prioritisation matrix to determine the impact or influence each has on the patient or project outcomes.

DATA ANALYSIS

Diagnostics



Data analysis

Once you've collected the right data for your project, you'll need to work out the best way to analyse it. Data analysis will allow you to identify the extent and potentially the cause of the problem or issue, so you can make informed decisions based on evidence, instead of guesswork.

Diagnostics

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Key points

1. Fit for purpose

Start your analysis by ensuring the data you have collected are fit for purpose, relate directly to your problem and are extracted through reliable sources, such as the Health Information Exchange (HIE). Consider who owns the data and how they will be used, potential confidentiality issues and if they need to be de-identified. Follow the links below for NSW Health information on data.

2. Cleanse the data

If the data you use for your analysis have entry mistakes or other anomalies (you may hear this referred to as 'dirty data'), then your analysis will be affected and you may miss vital information for your report. Ensure the data is cleansed and free of mistakes before you use it. It is recommended to use validated sources like HIE if possible. Ask your organisations data analytics team for help if you are unsure.

3. Select tools

It's important to know which tool to apply to the dataset, as using the wrong one can significantly affect the analysis. Selecting a fit for purpose analysis tool is vital to inform good decision making. There are many IT programs that will analyse data for you; your local data analyst should be able to assist. Consider if you will need a report format or graphs. How will the analysis be used? Improvement work predominantly uses descriptive statistics like means or median.

4. Validate your findings

It is good practice to validate your analysis findings with others. Peer group review can help check if your results are valid and align with the purpose of your project. This can identify any bias with the data findings and help test your hypothesis with others who may understand it differently. Your results should be repeatable, applicable to the whole group you are studying, and clearly relate the cause to the effect.

Considerations and tips

Your data analysis will be used to make important decisions and will support your case for change. Good analysis will help you understand the 'as is' with confidence and obtain stakeholder buy-in.

Existing information

Find out if this type of analysis has already been done in your organisation with the same or similar group. You can utilise the existing information or expertise to help with your analysis. Sharing documents or tools can ease your burden and help link to other work to support your own.

Data confidentiality

Consider who you will share your results with and how they will be shared. There are restrictions on sending data via unsecured email accounts and sharing platforms that are not approved by NSW Health. Sensitive findings can be damaging if taken out of context. Ensure you have governance over your reports and responsible means of sharing.

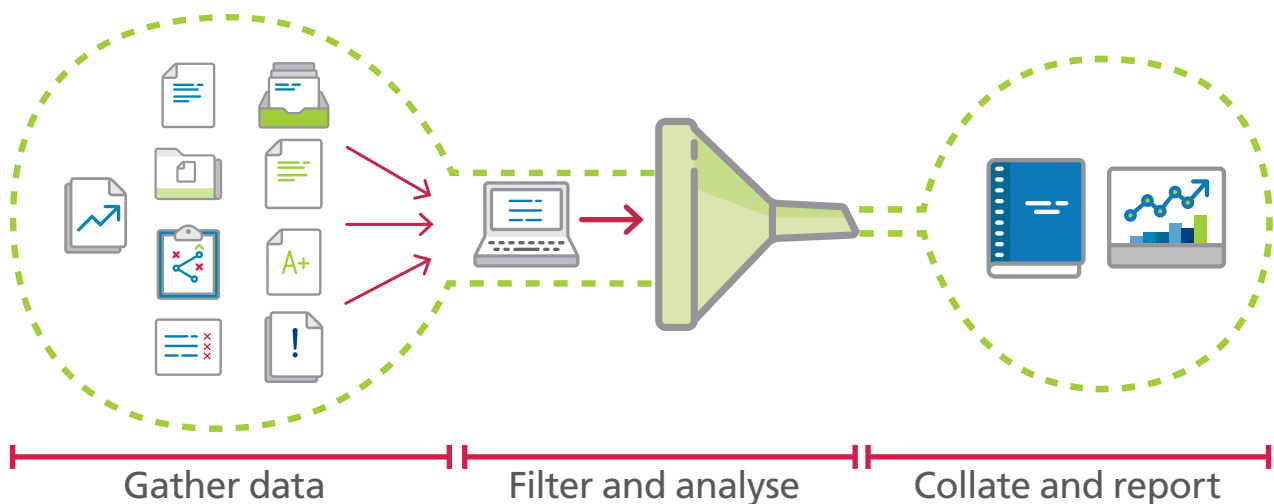
Don't over analyse

Complex data and statistics are not always necessary and can create confusion rather than clarity. Try to keep it as simple as possible and focus on data that inform your project and stakeholder needs

Comparing data

When comparing data, make sure you use similar timeframes and compare at least three different periods. If you compare 'apples with apples' it will help identify trends or anomalies/outliers in your data and bring credibility to the analysis.

Data analysis



Further information

[My Health Learning Log in Form](#) – Redesign Diagnostics (202464432): Data Analysis

Analytics Assist, NSW Health – <http://analyticsassist.health.nsw.gov.au/Pages/default.aspx>

Next steps

Consider other specific analysis techniques like mapping, root cause or themes (see relevant factsheets). Once you have analysed the data you will need to think about how to present it to your stakeholders.

QUANTITATIVE DATA

Diagnostics



Quantitative data

Quantitative data are measures represented by a value or count expressed as a number. They differ from qualitative data, which describe the information and are not expressed as numbers.

Diagnostics

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Key points

1. Understand types of data

Quantitative data relate to quantities, values or numbers. They are usually expressed in numerical form, and may communicate factors such as length, size, amount, price and duration. Data can be displayed in tables or graphs, and it is possible to compare previous time periods to demonstrate changes in performance. In the medical field, quantitative data is usually considered more objective than qualitative data.

2. Use existing data sets

We recommend the use of standardised data sets that exist at your facility, to ease the burden of collection and allow you to compare like with like – which will strengthen the analysis. Standardised data sets generally define each data element and outline specific rules for inclusions and exclusions. These are generally consistent over long periods of time. Data sets also contain 'cleaned data' to ensure they are accurate.

3. Collect data

Collecting your own data may be necessary when the information you need is not currently measured. There are data collection rules to guard against unintentionally introducing biases or errors which can reduce the reliability of your data. If you don't have expertise in this area, seek advice from a quality or redesign leader or research staff to ensure your efforts will be rewarded with the right high quality data.

4. Store data

Storing data in the right place the first time can reduce headaches when it comes to analysing it later. If you are a novice in this area, seek advice on how the most appropriate computer programs or survey tools to enter and store your data. Pay attention to accurately recording and storing data and do quality checks, as entering incorrect figures can substantially alter results.

Considerations and tips

The hardest part of data gathering is knowing when to stop and not becoming distracted by more and interesting data. Remember to collect the data that will inform your project, rather than data that are 'nice to have'.

What data are available?

This question is best answered by the people who are working in the data team at your hospital or who work in the area your project will impact. Often people submit data to a database or have access to data specific to their work.

Where can I get data?

In NSW we are lucky to have access to a large amount of NSW health specific data. The Health Information Exchange is a rich source of data on our admitted patient population. This can be accessed through your hospital, Local Health District or the Ministry of Health.

Are they independent?

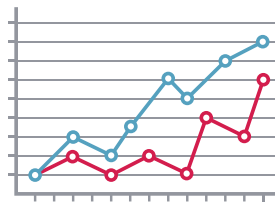
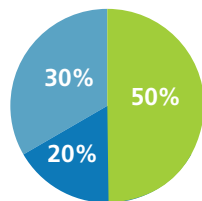
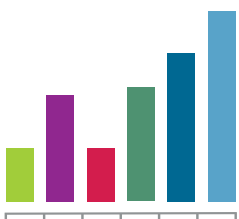
The Bureau of Health Information provide independent, unbiased reports and dashboards that are 'interactive' and can help you interrogate the data through pre-mapped tables. If your hospital submits data to the Health Roundtable you will have access to data that is benchmarked across Australia and New Zealand.

What do the data say?

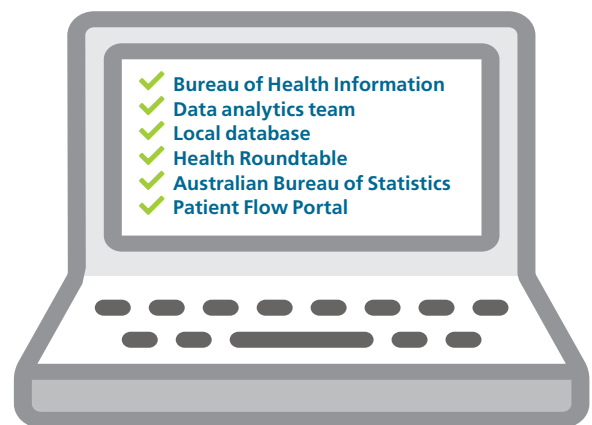
Once you have collected all of the data, you need to display your data in a format that is easily understood by the audience. There are some methods that work better than others, depending on the situation – see Presenting data factsheet for more information.

Displaying quantitative data

Keep charts simple and the data message clear



Data sources



Further information

[My Health Learning Log in Form](#) – Redesign Diagnostics (202464432): Data Collection

Data Governance, NSW Health – <http://internal.health.nsw.gov.au/data/governance/index.html>

Information on access to data, statistical publications and reports, NSW Health – <http://internal.health.nsw.gov.au/data/access/index.html>

Next steps

Now that you are on your way to collecting your defining quantitative data, consider which qualitative data you will need to describe and support your case.

PRESENTING DATA

Diagnostics



Presenting data

Good data presented well will put you a step closer to building a convincing case for change. There is value in investing time in how you will present your data.

Diagnostics

The purpose of this phase is to gain a comprehensive understanding of the current state from different perspectives. Once you know the issues you can prioritise them and establish the root causes, so you develop the right solutions.

Key points

1. Keep it clear

During the diagnostic phase, you will gather a lot of quantitative and qualitative data. Think about different ways to present your findings in a clear and engaging way, to create impact and get your message across to stakeholders. Facts and figures are only one side of the story. Ensure you bring the patient/consumer voice into the presentation to demonstrate the impact of your findings.

2. Present graphs

Graphs can be a great way to show change or trends and make your point, but make sure the graphs are simple and clear. Don't make people search for the information you are trying to convey. Use labels and short explanatory titles to make your point obvious. Keep colours minimal and ensure the graph keys are easy to understand. Make sure the graph and scale are appropriate to the data.

3. Create journey maps

A journey map is a great visual that can show the high and low points of a healthcare consumer's experience and help stakeholders understand the impact. The key to presenting a good journey map is to use a combination of themed information and direct impactful quotes which cut to key points and highlight what consumers are experiencing or saying about a service. See the mapping factsheet for more information.

4. Visually communicate

The old adage of 'a picture tells a thousand words' is true in displaying data. Using a photograph or images to demonstrate an issue can be very impactful. Add data to the image title to display information in a way that captures the hearts and minds of people who see it. Just make sure the image is not assigning blame or singling people out.

Considerations and tips

There are things to consider when you are presenting data that will make it more impactful. Using the right mode to best display the data and for the right audience is good practice. Keep it simple.

Know your audience

How does your audience like information presented? What will be easiest for them to read/digest? It may be best to have several display options to appeal to different people's frames of reference and for use at different forums (formal meetings, reports or updates).

Check and double-check

Make sure you are providing accurate and valid data. This is important to build and maintain trust and credibility in your project. Be honest and transparent in your findings and always reference the source/s of your data so things can be clarified if necessary.

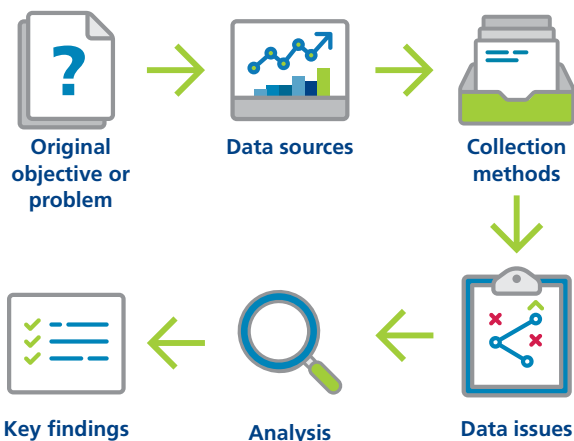
Quality over quantity

Consider how much data or information you present at one time. Quality over quantity is key. It's easy for stakeholders to get overwhelmed and confused when presented with lots of numbers and facts. People lose focus when they can't understand the data. Ensure the data you use relates directly to the project objective.

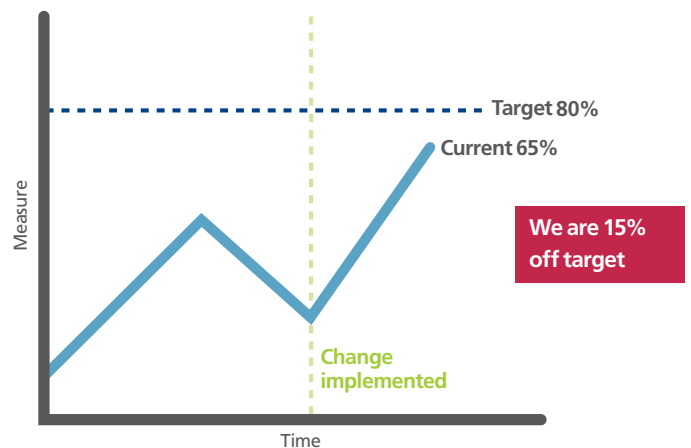
Consult experts

Seek out data support people who will be able to assist with using the right display for the right data. Test your presentation on a few stakeholders to ensure you are getting your message across clearly. There are many free online resources available to assist you to build storyboards, journey maps or infographics.

Use data to tell a story



Clear and simple charts



Further information

[My Health Learning Log in Form](#) – Redesign Diagnostics (202464432): Data Analysis, Presenting the Findings

Next steps

Clear data presentation helps your stakeholders understand the issues and objectives of your project. Creating concise problem statements is the next step in bringing the data story together.

GAP ANALYSIS

Diagnostics



Gap analysis

If you plan to implement an existing guideline or model of care, a gap analysis can be used to determine where your 'gaps' or needs are and what you need to change.

Diagnostics

The purpose of this phase is to gain a comprehensive understanding of the current state from different perspectives. Once you know the issues you can prioritise them and establish the root causes, so you develop the right solutions.

Key points

1. Find the gaps

Identifying gaps in current practice can provide an understanding of how your service is performing in relation to an existing best practice model or guideline. Firstly identify the core requirements of the new model/guideline. These are the elements that must be present to achieve the outcomes required. Seek expert advice or talk to others already utilising the new model. Self-assessments can be helpful and are sometimes included in models/guidelines.

2. Identify current gaps

The gap analysis is best completed with a range of stakeholders, and if possible with an independent person who knows the model/guideline in detail and can challenge assumptions and ask informed questions. Visiting other sites that have implemented the new model can also provide good information on how it is working in practice, which will help you to consider how it could work in your site.

3. Prioritise the gaps

Completing a self-assessment may help identify and prioritise what can be achieved quickly and easily (quick wins). It can also identify longer-term challenges to focus on, i.e. those that require more time, resources or training before they can be implemented. The use of a traffic light system can assist in informing stakeholders of the gaps and highlight areas requiring further in-depth assessment.

4. Do further analysis

A range of diagnostic tools and methods can be used to further understand the identified gaps between your practice and the best practice model. These may include (but are not limited to) data analysis, process mapping, interviews and a root cause analysis. The information gained through further analysis will inform what is currently working and build the case for change with your stakeholders.

Considerations and tips

Be mindful of not jumping from gaps to solutions – a little more investigation will help you choose the right solution.

The devil is in the detail

A gap analysis is a high-level tool – it doesn't get to the detail of a problem. For example, the analysis may identify a problem in a process, but it probably can't identify the specific causes of the problem. You will need to further analyse this.

Involve your stakeholders

Involve your stakeholders in helping you understand why the gap exists and what is currently happening. This will allow all of you to understand the barriers or issues that need to be managed.

Look to success

Consult people from sites that have already implemented the change. Learn from them what worked, what they tweaked, and if it is going as expected. Building on the shoulders of giants is a good strategy for success.

Stage your approach

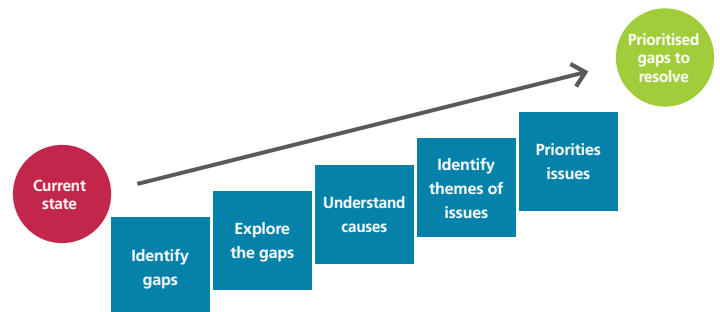
Don't try to address all of the gaps at once – instead, focus on 1-2 gaps that have been prioritised. Once you have successfully implemented the change, it will build momentum for the next part.

Traffic Light rating for self assessment tool



- ← Does not meet Model of Care within current resourcing (>> meet with Executive)
- ← Does not meet Model of Care, restructure of services is possible within current resources
- ← Matches Model of Care

Gap Analysis



Further information

Implementation Guide: Putting a Model into Practice (Pg. 15)

– www.aci.health.nsw.gov.au/data/assets/pdf_file/0007/291742/Clinical_Innovation_Program_Implementation_Guide.pdf

Next steps

Just like with anything else you create, it is always important that you review your gap analysis for major errors and omissions. It's a good idea to have someone familiar with the guideline or model to review your findings before you present them.

QUALITATIVE DATA

Diagnostics



Qualitative data

Qualitative data is not directly measurable, but rather a narrative that provides a deeper human insight into the experience of the issue. The data are collected to describe a problem, usually from the perspective of the staff and consumer.

Diagnostics

The purpose of this phase is to gain a comprehensive understanding of the current state from different perspectives. Once you know the issues you can prioritise them and establish the root causes, so you develop the right solutions.

Key points

1. The qualitative approach

This data collection approach is used to gain better understanding around subjective meanings, attitudes and values. Qualitative data helps us gain insight into why people do what they do, their experience, what motivates them and how they feel (their attitude). These subjective data are useful when trying to understand complex situations. The data should support, explain and enhance the quantitative data you have gathered.

2. Collect qualitative data

You can collect data through interviews, surveys, focus groups or observational studies. Interviews are resource heavy but offer a deep insight with the ability to expand on an answer then and there. Small focus groups allow this to a slightly lesser extent. Ideally 6-12 people are involved over 1-2 sessions, for more perspectives in less time. Surveys can be anonymous and are ideal for shorter responses from many people.

3. Seek depth and breadth

Consider the options that are most appropriate and feasible for your project. The aim is to get depth of information (details) through interviews and focus groups, and breadth (a wide range of opinions) via survey or questionnaire. Surveys may highlight areas to 'drill down' in interviews or focus groups. Don't forget to capture information from minority groups.

4. Capturing information

Recording interviews enables you to capture the information for later review and theming. Make sure you get consent and access the right equipment. If this isn't possible, bring 1-2 scribes who can capture information and key quotes, allowing you to focus on the and the audience. In focus groups, you may choose to use butchers paper so the group can see and validate what is being captured.

Considerations and tips

It takes skill and patience to collect quantitative data. Consider the necessary resources and timing, so you can get the most from your consumers and staff groups.

Validity and reliability

Validity is about how appropriate the tools, processes and data are. For example, one consideration is how the questions relate to the problem being explored, or how appropriate the technique and sample size are for your needs. Reliability is about how repeatable are the processes and the results, particularly in observational data.

Ethics and consent

The use of qualitative data (and quantitative data) must be governed by sound ethical practice. Consider ethics in collection, analysis, use and storage whether the project is or is not registered with local ethics committees. Be sure you are familiar with requirements.

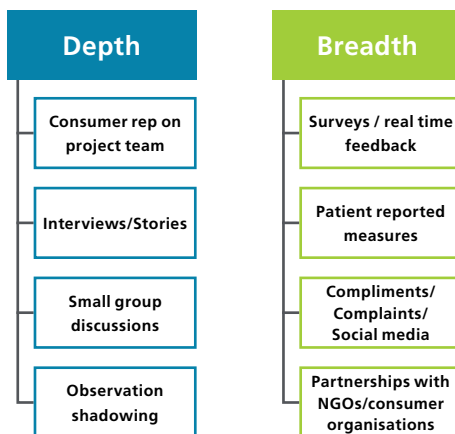
Resources

Collecting quantitative data can be resource intensive and takes planning. You will need skilled interviewers or facilitators who know what to do if sensitive situations arise. Survey questions need to be fit for purpose and have easy access for people to complete and collate, consider online platforms available to you.

Be open minded

Your task is to capture the personal perspectives of your subjects to inform the diagnostic. Listen to understand, not to respond. Use prompting phrases like 'tell me a little more...' and ask open-ended questions that prompt replies but are not leading. Remain open minded – there are no right or wrong responses.

Depth and breadth



Ethics and consent

Collecting data with consumers



Further information

[My Health Learning Log in Form](#) – Redesign Diagnostics (202464432): Data Collection
Staff interviews
Patient and carer interviews

Patient Experience Resources – www.aci.health.nsw.gov.au/resources/patient-experience

Next steps

Now that you have gathered qualitative data, you may like to use mapping to support and enrich your findings and bring your data story together. Triangulating your qualitative, quantitative and mapping data will lead to robust analysis.

PRIORITISING KEY ISSUES

Diagnostics



Prioritising key issues

It is generally not possible to address all issues that are raised. Issues need to be prioritised so you can identify where you will be focusing your improvement strategies and precious resources to get maximum impact and results.

Diagnostics

The purpose of this phase is to gain a comprehensive understanding of the current state from different perspectives. Once you know the issues you can prioritise them and establish the root causes, so you develop the right solutions.

Key points

1. Use a decision matrix

A matrix outlining the impact versus the ability to influence is a useful tool for prioritising issues. This rates each issue on its level of impact on the problem and how likely it is that improvement can be made. Consult with stakeholders and plot issues on the matrix according to agreed level. The issues rating higher impact and ease of influence are the priority for consideration to take forward.

2. Vote on issues

A good way to find out what issues stakeholders believe are important and to narrow down the options is to vote on it. Get people to nominate their top three priorities by sticking a dot to their choices. You can do this on an individual basis or in groups. Offer guidance on what people should consider, such as the biggest impact on patients, staff or service.

3. Apply the Pareto principle

The Pareto principle (also known as the 80/20 rule) helps identify the issues relating to your problem that have the biggest impact and should be prioritised. In this context, it would mean that 80% of the problem will be solved by addressing 20% of the issues. After voting is complete, plot the prioritised issues on the Pareto chart to determine which issues to focus on.

4. Lower priority issues

After prioritising you will have a group of issues that you are not taking forward. Decide what to do with these issues with your steering group/ sponsor. Some may be addressed as a side benefit of those you are taking forward, some may sit with other projects, or some may be put on hold. Clear communication to stakeholders about what is happening with these issues is important for transparency and engagement.

Considerations and tips

When the issues are piling up, it can often seem daunting, but prioritising according to stakeholders' knowledge, the impact and influence will keep you on track so you can target the most important issues.

Involve stakeholders

Stakeholders' opinions are a key factor to inform the prioritisation of issues. Ensure staff, patients and other consumers who are impacted have input into the issues which are important to them. This increases the chance of success and encourages buy-in and trust in the project.

Focus on accurate theming

It can be tempting to theme multiple issues into one large topic, e.g. communication. This makes it difficult to prioritise which part of the topic is central to the problem. Keep the issues as clear as possible to achieve successful prioritisation.

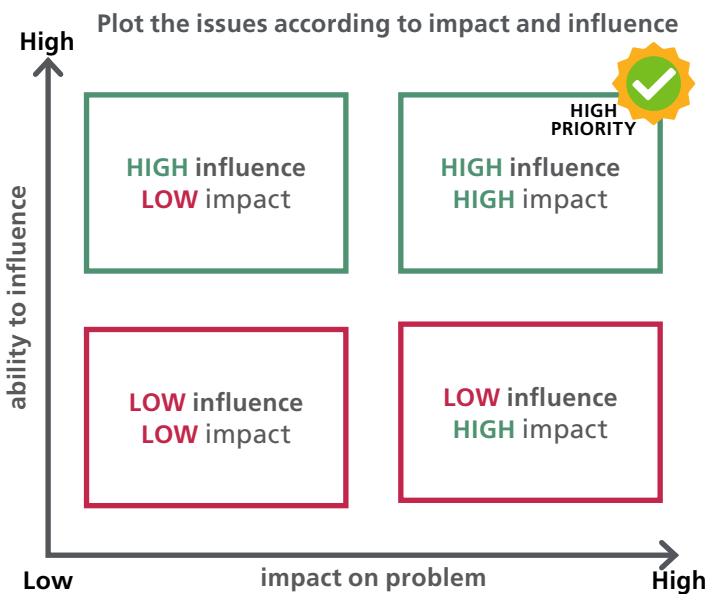
Look to the literature

It is likely that someone has already experienced the same issues in another service. Consult the literature or your professional networks to see if there are learnings from previous experience. This will also help to validate that you are taking the right issues forward.

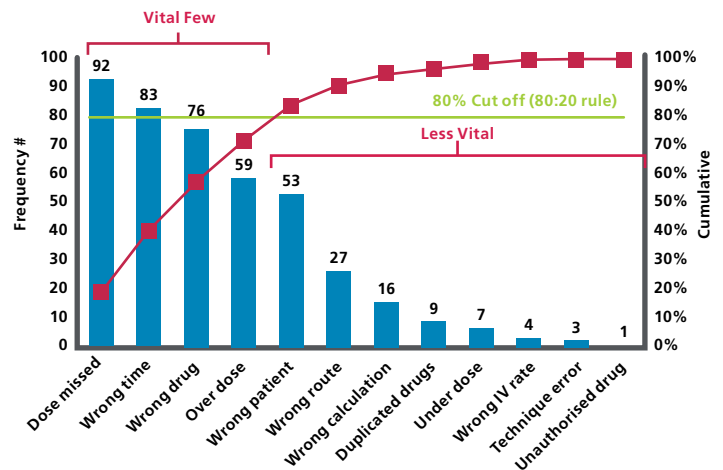
Keep the issues log

Even though you have prioritised and taken issues forward, don't discard the log you have developed over the course of the project. If you get to testing solutions and the problem is not reducing, you may need to come back and consider if you have missed addressing certain issues.

Matrix



Pareto chart



Further information

[My Health Learning Log in Form](#) – Redesign Diagnostics (202464432): Issues Prioritisation

Next steps

Once you know the key issues that are being taken forward, it's time to do a root cause analysis to find the true causes of those issues so they can be addressed effectively. Remember you need the right problem before you get the right solution.

MAPPING

Diagnostics



Mapping

Mapping is an important tool to use in diagnostics to understand the reality of a process or service. Different types of maps can help you identify issues in both service delivery and as a lived experience for both staff and consumers.

Diagnostics

The purpose of this phase is to gain a comprehensive understanding of the current state from different perspectives. Once you know the issues you can prioritise them and establish the root causes, so you develop the right solutions.

Key points

1. Why map?

The purpose of mapping is to:

- Identify what currently happens
- Understand how the work is done
- Identify issues as they occur along the way

You can choose different types of mapping to suit your purpose. It may be possible to overlay the maps to see the process from a service perspective (process map), patient perspective (journey map) or highlight waste (value stream map).

2. Process mapping

A process map visually lays out each step as it occurs along a specific process from start to finish. This captures the reality of a process as it happens during an average day, highlighting all of the steps and people involved. It can show points of time, data capture, communication, movement and technology. A good map captures the truth of what actually occurs and has input from all stakeholders involved.

3. Journey mapping

A journey map shows how a consumer experiences a process or service. It is based on what a patient/consumer says, thinks or feels about their experience at certain points along the journey. It can highlight which parts a patient feels most frustrated with or where they find value in the service. A journey map helps you understand what is important to the consumer in redesigning the service.

4 Value stream mapping

A value stream map identifies aspects of a process or service that are wasteful. In this map, value is defined by the customer. For example, for a patient seeing their GP, value would be delivered through the receptionist providing information, the practice nurse performing tests, and the GP consultation. Waiting time between these parts of the process is considered 'non value add'.

Considerations and tips

Creating a map requires good planning. It is crucial that the right stakeholders are involved to identify the steps and issues along the journey.

Display the map

Maps can communicate a lot of information in a very engaging way. There are many templates for process maps – choose one that demonstrates the processes well, and conveys information easily to stakeholders. Journey maps can include photographs, emojis or avatars. Storyboards may also be useful.

Include stakeholders

Including stakeholders ensures a more robust and informative map. It can also be a great way to demonstrate that you are listening and interested in understanding their perspectives. Patient journey maps can be developed by collating the input from many patients, demonstrating the common feedback themes.

Validate the map

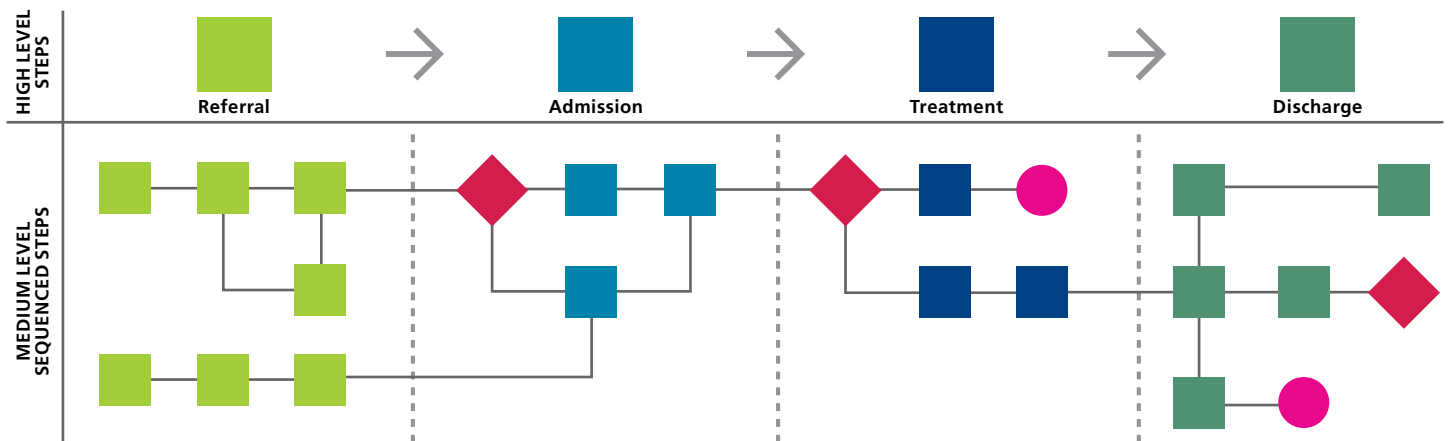
It is important to clearly document the process or journey that has been mapped. Ask for validation from the group and other stakeholders who may not have been involved in workshops or information gathering. This is also an opportunity to get additional information not identified in the original exercise.

Analysis

Once you have validated your map, you are ready to analyse it:

- How many steps are there, and are we doing them in the right order?
- Is the appropriate person doing the work?
- How coordinated is it?
- What steps are wasteful or add little value?
- How can we improve the experience for the staff or consumers?

Process mapping



Further information

[My Health Learning Log in Form](#) – Redesign Diagnostics (202464432): Process Mapping

Guide on how to process map (ACI) – www.aci.health.nsw.gov.au/search?q=process+map

Journey Map (Experience based Co-design Toolkit) – www.aci.health.nsw.gov.au/_data/assets/pdf_file/0010/419797/EBCD_Toolkit-Journey_Map.pdf

Next steps

Once you have validated and analysed your mapping, you need to ask if there are data or survey information that support what you found. You may find there are parts of the process you need to investigate further to fully understand.

PROBLEM STATEMENT

Diagnostics



Problem statement

Problem statements are clear concise descriptions summarising the issues that need to be addressed going into the solutions phase.

Diagnostics

The purpose of this phase is to gain a comprehensive understanding of the current state from different perspectives. Once you know the issues you can prioritise them and establish the root causes, so you develop the right solutions.

Key points

1. Evidence based problems

At the beginning of the redesign project, you would have set a goal and objectives and had an initial case for change. When the diagnostics phase is complete, you will have clearer, evidence-informed understanding of the problems that must be solved. It is then time to form your problem statement/s, which you will take forward to redesign.

2. Make it clear

Problem statements should be clear, concise statements summarising the issues identified in the diagnostics phase. For example: There is no agreed process for booking patients into the clinic. The problem statement must relate to the goal and objectives. If it doesn't, ask your team and sponsor if you have gone off track or if the goal or objectives should change in light of the evidence you found.

3. Explain the impact of the problem

Completion of a thorough diagnostics phase should provide you with the information you need to explain and quantify the impact of this problem on:

- patients/ consumers – access, experience and/or quality impacts
- staff – experience, delays, variation in care delivery, workflow
- the service (e.g. ward or dept) – meeting KPIs, costs, efficiency and effectiveness.

4. Revisit your case for change

Now that you have this information, you will be able to write a stronger and more specific case for change, and be able to shape it to different stakeholders' frames of reference. Having validated qualitative and quantitative data about your specific service (that stakeholders have been engaged in collecting) will go a long way to identifying and agreeing on effective solutions.

Considerations and tips

A good problem statement is based on evidence and clearly highlights the exact issue you intend to address.

Effective statements

A good problem statement should be clear to the audience and written simply, without jargon or abbreviations. Once agreed upon, supporting information needs to be provided and the problem statements need to be tested with stakeholders. This will inform you if your statement and supporting evidence are being communicated effectively.

Avoid blame

Problem statements need to be factual, based on the processes or issues you found. They are not about identifying teams or individuals who are involved. Usually problems arise due to poor or outdated processes in a changing environment. Performance issues should be managed separately by the sponsor.

Be creative

Problem statements need to be written, but they can also be communicated visually using diagrams, graphs, photographs or videos. Using images help you to communicate to a range of stakeholders and get your message across more effectively.

Non-prioritised problems

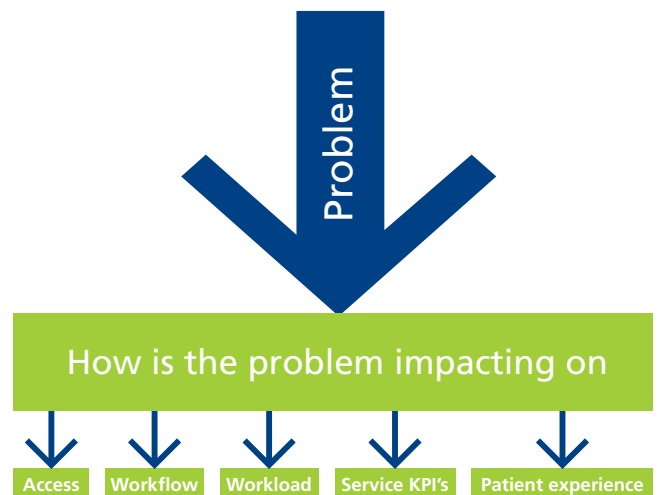
During the prioritisation phase of diagnostics, some problems may have been 'parked'. Work with your steering committee to decide what should happen with these issues, and communicate this to your stakeholders. For example, some issues may be assigned to other teams or actually be negated if you solve the prioritised issues.

Evidence based problem statement



- ← **Evidence**
 - diagnostic data
- ← **Impact**
 - consumers
 - staff
 - service
- ← **Visual cues**
 - pictures
 - graphs

What impact does the problem have?



Further information

[My Health Learning Log in Form](#) – Redesign Diagnostics (202464432)

How to write an effective problem statement/ iSixSigma – www.isixsigma.com/new-to-six-sigma/getting-started/how-to-write-an-effective-problem-statement/

Next steps

Now that you have well developed problem statements that are supported by evidence, you are ready to move to the solutions phase. Take a moment with your team to celebrate the end of diagnostics and the substantial work you have done to date.

THEME ANALYSIS

Diagnostics



Theme analysis

Interviews, focus groups and surveys can yield a high volume of qualitative data which may appear difficult to analyse. Using a structured theming process will help you get the most from responses.

Diagnostics

The purpose of this phase is to gain a comprehensive understanding of the current state from different perspectives. Once you know the issues you can prioritise them and establish the root causes, so you develop the right solutions.

Key points

1. Collate the information

Interviews and focus group discussions need to be transcribed to manage the data. This will be much easier if you had permission to record the discussion. It is time consuming to transcribe, however it is a key step. If you have a project budget this step may be outsourced to specialised services. Collate interview notes or survey responses word for word to assist theming.

2. Code

To code the information you may use numbers, symbols or colours for each major theme. Read through the notes or transcript to assign a code to key information. If you see information repeated, code it accordingly. As you move through the text, you will start to see groups of codes emerge. You may be able to access software to assist with coding – check with your local quality or research teams.

3. Theme

Once you have been through the coding process, you are ready to theme the data. You can theme using an inductive method (developing your own themes from the data) or deductive method (using a validated framework or model and assigning the coded data to those themes). An example of a model for theming patient data is the Picker Principles of Patient-centred Care (pictured).

4. Analyse and validate

You are now ready to analyse the themes. What is emerging as key issues for your stakeholders? What is working well, and why? What pain points are they reporting, and why do they exist? You will need to test your analysis. Put the information into a format that can be presented back to your stakeholders to validate and seek feedback to ensure you are representing their input effectively.

Considerations and tips

It is as important to be rigorous with qualitative data in the same manner that you would treat quantitative data. Keep the quotes accurate and avoid assumptions or paraphrasing.

Be alert for contradictions

As you see themes emerge in coding be alert for information that may contradict. Bias can unintentionally blind you to information that may not support what you are seeing in the themes. This can easily lead to missing key pieces of information in your analysis.

Quotes

As you work with the recorded information, be alert to impactful quotes that you may use to demonstrate a key theme or issue. Capture them for later use but be mindful of anonymity and respect to others. Quotes should highlight an issue, not place blame.

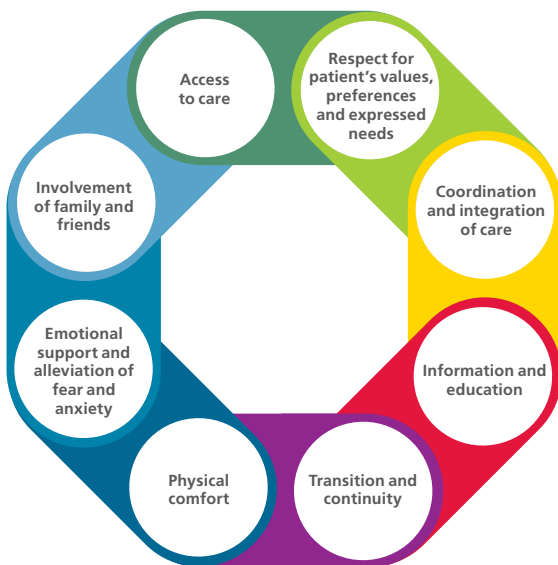
Storing information

Privacy and ethical requirements mandate how information is to be managed and stored. Find out the requirements for information you have locally and ensure you comply with them. Your local data or research teams should be able to advise you if needed.

Best practice

It's best practice to have two people involved in the coding and theming process. This can reduce the risk of theming bias and missing key pieces of information.

Picker Principles of Patient Centred Care



Coding the data

When you are analysing interview transcripts you can use coding with colours or symbols to pull out the themes and organise the data.

Themes

Emotions/ Consumer experience

Booking process

Satisfaction with service

Look for **emotions** like when people say they are **relieved** or **frustrated**. Themes around access to the service like **I had to make a lot of calls** or **it was hard to book appointments**. Satisfaction is different to experience as they could say **I was pleased with the service I received**, **the waiting time was satisfactory** but I **felt confused** about the complicated booking process.

Further information

[My Health Learning Log in Form](#) – Redesign Diagnostics (202464432): Issues Prioritisation

Picker Principles – www.picker.org/about-us/picker-principles-of-person-centred-care/

Next steps

Once you have themed your qualitative data, it is time to collate the analysis with the rest of your diagnostic and start to prioritise the issues found.